

APPENDIX D JUNCTION ANALYSIS - ROUNDABOUTS

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2008 Base.vai"
(drive-on-the-left) at 12:01:34 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 west
ARM C - A19 East

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.21	I	4.82	I	3.21
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.56	I	3.84	I	2.56
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.15	I	10.73	I	7.15

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.058	I	0.942
I		I		I	0.0	I	15.0	I	242.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A19 Barlby Rd 2008 Base.vao

I	I	ARM B	I	0.015	I	0.000	I	0.985	I
I	I		I	3.0	I	0.0	I	202.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.397	I	0.603	I	0.000	I
I	I		I	227.0	I	345.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	3.21	16.07	0.200		0.0	0.2	3.6		0.08
ARM B	2.56	18.09	0.142		0.0	0.2	2.4		0.06
ARM C	7.15	20.15	0.355		0.0	0.5	7.9		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	3.84	15.64	0.245		0.2	0.3	4.7		0.08
ARM B	3.06	17.77	0.172		0.2	0.2	3.1		0.07
ARM C	8.54	20.15	0.424		0.5	0.7	10.7		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	4.70	15.06	0.312		0.3	0.4	6.6		0.10
ARM B	3.75	17.33	0.216		0.2	0.3	4.0		0.07
ARM C	10.46	20.14	0.519		0.7	1.1	15.5		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	4.70	15.05	0.312		0.4	0.5	6.8		0.10
ARM B	3.75	17.33	0.216		0.3	0.3	4.1		0.07
ARM C	10.46	20.14	0.519		1.1	1.1	16.0		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	3.84	15.63	0.245		0.5	0.3	5.0		0.08
ARM B	3.06	17.76	0.172		0.3	0.2	3.2		0.07
ARM C	8.54	20.15	0.424		1.1	0.7	11.4		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	3.21	16.06	0.200		0.3	0.3	3.8		0.08
ARM B	2.56	18.07	0.142		0.2	0.2	2.5		0.06
ARM C	7.15	20.15	0.355		0.7	0.6	8.5		0.08

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.2
17.15	0.3
17.30	0.4
17.45	0.5
18.00	0.3
18.15	0.3

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.1 *

17.45 1.1 *
 18.00 0.7 *
 18.15 0.6 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	352.4	30.6	30.6
B	281.1	19.4	19.4
C	784.3	70.1	70.1
ALL	1417.8	120.0	120.0

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Base.vai"
(drive-on-the-left) at 12:03:36 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 west
ARM C - A19 East

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.03	I	6.04	I	4.03
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.49	I	3.73	I	2.49
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.86	I	11.79	I	7.86

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.062	I	0.938
I		I		I	0.0	I	20.0	I	302.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A19 Barlby Rd 2026 Base.vao

I	ARM B	0.045	0.000	0.955
I		9.0	0.0	190.0
I		(10.0)	(10.0)	(10.0)
I				
I	ARM C	0.461	0.539	0.000
I		290.0	339.0	0.0
I		(10.0)	(10.0)	(10.0)
I				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	4.03	16.11	0.250		0.0	0.3	4.8		0.08
ARM B	2.49	17.69	0.141		0.0	0.2	2.4		0.07
ARM C	7.86	20.11	0.391		0.0	0.6	9.2		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	4.81	15.69	0.306		0.3	0.4	6.4		0.09
ARM B	2.97	17.29	0.172		0.2	0.2	3.0		0.07
ARM C	9.39	20.10	0.467		0.6	0.9	12.7		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	5.89	15.11	0.389		0.4	0.6	9.2		0.11
ARM B	3.64	16.75	0.217		0.2	0.3	4.1		0.08
ARM C	11.50	20.08	0.573		0.9	1.3	19.0		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	5.89	15.10	0.390		0.6	0.6	9.5		0.11
ARM B	3.64	16.74	0.217		0.3	0.3	4.1		0.08
ARM C	11.50	20.08	0.573		1.3	1.3	19.8		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	4.81	15.67	0.307		0.6	0.4	6.9		0.09
ARM B	2.97	17.28	0.172		0.3	0.2	3.2		0.07
ARM C	9.39	20.10	0.467		1.3	0.9	13.7		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	4.03	16.10	0.250		0.4	0.3	5.1		0.08
ARM B	2.49	17.67	0.141		0.2	0.2	2.5		0.07
ARM C	7.86	20.11	0.391		0.9	0.6	10.0		0.08

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.9 *
17.30	1.3 *

17.45 1.3 *
 18.00 0.9 *
 18.15 0.6 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	441.5	41.9	41.9
B	272.9	19.3	19.3
C	862.5	84.4	84.4
ALL	1576.9	145.7	145.7

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
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END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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RG40 3GA, UK

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Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Site A.vao"
(drive-on-the-left) at 12:04:35 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 west
ARM C - A19 East

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.49	I	8.23	I	5.49
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.19	I	3.28	I	2.19
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.95	I	11.92	I	7.95

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.059	I	0.941
I		I		I	0.0	I	26.0	I	413.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A19 Barlby Rd 2026 Site A.vao

I	ARM B	0.051	0.000	0.949
I		9.0	0.0	166.0
I		(10.0)	(10.0)	(10.0)
I				
I	ARM C	0.492	0.508	0.000
I		313.0	323.0	0.0
I		(10.0)	(10.0)	(10.0)
I				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	5.49	16.21	0.338		0.0	0.5	7.3		0.09
ARM B	2.19	16.95	0.129		0.0	0.1	2.2		0.07
ARM C	7.95	20.11	0.395		0.0	0.6	9.4		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	6.55	15.81	0.414		0.5	0.7	10.2		0.11
ARM B	2.61	16.41	0.159		0.1	0.2	2.8		0.07
ARM C	9.49	20.10	0.472		0.6	0.9	12.9		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	8.03	15.26	0.526		0.7	1.1	15.7		0.14
ARM B	3.20	15.67	0.204		0.2	0.3	3.8		0.08
ARM C	11.63	20.08	0.579		0.9	1.4	19.5		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	8.03	15.25	0.526		1.1	1.1	16.4		0.14
ARM B	3.20	15.66	0.204		0.3	0.3	3.8		0.08
ARM C	11.63	20.08	0.579		1.4	1.4	20.4		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	6.55	15.80	0.415		1.1	0.7	11.1		0.11
ARM B	2.61	16.39	0.159		0.3	0.2	2.9		0.07
ARM C	9.49	20.10	0.472		1.4	0.9	14.0		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	5.49	16.20	0.339		0.7	0.5	8.0		0.09
ARM B	2.19	16.93	0.129		0.2	0.1	2.3		0.07
ARM C	7.95	20.11	0.395		0.9	0.7	10.1		0.08

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.1 *
17.45	1.1 *
18.00	0.7 *
18.15	0.5 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.9 *
17.30	1.4 *

17.45 1.4 *
 18.00 0.9 *
 18.15 0.7 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	602.0	68.7	68.8
B	240.0	17.7	17.7
C	872.1	86.3	86.3
ALL	1714.0	172.8	172.8

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Site D.vao"
(drive-on-the-left) at 12:05:30 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 west
ARM C - A19 East

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.57	I	6.86	I	4.57
I	ARM B	I	15.00	I	45.00	I	75.00	I	3.42	I	5.14	I	3.42
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.79	I	13.18	I	8.79

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.055	I	0.945
I		I		I	0.0	I	20.0	I	346.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A19 Barlby Rd 2026 Site D.vao

I	I	ARM B	I	0.029	I	0.000	I	0.971	I
I	I		I	8.0	I	0.0	I	266.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.437	I	0.563	I	0.000	I
I	I		I	307.0	I	396.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	4.57	15.75	0.290		0.0	0.4	5.9		0.09
ARM B	3.42	17.40	0.197		0.0	0.2	3.6		0.07
ARM C	8.79	20.12	0.437		0.0	0.8	11.1		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	5.46	15.26	0.358		0.4	0.6	8.1		0.10
ARM B	4.09	16.94	0.241		0.2	0.3	4.7		0.08
ARM C	10.49	20.11	0.522		0.8	1.1	15.6		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	6.69	14.59	0.459		0.6	0.8	12.1		0.13
ARM B	5.01	16.32	0.307		0.3	0.4	6.4		0.09
ARM C	12.85	20.09	0.640		1.1	1.7	24.7		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	6.69	14.58	0.459		0.8	0.8	12.6		0.13
ARM B	5.01	16.31	0.307		0.4	0.4	6.6		0.09
ARM C	12.85	20.09	0.640		1.7	1.8	26.2		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	5.46	15.24	0.359		0.8	0.6	8.7		0.10
ARM B	4.09	16.92	0.242		0.4	0.3	4.9		0.08
ARM C	10.49	20.11	0.522		1.8	1.1	17.2		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	4.57	15.73	0.291		0.6	0.4	6.3		0.09
ARM B	3.42	17.38	0.197		0.3	0.2	3.8		0.07
ARM C	8.79	20.12	0.437		1.1	0.8	12.1		0.09

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.1 **
17.30	1.7 **

17.45 1.8 **
 18.00 1.1 *
 18.15 0.8 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	QUEUEING DELAY	INCLUSIVE QUEUEING DELAY
(VEH)	(VEH/H)	(MIN)	(MIN)
A	501.9	53.7	53.7
B	375.7	30.0	30.0
C	964.0	107.0	107.0
ALL	1841.5	190.7	190.7

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Site E.vao"
(drive-on-the-left) at 12:06:22 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 west
ARM C - A19 East

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.03	I	6.04	I	4.03
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.49	I	3.73	I	2.49
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.78	I	11.66	I	7.78

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.075	I	0.925
I		I		I	0.0	I	24.0	I	298.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A19 Barlby Rd 2026 Site E.vao

I	I	ARM B	I	0.045	I	0.000	I	0.955	I
I	I		I	9.0	I	0.0	I	190.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.461	I	0.539	I	0.000	I
I	I		I	287.0	I	335.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	4.03	16.14	0.249		0.0	0.3	4.8		0.08
ARM B	2.49	17.71	0.140		0.0	0.2	2.4		0.07
ARM C	7.78	20.11	0.387		0.0	0.6	9.1		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	4.81	15.72	0.306		0.3	0.4	6.4		0.09
ARM B	2.97	17.32	0.171		0.2	0.2	3.0		0.07
ARM C	9.28	20.10	0.462		0.6	0.8	12.4		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	5.89	15.15	0.389		0.4	0.6	9.2		0.11
ARM B	3.64	16.79	0.217		0.2	0.3	4.1		0.08
ARM C	11.37	20.08	0.566		0.8	1.3	18.5		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	5.89	15.14	0.389		0.6	0.6	9.5		0.11
ARM B	3.64	16.78	0.217		0.3	0.3	4.1		0.08
ARM C	11.37	20.08	0.566		1.3	1.3	19.3		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	4.81	15.71	0.306		0.6	0.4	6.8		0.09
ARM B	2.97	17.31	0.172		0.3	0.2	3.2		0.07
ARM C	9.28	20.10	0.462		1.3	0.9	13.4		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	4.03	16.12	0.250		0.4	0.3	5.1		0.08
ARM B	2.49	17.70	0.141		0.2	0.2	2.5		0.07
ARM C	7.78	20.11	0.387		0.9	0.6	9.8		0.08

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.3 *

17.45 1.3 *
 18.00 0.9 *
 18.15 0.6 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	441.5	41.8	41.8
B	272.9	19.3	19.3
C	852.9	82.6	82.6
ALL	1567.3	143.7	143.7

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Site F.vao"
(drive-on-the-left) at 12:09:03 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 west
ARM C - A19 East

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.13	I	6.19	I	4.13
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.49	I	3.73	I	2.49
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.19	I	12.28	I	8.19

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.073	I	0.927
I		I		I	0.0	I	24.0	I	306.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A19 Barlby Rd 2026 Site F.vao

I	I	ARM B	I	0.045	I	0.000	I	0.955	I
I	I		I	9.0	I	0.0	I	190.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.469	I	0.531	I	0.000	I
I	I		I	307.0	I	348.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	4.13	16.06	0.257		0.0	0.3	5.0		0.08
ARM B	2.49	17.66	0.141		0.0	0.2	2.4		0.07
ARM C	8.19	20.11	0.407		0.0	0.7	9.9		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	4.93	15.62	0.315		0.3	0.5	6.7		0.09
ARM B	2.97	17.26	0.172		0.2	0.2	3.1		0.07
ARM C	9.78	20.10	0.486		0.7	0.9	13.6		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	6.03	15.03	0.401		0.5	0.7	9.7		0.11
ARM B	3.64	16.71	0.218		0.2	0.3	4.1		0.08
ARM C	11.97	20.08	0.596		0.9	1.4	20.8		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	6.03	15.02	0.402		0.7	0.7	10.0		0.11
ARM B	3.64	16.71	0.218		0.3	0.3	4.2		0.08
ARM C	11.97	20.08	0.596		1.4	1.5	21.8		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	4.93	15.61	0.316		0.7	0.5	7.2		0.09
ARM B	2.97	17.25	0.172		0.3	0.2	3.2		0.07
ARM C	9.78	20.10	0.486		1.5	1.0	14.9		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	4.13	16.04	0.257		0.5	0.3	5.3		0.08
ARM B	2.49	17.65	0.141		0.2	0.2	2.5		0.07
ARM C	8.19	20.11	0.407		1.0	0.7	10.7		0.08

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.7 *
17.45	0.7 *
18.00	0.5
18.15	0.3

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	0.9 *
17.30	1.4 *

17.45 1.5 *
 18.00 1.0 *
 18.15 0.7 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	452.5	43.8	43.8
B	272.9	19.4	19.4
C	898.1	91.7	91.7
ALL	1623.5	154.9	155.0

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Site G1.vai"
(drive-on-the-left) at 13:58:46 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 East
ARM C - New Link South
ARM D - A19 West

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	3.75	I	5.00	I	4.00	I	28.00	I	46.00	I	48.0	I	0.525	I	21.022	I
I	ARM D	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.95	I	5.93	I	3.95	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.74	I	4.11	I	2.74	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.72	I	7.09	I	4.72	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	8.32	I	12.49	I	8.32	I

DEMAND SET TITLE: A19/Barlby Rd

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

A19 Barlby Rd 2026 Site G1.vao

I	I	ARM A	I	0.000	I	0.085	I	0.016	I	0.899	I	I
I	I	I	I	0.0	I	27.0	I	5.0	I	284.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.041	I	0.000	I	0.164	I	0.795	I	I
I	I	I	I	9.0	I	0.0	I	36.0	I	174.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.108	I	0.336	I	0.000	I	0.556	I	I
I	I	I	I	41.0	I	127.0	I	0.0	I	210.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.548	I	0.284	I	0.168	I	0.000	I	I
I	I	I	I	365.0	I	189.0	I	112.0	I	0.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	3.95	15.55	0.254		0.0	0.3	4.9		0.09	I
I	I	ARM B	2.74	17.03	0.161		0.0	0.2	2.8		0.07	I
I	I	ARM C	4.72	16.06	0.294		0.0	0.4	6.0		0.09	I
I	I	ARM D	8.32	18.98	0.439		0.0	0.8	11.2		0.09	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	4.72	15.01	0.314		0.3	0.5	6.7		0.10	I
I	I	ARM B	3.27	16.50	0.198		0.2	0.2	3.6		0.08	I
I	I	ARM C	5.64	15.46	0.365		0.4	0.6	8.3		0.10	I
I	I	ARM D	9.94	18.74	0.531		0.8	1.1	16.1		0.11	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	5.78	14.29	0.404		0.5	0.7	9.7		0.12	I
I	I	ARM B	4.00	15.79	0.254		0.2	0.3	5.0		0.08	I
I	I	ARM C	6.91	14.64	0.472		0.6	0.9	12.7		0.13	I
I	I	ARM D	12.18	18.42	0.661		1.1	1.9	26.8		0.16	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	5.78	14.28	0.405		0.7	0.7	10.1		0.12	I
I	I	ARM B	4.00	15.78	0.254		0.3	0.3	5.1		0.08	I
I	I	ARM C	6.91	14.63	0.472		0.9	0.9	13.3		0.13	I
I	I	ARM D	12.18	18.41	0.661		1.9	1.9	28.7		0.16	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	4.72	14.99	0.315		0.7	0.5	7.1		0.10	I
I	I	ARM B	3.27	16.48	0.198		0.3	0.2	3.8		0.08	I
I	I	ARM C	5.64	15.44	0.365		0.9	0.6	9.0		0.10	I
I	I	ARM D	9.94	18.73	0.531		1.9	1.1	18.0		0.12	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	3.95	15.53	0.254		0.5	0.3	5.3		0.09	I
I	I	ARM B	2.74	17.01	0.161		0.2	0.2	2.9		0.07	I
I	I	ARM C	4.72	16.04	0.295		0.6	0.4	6.5		0.09	I
I	I	ARM D	8.32	18.97	0.439		1.1	0.8	12.2		0.09	I

 . QUEUE AT ARM A

TIME SEGMENT	NO. OF
ENDING	VEHICLES
	IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.7 *
17.45	0.7 *
18.00	0.5
18.15	0.3

 . QUEUE AT ARM B

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

18.00 0.2
18.15 0.2

.QUEUE AT ARM C

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

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.1 *
17.30	1.9 **
17.45	1.9 **
18.00	1.1 *
18.15	0.8 *

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *		I
			I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	A	I	433.3	I 288.9	I 43.8	I 0.10	I 43.8	I 0.10	I
I	B	I	300.3	I 200.2	I 23.2	I 0.08	I 23.2	I 0.08	I
I	C	I	518.3	I 345.5	I 55.8	I 0.11	I 55.8	I 0.11	I
I	D	I	913.2	I 608.8	I 113.0	I 0.12	I 113.0	I 0.12	I
I	ALL	I	2165.1	I 1443.4	I 235.8	I 0.11	I 235.8	I 0.11	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Site G2.vai"
(drive-on-the-left) at 13:59:33 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foley [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 East
ARM C - New Link South
ARM D - A19 West

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	3.75	I	5.00	I	4.00	I	28.00	I	46.00	I	48.0	I	0.525	I	21.022	I
I	ARM D	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	3.95	I	5.93	I	3.95
I	ARM B	I	15.00	I	45.00	I	3.09	I	4.63	I	3.09
I	ARM C	I	15.00	I	45.00	I	6.97	I	10.46	I	6.97
I	ARM D	I	15.00	I	45.00	I	8.74	I	13.11	I	8.74

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

A19 Barlby Rd 2026 Site G2.vao

I	I	ARM A	I	0.000	I	0.089	I	0.022	I	0.889	I	I
I	I	I	I	0.0	I	28.0	I	7.0	I	281.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.040	I	0.000	I	0.231	I	0.729	I	I
I	I	I	I	10.0	I	0.0	I	57.0	I	180.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.109	I	0.330	I	0.000	I	0.561	I	I
I	I	I	I	61.0	I	184.0	I	0.0	I	313.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.569	I	0.199	I	0.232	I	0.000	I	I
I	I	I	I	398.0	I	139.0	I	162.0	I	0.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	3.95	15.19	0.260		0.0	0.3	5.1		0.09	I
I	I	ARM B	3.09	16.71	0.185		0.0	0.2	3.3		0.07	I
I	I	ARM C	6.97	16.04	0.435		0.0	0.8	10.9		0.11	I
I	I	ARM D	8.74	18.45	0.474		0.0	0.9	12.8		0.10	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	4.72	14.59	0.323		0.3	0.5	6.9		0.10	I
I	I	ARM B	3.69	16.11	0.229		0.2	0.3	4.3		0.08	I
I	I	ARM C	8.33	15.43	0.540		0.8	1.2	16.6		0.14	I
I	I	ARM D	10.43	18.11	0.576		0.9	1.3	19.2		0.13	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	5.78	13.78	0.419		0.5	0.7	10.3		0.12	I
I	I	ARM B	4.52	15.32	0.295		0.3	0.4	6.1		0.09	I
I	I	ARM C	10.20	14.60	0.699		1.2	2.2	30.7		0.22	I
I	I	ARM D	12.78	17.65	0.724		1.3	2.5	34.8		0.20	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	5.78	13.75	0.420		0.7	0.7	10.7		0.13	I
I	I	ARM B	4.52	15.30	0.295		0.4	0.4	6.2		0.09	I
I	I	ARM C	10.20	14.59	0.699		2.2	2.3	33.7		0.23	I
I	I	ARM D	12.78	17.64	0.725		2.5	2.6	38.1		0.21	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	4.72	14.55	0.324		0.7	0.5	7.5		0.10	I
I	I	ARM B	3.69	16.09	0.229		0.4	0.3	4.6		0.08	I
I	I	ARM C	8.33	15.41	0.540		2.3	1.2	18.9		0.14	I
I	I	ARM D	10.43	18.08	0.577		2.6	1.4	22.0		0.13	I

I	I	TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY	I
I	I		(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING	I
I	I				(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	3.95	15.16	0.261		0.5	0.4	5.4		0.09	I
I	I	ARM B	3.09	16.68	0.185		0.3	0.2	3.5		0.07	I
I	I	ARM C	6.97	16.01	0.436		1.2	0.8	12.1		0.11	I
I	I	ARM D	8.74	18.43	0.474		1.4	0.9	14.2		0.10	I

 .QUEUE AT ARM A

TIME SEGMENT	NO. OF
ENDING	VEHICLES
	IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.7 *
17.45	0.7 *
18.00	0.5
18.15	0.4

 .QUEUE AT ARM B

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

18.00 0.3
18.15 0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.2	**
17.30	2.2	**
17.45	2.3	**
18.00	1.2	*
18.15	0.8	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.5	***
17.45	2.6	***
18.00	1.4	*
18.15	0.9	*

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING * * DELAY *		* INCLUSIVE QUEUEING * * DELAY *		I
			(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	433.3	288.9	46.0	0.11	46.0	0.11	I
I	B	I	338.7	225.8	28.0	0.08	28.0	0.08	I
I	C	I	765.1	510.1	123.0	0.16	123.0	0.16	I
I	D	I	958.5	639.0	141.0	0.15	141.1	0.15	I
I	ALL	I	2495.6	1663.7	338.0	0.14	338.1	0.14	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Site H1.vai"
(drive-on-the-left) at 14:00:12 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 west
ARM C - A19 East

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.96	I	5.94	I	3.96
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.45	I	3.68	I	2.45
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.09	I	10.63	I	7.09

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.085	I	0.915
I		I		I	0.0	I	27.0	I	290.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A19 Barlby Rd 2026 Site H1.vao

I	I	ARM B	I	0.046	I	0.000	I	0.954	I
I	I		I	9.0	I	0.0	I	187.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.630	I	0.370	I	0.000	I
I	I		I	357.0	I	210.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	3.96	16.93	0.234		0.0	0.3	4.4		0.08
ARM B	2.45	17.77	0.138		0.0	0.2	2.3		0.07
ARM C	7.09	20.11	0.352		0.0	0.5	7.9		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	4.73	16.66	0.284		0.3	0.4	5.8		0.08
ARM B	2.93	17.38	0.168		0.2	0.2	3.0		0.07
ARM C	8.46	20.10	0.421		0.5	0.7	10.6		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	5.80	16.31	0.355		0.4	0.5	8.0		0.09
ARM B	3.58	16.87	0.212		0.2	0.3	4.0		0.08
ARM C	10.37	20.08	0.516		0.7	1.1	15.3		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	5.80	16.30	0.355		0.5	0.5	8.2		0.10
ARM B	3.58	16.86	0.213		0.3	0.3	4.0		0.08
ARM C	10.37	20.08	0.516		1.1	1.1	15.8		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	4.73	16.66	0.284		0.5	0.4	6.1		0.08
ARM B	2.93	17.38	0.168		0.3	0.2	3.1		0.07
ARM C	8.46	20.10	0.421		1.1	0.7	11.3		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	3.96	16.92	0.234		0.4	0.3	4.7		0.08
ARM B	2.45	17.75	0.138		0.2	0.2	2.4		0.07
ARM C	7.09	20.11	0.352		0.7	0.5	8.4		0.08

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.1 *

17.45 1.1 *
 18.00 0.7 *
 18.15 0.5 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	434.7	37.3	37.3
B	268.8	18.8	18.8
C	777.5	69.3	69.3
ALL	1480.9	125.4	125.4

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A19 Barlby Rd 2026 Site H2.vai"
(drive-on-the-left) at 14:00:37 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19/Barlby Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A19/Barlby Road Roundabout Assessment

.INPUT DATA

ARM A - Barlby Rd (north)
ARM B - A19 west
ARM C - A19 East

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	3.60	I	4.75	I	5.00	I	21.00	I	46.00	I	50.0	I	0.508	I	20.082	I
I	ARM B	I	3.75	I	5.50	I	4.00	I	34.00	I	46.00	I	48.0	I	0.534	I	21.662	I
I	ARM C	I	4.00	I	5.00	I	3.50	I	23.00	I	46.00	I	40.0	I	0.544	I	22.191	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19/Barlby Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	3.95	I	5.93	I	3.95
I	ARM B	I	15.00	I	45.00	I	75.00	I	1.73	I	2.59	I	1.73
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.03	I	10.54	I	7.03

DEMAND SET TITLE: A19/Barlby Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.089	I	0.911
I		I		I	0.0	I	28.0	I	288.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A19 Barlby Rd 2026 Site H2.vao

I	I	ARM B	I	0.065	I	0.000	I	0.935	I
I	I		I	9.0	I	0.0	I	129.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.680	I	0.320	I	0.000	I
I	I		I	382.0	I	180.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	3.95	17.12	0.231		0.0	0.3	4.4		0.08
ARM B	1.73	17.78	0.097		0.0	0.1	1.6		0.06
ARM C	7.03	20.11	0.349		0.0	0.5	7.8		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	4.72	16.89	0.279		0.3	0.4	5.7		0.08
ARM B	2.06	17.40	0.118		0.1	0.1	2.0		0.07
ARM C	8.39	20.10	0.417		0.5	0.7	10.4		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	5.78	16.59	0.348		0.4	0.5	7.8		0.09
ARM B	2.52	16.89	0.149		0.1	0.2	2.6		0.07
ARM C	10.27	20.08	0.512		0.7	1.0	15.0		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	5.78	16.58	0.348		0.5	0.5	8.0		0.09
ARM B	2.52	16.88	0.149		0.2	0.2	2.6		0.07
ARM C	10.27	20.08	0.512		1.0	1.0	15.6		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	4.72	16.89	0.279		0.5	0.4	6.0		0.08
ARM B	2.06	17.39	0.118		0.2	0.1	2.1		0.07
ARM C	8.39	20.10	0.417		1.0	0.7	11.1		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	3.95	17.11	0.231		0.4	0.3	4.6		0.08
ARM B	1.73	17.77	0.097		0.1	0.1	1.6		0.06
ARM C	7.03	20.11	0.349		0.7	0.5	8.3		0.08

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 1.0 *
 18.00 0.7 *
 18.15 0.5 *

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	433.3	36.3	36.3
B	189.2	12.5	12.5
C	770.6	68.2	68.2
ALL	1393.2	117.0	117.0

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

END OF JOB

I	ARM B	I	0.992	I	0.000	I	0.008	I
I		I	508.0	I	0.0	I	4.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I
I	ARM C	I	0.958	I	0.042	I	0.000	I
I		I	345.0	I	15.0	I	0.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.26	33.60	0.276		0.0	0.4	5.6		0.04
ARM B	6.40	35.38	0.181		0.0	0.2	3.3		0.03
ARM C	4.50	30.01	0.150		0.0	0.2	2.6		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.06	33.58	0.329		0.4	0.5	7.2		0.04
ARM B	7.64	35.11	0.218		0.2	0.3	4.1		0.04
ARM C	5.37	29.36	0.183		0.2	0.2	3.3		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	13.55	33.56	0.404		0.5	0.7	9.9		0.05
ARM B	9.36	34.74	0.269		0.3	0.4	5.4		0.04
ARM C	6.58	28.47	0.231		0.2	0.3	4.4		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	13.55	33.56	0.404		0.7	0.7	10.1		0.05
ARM B	9.36	34.73	0.269		0.4	0.4	5.5		0.04
ARM C	6.58	28.47	0.231		0.3	0.3	4.5		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.06	33.58	0.329		0.7	0.5	7.5		0.04
ARM B	7.64	35.10	0.218		0.4	0.3	4.2		0.04
ARM C	5.37	29.36	0.183		0.3	0.2	3.4		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.26	33.60	0.276		0.5	0.4	5.8		0.04
ARM B	6.40	35.37	0.181		0.3	0.2	3.4		0.03
ARM C	4.50	30.00	0.150		0.2	0.2	2.7		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.3
 18.00 0.2
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	1016.1	46.2	46.2
B	702.1	25.9	25.9
C	493.6	20.9	20.9
ALL	2211.8	93.1	93.1

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026 Base.vai"
(drive-on-the-left) at 12:19:49 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.50	I	17.25	I	11.50
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.69	I	11.53	I	7.69
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.49	I	6.73	I	4.49

DEMAND SET TITLE: A19 / A63

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	0.791	0.209
I		I		0.0	728.0	192.0
I		I		(10.0)	(10.0)	(10.0)

I	I	ARM B	I	0.990	I	0.000	I	0.010	I
I	I		I	609.0	I	0.0	I	6.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.944	I	0.056	I	0.000	I
I	I		I	339.0	I	20.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	ARM A	11.50	33.57	0.343		0.0	0.5	7.6		0.05	I
I	ARM B	7.69	35.43	0.217		0.0	0.3	4.1		0.04	I
I	ARM C	4.49	29.35	0.153		0.0	0.2	2.7		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	ARM A	13.73	33.54	0.409		0.5	0.7	10.2		0.05	I
I	ARM B	9.18	35.17	0.261		0.3	0.4	5.2		0.04	I
I	ARM C	5.36	28.58	0.188		0.2	0.2	3.4		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	ARM A	16.82	33.51	0.502		0.7	1.0	14.7		0.06	I
I	ARM B	11.24	34.82	0.323		0.4	0.5	7.0		0.04	I
I	ARM C	6.56	27.51	0.239		0.2	0.3	4.6		0.05	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	ARM A	16.82	33.51	0.502		1.0	1.0	15.0		0.06	I
I	ARM B	11.24	34.81	0.323		0.5	0.5	7.1		0.04	I
I	ARM C	6.56	27.51	0.239		0.3	0.3	4.7		0.05	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	ARM A	13.73	33.54	0.409		1.0	0.7	10.7		0.05	I
I	ARM B	9.18	35.17	0.261		0.5	0.4	5.4		0.04	I
I	ARM C	5.36	28.57	0.188		0.3	0.2	3.5		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	ARM A	11.50	33.57	0.343		0.7	0.5	8.0		0.05	I
I	ARM B	7.69	35.43	0.217		0.4	0.3	4.2		0.04	I
I	ARM C	4.49	29.34	0.153		0.2	0.2	2.7		0.04	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5
17.45	0.5
18.00	0.4
18.15	0.3

 .QUEUE AT ARM C

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

17.45 0.3
 18.00 0.2
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1261.5	66.1	66.1
B	843.3	33.1	33.1
C	492.3	21.6	21.6
ALL	2597.1	120.8	120.8

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Nine Mile Ride Email: softwarebureau@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026site a.vai"
(drive-on-the-left) at 12:24:03 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.71	I	17.57	I	11.71	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.80	I	11.70	I	7.80	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.36	I	6.54	I	4.36	I

DEMAND SET TITLE: A19 / A63

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I	16.45 - 18.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.820	I	0.180	I
I		I		I	0.0	I	768.0	I	169.0	I
I		I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I		I

I	I	ARM B	I	0.990	I	0.000	I	0.010	I
I	I		I	618.0	I	0.0	I	6.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.926	I	0.074	I	0.000	I
I	I		I	323.0	I	26.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	ARM A	11.71	33.53	0.349		0.0	0.5	7.9		0.05	I
I	ARM B	7.80	35.59	0.219		0.0	0.3	4.1		0.04	I
I	ARM C	4.36	29.29	0.149		0.0	0.2	2.6		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	ARM A	13.99	33.50	0.418		0.5	0.7	10.5		0.05	I
I	ARM B	9.31	35.36	0.263		0.3	0.4	5.3		0.04	I
I	ARM C	5.21	28.51	0.183		0.2	0.2	3.3		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	ARM A	17.13	33.45	0.512		0.7	1.0	15.3		0.06	I
I	ARM B	11.41	35.05	0.325		0.4	0.5	7.1		0.04	I
I	ARM C	6.38	27.43	0.233		0.2	0.3	4.5		0.05	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	ARM A	17.13	33.45	0.512		1.0	1.0	15.7		0.06	I
I	ARM B	11.41	35.05	0.325		0.5	0.5	7.2		0.04	I
I	ARM C	6.38	27.42	0.233		0.3	0.3	4.5		0.05	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	ARM A	13.99	33.50	0.418		1.0	0.7	11.0		0.05	I
I	ARM B	9.31	35.36	0.263		0.5	0.4	5.5		0.04	I
I	ARM C	5.21	28.50	0.183		0.3	0.2	3.4		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	ARM A	11.71	33.53	0.349		0.7	0.5	8.2		0.05	I
I	ARM B	7.80	35.58	0.219		0.4	0.3	4.3		0.04	I
I	ARM C	4.36	29.28	0.149		0.2	0.2	2.7		0.04	I

 . QUEUE AT ARM A

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

 . QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5
17.45	0.5
18.00	0.4
18.15	0.3

 . QUEUE AT ARM C

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

17.45 0.3
 18.00 0.2
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1284.8	68.5	68.5
B	855.6	33.5	33.5
C	478.6	21.0	21.0
ALL	2619.0	123.0	123.0

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026site d.vai"
(drive-on-the-left) at 12:24:30 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	14.68	I	22.01	I	14.68
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.40	I	12.60	I	8.40
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.20	I	7.80	I	5.20

DEMAND SET TITLE: A19 / A63

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.773	I	0.227
I		I		I	0.0	I	908.0	I	266.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

I	I	ARM B	I	0.988	I	0.000	I	0.012	I
I	I		I	664.0	I	0.0	I	8.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.947	I	0.053	I	0.000	I
I	I		I	394.0	I	22.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	14.68	33.56	0.437		0.0	0.8	11.3		0.05
ARM B	8.40	34.92	0.241		0.0	0.3	4.7		0.04
ARM C	5.20	29.00	0.179		0.0	0.2	3.2		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	17.52	33.53	0.523		0.8	1.1	15.9		0.06
ARM B	10.03	34.56	0.290		0.3	0.4	6.0		0.04
ARM C	6.21	28.15	0.221		0.2	0.3	4.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	21.46	33.49	0.641		1.1	1.8	25.4		0.08
ARM B	12.28	34.07	0.361		0.4	0.6	8.3		0.05
ARM C	7.60	26.99	0.282		0.3	0.4	5.8		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	21.46	33.49	0.641		1.8	1.8	26.5		0.08
ARM B	12.28	34.07	0.361		0.6	0.6	8.4		0.05
ARM C	7.60	26.98	0.282		0.4	0.4	5.9		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	17.52	33.53	0.523		1.8	1.1	17.0		0.06
ARM B	10.03	34.55	0.290		0.6	0.4	6.2		0.04
ARM C	6.21	28.14	0.221		0.4	0.3	4.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	14.68	33.56	0.437		1.1	0.8	12.0		0.05
ARM B	8.40	34.91	0.241		0.4	0.3	4.8		0.04
ARM C	5.20	28.98	0.179		0.3	0.2	3.3		0.04

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.1 **
17.30	1.8 **
17.45	1.8 **
18.00	1.1 *
18.15	0.8 *

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.4
 18.00 0.3
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1609.8	108.1	108.1
B	921.5	38.5	38.5
C	570.4	26.7	26.7
ALL	3101.7	173.3	173.3

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026site E.vai"
(drive-on-the-left) at 12:25:02 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.64	I	17.46	I	11.64
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.63	I	11.44	I	7.63
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.50	I	6.75	I	4.50

DEMAND SET TITLE: A19 / A63

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.794	I	0.206
I		I		I	0.0	I	739.0	I	192.0
I		I		I	(10.0)	I	(10.0)	I	(10.0)

A63 A19 North 2026site E.vao

I	I	ARM B	I	0.990	I	0.000	I	0.010	I
I	I		I	604.0	I	0.0	I	6.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.931	I	0.069	I	0.000	I
I	I		I	335.0	I	25.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	11.64	33.54	0.347		0.0	0.5	7.8		0.05	I
I	I	ARM B	7.63	35.43	0.215		0.0	0.3	4.0		0.04	I
I	I	ARM C	4.50	29.39	0.153		0.0	0.2	2.7		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	13.90	33.50	0.415		0.5	0.7	10.4		0.05	I
I	I	ARM B	9.10	35.17	0.259		0.3	0.3	5.2		0.04	I
I	I	ARM C	5.37	28.61	0.188		0.2	0.2	3.4		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	17.02	33.46	0.509		0.7	1.0	15.1		0.06	I
I	I	ARM B	11.15	34.82	0.320		0.3	0.5	6.9		0.04	I
I	I	ARM C	6.58	27.56	0.239		0.2	0.3	4.6		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	17.02	33.46	0.509		1.0	1.0	15.4		0.06	I
I	I	ARM B	11.15	34.81	0.320		0.5	0.5	7.0		0.04	I
I	I	ARM C	6.58	27.56	0.239		0.3	0.3	4.7		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	13.90	33.50	0.415		1.0	0.7	10.9		0.05	I
I	I	ARM B	9.10	35.17	0.259		0.5	0.4	5.3		0.04	I
I	I	ARM C	5.37	28.61	0.188		0.3	0.2	3.5		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	11.64	33.54	0.347		0.7	0.5	8.1		0.05	I
I	I	ARM B	7.63	35.43	0.215		0.4	0.3	4.2		0.04	I
I	I	ARM C	4.50	29.37	0.153		0.2	0.2	2.8		0.04	I

QUEUE AT ARM A

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

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.3
17.30	0.5
17.45	0.5
18.00	0.4
18.15	0.3

QUEUE AT ARM C

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

17.45 0.3
 18.00 0.2
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1276.6	67.7	67.7
B	836.4	32.7	32.7
C	493.6	21.7	21.7
ALL	2606.7	122.1	122.1

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026site F.vai"
(drive-on-the-left) at 12:25:33 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.52	I	17.29	I	11.52
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.60	I	11.40	I	7.60
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.65	I	6.98	I	4.65

DEMAND SET TITLE: A19 / A63

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.791	I	0.209
I		I		I	0.0	I	729.0	I	193.0
I		I		I	(10.0)	I	(10.0)	I	(10.0)

17.45 0.3
 18.00 0.2
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1264.3	66.5	66.5
B	833.7	32.6	32.6
C	510.1	22.6	22.6
ALL	2608.0	121.6	121.6

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026site G1.vao"
(drive-on-the-left) at 14:07:44 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	12.50	I	18.75	I	12.50
I	ARM B	I	15.00	I	45.00	I	75.00	I	10.68	I	16.01	I	10.68
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.29	I	6.43	I	4.29

DEMAND SET TITLE: A19 / A63

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.895	I	0.105
I		I		I	0.0	I	895.0	I	105.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

A63 A19 North 2026site G1.vao

I	I	ARM B	I	0.867	I	0.000	I	0.133	I
I	I		I	740.0	I	0.0	I	114.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.799	I	0.201	I	0.000	I
I	I		I	274.0	I	69.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	12.50	33.25	0.376		0.0	0.6	8.8		0.05
ARM B	10.68	36.03	0.296		0.0	0.4	6.2		0.04
ARM C	4.29	28.50	0.150		0.0	0.2	2.6		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	14.93	33.16	0.450		0.6	0.8	12.0		0.05
ARM B	12.75	35.89	0.355		0.4	0.5	8.1		0.04
ARM C	5.12	27.56	0.186		0.2	0.2	3.4		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	18.28	33.03	0.553		0.8	1.2	17.9		0.07
ARM B	15.61	35.69	0.437		0.5	0.8	11.4		0.05
ARM C	6.27	26.27	0.239		0.2	0.3	4.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	18.28	33.03	0.553		1.2	1.2	18.5		0.07
ARM B	15.61	35.69	0.437		0.8	0.8	11.6		0.05
ARM C	6.27	26.26	0.239		0.3	0.3	4.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	14.93	33.15	0.450		1.2	0.8	12.6		0.05
ARM B	12.75	35.89	0.355		0.8	0.6	8.4		0.04
ARM C	5.12	27.55	0.186		0.3	0.2	3.5		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	12.50	33.24	0.376		0.8	0.6	9.2		0.05
ARM B	10.68	36.03	0.296		0.6	0.4	6.4		0.04
ARM C	4.29	28.49	0.151		0.2	0.2	2.7		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.8 *
17.45	0.8 *
18.00	0.6 *
18.15	0.4

QUEUE AT ARM C

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

17.45 0.3
 18.00 0.2
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1371.2	79.0	79.0
B	1171.0	52.2	52.2
C	470.3	21.5	21.5
ALL	3012.6	152.7	152.7

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026site G2.vao"
(drive-on-the-left) at 14:08:15 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	12.63	I	18.94	I	12.63	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	11.71	I	17.57	I	11.71	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.39	I	6.58	I	4.39	I

DEMAND SET TITLE: A19 / A63

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I
I	16.45 - 18.15	I		I		I		I		I
I		I	ARM A	I	0.000	I	0.902	I	0.098	I
I		I		I	0.0	I	911.0	I	99.0	I
I		I		I	(10.0)	I	(10.0)	I	(10.0)	I

I	ARM B	I	0.842	I	0.000	I	0.158	I
I		I	789.0	I	0.0	I	148.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I
I	ARM C	I	0.755	I	0.245	I	0.000	I
I		I	265.0	I	86.0	I	0.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	12.63	33.13	0.381		0.0	0.6	9.0		0.05
ARM B	11.71	36.07	0.325		0.0	0.5	7.1		0.04
ARM C	4.39	28.18	0.156		0.0	0.2	2.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	15.08	33.02	0.457		0.6	0.8	12.3		0.06
ARM B	13.99	35.94	0.389		0.5	0.6	9.4		0.05
ARM C	5.24	27.18	0.193		0.2	0.2	3.5		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	18.46	32.87	0.562		0.8	1.3	18.5		0.07
ARM B	17.13	35.75	0.479		0.6	0.9	13.4		0.05
ARM C	6.42	25.80	0.249		0.2	0.3	4.9		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	18.46	32.87	0.562		1.3	1.3	19.1		0.07
ARM B	17.13	35.75	0.479		0.9	0.9	13.7		0.05
ARM C	6.42	25.79	0.249		0.3	0.3	5.0		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	15.08	33.02	0.457		1.3	0.8	13.0		0.06
ARM B	13.99	35.93	0.389		0.9	0.6	9.8		0.05
ARM C	5.24	27.16	0.193		0.3	0.2	3.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	12.63	33.13	0.381		0.8	0.6	9.4		0.05
ARM B	11.71	36.07	0.325		0.6	0.5	7.3		0.04
ARM C	4.39	28.17	0.156		0.2	0.2	2.8		0.04

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.3 *
17.45	1.3 *
18.00	0.8 *
18.15	0.6 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.5

QUEUE AT ARM C

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

17.45 0.3
 18.00 0.2
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	1384.9	81.3	81.3
B	1284.8	60.7	60.7
C	481.3	22.5	22.5
ALL	3151.0	164.5	164.5

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026site H1.vao"
(drive-on-the-left) at 14:08:45 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.85	I	17.78	I	11.85
I	ARM B	I	15.00	I	45.00	I	75.00	I	9.96	I	14.94	I	9.96
I	ARM C	I	15.00	I	45.00	I	75.00	I	2.95	I	4.43	I	2.95

DEMAND SET TITLE: A19 / A63

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	0.800	0.200
I		I		0.0	758.0	190.0
I		I		(10.0)	(10.0)	(10.0)
I		I		I	I	I

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I	I	ARM B	I	0.992	I	0.000	I	0.008	I
I	I		I	791.0	I	0.0	I	6.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.886	I	0.114	I	0.000	I
I	I		I	209.0	I	27.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	11.85	33.52	0.353		0.0	0.5	8.0		0.05
ARM B	9.96	35.44	0.281		0.0	0.4	5.7		0.04
ARM C	2.95	28.17	0.105		0.0	0.1	1.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	14.15	33.49	0.423		0.5	0.7	10.7		0.05
ARM B	11.90	35.19	0.338		0.4	0.5	7.5		0.04
ARM C	3.52	27.16	0.130		0.1	0.1	2.2		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	17.33	33.44	0.518		0.7	1.1	15.6		0.06
ARM B	14.57	34.84	0.418		0.5	0.7	10.5		0.05
ARM C	4.31	25.78	0.167		0.1	0.2	3.0		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	17.33	33.44	0.518		1.1	1.1	16.0		0.06
ARM B	14.57	34.83	0.418		0.7	0.7	10.7		0.05
ARM C	4.31	25.77	0.167		0.2	0.2	3.0		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	14.15	33.49	0.423		1.1	0.7	11.3		0.05
ARM B	11.90	35.18	0.338		0.7	0.5	7.8		0.04
ARM C	3.52	27.15	0.130		0.2	0.1	2.3		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	11.85	33.52	0.353		0.7	0.5	8.4		0.05
ARM B	9.96	35.44	0.281		0.5	0.4	6.0		0.04
ARM C	2.95	28.15	0.105		0.1	0.1	1.8		0.04

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5 *
17.15	0.7 *
17.30	1.1 *
17.45	1.1 *
18.00	0.7 *
18.15	0.5 *

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.2
 18.00 0.1
 18.15 0.1

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	1299.9	70.0	70.0
B	1092.9	48.3	48.3
C	323.6	14.0	14.0
ALL	2716.4	132.3	132.3

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 North 2026site H2.vao"
(drive-on-the-left) at 14:09:13 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A19 / A63 North
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby District Council
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby LDF
STATUS: Draft 1
DESCRIPTION: Roundabout Assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - A19 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	9.50	I	11.20	I	18.00	I	80.00	I	50.0	I	0.533	I	37.074	I
I	ARM B	I	7.75	I	10.50	I	8.50	I	15.00	I	80.00	I	60.0	I	0.552	I	40.427	I
I	ARM C	I	7.00	I	9.00	I	8.50	I	21.00	I	80.00	I	62.0	I	0.521	I	36.642	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A19 / A63

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.98	I	17.96	I	11.98
I	ARM B	I	15.00	I	45.00	I	75.00	I	11.30	I	16.95	I	11.30
I	ARM C	I	15.00	I	45.00	I	75.00	I	2.60	I	3.90	I	2.60

DEMAND SET TITLE: A19 / A63

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	0.862	0.138
I		I		0.0	826.0	132.0
I		I		(10.0)	(10.0)	(10.0)
I		I		I	I	I

A63 A19 North 2026site H2.vao

I	I	ARM B	I	0.993	I	0.000	I	0.007	I
I	I		I	898.0	I	0.0	I	6.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.865	I	0.135	I	0.000	I
I	I		I	180.0	I	28.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	11.98	33.52	0.357		0.0	0.6	8.1		0.05
ARM B	11.30	35.84	0.315		0.0	0.5	6.8		0.04
ARM C	2.60	27.48	0.095		0.0	0.1	1.5		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	14.30	33.48	0.427		0.6	0.7	10.9		0.05
ARM B	13.49	35.67	0.378		0.5	0.6	9.0		0.05
ARM C	3.10	26.33	0.118		0.1	0.1	2.0		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	17.51	33.43	0.524		0.7	1.1	16.0		0.06
ARM B	16.53	35.42	0.467		0.6	0.9	12.8		0.05
ARM C	3.80	24.76	0.154		0.1	0.2	2.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	17.51	33.43	0.524		1.1	1.1	16.4		0.06
ARM B	16.53	35.42	0.467		0.9	0.9	13.1		0.05
ARM C	3.80	24.75	0.154		0.2	0.2	2.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	14.30	33.48	0.427		1.1	0.7	11.5		0.05
ARM B	13.49	35.66	0.378		0.9	0.6	9.3		0.05
ARM C	3.10	26.32	0.118		0.2	0.1	2.0		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	11.98	33.52	0.357		0.7	0.6	8.5		0.05
ARM B	11.30	35.84	0.315		0.6	0.5	7.0		0.04
ARM C	2.60	27.46	0.095		0.1	0.1	1.6		0.04

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.7 *
17.30	1.1 *
17.45	1.1 *
18.00	0.7 *
18.15	0.6 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.5

QUEUE AT ARM C

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

17.45 0.2
 18.00 0.1
 18.15 0.1

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	1313.6	71.4	71.4
B	1239.6	57.9	57.9
C	285.2	12.5	12.5
ALL	2838.4	141.9	141.9

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2008 Base.vai"
(drive-on-the-left) at 12:32:15 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	10.00	I	103.00	I	45.0	I	0.496	I	36.525	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	9.00	I	103.00	I	55.0	I	0.536	I	42.485	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	8.00	I	103.00	I	41.0	I	0.585	I	47.432	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	10.00	I	103.00	I	55.0	I	0.540	I	42.687	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	4.28	I	6.41	I	4.28
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.06	I	10.59	I	7.06
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.21	I	13.82	I	9.21
I	ARM D	I	15.00	I	45.00	I	75.00	I	3.40	I	5.10	I	3.40

DEMAND SET TITLE: A63/A19 South

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

I	I	ARM A	I	0.000	I	0.006	I	0.792	I	0.202	I
I	I		I	0.0	I	2.0	I	271.0	I	69.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM B	I	0.000	I	0.000	I	0.589	I	0.411	I
I	I		I	0.0	I	0.0	I	333.0	I	232.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM C	I	0.457	I	0.437	I	0.000	I	0.106	I
I	I		I	337.0	I	322.0	I	0.0	I	78.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM D	I	0.489	I	0.379	I	0.132	I	0.000	I
I	I		I	133.0	I	103.0	I	36.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	4.28	30.35	0.141		0.0	0.2	2.4		0.04	I
I	I	ARM B	7.06	36.10	0.196		0.0	0.2	3.6		0.03	I
I	I	ARM C	9.21	40.92	0.225		0.0	0.3	4.3		0.03	I
I	I	ARM D	3.40	34.36	0.099		0.0	0.1	1.6		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	5.10	29.79	0.171		0.2	0.2	3.1		0.04	I
I	I	ARM B	8.43	35.62	0.237		0.2	0.3	4.6		0.04	I
I	I	ARM C	11.00	40.49	0.272		0.3	0.4	5.5		0.03	I
I	I	ARM D	4.06	33.50	0.121		0.1	0.1	2.0		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	6.25	29.03	0.215		0.2	0.3	4.1		0.04	I
I	I	ARM B	10.33	34.94	0.296		0.3	0.4	6.2		0.04	I
I	I	ARM C	13.47	39.90	0.338		0.4	0.5	7.5		0.04	I
I	I	ARM D	4.97	32.30	0.154		0.1	0.2	2.7		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	6.25	29.03	0.215		0.3	0.3	4.1		0.04	I
I	I	ARM B	10.33	34.94	0.296		0.4	0.4	6.3		0.04	I
I	I	ARM C	13.47	39.90	0.338		0.5	0.5	7.6		0.04	I
I	I	ARM D	4.97	32.30	0.154		0.2	0.2	2.7		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	5.10	29.79	0.171		0.3	0.2	3.1		0.04	I
I	I	ARM B	8.43	35.61	0.237		0.4	0.3	4.7		0.04	I
I	I	ARM C	11.00	40.49	0.272		0.5	0.4	5.7		0.03	I
I	I	ARM D	4.06	33.49	0.121		0.2	0.1	2.1		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	4.28	30.34	0.141		0.2	0.2	2.5		0.04	I
I	I	ARM B	7.06	36.10	0.196		0.3	0.2	3.7		0.03	I
I	I	ARM C	9.21	40.91	0.225		0.4	0.3	4.4		0.03	I
I	I	ARM D	3.40	34.34	0.099		0.1	0.1	1.7		0.03	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

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

18.00 0.3
18.15 0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *		I
			I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	A	I	469.0	I 312.6	I 19.3	I 0.04	I 19.3	I 0.04	I
I	B	I	774.7	I 516.5	I 29.1	I 0.04	I 29.1	I 0.04	I
I	C	I	1010.6	I 673.7	I 35.1	I 0.03	I 35.1	I 0.03	I
I	D	I	373.0	I 248.6	I 12.8	I 0.03	I 12.8	I 0.03	I
I	ALL	I	2627.2	I 1751.5	I 96.2	I 0.04	I 96.3	I 0.04	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Base.vai"
(drive-on-the-left) at 12:32:59 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	6.22	I	9.34	I	6.22
I	ARM B	I	15.00	I	45.00	I	8.02	I	12.04	I	8.02
I	ARM C	I	15.00	I	45.00	I	10.96	I	16.44	I	10.96
I	ARM D	I	15.00	I	45.00	I	4.06	I	6.09	I	4.06

DEMAND SET TITLE: A63/A19 South

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

I	I	ARM A	I	0.000	I	0.010	I	0.825	I	0.165	I
I	I	I	I	0.0	I	5.0	I	411.0	I	82.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.000	I	0.000	I	0.555	I	0.445	I
I	I	I	I	0.0	I	0.0	I	356.0	I	286.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.481	I	0.430	I	0.000	I	0.089	I
I	I	I	I	422.0	I	377.0	I	0.0	I	78.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.486	I	0.385	I	0.129	I	0.000	I
I	I	I	I	158.0	I	125.0	I	42.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	6.22	32.04	0.194		0.0	0.2	3.6		0.04	I
I	I	ARM B	8.02	38.12	0.210		0.0	0.3	3.9		0.03	I
I	I	ARM C	10.96	44.41	0.247		0.0	0.3	4.8		0.03	I
I	I	ARM D	4.06	35.98	0.113		0.0	0.1	1.9		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	7.43	31.33	0.237		0.2	0.3	4.6		0.04	I
I	I	ARM B	9.58	37.36	0.256		0.3	0.3	5.1		0.04	I
I	I	ARM C	13.09	43.83	0.299		0.3	0.4	6.3		0.03	I
I	I	ARM D	4.85	34.85	0.139		0.1	0.2	2.4		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	9.10	30.36	0.300		0.3	0.4	6.3		0.05	I
I	I	ARM B	11.74	36.32	0.323		0.3	0.5	7.0		0.04	I
I	I	ARM C	16.03	43.04	0.373		0.4	0.6	8.8		0.04	I
I	I	ARM D	5.94	33.29	0.178		0.2	0.2	3.2		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	9.10	30.36	0.300		0.4	0.4	6.4		0.05	I
I	I	ARM B	11.74	36.31	0.323		0.5	0.5	7.1		0.04	I
I	I	ARM C	16.03	43.04	0.373		0.6	0.6	8.9		0.04	I
I	I	ARM D	5.94	33.29	0.178		0.2	0.2	3.3		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	7.43	31.32	0.237		0.4	0.3	4.7		0.04	I
I	I	ARM B	9.58	37.35	0.257		0.5	0.3	5.3		0.04	I
I	I	ARM C	13.09	43.83	0.299		0.6	0.4	6.5		0.03	I
I	I	ARM D	4.85	34.84	0.139		0.2	0.2	2.5		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	6.22	32.03	0.194		0.3	0.2	3.7		0.04	I
I	I	ARM B	8.02	38.11	0.211		0.3	0.3	4.1		0.03	I
I	I	ARM C	10.96	44.40	0.247		0.4	0.3	5.0		0.03	I
I	I	ARM D	4.06	35.97	0.113		0.2	0.1	1.9		0.03	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

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

18.00 0.3
18.15 0.3

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	TOTAL DEMAND		* QUEUEING * * DELAY *		* INCLUSIVE QUEUEING * * DELAY *	
		(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	A	I 682.9	I 455.2	I 29.3	I 0.04	I 29.3	I 0.04
I	B	I 880.3	I 586.9	I 32.5	I 0.04	I 32.5	I 0.04
I	C	I 1202.6	I 801.7	I 40.2	I 0.03	I 40.2	I 0.03
I	D	I 445.6	I 297.1	I 15.1	I 0.03	I 15.1	I 0.03
I	ALL	I 3211.4	I 2140.9	I 117.2	I 0.04	I 117.2	I 0.04

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Site A.vao"
(drive-on-the-left) at 12:33:36 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.14	I	9.21	I	6.14
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.16	I	12.24	I	8.16
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.11	I	16.67	I	11.11
I	ARM D	I	15.00	I	45.00	I	75.00	I	4.03	I	6.04	I	4.03

DEMAND SET TITLE: A63/A19 South

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

A63 A19 South 2026 Site A.vao

I	I	ARM A	I	0.000	I	0.010	I	0.825	I	0.165	I
I	I	I	I	0.0	I	5.0	I	405.0	I	81.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.000	I	0.000	I	0.564	I	0.436	I
I	I	I	I	0.0	I	0.0	I	368.0	I	285.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.489	I	0.424	I	0.000	I	0.087	I
I	I	I	I	435.0	I	377.0	I	0.0	I	77.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.484	I	0.385	I	0.130	I	0.000	I
I	I	I	I	156.0	I	124.0	I	42.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	6.14	32.04	0.192		0.0	0.2	3.5		0.04	I
I	I	ARM B	8.16	38.17	0.214		0.0	0.3	4.0		0.03	I
I	I	ARM C	11.11	44.43	0.250		0.0	0.3	4.9		0.03	I
I	I	ARM D	4.03	35.89	0.112		0.0	0.1	1.9		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	7.33	31.34	0.234		0.2	0.3	4.5		0.04	I
I	I	ARM B	9.75	37.42	0.260		0.3	0.4	5.2		0.04	I
I	I	ARM C	13.27	43.85	0.303		0.3	0.4	6.4		0.03	I
I	I	ARM D	4.81	34.74	0.138		0.1	0.2	2.4		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	8.98	30.37	0.296		0.3	0.4	6.2		0.05	I
I	I	ARM B	11.94	36.39	0.328		0.4	0.5	7.2		0.04	I
I	I	ARM C	16.25	43.06	0.377		0.4	0.6	8.9		0.04	I
I	I	ARM D	5.89	33.15	0.178		0.2	0.2	3.2		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	8.98	30.37	0.296		0.4	0.4	6.3		0.05	I
I	I	ARM B	11.94	36.38	0.328		0.5	0.5	7.3		0.04	I
I	I	ARM C	16.25	43.06	0.377		0.6	0.6	9.1		0.04	I
I	I	ARM D	5.89	33.15	0.178		0.2	0.2	3.2		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	7.33	31.33	0.234		0.4	0.3	4.7		0.04	I
I	I	ARM B	9.75	37.41	0.261		0.5	0.4	5.4		0.04	I
I	I	ARM C	13.27	43.85	0.303		0.6	0.4	6.6		0.03	I
I	I	ARM D	4.81	34.73	0.138		0.2	0.2	2.4		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	6.14	32.04	0.192		0.3	0.2	3.6		0.04	I
I	I	ARM B	8.16	38.16	0.214		0.4	0.3	4.1		0.03	I
I	I	ARM C	11.11	44.42	0.250		0.4	0.3	5.1		0.03	I
I	I	ARM D	4.03	35.87	0.112		0.2	0.1	1.9		0.03	I

QUEUE AT ARM A

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

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5
17.45	0.5

18.00 0.4
18.15 0.3

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *		I
			I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	A	I	673.3	I 448.8	I 28.7	I 0.04	I 28.7	I 0.04	I
I	B	I	895.4	I 596.9	I 33.2	I 0.04	I 33.2	I 0.04	I
I	C	I	1219.0	I 812.7	I 41.0	I 0.03	I 41.0	I 0.03	I
I	D	I	441.5	I 294.4	I 15.0	I 0.03	I 15.0	I 0.03	I
I	ALL	I	3229.2	I 2152.8	I 118.0	I 0.04	I 118.0	I 0.04	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Site D.vao"
(drive-on-the-left) at 12:34:21 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

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

DEMAND SET TITLE: A63/A19 South

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

A63 A19 South 2026 Site D.vao

I	ARM A	0.000	0.013	0.773	0.213
I		0.0	5.0	290.0	80.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I					
I	ARM B	0.000	0.000	0.374	0.626
I		0.0	0.0	285.0	477.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I					
I	ARM C	0.431	0.480	0.000	0.089
I		373.0	415.0	0.0	77.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I					
I	ARM D	0.484	0.385	0.130	0.000
I		156.0	124.0	42.0	0.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I					

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	4.69	31.79	0.147		0.0	0.2	2.6		0.04
ARM B	9.52	39.02	0.244		0.0	0.3	4.8		0.03
ARM C	10.81	42.90	0.252		0.0	0.3	5.0		0.03
ARM D	4.03	36.06	0.112		0.0	0.1	1.9		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	5.60	31.04	0.180		0.2	0.2	3.3		0.04
ARM B	11.37	38.43	0.296		0.3	0.4	6.2		0.04
ARM C	12.91	42.02	0.307		0.3	0.4	6.6		0.03
ARM D	4.81	34.94	0.138		0.1	0.2	2.4		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	6.86	30.00	0.229		0.2	0.3	4.4		0.04
ARM B	13.93	37.62	0.370		0.4	0.6	8.7		0.04
ARM C	15.81	40.82	0.387		0.4	0.6	9.3		0.04
ARM D	5.89	33.41	0.176		0.2	0.2	3.2		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	6.86	30.00	0.229		0.3	0.3	4.4		0.04
ARM B	13.93	37.62	0.370		0.6	0.6	8.8		0.04
ARM C	15.81	40.82	0.387		0.6	0.6	9.5		0.04
ARM D	5.89	33.40	0.176		0.2	0.2	3.2		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	5.60	31.03	0.180		0.3	0.2	3.4		0.04
ARM B	11.37	38.42	0.296		0.6	0.4	6.4		0.04
ARM C	12.91	42.01	0.307		0.6	0.4	6.8		0.03
ARM D	4.81	34.93	0.138		0.2	0.2	2.4		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	4.69	31.78	0.147		0.2	0.2	2.6		0.04
ARM B	9.52	39.01	0.244		0.4	0.3	4.9		0.03
ARM C	10.81	42.88	0.252		0.4	0.3	5.1		0.03
ARM D	4.03	36.05	0.112		0.2	0.1	1.9		0.03

QUEUE AT ARM A

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

QUEUE AT ARM B

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

18.00 0.4
 18.15 0.3

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *	
		I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	A	I 514.2	I 342.8	I 20.6	I 0.04	I 20.6	I 0.04
I	B	I 1044.9	I 696.6	I 39.7	I 0.04	I 39.7	I 0.04
I	C	I 1186.1	I 790.7	I 42.2	I 0.04	I 42.2	I 0.04
I	D	I 441.5	I 294.4	I 14.9	I 0.03	I 14.9	I 0.03
I	ALL	I 3186.7	I 2124.5	I 117.4	I 0.04	I 117.4	I 0.04

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Site E.vao"
(drive-on-the-left) at 12:34:54 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.49	I	9.73	I	6.49	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.06	I	12.09	I	8.06	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.93	I	16.39	I	10.93	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	5.18	I	7.76	I	5.18	I

DEMAND SET TITLE: A63/A19 South

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

I	ARM A	0.000	0.013	0.790	0.197
I		0.0	7.0	410.0	102.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM B	0.000	0.000	0.558	0.442
I		0.0	0.0	360.0	285.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM C	0.481	0.431	0.000	0.088
I		420.0	377.0	0.0	77.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM D	0.597	0.302	0.101	0.000
I		247.0	125.0	42.0	0.0
I		(10.0)	(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	6.49	32.04	0.202		0.0	0.3	3.7		0.04
ARM B	8.06	37.99	0.212		0.0	0.3	4.0		0.03
ARM C	10.93	44.26	0.247		0.0	0.3	4.8		0.03
ARM D	5.18	36.00	0.144		0.0	0.2	2.5		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	7.75	31.33	0.247		0.3	0.3	4.9		0.04
ARM B	9.63	37.19	0.259		0.3	0.3	5.2		0.04
ARM C	13.05	43.65	0.299		0.3	0.4	6.3		0.03
ARM D	6.18	34.87	0.177		0.2	0.2	3.2		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	9.49	30.36	0.313		0.3	0.5	6.7		0.05
ARM B	11.79	36.11	0.327		0.3	0.5	7.1		0.04
ARM C	15.98	42.82	0.373		0.4	0.6	8.8		0.04
ARM D	7.57	33.31	0.227		0.2	0.3	4.3		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	9.49	30.36	0.313		0.5	0.5	6.8		0.05
ARM B	11.79	36.11	0.327		0.5	0.5	7.3		0.04
ARM C	15.98	42.81	0.373		0.6	0.6	8.9		0.04
ARM D	7.57	33.31	0.227		0.3	0.3	4.4		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	7.75	31.32	0.247		0.5	0.3	5.0		0.04
ARM B	9.63	37.19	0.259		0.5	0.4	5.3		0.04
ARM C	13.05	43.64	0.299		0.6	0.4	6.5		0.03
ARM D	6.18	34.86	0.177		0.3	0.2	3.3		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	6.49	32.03	0.203		0.3	0.3	3.9		0.04
ARM B	8.06	37.97	0.212		0.4	0.3	4.1		0.03
ARM C	10.93	44.25	0.247		0.4	0.3	5.0		0.03
ARM D	5.18	35.98	0.144		0.2	0.2	2.5		0.03

QUEUE AT ARM A

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

QUEUE AT ARM B

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

18.00 0.4
18.15 0.3

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	TOTAL DEMAND		* QUEUEING * * DELAY *		* INCLUSIVE QUEUEING * * DELAY *	
		(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	A	711.7	474.4	31.0	0.04	31.0	0.04
I	B	884.4	589.6	33.0	0.04	33.0	0.04
I	C	1198.4	799.0	40.3	0.03	40.3	0.03
I	D	567.7	378.5	20.2	0.04	20.2	0.04
I	ALL	3362.2	2241.5	124.5	0.04	124.5	0.04

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Site F.vao"
(drive-on-the-left) at 12:35:28 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.20	I	9.30	I	6.20	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.06	I	12.09	I	8.06	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.13	I	16.69	I	11.13	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	4.05	I	6.08	I	4.05	I

DEMAND SET TITLE: A63/A19 South

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I I	I

A63 A19 South 2026 Site F.vao

I	ARM A	0.000	0.010	0.827	0.163
I		0.0	5.0	410.0	81.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I					
I	ARM B	0.000	0.000	0.558	0.442
I		0.0	0.0	360.0	285.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I					
I	ARM C	0.490	0.424	0.000	0.087
I		436.0	377.0	0.0	77.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I					
I	ARM D	0.485	0.386	0.130	0.000
I		157.0	125.0	42.0	0.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I					

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	6.20	32.04	0.194		0.0	0.2	3.5		0.04
ARM B	8.06	38.14	0.211		0.0	0.3	4.0		0.03
ARM C	11.13	44.43	0.250		0.0	0.3	4.9		0.03
ARM D	4.05	35.88	0.113		0.0	0.1	1.9		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	7.40	31.33	0.236		0.2	0.3	4.6		0.04
ARM B	9.63	37.38	0.258		0.3	0.3	5.1		0.04
ARM C	13.28	43.85	0.303		0.3	0.4	6.4		0.03
ARM D	4.84	34.73	0.139		0.1	0.2	2.4		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	9.07	30.36	0.299		0.3	0.4	6.3		0.05
ARM B	11.79	36.34	0.324		0.3	0.5	7.1		0.04
ARM C	16.27	43.06	0.378		0.4	0.6	9.0		0.04
ARM D	5.92	33.14	0.179		0.2	0.2	3.2		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	9.07	30.36	0.299		0.4	0.4	6.4		0.05
ARM B	11.79	36.33	0.325		0.5	0.5	7.2		0.04
ARM C	16.27	43.06	0.378		0.6	0.6	9.1		0.04
ARM D	5.92	33.14	0.179		0.2	0.2	3.3		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	7.40	31.32	0.236		0.4	0.3	4.7		0.04
ARM B	9.63	37.37	0.258		0.5	0.3	5.3		0.04
ARM C	13.28	43.85	0.303		0.6	0.4	6.6		0.03
ARM D	4.84	34.72	0.139		0.2	0.2	2.5		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	6.20	32.03	0.194		0.3	0.2	3.7		0.04
ARM B	8.06	38.13	0.211		0.3	0.3	4.1		0.03
ARM C	11.13	44.42	0.250		0.4	0.3	5.1		0.03
ARM D	4.05	35.87	0.113		0.2	0.1	1.9		0.03

QUEUE AT ARM A

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

QUEUE AT ARM B

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

18.00 0.3
18.15 0.3

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *		I
			(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	680.1	453.4	29.1	0.04	29.1	0.04	I
I	B	I	884.4	589.6	32.7	0.04	32.7	0.04	I
I	C	I	1220.4	813.6	41.1	0.03	41.1	0.03	I
I	D	I	444.3	296.2	15.1	0.03	15.1	0.03	I
I	ALL	I	3229.2	2152.8	118.1	0.04	118.1	0.04	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Site G1.vai"
(drive-on-the-left) at 14:10:20 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	RATE OF FLOW (VEH/MIN) IF FLOW STOPS BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK		
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.00	I	7.50	I	5.00
I	ARM B	I	15.00	I	45.00	I	75.00	I	9.81	I	14.72	I	9.81
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.02	I	16.54	I	11.02
I	ARM D	I	15.00	I	45.00	I	75.00	I	3.95	I	5.93	I	3.95

DEMAND SET TITLE: A63/A19 South

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

A63 A19 South 2026 Site G1.vao

I	I	ARM A	I	0.000	I	0.013	I	0.788	I	0.200	I
I	I	I	I	0.0	I	5.0	I	315.0	I	80.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.001	I	0.000	I	0.624	I	0.375	I
I	I	I	I	1.0	I	0.0	I	490.0	I	294.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.473	I	0.441	I	0.000	I	0.086	I
I	I	I	I	417.0	I	389.0	I	0.0	I	76.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.481	I	0.389	I	0.130	I	0.000	I
I	I	I	I	152.0	I	123.0	I	41.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	5.00	31.98	0.156		0.0	0.2	2.7		0.04	I
I	I	ARM B	9.81	38.84	0.253		0.0	0.3	5.0		0.03	I
I	I	ARM C	11.02	44.35	0.249		0.0	0.3	4.9		0.03	I
I	I	ARM D	3.95	35.93	0.110		0.0	0.1	1.8		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	5.97	31.26	0.191		0.2	0.2	3.5		0.04	I
I	I	ARM B	11.72	38.22	0.307		0.3	0.4	6.5		0.04	I
I	I	ARM C	13.16	43.76	0.301		0.3	0.4	6.4		0.03	I
I	I	ARM D	4.72	34.78	0.136		0.1	0.2	2.3		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	7.31	30.27	0.242		0.2	0.3	4.7		0.04	I
I	I	ARM B	14.35	37.37	0.384		0.4	0.6	9.2		0.04	I
I	I	ARM C	16.12	42.96	0.375		0.4	0.6	8.9		0.04	I
I	I	ARM D	5.78	33.21	0.174		0.2	0.2	3.1		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	7.31	30.27	0.242		0.3	0.3	4.8		0.04	I
I	I	ARM B	14.35	37.37	0.384		0.6	0.6	9.3		0.04	I
I	I	ARM C	16.12	42.95	0.375		0.6	0.6	9.0		0.04	I
I	I	ARM D	5.78	33.20	0.174		0.2	0.2	3.2		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	5.97	31.25	0.191		0.3	0.2	3.6		0.04	I
I	I	ARM B	11.72	38.22	0.307		0.6	0.4	6.7		0.04	I
I	I	ARM C	13.16	43.76	0.301		0.6	0.4	6.6		0.03	I
I	I	ARM D	4.72	34.77	0.136		0.2	0.2	2.4		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	5.00	31.97	0.156		0.2	0.2	2.8		0.04	I
I	I	ARM B	9.81	38.83	0.253		0.4	0.3	5.1		0.03	I
I	I	ARM C	11.02	44.34	0.249		0.4	0.3	5.0		0.03	I
I	I	ARM D	3.95	35.91	0.110		0.2	0.1	1.9		0.03	I

QUEUE AT ARM A

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

QUEUE AT ARM B

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

18.00 0.4
18.15 0.3

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *	
		I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	A	I 548.5	I 365.7	I 22.1	I 0.04	I 22.1	I 0.04
I	B	I 1076.4	I 717.6	I 41.9	I 0.04	I 41.9	I 0.04
I	C	I 1209.4	I 806.3	I 40.7	I 0.03	I 40.7	I 0.03
I	D	I 433.3	I 288.9	I 14.7	I 0.03	I 14.7	I 0.03
I	ALL	I 3267.6	I 2178.4	I 119.4	I 0.04	I 119.4	I 0.04

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Site G2.vai"
(drive-on-the-left) at 14:10:54 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	5.11	I	7.67	I	5.11	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	10.18	I	15.26	I	10.18	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.09	I	16.63	I	11.09	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	3.92	I	5.89	I	3.92	I

DEMAND SET TITLE: A63/A19 South

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

A63 A19 South 2026 Site G2.vao

I	I	ARM A	I	0.000	I	0.012	I	0.792	I	0.196	I
I	I	I	I	0.0	I	5.0	I	324.0	I	80.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.001	I	0.000	I	0.614	I	0.385	I
I	I	I	I	1.0	I	0.0	I	500.0	I	313.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.496	I	0.419	I	0.000	I	0.085	I
I	I	I	I	440.0	I	372.0	I	0.0	I	75.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.478	I	0.392	I	0.131	I	0.000	I
I	I	I	I	150.0	I	123.0	I	41.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	5.11	32.09	0.159		0.0	0.2	2.8		0.04	I
I	I	ARM B	10.18	38.78	0.262		0.0	0.4	5.2		0.03	I
I	I	ARM C	11.09	44.20	0.251		0.0	0.3	4.9		0.03	I
I	I	ARM D	3.92	35.88	0.109		0.0	0.1	1.8		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	6.10	31.39	0.194		0.2	0.2	3.6		0.04	I
I	I	ARM B	12.15	38.14	0.319		0.4	0.5	6.9		0.04	I
I	I	ARM C	13.24	43.58	0.304		0.3	0.4	6.5		0.03	I
I	I	ARM D	4.69	34.73	0.135		0.1	0.2	2.3		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	7.48	30.44	0.246		0.2	0.3	4.8		0.04	I
I	I	ARM B	14.88	37.27	0.399		0.5	0.7	9.8		0.04	I
I	I	ARM C	16.22	42.73	0.379		0.4	0.6	9.0		0.04	I
I	I	ARM D	5.74	33.14	0.173		0.2	0.2	3.1		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	7.48	30.43	0.246		0.3	0.3	4.9		0.04	I
I	I	ARM B	14.88	37.27	0.399		0.7	0.7	9.9		0.04	I
I	I	ARM C	16.22	42.73	0.379		0.6	0.6	9.1		0.04	I
I	I	ARM D	5.74	33.14	0.173		0.2	0.2	3.1		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	6.10	31.39	0.194		0.3	0.2	3.7		0.04	I
I	I	ARM B	12.15	38.14	0.319		0.7	0.5	7.1		0.04	I
I	I	ARM C	13.24	43.58	0.304		0.6	0.4	6.6		0.03	I
I	I	ARM D	4.69	34.72	0.135		0.2	0.2	2.4		0.03	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	5.11	32.08	0.159		0.2	0.2	2.9		0.04	I
I	I	ARM B	10.18	38.77	0.262		0.5	0.4	5.4		0.03	I
I	I	ARM C	11.09	44.19	0.251		0.4	0.3	5.1		0.03	I
I	I	ARM D	3.92	35.87	0.109		0.2	0.1	1.9		0.03	I

QUEUE AT ARM A

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

QUEUE AT ARM B

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

18.00 0.5
18.15 0.4

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	560.8	I	373.9	I	22.6	I	0.04	I
I	B	I	1116.2	I	744.1	I	44.4	I	0.04	I
I	C	I	1216.3	I	810.8	I	41.3	I	0.03	I
I	D	I	430.6	I	287.0	I	14.6	I	0.03	I
I	ALL	I	3323.8	I	2215.9	I	122.9	I	0.04	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Site H1.vai"
(drive-on-the-left) at 14:12:06 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	7.49	I	11.23	I	7.49	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	9.66	I	14.49	I	9.66	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	16.85	I	25.28	I	16.85	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	4.00	I	6.00	I	4.00	I

DEMAND SET TITLE: A63/A19 South

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I I	I

A63 A19 South 2026 Site H1.vao

I	ARM A	0.000	0.003	0.865	0.132
I		0.0	2.0	518.0	79.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM B	0.000	0.000	0.634	0.366
I		0.0	0.0	490.0	283.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM C	0.524	0.384	0.000	0.093
I		706.0	517.0	0.0	125.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM D	0.478	0.391	0.131	0.000
I		153.0	125.0	42.0	0.0
I		(10.0)	(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	7.49	31.11	0.241		0.0	0.3	4.7		0.04
ARM B	9.66	37.37	0.259		0.0	0.3	5.1		0.04
ARM C	16.85	44.46	0.379		0.0	0.6	9.0		0.04
ARM D	4.00	32.91	0.122		0.0	0.1	2.0		0.03

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	8.94	30.22	0.296		0.3	0.4	6.2		0.05
ARM B	11.54	36.46	0.316		0.3	0.5	6.8		0.04
ARM C	20.12	43.89	0.458		0.6	0.8	12.4		0.04
ARM D	4.78	31.17	0.153		0.1	0.2	2.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	10.95	29.00	0.378		0.4	0.6	8.9		0.06
ARM B	14.13	35.21	0.401		0.5	0.7	9.8		0.05
ARM C	24.64	43.11	0.572		0.8	1.3	19.4		0.05
ARM D	5.85	28.80	0.203		0.2	0.3	3.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	10.95	28.99	0.378		0.6	0.6	9.1		0.06
ARM B	14.13	35.20	0.401		0.7	0.7	10.0		0.05
ARM C	24.64	43.11	0.572		1.3	1.3	19.9		0.05
ARM D	5.85	28.78	0.203		0.3	0.3	3.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	8.94	30.21	0.296		0.6	0.4	6.4		0.05
ARM B	11.54	36.44	0.317		0.7	0.5	7.1		0.04
ARM C	20.12	43.88	0.459		1.3	0.9	13.0		0.04
ARM D	4.78	31.15	0.153		0.3	0.2	2.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	7.49	31.10	0.241		0.4	0.3	4.8		0.04
ARM B	9.66	37.35	0.259		0.5	0.4	5.3		0.04
ARM C	16.85	44.45	0.379		0.9	0.6	9.3		0.04
ARM D	4.00	32.88	0.122		0.2	0.1	2.1		0.03

QUEUE AT ARM A

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

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.7 *
17.45	0.7 *

18.00 0.5
18.15 0.4

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.3 *
17.45	1.3 *
18.00	0.9 *
18.15	0.6 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	821.4	I	547.6	I	40.1	I	0.05	I
I	B	I	1059.9	I	706.6	I	44.2	I	0.04	I
I	C	I	1848.4	I	1232.3	I	83.0	I	0.04	I
I	D	I	438.8	I	292.5	I	17.2	I	0.04	I
I	ALL	I	4168.5	I	2779.0	I	184.5	I	0.04	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-
"p:\JC\FeeNo\B1368600.XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A19 South 2026 Site H2.vai"
(drive-on-the-left) at 14:12:48 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A19 South
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/A19 South Roundabout assessment

.INPUT DATA

ARM A - A19 North
ARM B - A63 East
ARM C - A19 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	7.00	I	9.00	I	7.00	I	31.00	I	103.00	I	45.0	I	0.532	I	39.216	I
I	ARM B	I	8.25	I	10.50	I	18.00	I	29.00	I	103.00	I	55.0	I	0.583	I	46.216	I
I	ARM C	I	9.50	I	11.00	I	12.00	I	28.00	I	103.00	I	41.0	I	0.642	I	52.094	I
I	ARM D	I	8.75	I	10.25	I	10.50	I	31.00	I	103.00	I	55.0	I	0.582	I	45.959	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A19 South

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	
I	ARM	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	
I	ARM	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	
I	ARM A	I	15.00	I	45.00	I	75.00	I	8.16	I	12.24	I	8.16	I	15.00	I	45.00	I	75.00
I	ARM B	I	15.00	I	45.00	I	75.00	I	10.41	I	15.62	I	10.41	I	15.00	I	45.00	I	75.00
I	ARM C	I	15.00	I	45.00	I	75.00	I	20.13	I	30.19	I	20.13	I	15.00	I	45.00	I	75.00
I	ARM D	I	15.00	I	45.00	I	75.00	I	4.05	I	6.08	I	4.05	I	15.00	I	45.00	I	75.00

DEMAND SET TITLE: A63/A19 South

I	TIME	I	FROM/TO I	ARM A	ARM B	ARM C	ARM D	I
I	16.45 - 18.15	I	I	I	I	I	I	I

A63 A19 South 2026 Site H2.vao

I	I	ARM A	I	0.000	I	0.003	I	0.877	I	0.119	I
I	I	I	I	0.0	I	2.0	I	573.0	I	78.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.000	I	0.000	I	0.658	I	0.342	I
I	I	I	I	0.0	I	0.0	I	548.0	I	285.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.521	I	0.393	I	0.000	I	0.086	I
I	I	I	I	839.0	I	633.0	I	0.0	I	138.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.469	I	0.383	I	0.148	I	0.000	I
I	I	I	I	152.0	I	124.0	I	48.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	8.16	30.31	0.269		0.0	0.4	5.4		0.05	I
I	I	ARM B	10.41	36.93	0.282		0.0	0.4	5.8		0.04	I
I	I	ARM C	20.13	44.45	0.453		0.0	0.8	12.1		0.04	I
I	I	ARM D	4.05	31.11	0.130		0.0	0.1	2.2		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	9.75	29.26	0.333		0.4	0.5	7.3		0.05	I
I	I	ARM B	12.43	35.93	0.346		0.4	0.5	7.8		0.04	I
I	I	ARM C	24.03	43.88	0.548		0.8	1.2	17.7		0.05	I
I	I	ARM D	4.84	29.02	0.167		0.1	0.2	3.0		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	11.94	27.83	0.429		0.5	0.7	10.9		0.06	I
I	I	ARM B	15.23	34.57	0.440		0.5	0.8	11.5		0.05	I
I	I	ARM C	29.43	43.10	0.683		1.2	2.1	30.6		0.07	I
I	I	ARM D	5.92	26.16	0.226		0.2	0.3	4.3		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	11.94	27.82	0.429		0.7	0.7	11.2		0.06	I
I	I	ARM B	15.23	34.56	0.441		0.8	0.8	11.8		0.05	I
I	I	ARM C	29.43	43.09	0.683		2.1	2.1	32.0		0.07	I
I	I	ARM D	5.92	26.13	0.227		0.3	0.3	4.4		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	9.75	29.24	0.333		0.7	0.5	7.7		0.05	I
I	I	ARM B	12.43	35.92	0.346		0.8	0.5	8.1		0.04	I
I	I	ARM C	24.03	43.87	0.548		2.1	1.2	18.8		0.05	I
I	I	ARM D	4.84	28.97	0.167		0.3	0.2	3.1		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	8.16	30.29	0.269		0.5	0.4	5.6		0.05	I
I	I	ARM B	10.41	36.91	0.282		0.5	0.4	6.0		0.04	I
I	I	ARM C	20.13	44.44	0.453		1.2	0.8	12.7		0.04	I
I	I	ARM D	4.05	31.07	0.130		0.2	0.2	2.3		0.04	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.4
17.15	0.5 *
17.30	0.8 *
17.45	0.8 *

18.00 0.5 *
18.15 0.4

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.2	**
17.30	2.1	**
17.45	2.1	**
18.00	1.2	*
18.15	0.8	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.2

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING * * DELAY *		* INCLUSIVE QUEUEING * * DELAY *		I
			(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	895.4	596.9	48.2	0.05	48.2	0.05	I
I	B	I	1142.2	761.5	50.9	0.04	50.9	0.04	I
I	C	I	2207.6	1471.8	123.8	0.06	123.8	0.06	I
I	D	I	444.3	296.2	19.2	0.04	19.2	0.04	I
I	ALL	I	4689.5	3126.4	242.2	0.05	242.2	0.05	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT_Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2008 Base.vai"
(drive-on-the-left) at 12:10:42 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	12.35	I	18.53	I	12.35
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.47	I	6.71	I	4.47
I	ARM C	I	15.00	I	45.00	I	75.00	I	8.02	I	12.04	I	8.02
I	ARM D	I	15.00	I	45.00	I	75.00	I	5.32	I	7.99	I	5.32

DEMAND SET TITLE: A63/A1041

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

I	I	ARM A	I	0.000	I	0.018	I	0.720	I	0.262	I
I	I		I	0.0	I	18.0	I	711.0	I	259.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM B	I	0.047	I	0.000	I	0.746	I	0.207	I
I	I		I	17.0	I	0.0	I	267.0	I	74.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM C	I	0.908	I	0.022	I	0.008	I	0.062	I
I	I		I	583.0	I	14.0	I	5.0	I	40.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM D	I	0.521	I	0.472	I	0.007	I	0.000	I
I	I		I	222.0	I	201.0	I	3.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	12.35	37.91	0.326		0.0	0.5	7.1		0.04
ARM B	4.47	35.65	0.126		0.0	0.1	2.1		0.03
ARM C	8.02	33.44	0.240		0.0	0.3	4.6		0.04
ARM D	5.32	33.13	0.161		0.0	0.2	2.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	14.75	37.59	0.392		0.5	0.6	9.5		0.04
ARM B	5.34	34.12	0.157		0.1	0.2	2.8		0.03
ARM C	9.58	32.96	0.291		0.3	0.4	6.0		0.04
ARM D	6.36	32.27	0.197		0.2	0.2	3.6		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	18.06	37.16	0.486		0.6	0.9	13.8		0.05
ARM B	6.54	32.02	0.204		0.2	0.3	3.8		0.04
ARM C	11.74	32.31	0.363		0.4	0.6	8.4		0.05
ARM D	7.79	31.11	0.250		0.2	0.3	4.9		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	18.06	37.16	0.486		0.9	0.9	14.1		0.05
ARM B	6.54	32.01	0.204		0.3	0.3	3.8		0.04
ARM C	11.74	32.31	0.363		0.6	0.6	8.5		0.05
ARM D	7.79	31.10	0.250		0.3	0.3	5.0		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	14.75	37.59	0.392		0.9	0.6	9.9		0.04
ARM B	5.34	34.10	0.157		0.3	0.2	2.8		0.03
ARM C	9.58	32.96	0.291		0.6	0.4	6.3		0.04
ARM D	6.36	32.26	0.197		0.3	0.2	3.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	12.35	37.91	0.326		0.6	0.5	7.4		0.04
ARM B	4.47	35.62	0.126		0.2	0.1	2.2		0.03
ARM C	8.02	33.43	0.240		0.4	0.3	4.8		0.04
ARM D	5.32	33.11	0.161		0.2	0.2	2.9		0.04

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.5

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3

18.00 0.2
18.15 0.1

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	I	I	I	I	I	I	I	I		
I	A	I	1354.8	I	903.2	I	61.8	I	0.05	I
I	B	I	490.9	I	327.3	I	17.5	I	0.04	I
I	C	I	880.3	I	586.9	I	38.7	I	0.04	I
I	D	I	584.1	I	389.4	I	23.0	I	0.04	I
I	ALL	I	3310.1	I	2206.7	I	141.0	I	0.04	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT_Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Base.vai"
(drive-on-the-left) at 12:11:34 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.76	I	23.64	I	15.76	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.70	I	8.55	I	5.70	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.84	I	14.76	I	9.84	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.35	I	9.52	I	6.35	I

DEMAND SET TITLE: A63/A1041

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

I	I	ARM A	I	0.000	I	0.017	I	0.725	I	0.258	I
I	I		I	0.0	I	22.0	I	914.0	I	325.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM B	I	0.072	I	0.000	I	0.331	I	0.596	I
I	I		I	33.0	I	0.0	I	151.0	I	272.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM C	I	0.910	I	0.024	I	0.008	I	0.058	I
I	I		I	716.0	I	19.0	I	6.0	I	46.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM D	I	0.555	I	0.437	I	0.008	I	0.000	I
I	I		I	282.0	I	222.0	I	4.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	15.76	37.71	0.418		0.0	0.7	10.5		0.05	I
I	I	ARM B	5.70	33.49	0.170		0.0	0.2	3.0		0.04	I
I	I	ARM C	9.84	31.49	0.312		0.0	0.5	6.7		0.05	I
I	I	ARM D	6.35	32.04	0.198		0.0	0.2	3.6		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	18.82	37.35	0.504		0.7	1.0	14.8		0.05	I
I	I	ARM B	6.81	31.53	0.216		0.2	0.3	4.1		0.04	I
I	I	ARM C	11.75	30.63	0.383		0.5	0.6	9.1		0.05	I
I	I	ARM D	7.58	30.97	0.245		0.2	0.3	4.8		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	23.05	36.86	0.625		1.0	1.6	23.9		0.07	I
I	I	ARM B	8.34	28.86	0.289		0.3	0.4	6.0		0.05	I
I	I	ARM C	14.39	29.46	0.488		0.6	0.9	13.9		0.07	I
I	I	ARM D	9.29	29.52	0.315		0.3	0.5	6.7		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	23.05	36.86	0.625		1.6	1.7	24.8		0.07	I
I	I	ARM B	8.34	28.84	0.289		0.4	0.4	6.1		0.05	I
I	I	ARM C	14.39	29.45	0.489		0.9	1.0	14.2		0.07	I
I	I	ARM D	9.29	29.50	0.315		0.5	0.5	6.9		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	18.82	37.35	0.504		1.7	1.0	15.7		0.05	I
I	I	ARM B	6.81	31.49	0.216		0.4	0.3	4.2		0.04	I
I	I	ARM C	11.75	30.62	0.384		1.0	0.6	9.6		0.05	I
I	I	ARM D	7.58	30.95	0.245		0.5	0.3	5.0		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	15.76	37.70	0.418		1.0	0.7	11.0		0.05	I
I	I	ARM B	5.70	33.45	0.170		0.3	0.2	3.1		0.04	I
I	I	ARM C	9.84	31.48	0.313		0.6	0.5	7.0		0.05	I
I	I	ARM D	6.35	32.02	0.198		0.3	0.2	3.8		0.04	I

. QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 **
17.30	1.6 ***
17.45	1.7 ***
18.00	1.0 *
18.15	0.7 *

. QUEUE AT ARM B

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

18.00 0.3
18.15 0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	0.9 *
17.45	1.0 *
18.00	0.6 *
18.15	0.5

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *	
		I	I	I	I	I	I
I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
I	A	I 1729.1	I 1152.7	I 100.8	I 0.06	I 100.8	I 0.06
I	B	I 625.3	I 416.8	I 26.5	I 0.04	I 26.5	I 0.04
I	C	I 1079.1	I 719.4	I 60.4	I 0.06	I 60.4	I 0.06
I	D	I 696.6	I 464.4	I 30.8	I 0.04	I 30.8	I 0.04
I	ALL	I 4130.1	I 2753.4	I 218.5	I 0.05	I 218.5	I 0.05

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Site A.vai"
(drive-on-the-left) at 12:12:20 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.77	I	23.66	I	15.77	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.88	I	8.81	I	5.88	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.86	I	14.79	I	9.86	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.32	I	9.49	I	6.32	I

DEMAND SET TITLE: A63/A1041

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I I	I

I	I	ARM A	I	0.000	I	0.018	I	0.726	I	0.256	I
I	I	I	I	0.0	I	23.0	I	916.0	I	323.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.070	I	0.000	I	0.323	I	0.606	I
I	I	I	I	33.0	I	0.0	I	152.0	I	285.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.909	I	0.025	I	0.009	I	0.057	I
I	I	I	I	717.0	I	20.0	I	7.0	I	45.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.553	I	0.439	I	0.008	I	0.000	I
I	I	I	I	280.0	I	222.0	I	4.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	15.77	37.69	0.418		0.0	0.7	10.5		0.05	I
I	I	ARM B	5.88	33.48	0.175		0.0	0.2	3.1		0.04	I
I	I	ARM C	9.86	31.42	0.314		0.0	0.5	6.7		0.05	I
I	I	ARM D	6.32	32.02	0.198		0.0	0.2	3.6		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	18.84	37.33	0.505		0.7	1.0	14.9		0.05	I
I	I	ARM B	7.02	31.52	0.223		0.2	0.3	4.2		0.04	I
I	I	ARM C	11.78	30.54	0.386		0.5	0.6	9.2		0.05	I
I	I	ARM D	7.55	30.95	0.244		0.2	0.3	4.8		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	23.07	36.84	0.626		1.0	1.7	24.0		0.07	I
I	I	ARM B	8.59	28.85	0.298		0.3	0.4	6.2		0.05	I
I	I	ARM C	14.42	29.35	0.491		0.6	1.0	14.0		0.07	I
I	I	ARM D	9.25	29.48	0.314		0.3	0.5	6.7		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	23.07	36.84	0.626		1.7	1.7	24.9		0.07	I
I	I	ARM B	8.59	28.83	0.298		0.4	0.4	6.3		0.05	I
I	I	ARM C	14.42	29.34	0.492		1.0	1.0	14.4		0.07	I
I	I	ARM D	9.25	29.47	0.314		0.5	0.5	6.8		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	18.84	37.33	0.505		1.7	1.0	15.8		0.05	I
I	I	ARM B	7.02	31.48	0.223		0.4	0.3	4.4		0.04	I
I	I	ARM C	11.78	30.53	0.386		1.0	0.6	9.7		0.05	I
I	I	ARM D	7.55	30.93	0.244		0.5	0.3	4.9		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	15.77	37.69	0.419		1.0	0.7	11.0		0.05	I
I	I	ARM B	5.88	33.44	0.176		0.3	0.2	3.2		0.04	I
I	I	ARM C	9.86	31.40	0.314		0.6	0.5	7.0		0.05	I
I	I	ARM D	6.32	32.00	0.198		0.3	0.2	3.8		0.04	I

 . QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 **
17.30	1.7 **
17.45	1.7 **
18.00	1.0 *
18.15	0.7 *

 . QUEUE AT ARM B

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

18.00 0.3
18.15 0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	1.0 *
17.45	1.0 *
18.00	0.6 *
18.15	0.5

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	1730.5	I	1153.6	I	101.1	I	0.06	I
I	B	I	644.5	I	429.6	I	27.6	I	0.04	I
I	C	I	1081.9	I	721.3	I	61.0	I	0.06	I
I	D	I	693.8	I	462.6	I	30.6	I	0.04	I
I	ALL	I	4150.7	I	2767.1	I	220.3	I	0.05	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Site D.vai"
(drive-on-the-left) at 12:13:20 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.02	I	22.54	I	15.02	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.75	I	11.63	I	7.75	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.75	I	14.63	I	9.75	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.81	I	10.22	I	6.81	I

DEMAND SET TITLE: A63/A1041

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

I	I	ARM A	I	0.000	I	0.022	I	0.710	I	0.269	I
I	I	I	I	0.0	I	26.0	I	853.0	I	323.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.037	I	0.000	I	0.329	I	0.634	I
I	I	I	I	23.0	I	0.0	I	204.0	I	393.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.908	I	0.027	I	0.008	I	0.058	I
I	I	I	I	708.0	I	21.0	I	6.0	I	45.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.514	I	0.479	I	0.007	I	0.000	I
I	I	I	I	280.0	I	261.0	I	4.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	15.02	37.41	0.402		0.0	0.7	9.8		0.04
ARM B	7.75	33.99	0.228		0.0	0.3	4.3		0.04
ARM C	9.75	30.74	0.317		0.0	0.5	6.8		0.05
ARM D	6.81	32.15	0.212		0.0	0.3	4.0		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	17.94	36.99	0.485		0.7	0.9	13.8		0.05
ARM B	9.25	32.13	0.288		0.3	0.4	6.0		0.04
ARM C	11.64	29.73	0.392		0.5	0.6	9.4		0.06
ARM D	8.13	31.11	0.262		0.3	0.4	5.2		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	21.97	36.43	0.603		0.9	1.5	21.9		0.07
ARM B	11.33	29.60	0.383		0.4	0.6	9.1		0.05
ARM C	14.26	28.35	0.503		0.6	1.0	14.7		0.07
ARM D	9.96	29.68	0.336		0.4	0.5	7.4		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	21.97	36.42	0.603		1.5	1.5	22.6		0.07
ARM B	11.33	29.58	0.383		0.6	0.6	9.3		0.05
ARM C	14.26	28.34	0.503		1.0	1.0	15.1		0.07
ARM D	9.96	29.67	0.336		0.5	0.5	7.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	17.94	36.99	0.485		1.5	0.9	14.6		0.05
ARM B	9.25	32.10	0.288		0.6	0.4	6.2		0.04
ARM C	11.64	29.71	0.392		1.0	0.6	9.9		0.06
ARM D	8.13	31.09	0.262		0.5	0.4	5.4		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	15.02	37.40	0.402		0.9	0.7	10.3		0.04
ARM B	7.75	33.95	0.228		0.4	0.3	4.5		0.04
ARM C	9.75	30.72	0.317		0.6	0.5	7.1		0.05
ARM D	6.81	32.13	0.212		0.4	0.3	4.1		0.04

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	0.9 **
17.30	1.5 **
17.45	1.5 **
18.00	0.9 *
18.15	0.7 *

QUEUE AT ARM B

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

18.00 0.4
18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	1.0 *
17.45	1.0 *
18.00	0.6 *
18.15	0.5

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *
18.00	0.4
18.15	0.3

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	1648.2	I	1098.8	I	92.9	I	0.06	I
I	B	I	850.2	I	566.8	I	39.4	I	0.05	I
I	C	I	1069.5	I	713.0	I	63.0	I	0.06	I
I	D	I	747.3	I	498.2	I	33.7	I	0.05	I
I	ALL	I	4315.2	I	2876.8	I	229.0	I	0.05	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Site E.vai"
(drive-on-the-left) at 12:15:11 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.76	I	23.64	I	15.76	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.89	I	8.83	I	5.89	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.07	I	15.11	I	10.07	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.36	I	9.54	I	6.36	I

DEMAND SET TITLE: A63/A1041

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

I	I	ARM A	I	0.000	I	0.017	I	0.726	I	0.257	I
I	I	I	I	0.0	I	22.0	I	915.0	I	324.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.070	I	0.000	I	0.344	I	0.586	I
I	I	I	I	33.0	I	0.0	I	162.0	I	276.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.908	I	0.030	I	0.005	I	0.057	I
I	I	I	I	732.0	I	24.0	I	4.0	I	46.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.556	I	0.436	I	0.008	I	0.000	I
I	I	I	I	283.0	I	222.0	I	4.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	15.76	37.69	0.418		0.0	0.7	10.5		0.05	I
I	I	ARM B	5.89	33.51	0.176		0.0	0.2	3.1		0.04	I
I	I	ARM C	10.07	31.47	0.320		0.0	0.5	6.9		0.05	I
I	I	ARM D	6.36	31.91	0.199		0.0	0.2	3.7		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	18.82	37.32	0.504		0.7	1.0	14.8		0.05	I
I	I	ARM B	7.03	31.55	0.223		0.2	0.3	4.2		0.04	I
I	I	ARM C	12.03	30.61	0.393		0.5	0.6	9.5		0.05	I
I	I	ARM D	7.60	30.81	0.247		0.2	0.3	4.8		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	23.05	36.83	0.626		1.0	1.7	24.0		0.07	I
I	I	ARM B	8.61	28.89	0.298		0.3	0.4	6.2		0.05	I
I	I	ARM C	14.73	29.43	0.501		0.6	1.0	14.5		0.07	I
I	I	ARM D	9.30	29.32	0.317		0.3	0.5	6.8		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	23.05	36.83	0.626		1.7	1.7	24.9		0.07	I
I	I	ARM B	8.61	28.86	0.298		0.4	0.4	6.4		0.05	I
I	I	ARM C	14.73	29.42	0.501		1.0	1.0	15.0		0.07	I
I	I	ARM D	9.30	29.31	0.317		0.5	0.5	7.0		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	18.82	37.32	0.504		1.7	1.0	15.7		0.05	I
I	I	ARM B	7.03	31.51	0.223		0.4	0.3	4.4		0.04	I
I	I	ARM C	12.03	30.60	0.393		1.0	0.7	10.0		0.05	I
I	I	ARM D	7.60	30.79	0.247		0.5	0.3	5.0		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	15.76	37.68	0.418		1.0	0.7	11.0		0.05	I
I	I	ARM B	5.89	33.46	0.176		0.3	0.2	3.2		0.04	I
I	I	ARM C	10.07	31.46	0.320		0.7	0.5	7.2		0.05	I
I	I	ARM D	6.36	31.88	0.200		0.3	0.3	3.8		0.04	I

 .QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 **
17.30	1.7 **
17.45	1.7 **
18.00	1.0 *
18.15	0.7 *

 .QUEUE AT ARM B

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

18.00 0.3
18.15 0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	1.0 *
17.45	1.0 *
18.00	0.7 *
18.15	0.5

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	1729.1	I	1152.7	I	101.0	I	0.06	I
I	B	I	645.8	I	430.6	I	27.6	I	0.04	I
I	C	I	1105.2	I	736.8	I	63.1	I	0.06	I
I	D	I	697.9	I	465.3	I	31.1	I	0.04	I
I	ALL	I	4178.1	I	2785.4	I	222.7	I	0.05	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Site F.vai"
(drive-on-the-left) at 12:15:55 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	16.00	I	24.00	I	16.00	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.75	I	8.63	I	5.75	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.14	I	15.21	I	10.14	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.32	I	9.49	I	6.32	I

DEMAND SET TITLE: A63/A1041

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

I	I	ARM A	I	0.000	I	0.017	I	0.730	I	0.253	I
I	I	I	I	0.0	I	22.0	I	934.0	I	324.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.072	I	0.000	I	0.328	I	0.600	I
I	I	I	I	33.0	I	0.0	I	151.0	I	276.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.908	I	0.025	I	0.011	I	0.057	I
I	I	I	I	736.0	I	20.0	I	9.0	I	46.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.553	I	0.439	I	0.008	I	0.000	I
I	I	I	I	280.0	I	222.0	I	4.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	16.00	37.68	0.425		0.0	0.7	10.8		0.05	I
I	I	ARM B	5.75	33.32	0.173		0.0	0.2	3.1		0.04	I
I	I	ARM C	10.14	31.47	0.322		0.0	0.5	7.0		0.05	I
I	I	ARM D	6.32	31.87	0.198		0.0	0.2	3.6		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	19.11	37.32	0.512		0.7	1.0	15.3		0.05	I
I	I	ARM B	6.87	31.32	0.219		0.2	0.3	4.1		0.04	I
I	I	ARM C	12.11	30.61	0.395		0.5	0.7	9.6		0.05	I
I	I	ARM D	7.55	30.77	0.245		0.2	0.3	4.8		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	23.40	36.82	0.636		1.0	1.7	25.0		0.07	I
I	I	ARM B	8.41	28.61	0.294		0.3	0.4	6.1		0.05	I
I	I	ARM C	14.83	29.43	0.504		0.7	1.0	14.7		0.07	I
I	I	ARM D	9.25	29.27	0.316		0.3	0.5	6.8		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	23.40	36.82	0.636		1.7	1.7	25.9		0.07	I
I	I	ARM B	8.41	28.58	0.294		0.4	0.4	6.2		0.05	I
I	I	ARM C	14.83	29.42	0.504		1.0	1.0	15.1		0.07	I
I	I	ARM D	9.25	29.26	0.316		0.5	0.5	6.9		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	19.11	37.31	0.512		1.7	1.1	16.3		0.06	I
I	I	ARM B	6.87	31.28	0.219		0.4	0.3	4.3		0.04	I
I	I	ARM C	12.11	30.59	0.396		1.0	0.7	10.1		0.05	I
I	I	ARM D	7.55	30.75	0.246		0.5	0.3	5.0		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	16.00	37.67	0.425		1.1	0.7	11.3		0.05	I
I	I	ARM B	5.75	33.27	0.173		0.3	0.2	3.2		0.04	I
I	I	ARM C	10.14	31.46	0.322		0.7	0.5	7.3		0.05	I
I	I	ARM D	6.32	31.85	0.199		0.3	0.2	3.8		0.04	I

 . QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 **
17.30	1.7 **
17.45	1.7 **
18.00	1.1 *
18.15	0.7 *

 . QUEUE AT ARM B

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

18.00 0.3
18.15 0.2

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	1755.2	I	1170.1	I	104.5	I	0.06	I
I	B	I	630.8	I	420.5	I	27.0	I	0.04	I
I	C	I	1112.1	I	741.4	I	63.8	I	0.06	I
I	D	I	693.8	I	462.6	I	30.9	I	0.04	I
I	ALL	I	4191.8	I	2794.5	I	226.2	I	0.05	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Site G1.vai"
(drive-on-the-left) at 14:02:11 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.45	I	23.17	I	15.45	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.05	I	12.08	I	8.05	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	9.93	I	14.89	I	9.93	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.47	I	9.71	I	6.47	I

DEMAND SET TITLE: A63/A1041

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

I	I	ARM A	I	0.000	I	0.019	I	0.725	I	0.256	I
I	I	I	I	0.0	I	24.0	I	896.0	I	316.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.053	I	0.000	I	0.289	I	0.658	I
I	I	I	I	34.0	I	0.0	I	186.0	I	424.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.894	I	0.043	I	0.008	I	0.055	I
I	I	I	I	710.0	I	34.0	I	6.0	I	44.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.533	I	0.459	I	0.008	I	0.000	I
I	I	I	I	276.0	I	238.0	I	4.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	15.45	37.48	0.412		0.0	0.7	10.2		0.05	I
I	I	ARM B	8.05	33.71	0.239		0.0	0.3	4.6		0.04	I
I	I	ARM C	9.93	30.49	0.325		0.0	0.5	7.1		0.05	I
I	I	ARM D	6.47	31.97	0.203		0.0	0.3	3.7		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	18.45	37.08	0.498		0.7	1.0	14.5		0.05	I
I	I	ARM B	9.61	31.79	0.302		0.3	0.4	6.4		0.05	I
I	I	ARM C	11.85	29.44	0.403		0.5	0.7	9.9		0.06	I
I	I	ARM D	7.73	30.89	0.250		0.3	0.3	4.9		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	22.60	36.53	0.618		1.0	1.6	23.3		0.07	I
I	I	ARM B	11.77	29.18	0.403		0.4	0.7	9.9		0.06	I
I	I	ARM C	14.51	27.99	0.519		0.7	1.1	15.6		0.07	I
I	I	ARM D	9.47	29.41	0.322		0.3	0.5	7.0		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	22.60	36.53	0.619		1.6	1.6	24.1		0.07	I
I	I	ARM B	11.77	29.15	0.404		0.7	0.7	10.1		0.06	I
I	I	ARM C	14.51	27.98	0.519		1.1	1.1	16.0		0.07	I
I	I	ARM D	9.47	29.40	0.322		0.5	0.5	7.1		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	18.45	37.08	0.498		1.6	1.0	15.3		0.05	I
I	I	ARM B	9.61	31.75	0.303		0.7	0.4	6.6		0.05	I
I	I	ARM C	11.85	29.42	0.403		1.1	0.7	10.4		0.06	I
I	I	ARM D	7.73	30.87	0.250		0.5	0.3	5.1		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	15.45	37.48	0.412		1.0	0.7	10.8		0.05	I
I	I	ARM B	8.05	33.67	0.239		0.4	0.3	4.8		0.04	I
I	I	ARM C	9.93	30.47	0.326		0.7	0.5	7.4		0.05	I
I	I	ARM D	6.47	31.95	0.203		0.3	0.3	3.9		0.04	I

 .QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 **
17.30	1.6 **
17.45	1.6 **
18.00	1.0 *
18.15	0.7 *

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.7 *
17.45	0.7 *

18.00 0.4
18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.7 *
17.30	1.1 *
17.45	1.1 *
18.00	0.7 *
18.15	0.5

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	1694.8	I	1129.9	I	98.2	I	0.06	I
I	B	I	883.1	I	588.7	I	42.4	I	0.05	I
I	C	I	1088.7	I	725.8	I	66.3	I	0.06	I
I	D	I	710.3	I	473.5	I	31.7	I	0.04	I
I	ALL	I	4376.9	I	2917.9	I	238.7	I	0.05	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Site G2.vai"
(drive-on-the-left) at 14:04:22 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I				
I	ARM A	I	15.00	I	45.00	I	75.00	I	15.43	I	23.14	I	15.43	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.65	I	12.97	I	8.65	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.02	I	15.04	I	10.02	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	6.26	I	9.39	I	6.26	I

DEMAND SET TITLE: A63/A1041

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I
I	16.45 - 18.15	I		I		I		I		I		I

I	I	ARM A	I	0.000	I	0.020	I	0.725	I	0.254	I
I	I		I	0.0	I	25.0	I	895.0	I	314.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM B	I	0.051	I	0.000	I	0.290	I	0.659	I
I	I		I	35.0	I	0.0	I	201.0	I	456.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM C	I	0.885	I	0.052	I	0.007	I	0.055	I
I	I		I	710.0	I	42.0	I	6.0	I	44.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM D	I	0.547	I	0.445	I	0.008	I	0.000	I
I	I		I	274.0	I	223.0	I	4.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	15.43	37.53	0.411		0.0	0.7	10.2		0.05
ARM B	8.65	33.73	0.256		0.0	0.3	5.1		0.04
ARM C	10.02	30.28	0.331		0.0	0.5	7.2		0.05
ARM D	6.26	31.91	0.196		0.0	0.2	3.6		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	18.42	37.14	0.496		0.7	1.0	14.4		0.05
ARM B	10.33	31.82	0.325		0.3	0.5	7.1		0.05
ARM C	11.97	29.18	0.410		0.5	0.7	10.2		0.06
ARM D	7.48	30.81	0.243		0.2	0.3	4.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	22.56	36.61	0.616		1.0	1.6	23.1		0.07
ARM B	12.65	29.21	0.433		0.5	0.8	11.1		0.06
ARM C	14.66	27.68	0.530		0.7	1.1	16.2		0.08
ARM D	9.16	29.32	0.312		0.3	0.5	6.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	22.56	36.60	0.616		1.6	1.6	23.9		0.07
ARM B	12.65	29.19	0.433		0.8	0.8	11.4		0.06
ARM C	14.66	27.66	0.530		1.1	1.1	16.8		0.08
ARM D	9.16	29.31	0.313		0.5	0.5	6.8		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	18.42	37.14	0.496		1.6	1.0	15.2		0.05
ARM B	10.33	31.78	0.325		0.8	0.5	7.4		0.05
ARM C	11.97	29.16	0.411		1.1	0.7	10.8		0.06
ARM D	7.48	30.79	0.243		0.5	0.3	4.9		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	15.43	37.53	0.411		1.0	0.7	10.7		0.05
ARM B	8.65	33.69	0.257		0.5	0.3	5.3		0.04
ARM C	10.02	30.26	0.331		0.7	0.5	7.6		0.05
ARM D	6.26	31.88	0.196		0.3	0.2	3.7		0.04

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 **
17.30	1.6 **
17.45	1.6 **
18.00	1.0 *
18.15	0.7 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.8 *
17.45	0.8 *

18.00 0.5
18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.7 *
17.30	1.1 *
17.45	1.1 *
18.00	0.7 *
18.15	0.5

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	1692.1	I	1128.0	I	97.4	I	0.06	I
I	B	I	948.9	I	632.6	I	47.3	I	0.05	I
I	C	I	1099.7	I	733.1	I	68.8	I	0.06	I
I	D	I	687.0	I	458.0	I	30.4	I	0.04	I
I	ALL	I	4427.6	I	2951.8	I	244.0	I	0.06	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Site H1.vai"
(drive-on-the-left) at 14:05:15 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	16.88	I	25.31	I	16.88	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	6.15	I	9.23	I	6.15	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.91	I	16.37	I	10.91	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	8.05	I	12.08	I	8.05	I

DEMAND SET TITLE: A63/A1041

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I I	I

I	I	ARM A	I	0.000	I	0.016	I	0.693	I	0.291	I
I	I	I	I	0.0	I	22.0	I	935.0	I	393.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.067	I	0.000	I	0.262	I	0.671	I
I	I	I	I	33.0	I	0.0	I	129.0	I	330.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.832	I	0.103	I	0.007	I	0.058	I
I	I	I	I	726.0	I	90.0	I	6.0	I	51.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.483	I	0.511	I	0.006	I	0.000	I
I	I	I	I	311.0	I	329.0	I	4.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	16.88	36.42	0.463		0.0	0.9	12.6		0.05	I
I	I	ARM B	6.15	32.79	0.188		0.0	0.2	3.4		0.04	I
I	I	ARM C	10.91	30.62	0.356		0.0	0.6	8.1		0.05	I
I	I	ARM D	8.05	31.47	0.256		0.0	0.3	5.0		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	20.15	35.81	0.563		0.9	1.3	18.6		0.06	I
I	I	ARM B	7.34	30.69	0.239		0.2	0.3	4.6		0.04	I
I	I	ARM C	13.03	29.59	0.440		0.6	0.8	11.5		0.06	I
I	I	ARM D	9.61	30.29	0.317		0.3	0.5	6.8		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	24.68	34.97	0.706		1.3	2.3	33.6		0.10	I
I	I	ARM B	8.99	27.84	0.323		0.3	0.5	7.0		0.05	I
I	I	ARM C	15.96	28.18	0.566		0.8	1.3	18.7		0.08	I
I	I	ARM D	11.77	28.69	0.410		0.5	0.7	10.2		0.06	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	24.68	34.96	0.706		2.3	2.4	35.5		0.10	I
I	I	ARM B	8.99	27.80	0.324		0.5	0.5	7.1		0.05	I
I	I	ARM C	15.96	28.16	0.567		1.3	1.3	19.4		0.08	I
I	I	ARM D	11.77	28.67	0.411		0.7	0.7	10.4		0.06	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	20.15	35.79	0.563		2.4	1.3	20.1		0.06	I
I	I	ARM B	7.34	30.62	0.240		0.5	0.3	4.8		0.04	I
I	I	ARM C	13.03	29.56	0.441		1.3	0.8	12.2		0.06	I
I	I	ARM D	9.61	30.27	0.318		0.7	0.5	7.1		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	16.88	36.40	0.464		1.3	0.9	13.3		0.05	I
I	I	ARM B	6.15	32.73	0.188		0.3	0.2	3.5		0.04	I
I	I	ARM C	10.91	30.60	0.357		0.8	0.6	8.5		0.05	I
I	I	ARM D	8.05	31.44	0.256		0.5	0.3	5.3		0.04	I

 . QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.9 *
17.15	1.3 **
17.30	2.3 **
17.45	2.4 **
18.00	1.3 *
18.15	0.9 *

 . QUEUE AT ARM B

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

18.00 0.3
18.15 0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.3 *
17.45	1.3 *
18.00	0.8 *
18.15	0.6 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.7 *
17.45	0.7 *
18.00	0.5
18.15	0.3

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *		I
			(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	1851.1	1234.1	I	133.7	I	0.07	I
I	B	I	674.6	449.8	I	30.5	I	0.05	I
I	C	I	1197.1	798.0	I	78.5	I	0.07	I
I	D	I	883.1	588.7	I	44.8	I	0.05	I
I	ALL	I	4605.9	3070.6	I	287.5	I	0.06	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A63 A1041 2026 Site H2.vai"
(drive-on-the-left) at 14:06:01 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/A1041
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A53/A1041 roundabout assessment

.INPUT DATA

ARM A - A1041 North
ARM B - A63 East
ARM C - A1041 South
ARM D - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	8.50	I	10.50	I	8.00	I	16.50	I	80.00	I	57.0	I	0.583	I	43.485	I
I	ARM B	I	8.50	I	10.50	I	8.00	I	21.00	I	80.00	I	35.0	I	0.640	I	47.807	I
I	ARM C	I	7.15	I	9.00	I	9.00	I	22.00	I	80.00	I	47.0	I	0.558	I	39.466	I
I	ARM D	I	6.50	I	11.25	I	18.00	I	28.00	I	80.00	I	63.0	I	0.563	I	41.223	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/A1041

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	17.09	I	25.63	I	17.09	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	6.68	I	10.01	I	6.68	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.95	I	16.42	I	10.95	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	9.49	I	14.23	I	9.49	I

DEMAND SET TITLE: A63/A1041

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I I	I

I	I	ARM A	I	0.000	I	0.016	I	0.693	I	0.291	I
I	I		I	0.0	I	22.0	I	947.0	I	398.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM B	I	0.062	I	0.000	I	0.225	I	0.713	I
I	I		I	33.0	I	0.0	I	120.0	I	381.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM C	I	0.816	I	0.115	I	0.007	I	0.062	I
I	I		I	715.0	I	101.0	I	6.0	I	54.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I
I	I	ARM D	I	0.453	I	0.542	I	0.005	I	0.000	I
I	I		I	344.0	I	411.0	I	4.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I		I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	17.09	35.74	0.478		0.0	0.9	13.3		0.05	I
I	I	ARM B	6.68	32.65	0.204		0.0	0.3	3.8		0.04	I
I	I	ARM C	10.95	30.23	0.362		0.0	0.6	8.3		0.05	I
I	I	ARM D	9.49	31.47	0.301		0.0	0.4	6.3		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	20.40	35.00	0.583		0.9	1.4	20.2		0.07	I
I	I	ARM B	7.97	30.53	0.261		0.3	0.4	5.2		0.04	I
I	I	ARM C	13.08	29.12	0.449		0.6	0.8	11.9		0.06	I
I	I	ARM D	11.33	30.29	0.374		0.4	0.6	8.8		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	24.99	33.98	0.735		1.4	2.7	38.3		0.11	I
I	I	ARM B	9.76	27.65	0.353		0.4	0.5	8.0		0.06	I
I	I	ARM C	16.01	27.61	0.580		0.8	1.4	19.7		0.09	I
I	I	ARM D	13.88	28.69	0.484		0.6	0.9	13.6		0.07	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	24.99	33.97	0.736		2.7	2.7	40.9		0.11	I
I	I	ARM B	9.76	27.60	0.354		0.5	0.5	8.2		0.06	I
I	I	ARM C	16.01	27.59	0.580		1.4	1.4	20.5		0.09	I
I	I	ARM D	13.88	28.67	0.484		0.9	0.9	14.0		0.07	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	20.40	34.98	0.583		2.7	1.4	22.0		0.07	I
I	I	ARM B	7.97	30.45	0.262		0.5	0.4	5.4		0.04	I
I	I	ARM C	13.08	29.09	0.449		1.4	0.8	12.7		0.06	I
I	I	ARM D	11.33	30.26	0.374		0.9	0.6	9.2		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	17.09	35.73	0.478		1.4	0.9	14.2		0.05	I
I	I	ARM B	6.68	32.59	0.205		0.4	0.3	3.9		0.04	I
I	I	ARM C	10.95	30.20	0.363		0.8	0.6	8.7		0.05	I
I	I	ARM D	9.49	31.44	0.302		0.6	0.4	6.6		0.05	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *
17.45	0.5 *

18.00 0.4
18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.6 *
17.15	0.8 *
17.30	1.4 *
17.45	1.4 *
18.00	0.8 *
18.15	0.6 *

.QUEUE AT ARM D

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

. QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	1874.4	I	1249.6	I	148.9	I	0.08	I
I	B	I	732.2	I	488.2	I	34.5	I	0.05	I
I	C	I	1201.2	I	800.8	I	81.8	I	0.07	I
I	D	I	1040.7	I	693.8	I	58.5	I	0.06	I
I	ALL	I	4848.6	I	3232.4	I	323.7	I	0.07	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2008 Base.vai"
(drive-on-the-left) at 12:43:12 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.98	I	1.46	I	0.98
I	ARM B	I	15.00	I	45.00	I	75.00	I	4.35	I	6.52	I	4.35
I	ARM C	I	15.00	I	45.00	I	75.00	I	5.19	I	7.78	I	5.19

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.000	I	1.000
I		I		I	0.0	I	0.0	I	78.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

I	ARM B	I	0.138	I	0.000	I	0.862	I
I		I	48.0	I	0.0	I	300.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I
I	ARM C	I	0.345	I	0.655	I	0.000	I
I		I	143.0	I	272.0	I	0.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	16.45-17.00										I
I	ARM A	0.98	29.49	0.033		0.0	0.0	0.5		0.04	I
I	ARM B	4.35	31.93	0.136		0.0	0.2	2.3		0.04	I
I	ARM C	5.19	31.16	0.166		0.0	0.2	2.9		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.00-17.15										I
I	ARM A	1.16	29.17	0.040		0.0	0.0	0.6		0.04	I
I	ARM B	5.19	31.84	0.163		0.2	0.2	2.9		0.04	I
I	ARM C	6.19	31.11	0.199		0.2	0.2	3.7		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.15-17.30										I
I	ARM A	1.43	28.73	0.050		0.0	0.1	0.8		0.04	I
I	ARM B	6.36	31.71	0.201		0.2	0.3	3.7		0.04	I
I	ARM C	7.59	31.03	0.245		0.2	0.3	4.8		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.30-17.45										I
I	ARM A	1.43	28.73	0.050		0.1	0.1	0.8		0.04	I
I	ARM B	6.36	31.71	0.201		0.3	0.3	3.8		0.04	I
I	ARM C	7.59	31.03	0.245		0.3	0.3	4.8		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	17.45-18.00										I
I	ARM A	1.16	29.16	0.040		0.1	0.0	0.6		0.04	I
I	ARM B	5.19	31.84	0.163		0.3	0.2	3.0		0.04	I
I	ARM C	6.19	31.11	0.199		0.3	0.2	3.8		0.04	I

I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	18.00-18.15										I
I	ARM A	0.98	29.48	0.033		0.0	0.0	0.5		0.04	I
I	ARM B	4.35	31.93	0.136		0.2	0.2	2.4		0.04	I
I	ARM C	5.19	31.16	0.166		0.2	0.2	3.0		0.04	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

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

 .QUEUE AT ARM C

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

17.45 0.3
 18.00 0.2
 18.15 0.2

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	107.0	3.8	3.8
B	477.2	18.0	18.0
C	569.1	23.1	23.1
ALL	1153.2	44.9	44.9

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2026 Base.vai"
(drive-on-the-left) at 12:43:41 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.98	I	1.46	I	0.98
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.09	I	7.63	I	5.09
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.43	I	9.64	I	6.43

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.000	I	1.000
I		I		I	0.0	I	0.0	I	78.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

I	I	ARM B	I	0.093	I	0.000	I	0.907	I
I	I		I	38.0	I	0.0	I	369.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.368	I	0.632	I	0.000	I
I	I		I	189.0	I	325.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	16.45-17.00										
I	ARM A	0.98	29.17	0.033		0.0	0.0	0.5		0.04	I
I	ARM B	5.09	31.93	0.159		0.0	0.2	2.8		0.04	I
I	ARM C	6.43	31.23	0.206		0.0	0.3	3.8		0.04	I

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	17.00-17.15										
I	ARM A	1.16	28.79	0.040		0.0	0.0	0.6		0.04	I
I	ARM B	6.07	31.84	0.191		0.2	0.2	3.5		0.04	I
I	ARM C	7.67	31.18	0.246		0.3	0.3	4.8		0.04	I

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	17.15-17.30										
I	ARM A	1.43	28.27	0.050		0.0	0.1	0.8		0.04	I
I	ARM B	7.44	31.71	0.235		0.2	0.3	4.5		0.04	I
I	ARM C	9.40	31.12	0.302		0.3	0.4	6.4		0.05	I

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	17.30-17.45										
I	ARM A	1.43	28.26	0.050		0.1	0.1	0.8		0.04	I
I	ARM B	7.44	31.71	0.235		0.3	0.3	4.6		0.04	I
I	ARM C	9.40	31.12	0.302		0.4	0.4	6.5		0.05	I

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	17.45-18.00										
I	ARM A	1.16	28.79	0.040		0.1	0.0	0.6		0.04	I
I	ARM B	6.07	31.84	0.191		0.3	0.2	3.6		0.04	I
I	ARM C	7.67	31.18	0.246		0.4	0.3	5.0		0.04	I

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	18.00-18.15										
I	ARM A	0.98	29.16	0.033		0.0	0.0	0.5		0.04	I
I	ARM B	5.09	31.93	0.159		0.2	0.2	2.9		0.04	I
I	ARM C	6.43	31.23	0.206		0.3	0.3	3.9		0.04	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

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

 .QUEUE AT ARM C

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

17.45 0.4
 18.00 0.3
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	107.0	3.9	3.9
B	558.1	21.9	21.9
C	704.8	30.4	30.4
ALL	1369.8	56.2	56.2

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

END OF JOB

a63 Leeds Rd 2026 Site A.vao

I	I	ARM B	I	0.092	I	0.000	I	0.908	I
I	I		I	37.0	I	0.0	I	367.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.381	I	0.619	I	0.000	I
I	I		I	198.0	I	322.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	0.99	29.19	0.034		0.0	0.0	0.5		0.04
ARM B	5.05	31.93	0.158		0.0	0.2	2.8		0.04
ARM C	6.50	31.23	0.208		0.0	0.3	3.9		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	1.18	28.81	0.041		0.0	0.0	0.6		0.04
ARM B	6.03	31.83	0.189		0.2	0.2	3.5		0.04
ARM C	7.76	31.19	0.249		0.3	0.3	4.9		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	1.44	28.29	0.051		0.0	0.1	0.8		0.04
ARM B	7.39	31.70	0.233		0.2	0.3	4.5		0.04
ARM C	9.51	31.13	0.305		0.3	0.4	6.5		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	1.44	28.29	0.051		0.1	0.1	0.8		0.04
ARM B	7.39	31.70	0.233		0.3	0.3	4.5		0.04
ARM C	9.51	31.13	0.305		0.4	0.4	6.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	1.18	28.81	0.041		0.1	0.0	0.6		0.04
ARM B	6.03	31.83	0.189		0.3	0.2	3.6		0.04
ARM C	7.76	31.19	0.249		0.4	0.3	5.1		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	0.99	29.18	0.034		0.0	0.0	0.5		0.04
ARM B	5.05	31.92	0.158		0.2	0.2	2.9		0.04
ARM C	6.50	31.23	0.208		0.3	0.3	4.0		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.4
 18.00 0.3
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	108.3	3.9	3.9
B	554.0	21.7	21.7
C	713.0	30.9	30.9
ALL	1375.3	56.5	56.5

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2026 Site D.vai"
(drive-on-the-left) at 12:45:11 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.98	I	1.46	I	0.98
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.05	I	7.58	I	5.05
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.40	I	9.60	I	6.40

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.000	I	1.000
I		I		I	0.0	I	0.0	I	78.0
I		I		I	(10.0)	I	(10.0)	I	(10.0)

a63 Leeds Rd 2026 Site D.vao

I	I	ARM B	I	0.092	I	0.000	I	0.908	I
I	I		I	37.0	I	0.0	I	367.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.371	I	0.629	I	0.000	I
I	I		I	190.0	I	322.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	0.98	29.19	0.033		0.0	0.0	0.5		0.04
ARM B	5.05	31.93	0.158		0.0	0.2	2.8		0.04
ARM C	6.40	31.23	0.205		0.0	0.3	3.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	1.16	28.81	0.040		0.0	0.0	0.6		0.04
ARM B	6.03	31.84	0.189		0.2	0.2	3.5		0.04
ARM C	7.64	31.19	0.245		0.3	0.3	4.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	1.43	28.29	0.050		0.0	0.1	0.8		0.04
ARM B	7.39	31.71	0.233		0.2	0.3	4.5		0.04
ARM C	9.36	31.13	0.301		0.3	0.4	6.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	1.43	28.29	0.050		0.1	0.1	0.8		0.04
ARM B	7.39	31.71	0.233		0.3	0.3	4.5		0.04
ARM C	9.36	31.13	0.301		0.4	0.4	6.4		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	1.16	28.81	0.040		0.1	0.0	0.6		0.04
ARM B	6.03	31.84	0.189		0.3	0.2	3.6		0.04
ARM C	7.64	31.19	0.245		0.4	0.3	4.9		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	0.98	29.18	0.033		0.0	0.0	0.5		0.04
ARM B	5.05	31.93	0.158		0.2	0.2	2.9		0.04
ARM C	6.40	31.23	0.205		0.3	0.3	3.9		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.4
 18.00 0.3
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	107.0	3.9	3.9
B	554.0	21.7	21.7
C	702.1	30.2	30.2
ALL	1363.0	55.8	55.8

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2026 Site E.vai"
(drive-on-the-left) at 12:45:37 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.96	I	1.44	I	0.96
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.28	I	7.91	I	5.28
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.51	I	11.27	I	7.51

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.000	I	1.000
I		I		I	0.0	I	0.0	I	77.0
I		I		I	(10.0)	I	(10.0)	I	(10.0)

a63 Leeds Rd 2026 Site E.vao

I	I	ARM B	I	0.090	I	0.000	I	0.910	I
I	I		I	38.0	I	0.0	I	384.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.313	I	0.687	I	0.000	I
I	I		I	188.0	I	413.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	0.96	28.65	0.034		0.0	0.0	0.5		0.04
ARM B	5.28	31.94	0.165		0.0	0.2	2.9		0.04
ARM C	7.51	31.23	0.241		0.0	0.3	4.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	1.15	28.16	0.041		0.0	0.0	0.6		0.04
ARM B	6.30	31.85	0.198		0.2	0.2	3.6		0.04
ARM C	8.97	31.18	0.288		0.3	0.4	6.0		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	1.41	27.49	0.051		0.0	0.1	0.8		0.04
ARM B	7.71	31.72	0.243		0.2	0.3	4.7		0.04
ARM C	10.99	31.12	0.353		0.4	0.5	8.0		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	1.41	27.49	0.051		0.1	0.1	0.8		0.04
ARM B	7.71	31.72	0.243		0.3	0.3	4.8		0.04
ARM C	10.99	31.12	0.353		0.5	0.5	8.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	1.15	28.15	0.041		0.1	0.0	0.6		0.04
ARM B	6.30	31.84	0.198		0.3	0.2	3.8		0.04
ARM C	8.97	31.18	0.288		0.5	0.4	6.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	0.96	28.64	0.034		0.0	0.0	0.5		0.04
ARM B	5.28	31.94	0.165		0.2	0.2	3.0		0.04
ARM C	7.51	31.23	0.241		0.4	0.3	4.8		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *

17.45 0.5 *
 18.00 0.4
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	105.6	3.9	3.9
B	578.7	22.9	22.9
C	824.1	37.8	37.8
ALL	1508.3	64.6	64.6

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2026 Site F.vai"
(drive-on-the-left) at 12:46:02 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	0.98	I	1.46	I	0.98
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.05	I	7.58	I	5.05
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.43	I	9.64	I	6.43

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.000	I	1.000
I		I		I	0.0	I	0.0	I	78.0
I		I		I	(10.0)	I	(10.0)	I	(10.0)

a63 Leeds Rd 2026 Site F.vao

I	I	ARM B	I	0.092	I	0.000	I	0.908	I
I	I		I	37.0	I	0.0	I	367.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.372	I	0.628	I	0.000	I
I	I		I	191.0	I	323.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	0.98	29.18	0.033		0.0	0.0	0.5		0.04	I
I	I	ARM B	5.05	31.93	0.158		0.0	0.2	2.8		0.04	I
I	I	ARM C	6.43	31.23	0.206		0.0	0.3	3.8		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	1.16	28.81	0.040		0.0	0.0	0.6		0.04	I
I	I	ARM B	6.03	31.84	0.189		0.2	0.2	3.5		0.04	I
I	I	ARM C	7.67	31.19	0.246		0.3	0.3	4.8		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	1.43	28.28	0.050		0.0	0.1	0.8		0.04	I
I	I	ARM B	7.39	31.71	0.233		0.2	0.3	4.5		0.04	I
I	I	ARM C	9.40	31.13	0.302		0.3	0.4	6.4		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	1.43	28.28	0.050		0.1	0.1	0.8		0.04	I
I	I	ARM B	7.39	31.71	0.233		0.3	0.3	4.5		0.04	I
I	I	ARM C	9.40	31.13	0.302		0.4	0.4	6.5		0.05	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	1.16	28.80	0.040		0.1	0.0	0.6		0.04	I
I	I	ARM B	6.03	31.84	0.189		0.3	0.2	3.6		0.04	I
I	I	ARM C	7.67	31.19	0.246		0.4	0.3	5.0		0.04	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	0.98	29.18	0.033		0.0	0.0	0.5		0.04	I
I	I	ARM B	5.05	31.93	0.158		0.2	0.2	2.9		0.04	I
I	I	ARM C	6.43	31.23	0.206		0.3	0.3	3.9		0.04	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

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

 .QUEUE AT ARM C

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

17.45 0.4
 18.00 0.3
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	107.0	3.9	3.9
B	554.0	21.7	21.7
C	704.8	30.4	30.4
ALL	1365.7	55.9	55.9

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2026 Site G1.vao"
(drive-on-the-left) at 14:13:29 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	1.10	I	1.65	I	1.10
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.11	I	7.67	I	5.11
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.30	I	9.45	I	6.30

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.000	I	1.000
I		I		I	0.0	I	0.0	I	88.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

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I	ARM B	0.088	0.000	0.912
I		36.0	0.0	373.0
I		(10.0)	(10.0)	(10.0)
I				
I	ARM C	0.373	0.627	0.000
I		188.0	316.0	0.0
I		(10.0)	(10.0)	(10.0)
I				

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	1.10	29.22	0.038		0.0	0.0	0.6		0.04
ARM B	5.11	31.87	0.160		0.0	0.2	2.8		0.04
ARM C	6.30	31.24	0.202		0.0	0.3	3.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	1.31	28.86	0.046		0.0	0.0	0.7		0.04
ARM B	6.10	31.76	0.192		0.2	0.2	3.5		0.04
ARM C	7.52	31.20	0.241		0.3	0.3	4.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	1.61	28.35	0.057		0.0	0.1	0.9		0.04
ARM B	7.48	31.62	0.236		0.2	0.3	4.6		0.04
ARM C	9.21	31.14	0.296		0.3	0.4	6.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	1.61	28.34	0.057		0.1	0.1	0.9		0.04
ARM B	7.48	31.62	0.236		0.3	0.3	4.6		0.04
ARM C	9.21	31.14	0.296		0.4	0.4	6.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	1.31	28.85	0.046		0.1	0.0	0.7		0.04
ARM B	6.10	31.76	0.192		0.3	0.2	3.6		0.04
ARM C	7.52	31.19	0.241		0.4	0.3	4.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	1.10	29.22	0.038		0.0	0.0	0.6		0.04
ARM B	5.11	31.87	0.160		0.2	0.2	2.9		0.04
ARM C	6.30	31.24	0.202		0.3	0.3	3.8		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.4
 18.00 0.3
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	120.7	4.4	4.4
B	560.8	22.1	22.1
C	691.1	29.6	29.6
ALL	1372.6	56.1	56.1

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2026 Site G2.vao"
(drive-on-the-left) at 14:14:07 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	1.09	I	1.63	I	1.09
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.34	I	8.01	I	5.34
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.28	I	9.41	I	6.28

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	0.000	1.000
I		I		0.0	0.0	87.0
I		I		(10.0)	(10.0)	(10.0)
I		I		I	I	I

a63 Leeds Rd 2026 Site G2.vao

I	ARM B	I	0.084	I	0.000	I	0.916	I
I		I	36.0	I	0.0	I	391.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I
I	ARM C	I	0.375	I	0.625	I	0.000	I
I		I	188.0	I	314.0	I	0.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	1.09	29.24	0.037		0.0	0.0	0.6		0.04
ARM B	5.34	31.88	0.167		0.0	0.2	3.0		0.04
ARM C	6.28	31.24	0.201		0.0	0.3	3.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	1.30	28.87	0.045		0.0	0.0	0.7		0.04
ARM B	6.37	31.77	0.201		0.2	0.3	3.7		0.04
ARM C	7.49	31.20	0.240		0.3	0.3	4.7		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	1.59	28.36	0.056		0.0	0.1	0.9		0.04
ARM B	7.81	31.63	0.247		0.3	0.3	4.8		0.04
ARM C	9.18	31.14	0.295		0.3	0.4	6.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	1.59	28.36	0.056		0.1	0.1	0.9		0.04
ARM B	7.81	31.63	0.247		0.3	0.3	4.9		0.04
ARM C	9.18	31.14	0.295		0.4	0.4	6.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	1.30	28.87	0.045		0.1	0.0	0.7		0.04
ARM B	6.37	31.77	0.201		0.3	0.3	3.8		0.04
ARM C	7.49	31.19	0.240		0.4	0.3	4.8		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	1.09	29.23	0.037		0.0	0.0	0.6		0.04
ARM B	5.34	31.87	0.167		0.3	0.2	3.1		0.04
ARM C	6.28	31.24	0.201		0.3	0.3	3.8		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.4
 18.00 0.3
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	119.3	4.3	4.3
B	585.5	23.3	23.3
C	688.3	29.4	29.4
ALL	1393.2	57.1	57.1

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2026 Site H1.vao"
(drive-on-the-left) at 14:14:31 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	1.05	I	1.57	I	1.05
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.56	I	8.34	I	5.56
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.05	I	10.58	I	7.05

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	0.012	0.988
I		I		0.0	1.0	83.0
I		I		(10.0)	(10.0)	(10.0)

a63 Leeds Rd 2026 Site H1.vao

I	ARM B	I	0.074	I	0.000	I	0.926	I
I		I	33.0	I	0.0	I	412.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I
I	ARM C	I	0.436	I	0.564	I	0.000	I
I		I	246.0	I	318.0	I	0.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	1.05	29.21	0.036		0.0	0.0	0.6		0.04
ARM B	5.56	31.90	0.174		0.0	0.2	3.1		0.04
ARM C	7.05	31.26	0.226		0.0	0.3	4.3		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	1.25	28.84	0.043		0.0	0.0	0.7		0.04
ARM B	6.64	31.80	0.209		0.2	0.3	3.9		0.04
ARM C	8.42	31.22	0.270		0.3	0.4	5.5		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	1.54	28.33	0.054		0.0	0.1	0.8		0.04
ARM B	8.13	31.66	0.257		0.3	0.3	5.1		0.04
ARM C	10.31	31.16	0.331		0.4	0.5	7.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	1.54	28.33	0.054		0.1	0.1	0.9		0.04
ARM B	8.13	31.66	0.257		0.3	0.3	5.2		0.04
ARM C	10.31	31.16	0.331		0.5	0.5	7.4		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	1.25	28.84	0.043		0.1	0.0	0.7		0.04
ARM B	6.64	31.80	0.209		0.3	0.3	4.0		0.04
ARM C	8.42	31.22	0.270		0.5	0.4	5.6		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	1.05	29.21	0.036		0.0	0.0	0.6		0.04
ARM B	5.56	31.90	0.174		0.3	0.2	3.2		0.04
ARM C	7.05	31.26	0.226		0.4	0.3	4.4		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5

17.45 0.5
 18.00 0.4
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	115.2	4.2	4.2
B	610.2	24.5	24.5
C	773.4	34.5	34.5
ALL	1498.7	63.2	63.2

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 Leeds Rd 2026 Site H2.vao"
(drive-on-the-left) at 14:14:57 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Leeds Rd
LOCATION: Selby
DATE: 03/09/09
CLIENT: Selby
ENUMERATOR: Foleyd [LEC10579]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Leeds Rd(A63) Roundabout assessment

.INPUT DATA

ARM A - Leeds Rd (A63)
ARM B - A63 East
ARM C - A63 west

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.25	I	8.25	I	8.20	I	23.00	I	100.00	I	55.0	I	0.482	I	34.242	I
I	ARM B	I	6.00	I	9.25	I	9.50	I	22.00	I	100.00	I	50.0	I	0.497	I	35.658	I
I	ARM C	I	6.25	I	8.00	I	6.00	I	25.00	I	100.00	I	45.0	I	0.493	I	34.606	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Leeds Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	1.09	I	1.63	I	1.09
I	ARM B	I	15.00	I	45.00	I	75.00	I	5.75	I	8.63	I	5.75
I	ARM C	I	15.00	I	45.00	I	75.00	I	7.45	I	11.17	I	7.45

DEMAND SET TITLE: A63/Leeds Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.023	I	0.977
I		I		I	0.0	I	2.0	I	85.0
I		I		I	(10.0)	I	(10.0)	I	(10.0)

a63 Leeds Rd 2026 Site H2.vao

I	I	ARM B	I	0.061	I	0.000	I	0.939	I
I	I		I	28.0	I	0.0	I	432.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.460	I	0.540	I	0.000	I
I	I		I	274.0	I	322.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	1.09	29.19	0.037		0.0	0.0	0.6		0.04
ARM B	5.75	31.89	0.180		0.0	0.2	3.2		0.04
ARM C	7.45	31.29	0.238		0.0	0.3	4.6		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	1.30	28.81	0.045		0.0	0.0	0.7		0.04
ARM B	6.87	31.79	0.216		0.2	0.3	4.1		0.04
ARM C	8.90	31.25	0.285		0.3	0.4	5.9		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	1.59	28.29	0.056		0.0	0.1	0.9		0.04
ARM B	8.41	31.64	0.266		0.3	0.4	5.3		0.04
ARM C	10.90	31.21	0.349		0.4	0.5	7.9		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	1.59	28.29	0.056		0.1	0.1	0.9		0.04
ARM B	8.41	31.64	0.266		0.4	0.4	5.4		0.04
ARM C	10.90	31.21	0.349		0.5	0.5	8.0		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	1.30	28.81	0.045		0.1	0.0	0.7		0.04
ARM B	6.87	31.79	0.216		0.4	0.3	4.2		0.04
ARM C	8.90	31.25	0.285		0.5	0.4	6.1		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	1.09	29.19	0.037		0.0	0.0	0.6		0.04
ARM B	5.75	31.89	0.180		0.3	0.2	3.3		0.04
ARM C	7.45	31.29	0.238		0.4	0.3	4.8		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *

17.45 0.5 *
 18.00 0.4
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	119.3	4.4	4.4
B	630.8	25.6	25.6
C	817.2	37.2	37.2
ALL	1567.3	67.2	67.2

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2008 Base.vai"
(drive-on-the-left) at 12:48:29 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	6.95	I	10.42	I	6.95
I	ARM B	I	15.00	I	45.00	I	75.00	I	6.40	I	9.60	I	6.40
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	1.000	I	0.000
I		I		I	0.0	I	556.0	I	0.0
I		I		I	(10.0)	I	(10.0)	I	(10.0)

I	ARM B	I	1.000	I	0.000	I	0.000	I
I		I	512.0	I	0.0	I	0.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I
I	ARM C	I	0.000	I	0.000	I	0.000	I
I		I	0.0	I	0.0	I	0.0	I
I		I	(10.0)	I	(10.0)	I	(10.0)	I
I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	6.95	31.06	0.224		0.0	0.3	4.2		0.04
ARM B	6.40	39.75	0.161		0.0	0.2	2.8		0.03
ARM C	0.00	24.50	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	8.30	31.06	0.267		0.3	0.4	5.4		0.04
ARM B	7.64	39.75	0.192		0.2	0.2	3.5		0.03
ARM C	0.00	23.80	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	10.16	31.06	0.327		0.4	0.5	7.2		0.05
ARM B	9.36	39.75	0.235		0.2	0.3	4.6		0.03
ARM C	0.00	22.81	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	10.16	31.06	0.327		0.5	0.5	7.3		0.05
ARM B	9.36	39.75	0.235		0.3	0.3	4.6		0.03
ARM C	0.00	22.81	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	8.30	31.06	0.267		0.5	0.4	5.6		0.04
ARM B	7.64	39.75	0.192		0.3	0.2	3.6		0.03
ARM C	0.00	23.79	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	6.95	31.06	0.224		0.4	0.3	4.4		0.04
ARM B	6.40	39.75	0.161		0.2	0.2	2.9		0.03
ARM C	0.00	24.50	0.000		0.0	0.0	0.0		0.00

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5
17.45	0.5
18.00	0.4
18.15	0.3

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.0
 18.00 0.0
 18.15 0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	762.4	34.0	34.0
B	702.1	22.1	22.1
C	0.0	0.0	0.0
ALL	1464.5	56.1	56.1

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road base2026.vai"
(drive-on-the-left) at 12:49:50 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.35	I	14.03	I	9.35
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.69	I	11.53	I	7.69
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	1.000	0.000
I		I		0.0	748.0	0.0
I		I		(10.0)	(10.0)	(10.0)

I	I	ARM B	I	1.000	I	0.000	I	0.000	I
I	I		I	615.0	I	0.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.000	I	0.000	I	0.000	I
I	I		I	0.0	I	0.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	9.35	31.06	0.301		0.0	0.4	6.3		0.05	I
I	I	ARM B	7.69	39.75	0.193		0.0	0.2	3.5		0.03	I
I	I	ARM C	0.00	23.78	0.000		0.0	0.0	0.0		0.00	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	11.16	31.06	0.359		0.4	0.6	8.3		0.05	I
I	I	ARM B	9.18	39.75	0.231		0.2	0.3	4.4		0.03	I
I	I	ARM C	0.00	22.92	0.000		0.0	0.0	0.0		0.00	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	13.67	31.06	0.440		0.6	0.8	11.5		0.06	I
I	I	ARM B	11.24	39.75	0.283		0.3	0.4	5.8		0.04	I
I	I	ARM C	0.00	21.74	0.000		0.0	0.0	0.0		0.00	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	13.67	31.06	0.440		0.8	0.8	11.7		0.06	I
I	I	ARM B	11.24	39.75	0.283		0.4	0.4	5.9		0.04	I
I	I	ARM C	0.00	21.73	0.000		0.0	0.0	0.0		0.00	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	11.16	31.06	0.359		0.8	0.6	8.6		0.05	I
I	I	ARM B	9.18	39.75	0.231		0.4	0.3	4.6		0.03	I
I	I	ARM C	0.00	22.91	0.000		0.0	0.0	0.0		0.00	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	9.35	31.06	0.301		0.6	0.4	6.6		0.05	I
I	I	ARM B	7.69	39.75	0.193		0.3	0.2	3.6		0.03	I
I	I	ARM C	0.00	23.77	0.000		0.0	0.0	0.0		0.00	I

 .QUEUE AT ARM A

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

 .QUEUE AT ARM B

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

 .QUEUE AT ARM C

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

17.45 0.0
 18.00 0.0
 18.15 0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	1025.7	53.0	53.0
B	843.3	27.9	27.9
C	0.0	0.0	0.0
ALL	1869.0	80.9	80.9

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2026 site a.vai"
(drive-on-the-left) at 12:51:17 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.93	I	14.89	I	9.93
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.80	I	11.70	I	7.80
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	1.000	0.000
I		I		0.0	794.0	0.0
I		I		(10.0)	(10.0)	(10.0)
I		I		I	I	I

a63 minor road 2026 site a.vao

I	ARM B	I	1.000	I	0.000	I	0.000	I		I
I		I	624.0	I	0.0	I	0.0	I		I
I		I	(10.0)	I	(10.0)	I	(10.0)	I		I
I		I		I		I		I		I
I	ARM C	I	0.000	I	0.000	I	0.000	I		I
I		I	0.0	I	0.0	I	0.0	I		I
I		I	(10.0)	I	(10.0)	I	(10.0)	I		I
I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.93	31.06	0.320		0.0	0.5	6.9		0.05
ARM B	7.80	39.75	0.196		0.0	0.2	3.6		0.03
ARM C	0.00	23.71	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.85	31.06	0.382		0.5	0.6	9.1		0.05
ARM B	9.31	39.75	0.234		0.2	0.3	4.5		0.03
ARM C	0.00	22.84	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	14.51	31.06	0.467		0.6	0.9	12.8		0.06
ARM B	11.41	39.75	0.287		0.3	0.4	6.0		0.04
ARM C	0.00	21.64	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	14.51	31.06	0.467		0.9	0.9	13.1		0.06
ARM B	11.41	39.75	0.287		0.4	0.4	6.0		0.04
ARM C	0.00	21.64	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.85	31.06	0.382		0.9	0.6	9.5		0.05
ARM B	9.31	39.75	0.234		0.4	0.3	4.7		0.03
ARM C	0.00	22.83	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.93	31.06	0.320		0.6	0.5	7.2		0.05
ARM B	7.80	39.75	0.196		0.3	0.2	3.7		0.03
ARM C	0.00	23.70	0.000		0.0	0.0	0.0		0.00

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.5

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.0
 18.00 0.0
 18.15 0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	1088.7	58.5	58.5
B	855.6	28.5	28.5
C	0.0	0.0	0.0
ALL	1944.4	87.0	87.0

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2026 site d.vai"
(drive-on-the-left) at 12:51:31 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.63	I	17.44	I	11.63
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.40	I	12.60	I	8.40
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	1.000	I	0.000
I		I		I	0.0	I	930.0	I	0.0
I		I		I	(10.0)	I	(10.0)	I	(10.0)

a63 minor road 2026 site d.vao

I	I	ARM B	I	1.000	I	0.000	I	0.000	I		
I	I		I	672.0	I	0.0	I	0.0	I		
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I		
I	I		I		I		I		I		
I	I	ARM C	I	0.000	I	0.000	I	0.000	I		
I	I		I	0.0	I	0.0	I	0.0	I		
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I		
I	I		I		I		I		I		

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	11.63	31.06	0.374		0.0	0.6	8.7		0.05
ARM B	8.40	39.75	0.211		0.0	0.3	4.0		0.03
ARM C	0.00	23.37	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	13.88	31.06	0.447		0.6	0.8	11.8		0.06
ARM B	10.03	39.75	0.252		0.3	0.3	5.0		0.03
ARM C	0.00	22.43	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	17.00	31.06	0.547		0.8	1.2	17.5		0.07
ARM B	12.28	39.75	0.309		0.3	0.4	6.6		0.04
ARM C	0.00	21.14	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	17.00	31.06	0.547		1.2	1.2	18.0		0.07
ARM B	12.28	39.75	0.309		0.4	0.4	6.7		0.04
ARM C	0.00	21.14	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	13.88	31.06	0.447		1.2	0.8	12.5		0.06
ARM B	10.03	39.75	0.252		0.4	0.3	5.1		0.03
ARM C	0.00	22.42	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	11.63	31.06	0.374		0.8	0.6	9.2		0.05
ARM B	8.40	39.75	0.211		0.3	0.3	4.1		0.03
ARM C	0.00	23.36	0.000		0.0	0.0	0.0		0.00

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.0
 18.00 0.0
 18.15 0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
A	1275.2	77.7	77.7
B	921.5	31.5	31.5
C	0.0	0.0	0.0
ALL	2196.7	109.1	109.2

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2026 Site E.vai"
(drive-on-the-left) at 12:52:01 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.55	I	14.33	I	9.55
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.63	I	11.44	I	7.63
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	1.000	0.000
I		I		0.0	764.0	0.0
I		I		(10.0)	(10.0)	(10.0)

a63 minor road 2026 Site E.vao

I	I	ARM B	I	1.000	I	0.000	I	0.000	I		
I	I		I	610.0	I	0.0	I	0.0	I		
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I		
I	I		I		I		I		I		
I	I	ARM C	I	0.000	I	0.000	I	0.000	I		
I	I		I	0.0	I	0.0	I	0.0	I		
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I		
I	I		I		I		I		I		

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.55	31.06	0.307		0.0	0.4	6.5		0.05
ARM B	7.63	39.75	0.192		0.0	0.2	3.5		0.03
ARM C	0.00	23.81	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.40	31.06	0.367		0.4	0.6	8.5		0.05
ARM B	9.10	39.75	0.229		0.2	0.3	4.4		0.03
ARM C	0.00	22.96	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	13.97	31.06	0.450		0.6	0.8	11.9		0.06
ARM B	11.15	39.75	0.281		0.3	0.4	5.8		0.03
ARM C	0.00	21.79	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	13.97	31.06	0.450		0.8	0.8	12.2		0.06
ARM B	11.15	39.75	0.281		0.4	0.4	5.8		0.03
ARM C	0.00	21.79	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.40	31.06	0.367		0.8	0.6	8.9		0.05
ARM B	9.10	39.75	0.229		0.4	0.3	4.5		0.03
ARM C	0.00	22.95	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.55	31.06	0.307		0.6	0.4	6.8		0.05
ARM B	7.63	39.75	0.192		0.3	0.2	3.6		0.03
ARM C	0.00	23.80	0.000		0.0	0.0	0.0		0.00

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.0
 18.00 0.0
 18.15 0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	1047.6	54.9	0.05
B	836.4	27.6	0.03
C	0.0	0.0	0.00
ALL	1884.0	82.5	0.04

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby.LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2026 Site F.vai"
(drive-on-the-left) at 12:52:28 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.41	I	14.12	I	9.41
I	ARM B	I	15.00	I	45.00	I	75.00	I	7.59	I	11.38	I	7.59
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	TURNING PROPORTIONS			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	1.000	0.000
I		I		0.0	753.0	0.0
I		I		(10.0)	(10.0)	(10.0)

a63 minor road 2026 Site F.vao

I	ARM B	I	1.000	I	0.000	I	0.000	I		I
I		I	607.0	I	0.0	I	0.0	I		I
I		I	(10.0)	I	(10.0)	I	(10.0)	I		I
I		I		I		I		I		I
I	ARM C	I	0.000	I	0.000	I	0.000	I		I
I		I	0.0	I	0.0	I	0.0	I		I
I		I	(10.0)	I	(10.0)	I	(10.0)	I		I
I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.41	31.06	0.303		0.0	0.4	6.4		0.05
ARM B	7.59	39.75	0.191		0.0	0.2	3.5		0.03
ARM C	0.00	23.83	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.24	31.06	0.362		0.4	0.6	8.3		0.05
ARM B	9.06	39.75	0.228		0.2	0.3	4.4		0.03
ARM C	0.00	22.99	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	13.77	31.06	0.443		0.6	0.8	11.6		0.06
ARM B	11.10	39.75	0.279		0.3	0.4	5.7		0.03
ARM C	0.00	21.82	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	13.77	31.06	0.443		0.8	0.8	11.9		0.06
ARM B	11.10	39.75	0.279		0.4	0.4	5.8		0.03
ARM C	0.00	21.82	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.24	31.06	0.362		0.8	0.6	8.7		0.05
ARM B	9.06	39.75	0.228		0.4	0.3	4.5		0.03
ARM C	0.00	22.98	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.41	31.06	0.303		0.6	0.4	6.6		0.05
ARM B	7.59	39.75	0.191		0.3	0.2	3.6		0.03
ARM C	0.00	23.82	0.000		0.0	0.0	0.0		0.00

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.0
 18.00 0.0
 18.15 0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN/VEH)
A	1032.5	688.3	53.6
B	832.3	554.9	27.4
C	0.0	0.0	0.0
ALL	1864.8	1243.2	81.0

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Crowthorne House Fax: +44 (0) 1344 770864
Nine Mile Ride Email: softwarebureau@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2026 Site G1.vai"
(drive-on-the-left) at 14:15:39 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	12.05	I	18.08	I	12.05
I	ARM B	I	15.00	I	45.00	I	75.00	I	8.94	I	13.41	I	8.94
I	ARM C	I	15.00	I	45.00	I	75.00	I	4.74	I	7.11	I	4.74

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	I			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	0.949	0.051
I		I		0.0	915.0	49.0
I		I		(10.0)	(10.0)	(10.0)

a63 minor road 2026 Site G1.vao

I	I	ARM B	I	0.855	I	0.000	I	0.145	I
I	I		I	611.0	I	0.0	I	104.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.641	I	0.359	I	0.000	I
I	I		I	243.0	I	136.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	12.05	30.05	0.401		0.0	0.7	9.7		0.06	I
I	I	ARM B	8.94	39.33	0.227		0.0	0.3	4.3		0.03	I
I	I	ARM C	4.74	21.64	0.219		0.0	0.3	4.1		0.06	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	14.39	29.85	0.482		0.7	0.9	13.5		0.06	I
I	I	ARM B	10.67	39.25	0.272		0.3	0.4	5.5		0.03	I
I	I	ARM C	5.66	20.86	0.271		0.3	0.4	5.5		0.07	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	17.62	29.58	0.596		0.9	1.5	21.1		0.08	I
I	I	ARM B	13.07	39.13	0.334		0.4	0.5	7.4		0.04	I
I	I	ARM C	6.93	19.80	0.350		0.4	0.5	7.8		0.08	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	17.62	29.58	0.596		1.5	1.5	21.9		0.08	I
I	I	ARM B	13.07	39.13	0.334		0.5	0.5	7.5		0.04	I
I	I	ARM C	6.93	19.80	0.350		0.5	0.5	8.0		0.08	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	14.39	29.85	0.482		1.5	0.9	14.4		0.06	I
I	I	ARM B	10.67	39.24	0.272		0.5	0.4	5.7		0.04	I
I	I	ARM C	5.66	20.86	0.271		0.5	0.4	5.7		0.07	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	12.05	30.05	0.401		0.9	0.7	10.3		0.06	I
I	I	ARM B	8.94	39.33	0.227		0.4	0.3	4.5		0.03	I
I	I	ARM C	4.74	21.63	0.219		0.4	0.3	4.3		0.06	I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	0.9 *
17.30	1.5 *
17.45	1.5 *
18.00	0.9 *
18.15	0.7 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5
17.45	0.5 *
18.00	0.4
18.15	0.3

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.5 *

17.45 0.5 *
 18.00 0.4
 18.15 0.3

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1321.8	91.0	91.0
B	980.4	34.9	34.9
C	519.7	35.4	35.4
ALL	2822.0	161.4	161.4

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2026 Site G2.vai"
(drive-on-the-left) at 14:16:02 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	12.46	I	18.69	I	12.46
I	ARM B	I	15.00	I	45.00	I	75.00	I	9.46	I	14.19	I	9.46
I	ARM C	I	15.00	I	45.00	I	75.00	I	6.97	I	10.46	I	6.97

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	0.931	I	0.069
I		I		I	0.0	I	928.0	I	69.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

a63 minor road 2026 Site G2.vao

I	I	ARM B	I	0.793	I	0.000	I	0.207	I
I	I		I	600.0	I	0.0	I	157.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I
I	I	ARM C	I	0.604	I	0.396	I	0.000	I
I	I		I	337.0	I	221.0	I	0.0	I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I
I	I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	12.46	29.42	0.424		0.0	0.7	10.7		0.06
ARM B	9.46	39.16	0.242		0.0	0.3	4.7		0.03
ARM C	6.97	21.71	0.321		0.0	0.5	6.9		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	14.88	29.10	0.511		0.7	1.0	15.2		0.07
ARM B	11.30	39.04	0.289		0.3	0.4	6.0		0.04
ARM C	8.33	20.95	0.398		0.5	0.7	9.6		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	18.23	28.66	0.636		1.0	1.7	24.8		0.09
ARM B	13.84	38.88	0.356		0.4	0.6	8.1		0.04
ARM C	10.20	19.91	0.512		0.7	1.0	15.0		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	18.23	28.66	0.636		1.7	1.7	25.9		0.10
ARM B	13.84	38.88	0.356		0.6	0.6	8.3		0.04
ARM C	10.20	19.90	0.513		1.0	1.0	15.6		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	14.88	29.09	0.512		1.7	1.1	16.3		0.07
ARM B	11.30	39.03	0.289		0.6	0.4	6.2		0.04
ARM C	8.33	20.94	0.398		1.0	0.7	10.3		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	12.46	29.41	0.424		1.1	0.7	11.3		0.06
ARM B	9.46	39.15	0.242		0.4	0.3	4.8		0.03
ARM C	6.97	21.70	0.321		0.7	0.5	7.3		0.07

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.7 *
17.15	1.0 **
17.30	1.7 **
17.45	1.7 **
18.00	1.1 *
18.15	0.7 *

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 1.0 *
 18.00 0.7 *
 18.15 0.5

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	QUEUEING DELAY	INCLUSIVE QUEUEING DELAY
(VEH)	(VEH/H)	(MIN)	(MIN)
A	1367.1	104.2	104.2
B	1038.0	38.2	38.2
C	765.1	64.7	64.7
ALL	3170.2	207.0	207.0

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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RG40 3GA, UK

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2026 Site H1.vai"
(drive-on-the-left) at 14:16:19 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.80	I	14.70	I	9.80
I	ARM B	I	15.00	I	45.00	I	75.00	I	9.96	I	14.94	I	9.96
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	TURNING PROPORTIONS			I
			FROM/TO	ARM A	ARM B	
I	16.45 - 18.15	I	I	I	I	I
I		I	ARM A	0.000	1.000	0.000
I		I		0.0	784.0	0.0
I		I		(10.0)	(10.0)	(10.0)

a63 minor road 2026 Site H1.vao

I	I	ARM B	I	1.000	I	0.000	I	0.000	I		I
I	I		I	797.0	I	0.0	I	0.0	I		I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I		I
I	I		I		I		I		I		I
I	I	ARM C	I	0.000	I	0.000	I	0.000	I		I
I	I		I	0.0	I	0.0	I	0.0	I		I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I		I
I	I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.80	31.06	0.316		0.0	0.5	6.7		0.05
ARM B	9.96	39.75	0.251		0.0	0.3	4.9		0.03
ARM C	0.00	22.48	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	11.70	31.06	0.377		0.5	0.6	8.9		0.05
ARM B	11.90	39.75	0.299		0.3	0.4	6.3		0.04
ARM C	0.00	21.36	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	14.33	31.06	0.461		0.6	0.9	12.5		0.06
ARM B	14.57	39.75	0.366		0.4	0.6	8.5		0.04
ARM C	0.00	19.84	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	14.33	31.06	0.461		0.9	0.9	12.8		0.06
ARM B	14.57	39.75	0.366		0.6	0.6	8.7		0.04
ARM C	0.00	19.83	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	11.70	31.06	0.377		0.9	0.6	9.3		0.05
ARM B	11.90	39.75	0.299		0.6	0.4	6.5		0.04
ARM C	0.00	21.35	0.000		0.0	0.0	0.0		0.00

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.80	31.06	0.316		0.6	0.5	7.0		0.05
ARM B	9.96	39.75	0.251		0.4	0.3	5.1		0.03
ARM C	0.00	22.46	0.000		0.0	0.0	0.0		0.00

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.6 *
17.30	0.9 *
17.45	0.9 *
18.00	0.6 *
18.15	0.5

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.0
 18.00 0.0
 18.15 0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1075.0	57.3	57.3
B	1092.9	40.0	40.0
C	0.0	0.0	0.0
ALL	2167.9	97.3	97.3

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
a63 minor road 2026 Site H2.vai"
(drive-on-the-left) at 14:16:40 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A63/Minor Road
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby CC
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A63/Minor road junction assessment

.INPUT DATA

ARM A - A63 North
ARM B - A63 South
ARM C - Minor Road

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	6.50	I	8.00	I	7.80	I	19.00	I	60.00	I	55.0	I	0.594	I	34.163	I
I	ARM B	I	8.00	I	10.25	I	11.00	I	18.00	I	60.00	I	50.0	I	0.697	I	43.730	I
I	ARM C	I	4.75	I	8.25	I	10.50	I	19.00	I	60.00	I	68.0	I	0.520	I	28.165	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A63/Minor Road

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	10.68	I	16.01	I	10.68
I	ARM B	I	15.00	I	45.00	I	75.00	I	11.30	I	16.95	I	11.30
I	ARM C	I	15.00	I	45.00	I	75.00	I	0.00	I	0.00	I	0.00

DEMAND SET TITLE: A63/Minor Road

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C
I	16.45 - 18.15	I		I		I		I	
I		I	ARM A	I	0.000	I	1.000	I	0.000
I		I		I	0.0	I	854.0	I	0.0
I		I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)

a63 minor road 2026 Site H2.vao

I	I	ARM B	I	1.000	I	0.000	I	0.000	I		I
I	I		I	904.0	I	0.0	I	0.0	I		I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I		I
I	I		I		I		I		I		I
I	I	ARM C	I	0.000	I	0.000	I	0.000	I		I
I	I		I	0.0	I	0.0	I	0.0	I		I
I	I		I	(10.0)	I	(10.0)	I	(10.0)	I		I
I	I		I		I		I		I		I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	16.45-17.00										
I	ARM A	10.68	31.06	0.344	0.0	0.5	7.7		0.05		
I	ARM B	11.30	39.75	0.284	0.0	0.4	5.8		0.04		
I	ARM C	0.00	21.72	0.000	0.0	0.0	0.0		0.00		

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	17.00-17.15										
I	ARM A	12.75	31.06	0.410	0.5	0.7	10.2		0.05		
I	ARM B	13.49	39.75	0.339	0.4	0.5	7.6		0.04		
I	ARM C	0.00	20.45	0.000	0.0	0.0	0.0		0.00		

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	17.15-17.30										
I	ARM A	15.61	31.06	0.503	0.7	1.0	14.7		0.06		
I	ARM B	16.53	39.75	0.416	0.5	0.7	10.5		0.04		
I	ARM C	0.00	18.72	0.000	0.0	0.0	0.0		0.00		

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	17.30-17.45										
I	ARM A	15.61	31.06	0.503	1.0	1.0	15.1		0.06		
I	ARM B	16.53	39.75	0.416	0.7	0.7	10.6		0.04		
I	ARM C	0.00	18.71	0.000	0.0	0.0	0.0		0.00		

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	17.45-18.00										
I	ARM A	12.75	31.06	0.410	1.0	0.7	10.7		0.05		
I	ARM B	13.49	39.75	0.339	0.7	0.5	7.8		0.04		
I	ARM C	0.00	20.44	0.000	0.0	0.0	0.0		0.00		

I	I	I	I	I	I	I	I	I	I	I	I
TIME	DEMAND	CAPACITY	DEMAND/	PEDESTRIAN	START	END	DELAY	GEOMETRIC DELAY	AVERAGE DELAY		
	(VEH/MIN)	(VEH/MIN)	CAPACITY	FLOW	QUEUE	QUEUE	(VEH.MIN/	(VEH.MIN/	PER ARRIVING		
			(RFC)	(PEDS/MIN)	(VEHS)	(VEHS)	TIME SEGMENT)	TIME SEGMENT)	VEHICLE (MIN)		
I	18.00-18.15										
I	ARM A	10.68	31.06	0.344	0.7	0.5	8.0		0.05		
I	ARM B	11.30	39.75	0.284	0.5	0.4	6.0		0.04		
I	ARM C	0.00	21.70	0.000	0.0	0.0	0.0		0.00		

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

17.45 0.0
 18.00 0.0
 18.15 0.0

 QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * * DELAY *	* INCLUSIVE QUEUEING * * DELAY *
(VEH)	(VEH/H)	(MIN)	(MIN)
		(MIN/VEH)	(MIN/VEH)
A	1171.0	66.4	66.4
B	1239.6	48.4	48.4
C	0.0	0.0	0.0
ALL	2410.6	114.8	114.8

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2008 Base.vao"
(drive-on-the-left) at 11:51:23 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	8.06	I	12.09	I	8.06
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.36	I	3.54	I	2.36
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.39	I	15.58	I	10.39
I	ARM D	I	15.00	I	45.00	I	75.00	I	1.42	I	2.14	I	1.42

DEMAND SET TITLE: A1041/Abbots Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

I	I	ARM A	I	0.000	I	0.009	I	0.909	I	0.082	I
I	I	I	I	0.0	I	6.0	I	586.0	I	53.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.079	I	0.000	I	0.889	I	0.032	I
I	I	I	I	15.0	I	0.0	I	168.0	I	6.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.721	I	0.155	I	0.000	I	0.124	I
I	I	I	I	599.0	I	129.0	I	0.0	I	103.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.693	I	0.018	I	0.289	I	0.000	I
I	I	I	I	79.0	I	2.0	I	33.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 . QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	8.06	21.86	0.369		0.0	0.6	8.5		0.07	I
I	I	ARM B	2.36	14.69	0.161		0.0	0.2	2.8		0.08	I
I	I	ARM C	10.39	23.29	0.446		0.0	0.8	11.6		0.08	I
I	I	ARM D	1.42	13.22	0.108		0.0	0.1	1.8		0.08	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	9.63	21.62	0.445		0.6	0.8	11.6		0.08	I
I	I	ARM B	2.82	13.79	0.205		0.2	0.3	3.8		0.09	I
I	I	ARM C	12.40	23.18	0.535		0.8	1.1	16.5		0.09	I
I	I	ARM D	1.70	12.26	0.139		0.1	0.2	2.4		0.09	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	11.79	21.30	0.554		0.8	1.2	17.7		0.10	I
I	I	ARM B	3.46	12.57	0.275		0.3	0.4	5.5		0.11	I
I	I	ARM C	15.19	23.03	0.660		1.1	1.9	27.0		0.13	I
I	I	ARM D	2.08	10.97	0.190		0.2	0.2	3.4		0.11	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	11.79	21.29	0.554		1.2	1.2	18.4		0.11	I
I	I	ARM B	3.46	12.55	0.275		0.4	0.4	5.7		0.11	I
I	I	ARM C	15.19	23.03	0.660		1.9	1.9	28.6		0.13	I
I	I	ARM D	2.08	10.95	0.190		0.2	0.2	3.5		0.11	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	9.63	21.61	0.445		1.2	0.8	12.5		0.08	I
I	I	ARM B	2.82	13.76	0.205		0.4	0.3	4.0		0.09	I
I	I	ARM C	12.40	23.18	0.535		1.9	1.2	18.1		0.09	I
I	I	ARM D	1.70	12.23	0.139		0.2	0.2	2.5		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	8.06	21.85	0.369		0.8	0.6	9.0		0.07	I
I	I	ARM B	2.36	14.66	0.161		0.3	0.2	3.0		0.08	I
I	I	ARM C	10.39	23.29	0.446		1.2	0.8	12.5		0.08	I
I	I	ARM D	1.42	13.18	0.108		0.2	0.1	1.9		0.09	I

 . QUEUE AT ARM A

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

 . QUEUE AT ARM B

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

18.00 0.3
 18.15 0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.1	**
17.30	1.9	**
17.45	1.9	**
18.00	1.2	*
18.15	0.8	*

.QUEUE AT ARM D

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

 . QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	884.4	I	589.6	I	77.7	I	0.09	I
I	B	I	259.2	I	172.8	I	24.6	I	0.10	I
I	C	I	1139.5	I	759.7	I	114.4	I	0.10	I
I	D	I	156.3	I	104.2	I	15.4	I	0.10	I
I	ALL	I	2439.4	I	1626.3	I	232.1	I	0.10	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Base.vao"
(drive-on-the-left) at 11:54:03 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	10.24	I	15.36	I	10.24
I	ARM B	I	15.00	I	45.00	I	2.99	I	4.48	I	2.99
I	ARM C	I	15.00	I	45.00	I	10.88	I	16.31	I	10.88
I	ARM D	I	15.00	I	45.00	I	1.74	I	2.61	I	1.74

DEMAND SET TITLE: A1041/Abbots Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

I	ARM A	0.000	0.009	0.917	0.074
I		0.0	7.0	751.0	61.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM B	0.075	0.000	0.883	0.042
I		18.0	0.0	211.0	10.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM C	0.670	0.182	0.000	0.148
I		583.0	158.0	0.0	129.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM D	0.676	0.022	0.302	0.000
I		94.0	3.0	42.0	0.0
I		(10.0)	(10.0)	(10.0)	(10.0)

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	10.24	21.57	0.475		0.0	0.9	12.9		0.09
ARM B	2.99	13.46	0.222		0.0	0.3	4.1		0.10
ARM C	10.88	23.18	0.469		0.0	0.9	12.7		0.08
ARM D	1.74	13.12	0.132		0.0	0.2	2.2		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	12.22	21.28	0.574		0.9	1.3	19.2		0.11
ARM B	3.57	12.31	0.290		0.3	0.4	5.9		0.11
ARM C	12.99	23.05	0.563		0.9	1.3	18.5		0.10
ARM D	2.07	12.14	0.171		0.2	0.2	3.0		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	14.97	20.88	0.717		1.3	2.4	34.2		0.16
ARM B	4.37	10.78	0.405		0.4	0.7	9.7		0.16
ARM C	15.90	22.87	0.695		1.3	2.2	31.4		0.14
ARM D	2.54	10.82	0.235		0.2	0.3	4.4		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	14.97	20.87	0.717		2.4	2.5	37.0		0.17
ARM B	4.37	10.74	0.407		0.7	0.7	10.1		0.16
ARM C	15.90	22.87	0.696		2.2	2.2	33.6		0.14
ARM D	2.54	10.80	0.235		0.3	0.3	4.6		0.12

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	12.22	21.27	0.575		2.5	1.4	21.6		0.11
ARM B	3.57	12.26	0.291		0.7	0.4	6.4		0.12
ARM C	12.99	23.04	0.564		2.2	1.3	20.5		0.10
ARM D	2.07	12.10	0.171		0.3	0.2	3.2		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	10.24	21.56	0.475		1.4	0.9	14.1		0.09
ARM B	2.99	13.41	0.223		0.4	0.3	4.4		0.10
ARM C	10.88	23.17	0.469		1.3	0.9	13.8		0.08
ARM D	1.74	13.08	0.133		0.2	0.2	2.4		0.09

 QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.9 *
17.15	1.3 **
17.30	2.4 **
17.45	2.5 **
18.00	1.4 *
18.15	0.9 *

 QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.7 *
17.45	0.7 *

18.00 0.4
 18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.2	**
17.45	2.2	**
18.00	1.3	*
18.15	0.9	*

.QUEUE AT ARM D

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

 . QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	I	I	I	I	I	I	I	I	
I	A	I	1123.0	I	748.7	I	139.1	I	0.12
I	B	I	327.7	I	218.5	I	40.7	I	0.12
I	C	I	1193.0	I	795.3	I	130.3	I	0.11
I	D	I	190.6	I	127.1	I	19.8	I	0.10
I	ALL	I	2834.3	I	1889.5	I	329.9	I	0.12

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Site A.vai"
(drive-on-the-left) at 11:55:34 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	9.91	I	14.87	I	9.91
I	ARM B	I	15.00	I	45.00	I	3.35	I	5.02	I	3.35
I	ARM C	I	15.00	I	45.00	I	10.93	I	16.39	I	10.93
I	ARM D	I	15.00	I	45.00	I	1.79	I	2.68	I	1.79

DEMAND SET TITLE: A1041/Abbots Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

A1041 Abbots Rd 2026 Site A.vao

I	I	ARM A	I	0.000	I	0.009	I	0.948	I	0.043	I
I	I	I	I	0.0	I	7.0	I	752.0	I	34.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.071	I	0.000	I	0.787	I	0.142	I
I	I	I	I	19.0	I	0.0	I	211.0	I	38.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.672	I	0.182	I	0.000	I	0.146	I
I	I	I	I	587.0	I	159.0	I	0.0	I	128.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.678	I	0.028	I	0.294	I	0.000	I
I	I	I	I	97.0	I	4.0	I	42.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	9.91	21.56	0.460		0.0	0.8	12.2		0.09	I
I	I	ARM B	3.35	13.64	0.246		0.0	0.3	4.7		0.10	I
I	I	ARM C	10.93	23.17	0.472		0.0	0.9	12.8		0.08	I
I	I	ARM D	1.79	13.08	0.137		0.0	0.2	2.3		0.09	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	11.84	21.26	0.557		0.8	1.2	17.9		0.11	I
I	I	ARM B	4.00	12.52	0.319		0.3	0.5	6.8		0.12	I
I	I	ARM C	13.05	23.03	0.566		0.9	1.3	18.7		0.10	I
I	I	ARM D	2.13	12.09	0.177		0.2	0.2	3.1		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	14.50	20.86	0.695		1.2	2.2	31.1		0.15	I
I	I	ARM B	4.90	11.03	0.444		0.5	0.8	11.3		0.16	I
I	I	ARM C	15.98	22.85	0.699		1.3	2.3	31.9		0.14	I
I	I	ARM D	2.61	10.77	0.243		0.2	0.3	4.6		0.12	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	14.50	20.85	0.695		2.2	2.2	33.4		0.16	I
I	I	ARM B	4.90	11.00	0.445		0.8	0.8	11.9		0.16	I
I	I	ARM C	15.98	22.84	0.699		2.3	2.3	34.2		0.15	I
I	I	ARM D	2.61	10.74	0.243		0.3	0.3	4.8		0.12	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	11.84	21.25	0.557		2.2	1.3	20.0		0.11	I
I	I	ARM B	4.00	12.47	0.321		0.8	0.5	7.4		0.12	I
I	I	ARM C	13.05	23.02	0.567		2.3	1.3	20.7		0.10	I
I	I	ARM D	2.13	12.05	0.177		0.3	0.2	3.3		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	9.91	21.55	0.460		1.3	0.9	13.3		0.09	I
I	I	ARM B	3.35	13.59	0.247		0.5	0.3	5.1		0.10	I
I	I	ARM C	10.93	23.16	0.472		1.3	0.9	13.9		0.08	I
I	I	ARM D	1.79	13.04	0.137		0.2	0.2	2.4		0.09	I

 . QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.2 **
17.30	2.2 **
17.45	2.2 **
18.00	1.3 *
18.15	0.9 *

 . QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.5
17.30	0.8 *
17.45	0.8 *

18.00 0.5
 18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.3	**
17.45	2.3	**
18.00	1.3	*
18.15	0.9	*

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	1087.4	I	724.9	I	127.9	I	0.12
I	B	I	367.5	I	245.0	I	47.1	I	0.13
I	C	I	1198.4	I	799.0	I	132.2	I	0.11
I	D	I	196.1	I	130.7	I	20.6	I	0.11
I	ALL	I	2849.4	I	1899.6	I	327.8	I	0.12

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Site D.vai"
(drive-on-the-left) at 11:57:08 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	BEFORE I AT TOP I AFTER I	I						
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I	I	I	I	I	I						
I	I	I	TO RISE I IS REACHED IF FALLING I	I	PEAK I OF PEAK I PEAK I	I	I	I						
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.66	I	14.49	I	9.66	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	2.96	I	4.44	I	2.96	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.88	I	16.31	I	10.88	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	1.91	I	2.87	I	1.91	I

DEMAND SET TITLE: A1041/Abbots Rd

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I	I	I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

A1041 Abbots Rd 2026 Site D.vao

I	I	ARM A	I	0.000	I	0.008	I	0.909	I	0.083	I
I	I	I	I	0.0	I	6.0	I	703.0	I	64.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.076	I	0.000	I	0.882	I	0.042	I
I	I	I	I	18.0	I	0.0	I	209.0	I	10.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.672	I	0.180	I	0.000	I	0.147	I
I	I	I	I	585.0	I	157.0	I	0.0	I	128.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.699	I	0.026	I	0.275	I	0.000	I
I	I	I	I	107.0	I	4.0	I	42.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	9.66	21.57	0.448		0.0	0.8	11.6		0.08	I
I	I	ARM B	2.96	13.77	0.215		0.0	0.3	4.0		0.09	I
I	I	ARM C	10.88	23.16	0.470		0.0	0.9	12.7		0.08	I
I	I	ARM D	1.91	13.11	0.146		0.0	0.2	2.5		0.09	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	11.54	21.28	0.542		0.8	1.2	16.9		0.10	I
I	I	ARM B	3.54	12.68	0.279		0.3	0.4	5.6		0.11	I
I	I	ARM C	12.99	23.02	0.564		0.9	1.3	18.5		0.10	I
I	I	ARM D	2.28	12.13	0.188		0.2	0.2	3.4		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	14.13	20.88	0.677		1.2	2.0	28.8		0.15	I
I	I	ARM B	4.33	11.22	0.386		0.4	0.6	9.0		0.14	I
I	I	ARM C	15.90	22.84	0.696		1.3	2.2	31.5		0.14	I
I	I	ARM D	2.80	10.81	0.259		0.2	0.3	5.0		0.12	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	14.13	20.87	0.677		2.0	2.1	30.8		0.15	I
I	I	ARM B	4.33	11.19	0.387		0.6	0.6	9.4		0.15	I
I	I	ARM C	15.90	22.83	0.697		2.2	2.3	33.7		0.14	I
I	I	ARM D	2.80	10.79	0.259		2.2	0.3	5.2		0.12	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	11.54	21.27	0.543		2.1	1.2	18.8		0.10	I
I	I	ARM B	3.54	12.63	0.280		0.6	0.4	6.1		0.11	I
I	I	ARM C	12.99	23.01	0.564		2.3	1.3	20.5		0.10	I
I	I	ARM D	2.28	12.09	0.189		0.3	0.2	3.6		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	9.66	21.56	0.448		1.2	0.8	12.7		0.08	I
I	I	ARM B	2.96	13.72	0.216		0.4	0.3	4.3		0.09	I
I	I	ARM C	10.88	23.15	0.470		1.3	0.9	13.8		0.08	I
I	I	ARM D	1.91	13.07	0.146		0.2	0.2	2.6		0.09	I

 . QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.2 **
17.30	2.0 **
17.45	2.1 **
18.00	1.2 *
18.15	0.8 *

 . QUEUE AT ARM B

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

18.00 0.4
 18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.2	**
17.45	2.3	**
18.00	1.3	*
18.15	0.9	*

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I	
I	I	I	I	I	* DELAY *	I	* DELAY *	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	1059.9	I	706.6	I	119.6	I	0.11
I	B	I	325.0	I	216.7	I	38.2	I	0.12
I	C	I	1193.0	I	795.3	I	130.8	I	0.11
I	D	I	209.8	I	139.9	I	22.3	I	0.11
I	ALL	I	2787.7	I	1858.4	I	311.0	I	0.11

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Site E.vai"
(drive-on-the-left) at 11:58:19 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	FLOW STOPS IF FALLING	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.07	I	16.61	I	11.07
I	ARM B	I	15.00	I	45.00	I	75.00	I	3.08	I	4.61	I	3.08
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.50	I	17.25	I	11.50
I	ARM D	I	15.00	I	45.00	I	75.00	I	1.76	I	2.64	I	1.76

DEMAND SET TITLE: A1041/Abbots Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

A1041 Abbots Rd 2026 Site E.vao

I	I	ARM A	I	0.000	I	0.014	I	0.893	I	0.094	I
I	I	I	I	0.0	I	12.0	I	791.0	I	83.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.126	I	0.000	I	0.833	I	0.041	I
I	I	I	I	31.0	I	0.0	I	205.0	I	10.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.698	I	0.155	I	0.000	I	0.147	I
I	I	I	I	642.0	I	143.0	I	0.0	I	135.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.695	I	0.028	I	0.277	I	0.000	I
I	I	I	I	98.0	I	4.0	I	39.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	11.07	21.70	0.510		0.0	1.0	14.8		0.09	I
I	I	ARM B	3.08	13.06	0.235		0.0	0.3	4.4		0.10	I
I	I	ARM C	11.50	22.92	0.502		0.0	1.0	14.4		0.09	I
I	I	ARM D	1.76	12.75	0.138		0.0	0.2	2.3		0.09	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	13.22	21.43	0.617		1.0	1.6	22.7		0.12	I
I	I	ARM B	3.67	11.84	0.310		0.3	0.4	6.5		0.12	I
I	I	ARM C	13.73	22.73	0.604		1.0	1.5	21.6		0.11	I
I	I	ARM D	2.10	11.70	0.180		0.2	0.2	3.2		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	16.20	21.07	0.769		1.6	3.2	43.4		0.20	I
I	I	ARM B	4.50	10.21	0.441		0.4	0.8	11.1		0.17	I
I	I	ARM C	16.82	22.49	0.748		1.5	2.8	39.6		0.17	I
I	I	ARM D	2.58	10.29	0.250		0.2	0.3	4.8		0.13	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	16.20	21.06	0.769		3.2	3.2	48.1		0.20	I
I	I	ARM B	4.50	10.15	0.443		0.8	0.8	11.7		0.18	I
I	I	ARM C	16.82	22.48	0.748		2.8	2.9	43.2		0.18	I
I	I	ARM D	2.58	10.25	0.251		0.3	0.3	5.0		0.13	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	13.22	21.42	0.618		3.2	1.6	26.1		0.13	I
I	I	ARM B	3.67	11.76	0.312		0.8	0.5	7.1		0.12	I
I	I	ARM C	13.73	22.72	0.604		2.9	1.6	24.5		0.11	I
I	I	ARM D	2.10	11.64	0.181		0.3	0.2	3.4		0.11	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	11.07	21.69	0.511		1.6	1.1	16.4		0.09	I
I	I	ARM B	3.08	13.00	0.236		0.5	0.3	4.8		0.10	I
I	I	ARM C	11.50	22.91	0.502		1.6	1.0	15.8		0.09	I
I	I	ARM D	1.76	12.70	0.139		0.2	0.2	2.5		0.09	I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.0 *
17.15	1.6 **
17.30	3.2 ***
17.45	3.2 ***
18.00	1.6 **
18.15	1.1 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.8 *
17.45	0.8 *

18.00 0.5
 18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.5	*
17.30	2.8	***
17.45	2.9	***
18.00	1.6	**
18.15	1.0	*

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING * * DELAY *		* INCLUSIVE QUEUEING * * DELAY *		I
			(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	1214.9	809.9	171.4	0.14	171.5	0.14	I
I	B	I	337.3	224.9	45.6	0.14	45.6	0.14	I
I	C	I	1261.5	841.0	159.0	0.13	159.1	0.13	I
I	D	I	193.3	128.9	21.2	0.11	21.2	0.11	I
I	ALL	I	3007.1	2004.7	397.3	0.13	397.4	0.13	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Site F.vai"
(drive-on-the-left) at 11:59:33 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	RATE OF FLOW (VEH/MIN)	I
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I
I	ARM A	I	15.00 I 45.00 I 75.00	I	10.26 I 15.39 I 10.26	I
I	ARM B	I	15.00 I 45.00 I 75.00	I	3.08 I 4.61 I 3.08	I
I	ARM C	I	15.00 I 45.00 I 75.00	I	10.84 I 16.26 I 10.84	I
I	ARM D	I	15.00 I 45.00 I 75.00	I	1.96 I 2.94 I 1.96	I

DEMAND SET TITLE: A1041/Abbots Rd

I	I	I	TURNING PROPORTIONS				I
I	I	I	TURNING COUNTS (VEH/HR)				I
I	I	I	(PERCENTAGE OF H.V.S)				I
I	I	I	I	I	I	I	I
I	TIME	I	FROM/TO I	ARM A I	ARM B I	ARM C I	ARM D I
I	16.45 - 18.15	I	I	I	I	I	I

A1041 Abbots Rd 2026 Site F.vao

I	I	ARM A	I	0.000	I	0.009	I	0.914	I	0.078	I
I	I	I	I	0.0	I	7.0	I	750.0	I	64.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.106	I	0.000	I	0.854	I	0.041	I
I	I	I	I	26.0	I	0.0	I	210.0	I	10.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.670	I	0.181	I	0.000	I	0.149	I
I	I	I	I	581.0	I	157.0	I	0.0	I	129.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.707	I	0.025	I	0.268	I	0.000	I
I	I	I	I	111.0	I	4.0	I	42.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	10.26	21.57	0.476		0.0	0.9	13.0		0.09	I
I	I	ARM B	3.08	13.45	0.229		0.0	0.3	4.3		0.10	I
I	I	ARM C	10.84	23.10	0.469		0.0	0.9	12.7		0.08	I
I	I	ARM D	1.96	13.08	0.150		0.0	0.2	2.6		0.09	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	12.25	21.28	0.576		0.9	1.3	19.3		0.11	I
I	I	ARM B	3.67	12.30	0.299		0.3	0.4	6.1		0.12	I
I	I	ARM C	12.94	22.95	0.564		0.9	1.3	18.5		0.10	I
I	I	ARM D	2.34	12.10	0.194		0.2	0.2	3.5		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	15.01	20.88	0.719		1.3	2.5	34.5		0.17	I
I	I	ARM B	4.50	10.76	0.418		0.4	0.7	10.2		0.16	I
I	I	ARM C	15.85	22.75	0.697		1.3	2.2	31.6		0.14	I
I	I	ARM D	2.87	10.78	0.266		0.2	0.4	5.2		0.13	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	15.01	20.87	0.719		2.5	2.5	37.3		0.17	I
I	I	ARM B	4.50	10.72	0.420		0.7	0.7	10.7		0.16	I
I	I	ARM C	15.85	22.74	0.697		2.2	2.3	33.8		0.14	I
I	I	ARM D	2.87	10.75	0.267		0.4	0.4	5.4		0.13	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	12.25	21.27	0.576		2.5	1.4	21.7		0.11	I
I	I	ARM B	3.67	12.24	0.300		0.7	0.4	6.7		0.12	I
I	I	ARM C	12.94	22.94	0.564		2.3	1.3	20.5		0.10	I
I	I	ARM D	2.34	12.06	0.194		0.4	0.2	3.7		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	10.26	21.56	0.476		1.4	0.9	14.2		0.09	I
I	I	ARM B	3.08	13.40	0.230		0.4	0.3	4.6		0.10	I
I	I	ARM C	10.84	23.09	0.469		1.3	0.9	13.8		0.08	I
I	I	ARM D	1.96	13.04	0.150		0.2	0.2	2.7		0.09	I

 . QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.9 *
17.15	1.3 **
17.30	2.5 **
17.45	2.5 ***
18.00	1.4 *
18.15	0.9 *

 . QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.7 *
17.45	0.7 *

18.00 0.4
 18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.2	**
17.45	2.3	**
18.00	1.3	*
18.15	0.9	*

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING *	I	* INCLUSIVE QUEUEING *	I		
I	I	I	I	I	* DELAY *	I	* DELAY *	I		
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)		
I	A	I	1125.8	I	750.5	I	140.0	I	0.12	I
I	B	I	337.3	I	224.9	I	42.6	I	0.13	I
I	C	I	1188.8	I	792.6	I	130.8	I	0.11	I
I	D	I	215.3	I	143.5	I	23.2	I	0.11	I
I	ALL	I	2867.2	I	1911.5	I	336.6	I	0.12	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Site G1.vai"
(drive-on-the-left) at 13:18:06 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	BEFORE I	I	AT TOP	I	AFTER I		
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I	I	I	I	PEAK I	I	OF PEAK I	I	PEAK I		
I	I	I	TO RISE I IS REACHED IF FALLING I	I	I	I	PEAK I	I	OF PEAK I	I	PEAK I		
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.69	I	14.53	I	9.69
I	ARM B	I	15.00	I	45.00	I	75.00	I	3.30	I	4.95	I	3.30
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.76	I	16.14	I	10.76
I	ARM D	I	15.00	I	45.00	I	75.00	I	1.70	I	2.55	I	1.70

DEMAND SET TITLE: A1041/Abbots Rd

I	I	I	TURNING PROPORTIONS	I				
I	I	I	TURNING COUNTS (VEH/HR)	I				
I	I	I	(PERCENTAGE OF H.V.S)	I				
I	I	I		I				
I	TIME	I	FROM/TO I	ARM A	ARM B	ARM C	ARM D	I
I	16.45 - 18.15	I	I	I	I	I	I	I

A1041 Abbots Rd 2026 Site G1.vao

I	I	ARM A	I	0.000	I	0.009	I	0.950	I	0.041	I	I
I	I	I	I	0.0	I	7.0	I	736.0	I	32.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.068	I	0.000	I	0.784	I	0.148	I	I
I	I	I	I	18.0	I	0.0	I	207.0	I	39.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.671	I	0.182	I	0.000	I	0.146	I	I
I	I	I	I	578.0	I	157.0	I	0.0	I	126.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.662	I	0.037	I	0.301	I	0.000	I	I
I	I	I	I	90.0	I	5.0	I	41.0	I	0.0	I	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I	I
I	I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	9.69	21.57	0.449		0.0	0.8	11.7		0.08	I
I	I	ARM B	3.30	13.77	0.240		0.0	0.3	4.5		0.10	I
I	I	ARM C	10.76	23.18	0.464		0.0	0.9	12.4		0.08	I
I	I	ARM D	1.70	13.16	0.129		0.0	0.1	2.2		0.09	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	11.57	21.28	0.544		0.8	1.2	17.0		0.10	I
I	I	ARM B	3.94	12.68	0.311		0.3	0.4	6.5		0.11	I
I	I	ARM C	12.85	23.05	0.558		0.9	1.2	18.0		0.10	I
I	I	ARM D	2.03	12.19	0.167		0.1	0.2	2.9		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	14.17	20.88	0.678		1.2	2.0	29.0		0.15	I
I	I	ARM B	4.83	11.22	0.430		0.4	0.7	10.7		0.16	I
I	I	ARM C	15.74	22.87	0.688		1.2	2.1	30.4		0.14	I
I	I	ARM D	2.49	10.88	0.229		0.2	0.3	4.3		0.12	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	14.17	20.87	0.679		2.0	2.1	31.0		0.15	I
I	I	ARM B	4.83	11.19	0.431		0.7	0.8	11.2		0.16	I
I	I	ARM C	15.74	22.87	0.688		2.1	2.2	32.5		0.14	I
I	I	ARM D	2.49	10.85	0.229		0.3	0.3	4.4		0.12	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	11.57	21.27	0.544		2.1	1.2	18.9		0.10	I
I	I	ARM B	3.94	12.63	0.312		0.8	0.5	7.1		0.12	I
I	I	ARM C	12.85	23.04	0.558		2.2	1.3	20.0		0.10	I
I	I	ARM D	2.03	12.15	0.167		0.3	0.2	3.1		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	9.69	21.56	0.449		1.2	0.8	12.7		0.08	I
I	I	ARM B	3.30	13.72	0.241		0.5	0.3	4.9		0.10	I
I	I	ARM C	10.76	23.17	0.464		1.3	0.9	13.5		0.08	I
I	I	ARM D	1.70	13.12	0.130		0.2	0.1	2.3		0.09	I

 QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.2 **
17.30	2.0 **
17.45	2.1 **
18.00	1.2 *
18.15	0.8 *

 QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.7 *
17.45	0.8 *

18.00 0.5
18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.9 *
17.15	1.2 *
17.30	2.1 **
17.45	2.2 **
18.00	1.3 *
18.15	0.9 *

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	DEMAND (VEH/H)	QUEUEING DELAY (MIN)	QUEUEING DELAY (MIN/VEH)	INCLUSIVE QUEUEING DELAY (MIN)	INCLUSIVE QUEUEING DELAY (MIN/VEH)
A	1062.7	708.5	120.4	0.11	120.4	0.11
B	362.0	241.3	45.0	0.12	45.0	0.12
C	1180.6	787.1	126.9	0.11	126.9	0.11
D	186.5	124.3	19.2	0.10	19.2	0.10
ALL	2791.8	1861.2	311.4	0.11	311.4	0.11

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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THE USER OF THIS COMPUTER PROGRAM FOR THE SOLUTION OF AN ENGINEERING PROBLEM IS
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Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Site G2.vai"
(drive-on-the-left) at 13:18:39 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I								
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I BEFORE I AT TOP I AFTER I	I	I	I								
I	I	I	TO RISE I IS REACHED IF FALLING I PEAK I OF PEAK I PEAK I	I	I	I								
I	ARM A	I	15.00	I	45.00	I	75.00	I	9.69	I	14.53	I	9.69	I
I	ARM B	I	15.00	I	45.00	I	75.00	I	3.29	I	4.93	I	3.29	I
I	ARM C	I	15.00	I	45.00	I	75.00	I	10.74	I	16.11	I	10.74	I
I	ARM D	I	15.00	I	45.00	I	75.00	I	1.70	I	2.55	I	1.70	I

DEMAND SET TITLE: A1041/Abbots Rd

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

A1041 Abbots Rd 2026 Site G2.vao

I	I	ARM A	I	0.000	I	0.009	I	0.950	I	0.041	I
I	I	I	I	0.0	I	7.0	I	736.0	I	32.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.068	I	0.000	I	0.783	I	0.148	I
I	I	I	I	18.0	I	0.0	I	206.0	I	39.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.673	I	0.182	I	0.000	I	0.146	I
I	I	I	I	578.0	I	156.0	I	0.0	I	125.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.647	I	0.051	I	0.301	I	0.000	I
I	I	I	I	88.0	I	7.0	I	41.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

 QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	9.69	21.57	0.449		0.0	0.8	11.7		0.08	I
I	I	ARM B	3.29	13.77	0.239		0.0	0.3	4.5		0.10	I
I	I	ARM C	10.74	23.18	0.463		0.0	0.9	12.4		0.08	I
I	I	ARM D	1.70	13.16	0.129		0.0	0.1	2.2		0.09	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	11.57	21.27	0.544		0.8	1.2	17.1		0.10	I
I	I	ARM B	3.93	12.68	0.310		0.3	0.4	6.5		0.11	I
I	I	ARM C	12.82	23.05	0.556		0.9	1.2	18.0		0.10	I
I	I	ARM D	2.03	12.19	0.166		0.1	0.2	2.9		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	14.17	20.87	0.679		1.2	2.1	29.1		0.15	I
I	I	ARM B	4.81	11.22	0.429		0.4	0.7	10.6		0.15	I
I	I	ARM C	15.70	22.87	0.687		1.2	2.1	30.2		0.14	I
I	I	ARM D	2.49	10.89	0.228		0.2	0.3	4.3		0.12	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	14.17	20.86	0.679		2.1	2.1	31.1		0.15	I
I	I	ARM B	4.81	11.19	0.430		0.7	0.7	11.1		0.16	I
I	I	ARM C	15.70	22.87	0.687		2.1	2.2	32.2		0.14	I
I	I	ARM D	2.49	10.86	0.229		0.3	0.3	4.4		0.12	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	11.57	21.26	0.544		2.1	1.2	18.9		0.10	I
I	I	ARM B	3.93	12.63	0.311		0.7	0.5	7.1		0.12	I
I	I	ARM C	12.82	23.04	0.556		2.2	1.3	19.9		0.10	I
I	I	ARM D	2.03	12.15	0.167		0.3	0.2	3.1		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	9.69	21.55	0.449		1.2	0.8	12.7		0.08	I
I	I	ARM B	3.29	13.72	0.240		0.5	0.3	4.9		0.10	I
I	I	ARM C	10.74	23.17	0.463		1.3	0.9	13.4		0.08	I
I	I	ARM D	1.70	13.12	0.130		0.2	0.1	2.3		0.09	I

 . QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.8 *
17.15	1.2 **
17.30	2.1 **
17.45	2.1 **
18.00	1.2 *
18.15	0.8 *

 . QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.7 *
17.45	0.7 *

18.00 0.5
18.15 0.3

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.2	*
17.30	2.1	**
17.45	2.2	**
18.00	1.3	*
18.15	0.9	*

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.1
17.15	0.2
17.30	0.3
17.45	0.3
18.00	0.2
18.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING * * DELAY *		* INCLUSIVE QUEUEING * * DELAY *		I
			(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
I	A	I	1062.7	708.5	120.5	0.11	120.6	0.11	I
I	B	I	360.6	240.4	44.7	0.12	44.7	0.12	I
I	C	I	1177.9	785.2	126.1	0.11	126.1	0.11	I
I	D	I	186.5	124.3	19.2	0.10	19.2	0.10	I
I	ALL	I	2787.7	1858.4	310.5	0.11	310.6	0.11	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Site H1.vai"
(drive-on-the-left) at 13:19:16 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN	I	RATE OF FLOW (VEH/MIN)	I	BEFORE I AT TOP	I	AFTER I
I	I	I	FLOW STARTS I TOP OF PEAK I FLOW STOPS I	I	I	I	I	I	I
I	I	I	TO RISE I IS REACHED IF FALLING I	I	PEAK I OF PEAK I PEAK I	I	I	I	I
I	ARM A	I	15.00	I	45.00	I	75.00	I	11.34
I	ARM B	I	15.00	I	45.00	I	75.00	I	3.00
I	ARM C	I	15.00	I	45.00	I	75.00	I	11.39
I	ARM D	I	15.00	I	45.00	I	75.00	I	1.70

DEMAND SET TITLE: A1041/Abbots Rd

I	I	I	TURNING PROPORTIONS	I
I	I	I	TURNING COUNTS (VEH/HR)	I
I	I	I	(PERCENTAGE OF H.V.S)	I
I	I	I		I
I	TIME	I	FROM/TO I ARM A I ARM B I ARM C I ARM D I	I
I	16.45 - 18.15	I	I I I I I I	I

A1041 Abbots Rd 2026 Site H1.vao

I	I	ARM A	I	0.000	I	0.007	I	0.929	I	0.064	I
I	I	I	I	0.0	I	6.0	I	843.0	I	58.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM B	I	0.071	I	0.000	I	0.892	I	0.038	I
I	I	I	I	17.0	I	0.0	I	214.0	I	9.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM C	I	0.679	I	0.179	I	0.000	I	0.142	I
I	I	I	I	619.0	I	163.0	I	0.0	I	129.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I
I	I	ARM D	I	0.669	I	0.029	I	0.301	I	0.000	I
I	I	I	I	91.0	I	4.0	I	41.0	I	0.0	I
I	I	I	I	(10.0)	I	(10.0)	I	(10.0)	I	(10.0)	I
I	I	I	I	I	I	I	I	I	I	I	I

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	16.45-17.00										I
I	I	ARM A	11.34	21.54	0.526		0.0	1.1	15.7		0.10	I
I	I	ARM B	3.00	12.87	0.233		0.0	0.3	4.4		0.10	I
I	I	ARM C	11.39	23.22	0.490		0.0	1.0	13.8		0.08	I
I	I	ARM D	1.70	12.86	0.132		0.0	0.2	2.2		0.09	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.00-17.15										I
I	I	ARM A	13.54	21.24	0.638		1.1	1.7	24.6		0.13	I
I	I	ARM B	3.58	11.61	0.309		0.3	0.4	6.4		0.12	I
I	I	ARM C	13.60	23.09	0.589		1.0	1.4	20.4		0.10	I
I	I	ARM D	2.03	11.83	0.172		0.2	0.2	3.0		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.15-17.30										I
I	I	ARM A	16.58	20.83	0.796		1.7	3.6	49.5		0.22	I
I	I	ARM B	4.39	9.93	0.442		0.4	0.8	11.1		0.18	I
I	I	ARM C	16.65	22.93	0.726		1.4	2.6	35.9		0.16	I
I	I	ARM D	2.49	10.45	0.238		0.2	0.3	4.5		0.13	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.30-17.45										I
I	I	ARM A	16.58	20.82	0.796		3.6	3.8	55.8		0.23	I
I	I	ARM B	4.39	9.86	0.445		0.8	0.8	11.8		0.18	I
I	I	ARM C	16.65	22.92	0.727		2.6	2.6	38.8		0.16	I
I	I	ARM D	2.49	10.41	0.239		0.3	0.3	4.7		0.13	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	17.45-18.00										I
I	I	ARM A	13.54	21.22	0.638		3.8	1.8	28.8		0.13	I
I	I	ARM B	3.58	11.51	0.311		0.8	0.5	7.1		0.13	I
I	I	ARM C	13.60	23.08	0.589		2.6	1.5	22.9		0.11	I
I	I	ARM D	2.03	11.78	0.172		0.3	0.2	3.2		0.10	I

I	I	TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)	I
I	I	18.00-18.15										I
I	I	ARM A	11.34	21.52	0.527		1.8	1.1	17.6		0.10	I
I	I	ARM B	3.00	12.80	0.234		0.5	0.3	4.8		0.10	I
I	I	ARM C	11.39	23.21	0.491		1.5	1.0	15.1		0.09	I
I	I	ARM D	1.70	12.81	0.133		0.2	0.2	2.4		0.09	I

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.1 *
17.15	1.7 **
17.30	3.6 *****
17.45	3.8 *****
18.00	1.8 **
18.15	1.1 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.3
17.15	0.4
17.30	0.8 *
17.45	0.8 *

18.00 0.5
18.15 0.3

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND	I	* QUEUEING * * DELAY *	I	* INCLUSIVE QUEUEING * * DELAY *	I
I	I	I	(VEH)	I	(MIN)	I	(MIN)	I
I	I	I	(VEH/H)	I	(MIN/VEH)	I	(MIN/VEH)	I
I	A	I	1243.7	I	191.9	I	192.0	I
I	B	I	329.1	I	45.5	I	45.5	I
I	C	I	1249.2	I	146.8	I	146.9	I
I	D	I	186.5	I	20.0	I	20.0	I
I	ALL	I	3008.4	I	404.3	I	404.3	I

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

END OF JOB

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

Run with file:-
"p:\JC\FeeNo\B1368600 XT Selby LDF Option Appraisal\Modelling\Junctions\Arcady\Arcady Files KD\
A1041 Abbots Rd 2026 Site H2.vai"
(drive-on-the-left) at 13:19:48 on Tuesday, 22 September 2009

.FILE PROPERTIES

RUN TITLE: A1041/Abbots Rd
LOCATION: Selby
DATE: 02/09/09
CLIENT: Selby
ENUMERATOR: holdenv [NEW25515]
JOB NUMBER: Selby
STATUS:
DESCRIPTION: A1041/Abbots Rd Roundabout Assessment

.INPUT DATA

ARM A - A1041 North
ARM B - Abbots Rd East
ARM C - A1041 South
ARM D - Shop Car Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I
I	ARM A	I	5.50	I	5.50	I	0.00	I	20.00	I	35.00	I	55.0	I	0.589	I	25.366	I
I	ARM B	I	3.50	I	5.75	I	5.50	I	23.00	I	35.00	I	50.0	I	0.545	I	21.172	I
I	ARM C	I	5.25	I	5.75	I	3.00	I	15.00	I	35.00	I	45.0	I	0.605	I	26.235	I
I	ARM D	I	3.75	I	5.00	I	3.00	I	19.00	I	35.00	I	53.0	I	0.523	I	19.860	I

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

.TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: A1041/Abbots Rd

I	ARM	I	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	I	TOP OF PEAK IS REACHED	I	RATE OF FLOW (VEH/MIN) BEFORE PEAK	I	AT TOP OF PEAK	I	AFTER PEAK
I	ARM A	I	15.00	I	45.00	I	11.20	I	16.80	I	11.20
I	ARM B	I	15.00	I	45.00	I	4.05	I	6.08	I	4.05
I	ARM C	I	15.00	I	45.00	I	11.66	I	17.49	I	11.66
I	ARM D	I	15.00	I	45.00	I	1.69	I	2.53	I	1.69

DEMAND SET TITLE: A1041/Abbots Rd

I	TIME	I	FROM/TO	I	ARM A	I	ARM B	I	ARM C	I	ARM D
I	16.45 - 18.15	I		I		I		I		I	

A1041 Abbots Rd 2026 Site H2.vao

I	ARM A	0.000	0.007	0.960	0.033
I		0.0	6.0	860.0	30.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM B	0.052	0.000	0.833	0.114
I		17.0	0.0	270.0	37.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM C	0.684	0.178	0.000	0.138
I		638.0	166.0	0.0	129.0
I		(10.0)	(10.0)	(10.0)	(10.0)
I	ARM D	0.667	0.030	0.304	0.000
I		90.0	4.0	41.0	0.0
I		(10.0)	(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	11.20	21.52	0.521		0.0	1.1	15.4		0.10
ARM B	4.05	12.94	0.313		0.0	0.5	6.5		0.11
ARM C	11.66	23.22	0.502		0.0	1.0	14.4		0.09
ARM D	1.69	12.72	0.133		0.0	0.2	2.2		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	13.37	21.21	0.631		1.1	1.7	23.9		0.13
ARM B	4.84	11.69	0.414		0.5	0.7	10.0		0.15
ARM C	13.93	23.09	0.603		1.0	1.5	21.6		0.11
ARM D	2.02	11.66	0.173		0.2	0.2	3.0		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	16.38	20.80	0.788		1.7	3.5	47.4		0.22
ARM B	5.92	10.04	0.590		0.7	1.4	19.4		0.24
ARM C	17.06	22.93	0.744		1.5	2.8	38.9		0.17
ARM D	2.47	10.24	0.241		0.2	0.3	4.6		0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	16.38	20.79	0.788		3.5	3.6	53.2		0.23
ARM B	5.92	9.97	0.594		1.4	1.4	21.2		0.25
ARM C	17.06	22.92	0.744		2.8	2.8	42.3		0.17
ARM D	2.47	10.20	0.242		0.3	0.3	4.7		0.13

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	13.37	21.19	0.631		3.6	1.7	27.8		0.13
ARM B	4.84	11.60	0.417		1.4	0.7	11.4		0.15
ARM C	13.93	23.08	0.603		2.8	1.5	24.3		0.11
ARM D	2.02	11.60	0.174		0.3	0.2	3.3		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	11.20	21.50	0.521		1.7	1.1	17.1		0.10
ARM B	4.05	12.88	0.314		0.7	0.5	7.2		0.11
ARM C	11.66	23.21	0.502		1.5	1.0	15.8		0.09
ARM D	1.69	12.67	0.133		0.2	0.2	2.4		0.09

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	1.1 *
17.15	1.7 **
17.30	3.5 ***
17.45	3.6 ****
18.00	1.7 **
18.15	1.1 *

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.5
17.15	0.7 *
17.30	1.4 *
17.45	1.4 *

18.00 0.7 *
18.15 0.5

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

I	ARM	I	TOTAL DEMAND		* QUEUEING *		* INCLUSIVE QUEUEING *		I
			I	I	I	I	I	I	
I	I	I	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	I
I	A	I	1228.6	819.1	184.9	0.15	184.9	0.15	I
I	B	I	444.3	296.2	75.7	0.17	75.8	0.17	I
I	C	I	1279.3	852.9	157.4	0.12	157.4	0.12	I
I	D	I	185.1	123.4	20.2	0.11	20.2	0.11	I
I	ALL	I	3137.3	2091.6	438.2	0.14	438.3	0.14	I

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

END OF JOB

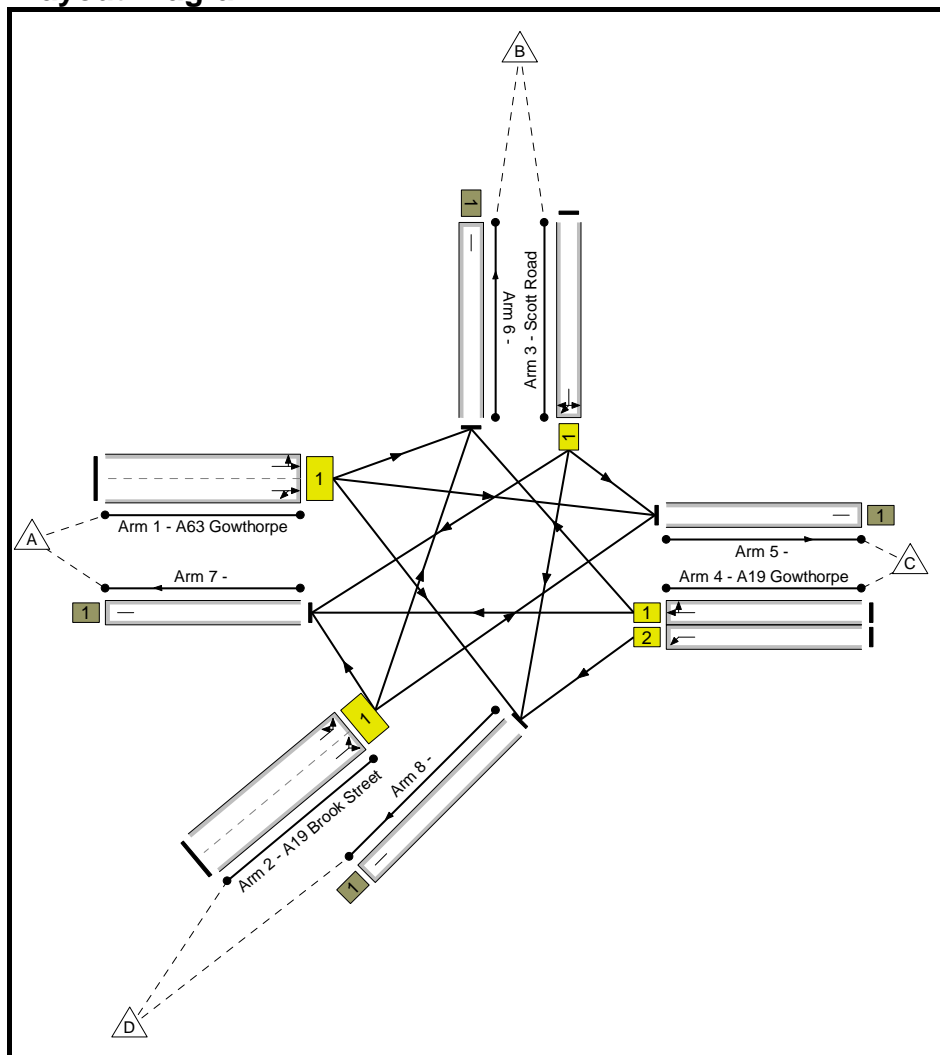
APPENDIX E JUNCTION ANALYSIS – SIGNALS

Gowthorpe Crossroads

User and Project Details

Project:	Selby VISUM
Title:	Gowthorpe/Brooke Street/Scott Road/Leeds Road
Location:	Selby
File name:	KD Gowthorpe Junction.lsgx
Author:	Edward Downer
Company:	Jacobs Consultancy
Address:	Horsley House, Regent Centre, Gosforth, Newcastle upon Tyne, NE3 3
Controller:	Generic
SCN:	NY124
Notes:	

Junction Layout Diagram



Gowthorpe Crossroads

Scenario 2: 'Base 2008'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 3: 'Base 2008'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	55	111	42	208	
B	75	0	126	224	425	
C	116	114	0	171	401	
D	24	191	182	0	397	
Tot.	215	360	419	437	1431	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	14	-	208	3600	3600	563	37.0	-	-	-	2.4	41.3	5.2	
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	12	-	397	3600	3600	488	81.4	-	-	-	6.5	59.3	12.4	
3/1	Scott Road Left Right Right2	U	C		1	25	-	425	1800	1800	488	87.2	-	-	-	7.0	59.6	13.8	
4/1	A19 Gowthorpe Right Ahead	U	B		1	14	-	230	1800	1800	281	81.8	-	-	-	4.6	71.7	8.0	
4/2	A19 Gowthorpe Left	U	B	E	1	33	19	171	1800	1800	637	26.8	-	-	-	1.2	26.0	3.4	
PRC for Signalled Links (%):					3.2	Total Delay for Signalled Links (pcuHr):					21.78								
PRC Over All Links (%):					3.2	Total Delay Over All Links(pcuHr):					21.78	Cycle Time (s):		96					

Gowthorpe Crossroads

Scenario 3: 'Base 2026'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 4: 'Base 2026'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	68	134	48	250	
B	107	0	140	297	544	
C	108	125	0	187	420	
D	29	234	246	0	509	
Tot.	244	427	520	532	1723	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	11	-	250	3600	3600	450	55.6	-	-	-	3.4	48.5	6.9	
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	13	-	509	3600	3600	525	97.0	-	-	-	13.7	97.2	21.4	
3/1	Scott Road Left Right Right2	U	C		1	27	-	544	1800	1800	525	103.6	-	-	-	23.3	154.1	32.4	
4/1	A19 Gowthorpe Right Ahead	U	B		1	11	-	233	1800	1800	225	103.6	-	-	-	13.0	200.9	16.3	
4/2	A19 Gowthorpe Left	U	B	E	1	31	20	187	1800	1800	600	31.2	-	-	-	1.5	28.2	3.9	
PRC for Signalled Links (%):						-15.1	Total Delay for Signalled Links (pcuHr):				54.85								
PRC Over All Links (%):						-15.1	Total Delay Over All Links(pcuHr):				54.85	Cycle Time (s):				96			

Gowthorpe Crossroads

Scenario 4: '2026 Site A'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 5: '2026 Site A'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	84	173	49	306	
B	148	0	125	303	576	
C	203	135	0	166	504	
D	31	248	237	0	516	
Tot.	382	467	535	518	1902	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	15	-	306	3600	3600	600	51.0	-	-	-	3.6	42.5	7.9
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	11	-	516	3600	3600	450	114.7	-	-	-	46.1	321.9	53.4
3/1	Scott Road Left Right Right2	U	C		1	25	-	576	1800	1800	488	118.2	-	-	-	56.5	353.4	65.0
4/1	A19 Gowthorpe Right Ahead	U	B		1	15	-	338	1800	1800	300	112.7	-	-	-	28.3	301.7	32.7
4/2	A19 Gowthorpe Left	U	B	E	1	33	18	166	1800	1800	637	26.0	-	-	-	1.2	25.9	3.3
PRC for Signalled Links (%):						-31.3	Total Delay for Signalled Links (pcuHr):						135.82					
PRC Over All Links (%):						-31.3	Total Delay Over All Links(pcuHr):						135.82		Cycle Time (s): 96			

Gowthorpe Crossroads

Scenario 5: '2026 Site D'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 6: '2026 Site D'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	67	144	48	259	
B	98	0	128	280	506	
C	119	127	0	158	404	
D	28	234	212	0	474	
Tot.	245	428	484	486	1643	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	13	-	259	3600	3600	525	49.3	-	-	-	3.2	44.5	6.8	
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	12	-	474	3600	3600	488	97.2	-	-	-	13.5	102.3	20.5	
3/1	Scott Road Left Right Right2	U	C		1	26	-	506	1800	1800	506	100.0	-	-	-	16.0	114.1	24.5	
4/1	A19 Gowthorpe Right Ahead	U	B		1	13	-	246	1800	1800	263	93.7	-	-	-	7.5	109.9	11.2	
4/2	A19 Gowthorpe Left	U	B	E	1	32	19	158	1800	1800	619	25.5	-	-	-	1.2	26.6	3.2	
PRC for Signalled Links (%):						-11.1	Total Delay for Signalled Links (pcuHr):				41.37								
PRC Over All Links (%):						-11.1	Total Delay Over All Links(pcuHr):				41.37		Cycle Time (s): 96						

Gowthorpe Crossroads

Scenario 6: '2026 Site E'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 7: '2020 Site E'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	68	136	48	252	
B	112	0	137	314	563	
C	105	125	0	202	432	
D	28	240	331	0	599	
Tot.	245	433	604	564	1846	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	11	-	252	3600	3600	450	56.0	-	-	-	3.4	48.6	6.9	
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	14	-	599	3600	3600	563	106.5	-	-	-	33.1	199.1	41.8	
3/1	Scott Road Left Right Right2	U	C		1	26	-	563	1800	1800	506	111.2	-	-	-	40.5	258.8	49.2	
4/1	A19 Gowthorpe Right Ahead	U	B		1	11	-	230	1800	1800	225	102.2	-	-	-	11.9	185.7	15.2	
4/2	A19 Gowthorpe Left	U	B	E	1	32	21	202	1800	1800	619	32.6	-	-	-	1.5	27.6	4.2	
PRC for Signalled Links (%):						-23.6	Total Delay for Signalled Links (pcuHr):				90.41								
PRC Over All Links (%):						-23.6	Total Delay Over All Links(pcuHr):				90.41	Cycle Time (s):		96					

Gowthorpe Crossroads

Scenario 7: '2026 Site F'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 8: '2026 Site F'

Traffic Flow Matrix

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	67	133	48	248
	B	111	0	138	345	594
	C	103	125	0	220	448
	D	28	249	286	0	563
	Tot.	242	441	557	613	1853

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	10	-	248	3600	3600	412	60.1	-	-	-	3.5	51.3	7.0	
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	13	-	563	3600	3600	525	107.2	-	-	-	33.2	212.2	41.3	
3/1	Scott Road Left Right Right2	U	C		1	28	-	594	1800	1800	544	109.2	-	-	-	37.7	228.6	47.2	
4/1	A19 Gowthorpe Right Ahead	U	B		1	10	-	228	1800	1800	206	110.5	-	-	-	18.5	292.2	21.4	
4/2	A19 Gowthorpe Left	U	B	E	1	30	20	220	1800	1800	581	37.8	-	-	-	1.8	30.0	4.8	
PRC for Signalled Links (%):						-22.8	Total Delay for Signalled Links (pcuHr):				94.78								
PRC Over All Links (%):						-22.8	Total Delay Over All Links(pcuHr):				94.78	Cycle Time (s):				96			

Gowthorpe Crossroads

Scenario 8: '2026 Site G1'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 9: '2026 Site G1'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	69	145	47	261	
B	96	0	124	333	553	
C	137	127	0	234	498	
D	28	259	227	0	514	
Tot.	261	455	496	614	1826	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	12	-	261	3600	3600	488	53.5	-	-	-	3.4	46.6	7.0	
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	12	-	514	3600	3600	488	105.4	-	-	-	27.1	190.0	34.4	
3/1	Scott Road Left Right Right2	U	C		1	27	-	553	1800	1800	525	105.3	-	-	-	27.1	176.3	36.2	
4/1	A19 Gowthorpe Right Ahead	U	B		1	12	-	264	1800	1800	244	108.3	-	-	-	18.7	254.6	22.2	
4/2	A19 Gowthorpe Left	U	B	E	1	31	19	234	1800	1800	600	39.0	-	-	-	1.9	29.4	5.1	
PRC for Signalled Links (%):						-20.3	Total Delay for Signalled Links (pcuHr):				78.17								
PRC Over All Links (%):						-20.3	Total Delay Over All Links(pcuHr):				78.17	Cycle Time (s):				96			

Gowthorpe Crossroads

Scenario 9: '2026 Site G2'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 10: '2026 Site G2'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	68	152	46	266	
B	92	0	127	337	556	
C	146	129	0	241	516	
D	27	283	234	0	544	
Tot.	265	480	513	624	1882	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	13	-	266	3600	3600	525	50.7	-	-	-	3.3	44.8	7.0
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	12	-	544	3600	3600	488	111.6	-	-	-	41.8	276.5	49.5
3/1	Scott Road Left Right Right2	U	C		1	26	-	556	1800	1800	506	109.8	-	-	-	37.0	239.4	45.7
4/1	A19 Gowthorpe Right Ahead	U	B		1	13	-	275	1800	1800	263	104.8	-	-	-	15.7	205.9	19.7
4/2	A19 Gowthorpe Left	U	B	E	1	32	19	241	1800	1800	619	38.9	-	-	-	1.9	28.6	5.1
PRC for Signalled Links (%):						-24.0	Total Delay for Signalled Links (pcuHr):				99.72							
PRC Over All Links (%):						-24.0	Total Delay Over All Links(pcuHr):				99.72	Cycle Time (s): 96						

Gowthorpe Crossroads

Scenario 10: '2026 Site H1'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 11: '2026 Site H1'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	82	152	55	289	
B	114	0	122	327	563	
C	100	123	0	206	429	
D	28	307	341	0	676	
Tot.	242	512	615	588	1957	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	10	-	289	3600	3600	412	70.1	-	-	-	4.4	55.2	8.5
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	15	-	676	3600	3600	600	112.7	-	-	-	53.7	286.0	63.5
3/1	Scott Road Left Right Right2	U	C		1	26	-	563	1800	1800	506	111.2	-	-	-	40.5	258.9	49.2
4/1	A19 Gowthorpe Right Ahead	U	B		1	10	-	223	1800	1800	206	108.1	-	-	-	16.2	261.7	19.1
4/2	A19 Gowthorpe Left	U	B	E	1	32	22	206	1800	1800	619	33.3	-	-	-	1.6	27.7	4.3
PRC for Signalled Links (%):						-25.2	Total Delay for Signalled Links (pcuHr):						116.42					
PRC Over All Links (%):						-25.2	Total Delay Over All Links(pcuHr):						116.42		Cycle Time (s): 96			

Gowthorpe Crossroads

Scenario 11: '2026 Site H2'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 12: '2026 Site H2'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	88	167	54	309	
B	106	0	364	120	590	
C	108	123	0	234	465	
D	27	335	384	0	746	
Tot.	241	546	915	408	2110	

Link Results

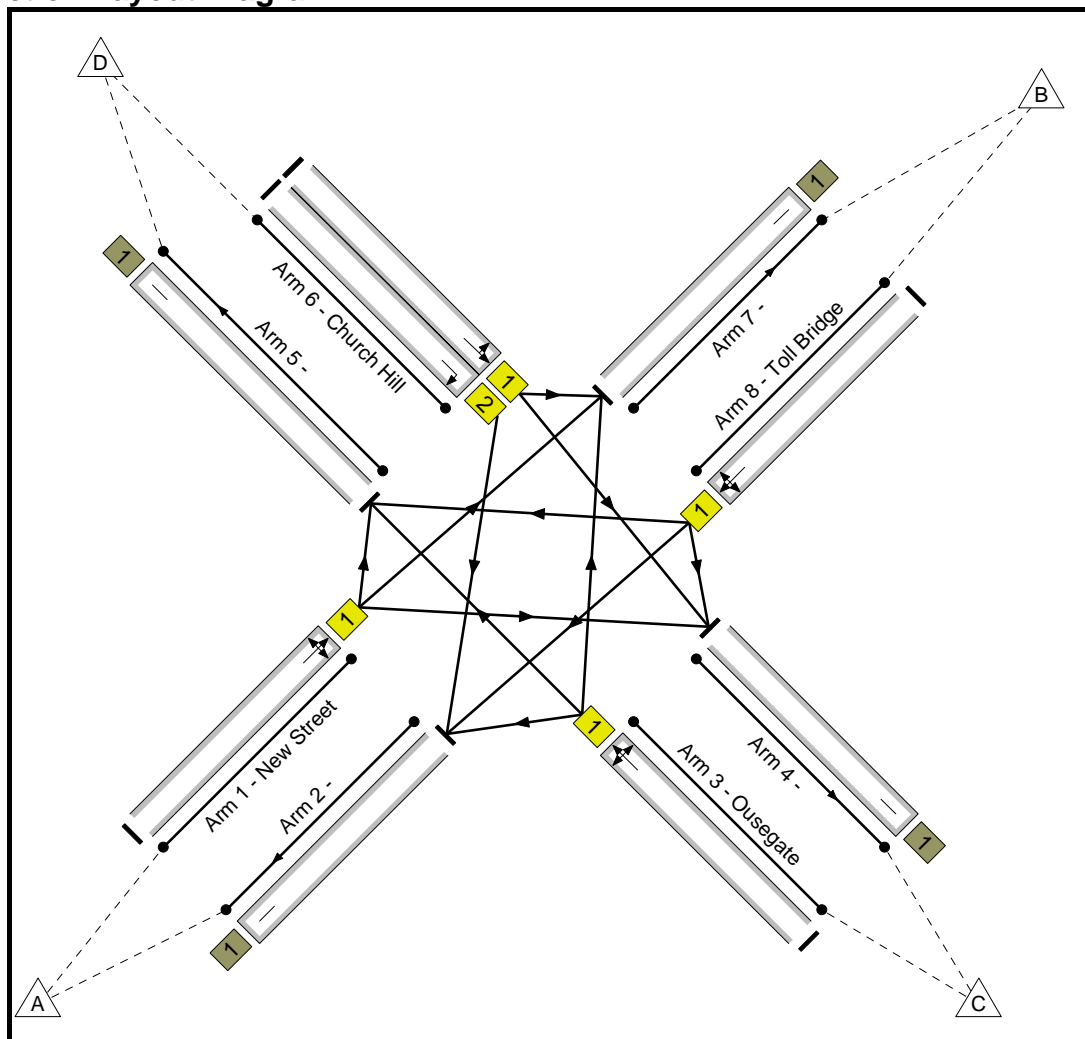
Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A63 Gowthorpe Ahead Left U-Turn	U	A		1	10	-	309	3600	3600	412	74.9	-	-	-	5.0	58.1	9.3	
2/1	A19 Brook Street Ahead Left U-Turn	U	D		1	16	-	746	3600	3600	637	117.0	-	-	-	71.6	345.7	82.6	
3/1	Scott Road Left Right Right2	U	C		1	25	-	590	1800	1800	488	121.0	-	-	-	64.1	391.1	72.4	
4/1	A19 Gowthorpe Right Ahead	U	B		1	10	-	231	1800	1800	206	112.0	-	-	-	19.9	310.7	22.8	
4/2	A19 Gowthorpe Left	U	B	E	1	33	23	234	1800	1800	637	36.7	-	-	-	1.8	27.5	4.9	
PRC for Signalled Links (%):						-34.5	Total Delay for Signalled Links (pcuHr):						162.44						
PRC Over All Links (%):						-34.5	Total Delay Over All Links(pcuHr):						162.44	Cycle Time (s): 96					

Selby Toll Bridge

User and Project Details

Project:	
Title:	
Location:	
File name:	KD Selby Toll Bridge.lsgx
Author:	Edward Downer
Company:	Jacobs Consultancy
Address:	Horsley House, Regent Centre, Gosforth, Newcastle upon Tyne, NE3 3
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Selby Toll Bridge

Scenario 2: 'Base 2008'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 2: 'Base 2008'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	524	80	76	680	
B	302	0	52	170	524	
C	27	46	0	85	158	
D	51	173	52	0	276	
Tot.	380	743	184	331	1638	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	New Street Right Left Ahead	U	A		1	36	-	680	1800	1800	802	84.7	-	-	-	6.5	34.6	16.5	
3/1	Ousegate Left Ahead Right	U	D		1	11	-	158	1800	1800	260	60.7	-	-	-	2.2	50.6	4.1	
6/1	Church Hill Ahead Left	U	C		1	11	-	225	1800	1800	260	86.5	-	-	-	4.9	78.9	7.8	
6/2	Church Hill Right	U	C		1	11	-	51	1800	1800	260	19.6	-	-	-	0.6	39.9	1.2	
8/1	Toll Bridge Ahead Left Right	U	B		1	36	-	524	1800	1800	802	65.3	-	-	-	3.6	24.4	10.3	
					PRC for Signalled Links (%):		4.1	Total Delay for Signalled Links (pcuHr):			17.80								
					PRC Over All Links (%):		4.1	Total Delay Over All Links (pcuHr):			17.80		Cycle Time (s): 83						

Selby Toll Bridge

Scenario 3: 'Base 2026'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 3: 'Base 2026'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	598	90	83	771	
B	319	0	164	233	716	
C	1	76	0	102	179	
D	42	203	68	0	313	
Tot.	362	877	322	418	1979	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	New Street Right Left Ahead	U	A		1	35	-	771	1800	1800	781	98.8	-	-	-	16.6	77.7	29.2	
3/1	Ousegate Left Ahead Right	U	D		1	12	-	179	1800	1800	282	63.5	-	-	-	2.5	50.0	4.7	
6/1	Church Hill Ahead Left	U	C		1	12	-	271	1800	1800	282	96.1	-	-	-	8.6	113.7	12.1	
6/2	Church Hill Right	U	C		1	12	-	42	1800	1800	282	14.9	-	-	-	0.4	37.8	0.9	
8/1	Toll Bridge Ahead Left Right	U	B		1	35	-	716	1800	1800	781	91.7	-	-	-	9.2	46.3	20.3	
PRC for Signalled Links (%):						-9.7	Total Delay for Signalled Links (pcuHr):						37.34						
PRC Over All Links (%):						-9.7	Total Delay Over All Links (pcuHr):						37.34	Cycle Time (s): 83					

Selby Toll Bridge

Scenario 4: '2026 Site A'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 4: '2026 Site A'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	514	71	75	660	
B	353	0	151	300	804	
C	37	68	0	122	227	
D	44	285	80	0	409	
Tot.	434	867	302	497	2100	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	New Street Right Left Ahead	U	A		1	33	-	660	1800	1800	737	89.5	-	-	-	8.1	44.0	18.0
3/1	Ousegate Left Ahead Right	U	D		1	14	-	227	1800	1800	325	69.8	-	-	-	3.1	49.8	6.0
6/1	Church Hill Ahead Left	U	C		1	14	-	365	1800	1800	325	112.2	-	-	-	28.3	279.4	33.0
6/2	Church Hill Right	U	C		1	14	-	44	1800	1800	325	13.5	-	-	-	0.4	35.0	0.9
8/1	Toll Bridge Ahead Left Right	U	B		1	33	-	804	1800	1800	737	109.0	-	-	-	46.6	208.6	58.6
PRC for Signalled Links (%):					-24.7	Total Delay for Signalled Links (pcuHr):					86.53							
PRC Over All Links (%):					-24.7	Total Delay Over All Links(pcuHr):					86.53	Cycle Time (s): 83						

Selby Toll Bridge

Scenario 5: '2026 Site D'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 5: '2026 Site D'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	652	90	79	821	
B	271	0	111	254	636	
C	1	93	0	96	190	
D	46	200	63	0	309	
Tot.	318	945	264	429	1956	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	New Street Right Left Ahead	U	A		1	36	-	821	1800	1800	802	102.3	-	-	-	25.7	112.5	39.1
3/1	Ousegate Left Ahead Right	U	D		1	11	-	190	1800	1800	260	73.0	-	-	-	3.1	58.7	5.5
6/1	Church Hill Ahead Left	U	C		1	11	-	263	1800	1800	260	101.1	-	-	-	11.5	157.4	15.0
6/2	Church Hill Right	U	C		1	11	-	46	1800	1800	260	17.7	-	-	-	0.5	39.6	1.0
8/1	Toll Bridge Ahead Left Right	U	B		1	36	-	636	1800	1800	802	79.3	-	-	-	5.4	30.3	14.4
PRC for Signalled Links (%):					-13.7	Total Delay for Signalled Links (pcuHr):					46.12							
PRC Over All Links (%):					-13.7	Total Delay Over All Links(pcuHr):					46.12	Cycle Time (s): 83						

Selby Toll Bridge

Scenario 6: '2026 Site E'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 6: '2026 Site E'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	587	119	83	789	
B	326	0	148	238	712	
C	25	75	0	101	201	
D	44	200	68	0	312	
Tot.	395	862	335	422	2014	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)		
1/1	New Street Right Left Ahead	U	A		1	35	-	789	1800	1800	781	101.1	-	-	-	21.7	99.2	34.6		
3/1	Ousegate Left Ahead Right	U	D		1	12	-	201	1800	1800	282	71.3	-	-	-	3.1	54.8	5.6		
6/1	Church Hill Ahead Left	U	C		1	12	-	268	1800	1800	282	95.1	-	-	-	8.0	107.4	11.5		
6/2	Church Hill Right	U	C		1	12	-	44	1800	1800	282	15.6	-	-	-	0.5	37.9	1.0		
8/1	Toll Bridge Ahead Left Right	U	B		1	35	-	712	1800	1800	781	91.2	-	-	-	8.9	45.1	19.8		
PRC for Signalled Links (%):					-12.3	Total Delay for Signalled Links (pcuHr):					42.18									
PRC Over All Links (%):					-12.3	Total Delay Over All Links (pcuHr):					42.18	Cycle Time (s):				83				

Selby Toll Bridge

Scenario 7: '2026 Site F'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 7: '2026 Site F'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	615	94	81	790	
B	337	0	147	237	721	
C	32	74	0	101	207	
D	44	213	66	0	323	
Tot.	413	902	307	419	2041	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	New Street Right Left Ahead	U	A		1	35	-	790	1800	1800	781	101.2	-	-	-	22.1	100.6	35.0
3/1	Ousegate Left Ahead Right	U	D		1	12	-	207	1800	1800	282	73.4	-	-	-	3.3	56.6	5.9
6/1	Church Hill Ahead Left	U	C		1	12	-	279	1800	1800	282	99.0	-	-	-	10.4	133.7	14.0
6/2	Church Hill Right	U	C		1	12	-	44	1800	1800	282	15.6	-	-	-	0.5	37.9	1.0
8/1	Toll Bridge Ahead Left Right	U	B		1	35	-	721	1800	1800	781	92.4	-	-	-	9.6	47.9	20.8
PRC for Signalled Links (%):					-12.4	Total Delay for Signalled Links (pcuHr):					45.74							
PRC Over All Links (%):					-12.4	Total Delay Over All Links (pcuHr):					45.74	Cycle Time (s): 83						

Selby Toll Bridge

Scenario 8: '2026 Site G1'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 8: '2026 Site G1'

Traffic Flow Matrix

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	430	22	67	519
	B	274	0	143	332	749
	C	43	111	0	96	250
	D	45	349	92	0	486
	Tot.	362	890	257	495	2004

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	New Street Right Left Ahead	U	A		1	30	-	519	1800	1800	672	77.2	-	-	-	5.0	34.4	12.2
3/1	Ousegate Left Ahead Right	U	D		1	17	-	250	1800	1800	390	64.0	-	-	-	2.9	42.2	6.1
6/1	Church Hill Ahead Left	U	C		1	17	-	441	1800	1800	390	113.0	-	-	-	34.6	282.6	40.4
6/2	Church Hill Right	U	C		1	17	-	45	1800	1800	390	11.5	-	-	-	0.4	31.4	0.9
8/1	Toll Bridge Ahead Left Right	U	B		1	30	-	749	1800	1800	672	111.4	-	-	-	51.1	245.7	61.8
PRC for Signalled Links (%):					-25.5	Total Delay for Signalled Links (pcuHr):					94.03							
PRC Over All Links (%):					-25.5	Total Delay Over All Links(pcuHr):					94.03	Cycle Time (s): 83						

Selby Toll Bridge

Scenario 9: '2026 Site G2'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 9: '2026 Site G2'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	393	17	42	452	
B	319	0	154	371	844	
C	9	135	0	92	236	
D	42	387	100	0	529	
Tot.	370	915	271	505	2061	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)		
1/1	New Street Right Left Ahead	U	A		1	30	-	452	1800	1800	672	67.2	-	-	-	3.7	29.9	9.7		
3/1	Ousegate Left Ahead Right	U	D		1	17	-	236	1800	1800	390	60.5	-	-	-	2.7	40.8	5.6		
6/1	Church Hill Ahead Left	U	C		1	17	-	487	1800	1800	390	124.8	-	-	-	58.1	429.4	64.2		
6/2	Church Hill Right	U	C		1	17	-	42	1800	1800	390	10.8	-	-	-	0.4	31.3	0.8		
8/1	Toll Bridge Ahead Left Right	U	B		1	30	-	844	1800	1800	672	125.5	-	-	-	101.0	430.9	111.7		
PRC for Signalled Links (%):					-39.5	Total Delay for Signalled Links (pcuHr):					165.90									
PRC Over All Links (%):					-39.5	Total Delay Over All Links (pcuHr):					165.90	Cycle Time (s):				83				

Selby Toll Bridge

Scenario 10: '2026 Site H1'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 10: '2026 Site H1'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	600	104	74	778	
B	317	0	183	245	745	
C	2	72	0	97	171	
D	42	217	60	0	319	
Tot.	361	889	347	416	2013	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	New Street Right Left Ahead	U	A		1	35	-	778	1800	1800	781	99.7	-	-	-	18.3	84.9	31.0	
3/1	Ousegate Left Ahead Right	U	D		1	12	-	171	1800	1800	282	60.7	-	-	-	2.3	48.6	4.4	
6/1	Church Hill Ahead Left	U	C		1	12	-	277	1800	1800	282	98.3	-	-	-	9.9	128.2	13.5	
6/2	Church Hill Right	U	C		1	12	-	42	1800	1800	282	14.9	-	-	-	0.4	37.8	0.9	
8/1	Toll Bridge Ahead Left Right	U	B		1	35	-	745	1800	1800	781	95.4	-	-	-	12.1	58.4	23.9	
PRC for Signalled Links (%):					-10.7	Total Delay for Signalled Links (pcuHr):					43.04								
PRC Over All Links (%):					-10.7	Total Delay Over All Links (pcuHr):					43.04	Cycle Time (s): 83							

Selby Toll Bridge

Scenario 11: '2026 Site H2'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 11: '2026 Site H2'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	618	126	74	818	
B	225	0	220	239	684	
C	41	68	0	96	205	
D	42	221	61	0	324	
Tot.	308	907	407	409	2031	

Link Results

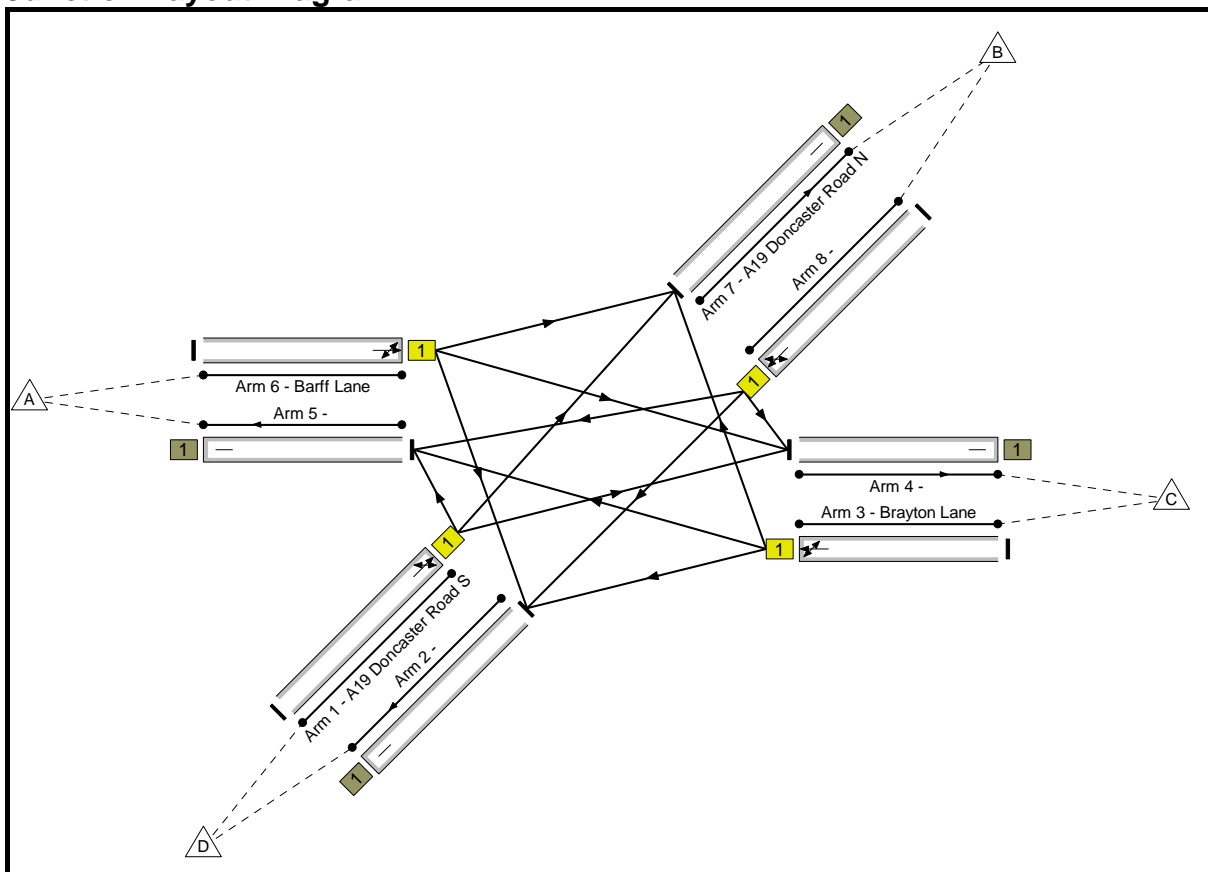
Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)		
1/1	New Street Right Left Ahead	U	A		1	35	-	818	1800	1800	781	104.8	-	-	-	33.2	145.9	46.1		
3/1	Ousegate Left Ahead Right	U	D		1	12	-	205	1800	1800	282	72.7	-	-	-	3.2	56.0	5.7		
6/1	Church Hill Ahead Left	U	C		1	12	-	282	1800	1800	282	100.0	-	-	-	11.2	142.4	14.9		
6/2	Church Hill Right	U	C		1	12	-	42	1800	1800	282	14.9	-	-	-	0.4	37.8	0.9		
8/1	Toll Bridge Ahead Left Right	U	B		1	35	-	684	1800	1800	781	87.6	-	-	-	7.4	38.9	17.6		
PRC for Signalled Links (%):					-16.4	Total Delay for Signalled Links (pcuHr):					55.32									
PRC Over All Links (%):					-16.4	Total Delay Over All Links(pcuHr):					55.32	Cycle Time (s):				83				

Brayton Crossroads

User and Project Details

Project:	Selby VISUM
Title:	Brayton Crossroads
Location:	Selby
File name:	KD Brayton Crossroads.lsgx
Author:	Edward Downer
Company:	Jacobs Consultancy
Address:	Horsley House, Regent Centre, Gosforth, Newcastle upon Tyne, NE3 3
Controller:	Generic
SCN:	
Notes:	

Junction Layout Diagram



Basic Results Summary

Scenario 2: 'Base 2008'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 2: 'Base 2008'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	9	59	14	82	
B	48	0	17	352	417	
C	81	24	0	31	136	
D	22	427	39	0	488	
Tot.	151	460	115	397	1123	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	38	-	488	1800	1800	878	55.6	-	-	-	2.6	19.0	8.2	
3/1	Brayton Lane Left Ahead Right	U	B		1	10	-	136	1800	1800	248	54.9	-	-	-	1.8	48.2	3.4	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	10	-	82	1800	1800	248	33.1	-	-	-	1.0	42.0	1.9	
8/1	Left U-Turn Ahead	U	A		1	38	-	417	1800	1800	878	47.5	-	-	-	2.0	17.6	6.6	
PRC for Signalled Links (%):						61.8	Total Delay for Signalled Links (pcuHr):				7.39								
PRC Over All Links (%):						61.8	Total Delay Over All Links (pcuHr):				7.39	Cycle Time (s):		80					

Basic Results Summary

Scenario 3: 'Base 2026'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 3: 'Base 2026'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	10	72	17	99	
B	61	0	21	505	587	
C	98	32	0	37	167	
D	24	533	43	0	600	
Tot.	183	575	136	559	1453	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	38	-	600	1800	1800	878	68.4	-	-	-	3.7	22.2	11.2	
3/1	Brayton Lane Left Ahead Right	U	B		1	10	-	167	1800	1800	248	67.5	-	-	-	2.5	54.6	4.5	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	10	-	99	1800	1800	248	40.0	-	-	-	1.2	43.6	2.3	
8/1	Left U-Turn Ahead	U	A		1	38	-	587	1800	1800	878	66.9	-	-	-	3.5	21.7	10.8	
PRC for Signalled Links (%):					31.6	Total Delay for Signalled Links (pcuHr):					10.98								
PRC Over All Links (%):					31.6	Total Delay Over All Links (pcuHr):					10.98	Cycle Time (s):		80					

Basic Results Summary

Scenario 4: '2026 Site A'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 4: '2026 Site A'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	10	73	17	100	
B	60	0	25	500	585	
C	98	38	0	37	173	
D	24	546	43	0	613	
Tot.	182	594	141	554	1471	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	38	-	613	1800	1800	878	69.9	-	-	-	3.9	22.7	11.7
3/1	Brayton Lane Left Ahead Right	U	B		1	10	-	173	1800	1800	248	69.9	-	-	-	2.7	56.4	4.8
6/1	Barff Lane U-Turn Ahead Left	U	D		1	10	-	100	1800	1800	248	40.4	-	-	-	1.2	43.7	2.4
8/1	Left U-Turn Ahead	U	A		1	38	-	585	1800	1800	878	66.7	-	-	-	3.5	21.7	10.7
PRC for Signalled Links (%):					28.8	Total Delay for Signalled Links (pcuHr):					11.31							
PRC Over All Links (%):					28.8	Total Delay Over All Links (pcuHr):					11.31	Cycle Time (s): 80						

Basic Results Summary

Scenario 5: '2026 Site D'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 5: '2026 Site D'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	10	71	17	98	
B	60	0	21	383	464	
C	97	31	0	37	165	
D	24	485	43	0	552	
Tot.	181	526	135	437	1279	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	37	-	552	1800	1800	855	64.6	-	-	-	3.3	21.8	10.1	
3/1	Brayton Lane Left Ahead Right	U	B		1	11	-	165	1800	1800	270	61.1	-	-	-	2.2	48.7	4.2	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	11	-	98	1800	1800	270	36.3	-	-	-	1.1	41.0	2.2	
8/1	Left U-Turn Ahead	U	A		1	37	-	464	1800	1800	855	54.3	-	-	-	2.5	19.4	7.8	
PRC for Signalled Links (%):						39.4	Total Delay for Signalled Links (pcuHr):				9.20								
PRC Over All Links (%):						39.4	Total Delay Over All Links(pcuHr):				9.20	Cycle Time (s):				80			

Basic Results Summary

Scenario 6: '2026 Site E'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 6: '2026 Site E'

Traffic Flow Matrix

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	13	72	17	102
	B	65	0	139	525	729
	C	98	208	0	37	343
	D	24	622	40	0	686
	Tot.	187	843	251	579	1860

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	33	-	686	1800	1800	765	89.7	-	-	-	8.0	42.1	18.0	
3/1	Brayton Lane Left Ahead Right	U	B		1	15	-	343	1800	1800	360	95.3	-	-	-	9.0	94.0	13.5	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	15	-	102	1800	1800	360	28.3	-	-	-	1.0	34.1	2.1	
8/1	Left U-Turn Ahead	U	A		1	33	-	729	1800	1800	765	95.3	-	-	-	11.7	57.9	22.8	
PRC for Signalled Links (%):						-5.9	Total Delay for Signalled Links (pcuHr):				29.67								
PRC Over All Links (%):						-5.9	Total Delay Over All Links(pcuHr):				29.67	Cycle Time (s):				80			

Basic Results Summary

Scenario 7: '2026 Site F'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 7: '2026 Site F'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	10	71	17	98	
B	60	0	47	503	610	
C	97	86	0	37	220	
D	24	548	43	0	615	
Tot.	181	644	161	557	1543	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	36	-	615	1800	1800	833	73.9	-	-	-	4.4	25.7	12.5	
3/1	Brayton Lane Left Ahead Right	U	B		1	12	-	220	1800	1800	293	75.2	-	-	-	3.4	55.8	6.1	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	12	-	98	1800	1800	293	33.5	-	-	-	1.1	38.9	2.2	
8/1	Left U-Turn Ahead	U	A		1	36	-	610	1800	1800	833	73.3	-	-	-	4.3	25.5	12.4	
PRC for Signalled Links (%):					19.7	Total Delay for Signalled Links (pcuHr):					13.18								
PRC Over All Links (%):					19.7	Total Delay Over All Links (pcuHr):					13.18	Cycle Time (s):		80					

Basic Results Summary

Scenario 8: '2026 Site G1'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 8: '2026 Site G1'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	10	82	17	109	
B	59	0	22	409	490	
C	106	34	0	39	179	
D	24	524	42	0	590	
Tot.	189	568	146	465	1368	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	37	-	590	1800	1800	855	69.0	-	-	-	3.8	23.1	11.3	
3/1	Brayton Lane Left Ahead Right	U	B		1	11	-	179	1800	1800	270	66.3	-	-	-	2.6	51.5	4.7	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	11	-	109	1800	1800	270	40.4	-	-	-	1.3	41.9	2.5	
8/1	Left U-Turn Ahead	U	A		1	37	-	490	1800	1800	855	57.3	-	-	-	2.7	20.1	8.4	
PRC for Signalled Links (%):						30.4	Total Delay for Signalled Links (pcuHr):				10.35								
PRC Over All Links (%):						30.4	Total Delay Over All Links(pcuHr):				10.35	Cycle Time (s):				80			

Basic Results Summary

Scenario 9: '2026 Site G2'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 9: '2026 Site G2'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	10	86	17	113	
B	58	0	22	419	499	
C	110	34	0	40	184	
D	24	546	42	0	612	
Tot.	192	590	150	476	1408	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	37	-	612	1800	1800	855	71.6	-	-	-	4.1	24.0	12.0	
3/1	Brayton Lane Left Ahead Right	U	B		1	11	-	184	1800	1800	270	68.1	-	-	-	2.7	52.6	4.9	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	11	-	113	1800	1800	270	41.9	-	-	-	1.3	42.3	2.6	
8/1	Left U-Turn Ahead	U	A		1	37	-	499	1800	1800	855	58.4	-	-	-	2.8	20.3	8.7	
PRC for Signalled Links (%):						25.7	Total Delay for Signalled Links (pcuHr):				10.92								
PRC Over All Links (%):						25.7	Total Delay Over All Links(pcuHr):				10.92	Cycle Time (s):				80			

Basic Results Summary

Scenario 10: '2026 Site H1'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 10: '2026 Site H1'

Traffic Flow Matrix

Desired Flow :

Origin	Destination					
	A	B	C	D	Tot.	
A	0	10	71	41	122	
B	58	0	20	580	658	
C	97	30	0	38	165	
D	48	782	46	0	876	
Tot.	203	822	137	659	1821	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	41	-	876	1800	1800	945	92.7	-	-	-	9.8	40.1	23.5	
3/1	Brayton Lane Left Ahead Right	U	B		1	7	-	165	1800	1800	180	91.7	-	-	-	5.3	116.1	7.3	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	7	-	122	1800	1800	180	67.8	-	-	-	2.2	64.8	3.6	
8/1	Left U-Turn Ahead	U	A		1	41	-	658	1800	1800	945	69.6	-	-	-	3.7	20.4	11.9	
PRC for Signalled Links (%):						-3.0	Total Delay for Signalled Links (pcuHr):				21.01								
PRC Over All Links (%):						-3.0	Total Delay Over All Links(pcuHr):				21.01	Cycle Time (s):		80					

Basic Results Summary

Scenario 11: '2026 Site H2'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 11: '2026 Site H2'

Traffic Flow Matrix

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	10	70	52	132
	B	57	0	20	622	699
	C	96	30	0	39	165
	D	59	898	48	0	1005
	Tot.	212	938	138	713	2001

Link Results

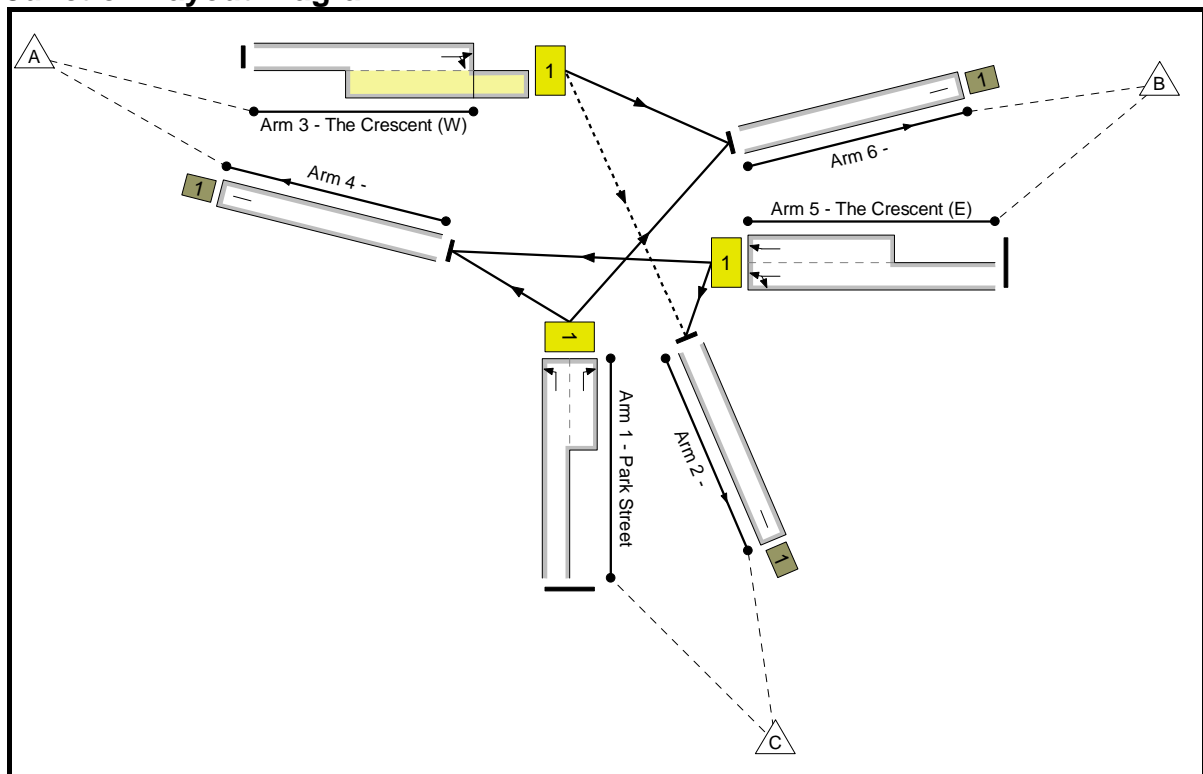
Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	A19 Doncaster Road S Ahead U-Turn Left	U	C		1	41	-	1005	1800	1800	945	106.3	-	-	-	44.3	158.7	60.5	
3/1	Brayton Lane Left Ahead Right	U	B		1	7	-	165	1800	1800	180	91.7	-	-	-	5.3	116.1	7.3	
6/1	Barff Lane U-Turn Ahead Left	U	D		1	7	-	132	1800	1800	180	73.3	-	-	-	2.6	70.5	4.1	
8/1	Left U-Turn Ahead	U	A		1	41	-	699	1800	1800	945	74.0	-	-	-	4.3	22.0	13.4	
PRC for Signalled Links (%):						-18.2	Total Delay for Signalled Links (pcuHr):				56.48								
PRC Over All Links (%):						-18.2	Total Delay Over All Links(pcuHr):				56.48	Cycle Time (s):				80			

Park Street T-Junction

User and Project Details

Project:	Selby VISUM
Title:	Park Street T-Junction
Location:	Selby
File name:	KD Park Street T-Junction.lsgx
Author:	Edward Downer
Company:	Jacobs Consultancy
Address:	Horsley House, Regent Centre, Gosforth, Newcastle upon Tyne, NE3 3
Controller:	Generic
SCN:	NY126
Notes:	

Junction Layout Diagram



Park Street T- Junction

Scenario 2: 'Base 2008'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 3: 'Base 2008'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
	A	B	C	Tot.	
A	0	294	196	490	
B	254	0	147	401	
C	235	280	0	515	
Tot.	489	574	343	1406	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	21	-	515	3600	2618	768	67.1	-	-	-	4.1	28.9	9.7	
3/1	The Crescent (W) Right Ahead	O	A		1	22	-	490	1800	2339	717	68.3	193	0	3	4.4	32.1	6.4	
5/1	The Crescent (E) Left Ahead	U	B		1	22	-	401	3600	3052	936	42.8	-	-	-	2.6	23.7	6.8	
PRC for Signalled Links (%):						31.8	Total Delay for Signalled Links (pcuHr):						11.15						
PRC Over All Links (%):						31.8	Total Delay Over All Links (pcuHr):						11.15	Cycle Time (s): 75					

Park Street T- Junction

Scenario 3: 'Base 2026'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 4: 'Base 2026'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
	A	B	C	Tot.	
A	0	317	241	558	
B	205	0	190	395	
C	316	327	0	643	
Tot.	521	644	431	1596	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	23	-	643	3600	2550	816	78.8	-	-	-	5.6	31.4	13.1	
3/1	The Crescent (W) Right Ahead	O	A		1	20	-	558	1800	2509	703	79.4	180	0	59	6.3	40.8	8.0	
5/1	The Crescent (E) Left Ahead	U	B		1	20	-	395	3600	3171	888	44.5	-	-	-	2.8	25.5	7.0	
PRC for Signalled Links (%):						13.3	Total Delay for Signalled Links (pcuHr):				14.72								
PRC Over All Links (%):						13.3	Total Delay Over All Links(pcuHr):				14.72	Cycle Time (s):				75			

Park Street T- Junction

Scenario 4: '2026 Site A'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 5: '2026 Site A'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
	A	B	C	Tot.	
A	0	245	274	519	
B	295	0	171	466	
C	314	302	0	616	
Tot.	609	547	445	1601	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
1/1	Park Street Left Right	U	C		1	19	-	616	3600	2700	720	85.6	-	-	-	7.0	40.8	14.4
3/1	The Crescent (W) Right Ahead	O	A		1	24	-	519	1800	1831	610	85.0	201	0	73	6.3	44.0	7.9
5/1	The Crescent (E) Left Ahead	U	B		1	24	-	466	3600	2952	984	47.4	-	-	-	2.9	22.6	7.8
PRC for Signalled Links (%):						5.2	Total Delay for Signalled Links (pcuHr):				16.26							
PRC Over All Links (%):						5.2	Total Delay Over All Links(pcuHr):				16.26	Cycle Time (s): 75						

Park Street T- Junction

Scenario 5: '2026 Site D'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 6: '2026 Site D'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
	A	B	C	Tot.	
A	0	310	242	552	
B	199	0	152	351	
C	323	373	0	696	
Tot.	522	683	394	1599	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	25	-	696	3600	2492	864	80.6	-	-	-	5.9	30.4	14.2	
3/1	The Crescent (W) Right Ahead	O	A		1	18	-	552	1800	2685	680	81.2	173	0	69	6.6	43.0	8.2	
5/1	The Crescent (E) Left Ahead	U	B		1	18	-	351	3600	3316	840	41.8	-	-	-	2.6	26.8	6.4	
PRC for Signalled Links (%):						10.9	Total Delay for Signalled Links (pcuHr):					15.09							
PRC Over All Links (%):						10.9	Total Delay Over All Links (pcuHr):					15.09	Cycle Time (s): 75						

Park Street T- Junction

Scenario 6: '2026 Site E'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 7: '2026 Site E'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
	A	B	C	Tot.	
A	0	340	307	647	
B	228	0	200	428	
C	305	326	0	631	
Tot.	533	666	507	1706	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	19	-	631	3600	2700	720	87.6	-	-	-	7.6	43.4	15.4	
3/1	The Crescent (W) Right Ahead	O	A		1	24	-	647	1800	2248	749	86.3	223	0	84	7.5	42.0	9.2	
5/1	The Crescent (E) Left Ahead	U	B		1	24	-	428	3600	2952	984	43.5	-	-	-	2.6	22.2	7.0	
PRC for Signalled Links (%):						2.7	Total Delay for Signalled Links (pcuHr):				17.79								
PRC Over All Links (%):						2.7	Total Delay Over All Links (pcuHr):				17.79	Cycle Time (s):				75			

Park Street T- Junction

Scenario 7: '2026 Site F'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 8: '2026 Site F'

Traffic Flow Matrix

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	347	242	589
	B	246	0	200	446
	C	300	322	0	622
	Tot.	546	669	442	1657

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	21	-	622	3600	2618	768	81.0	-	-	-	6.0	34.7	13.3	
3/1	The Crescent (W) Right Ahead	O	A		1	22	-	589	1800	2329	714	82.5	182	0	60	6.5	39.9	8.7	
5/1	The Crescent (E) Left Ahead	U	B		1	22	-	446	3600	3052	936	47.6	-	-	-	3.0	24.3	7.8	
PRC for Signalled Links (%):						9.2	Total Delay for Signalled Links (pcuHr):					15.53							
PRC Over All Links (%):						9.2	Total Delay Over All Links(pcuHr):					15.53	Cycle Time (s): 75						

Park Street T- Junction

Scenario 8: '2026 Site G1'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 9: '2026 Site G1'

Traffic Flow Matrix

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	127	299	426
	B	273	0	121	394
	C	309	305	0	614
	Tot.	582	432	420	1434

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	19	-	614	3600	2700	720	85.3	-	-	-	6.9	40.5	14.4	
3/1	The Crescent (W) Right Ahead	O	A		1	24	-	426	1800	1523	508	83.9	238	0	61	5.5	46.9	8.4	
5/1	The Crescent (E) Left Ahead	U	B		1	24	-	394	3600	2952	984	40.0	-	-	-	2.4	21.8	6.5	
PRC for Signalled Links (%):						5.5	Total Delay for Signalled Links (pcuHr):				14.85								
PRC Over All Links (%):						5.5	Total Delay Over All Links(pcuHr):				14.85	Cycle Time (s):				75			

Park Street T- Junction

Scenario 9: '2026 Site G2'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 10: '2026 Site G2'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
	A	B	C	Tot.	
A	0	116	309	425	
B	277	0	126	403	
C	335	262	0	597	
Tot.	612	378	435	1425	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	18	-	597	3600	2747	696	85.8	-	-	-	7.0	42.3	14.1	
3/1	The Crescent (W) Right Ahead	O	A		1	25	-	425	1800	1449	502	84.6	247	0	62	5.6	47.7	8.7	
5/1	The Crescent (E) Left Ahead	U	B		1	25	-	403	3600	2908	1008	40.0	-	-	-	2.4	21.0	6.5	
PRC for Signalled Links (%):						4.9	Total Delay for Signalled Links (pcuHr):					15.00							
PRC Over All Links (%):						4.9	Total Delay Over All Links (pcuHr):					15.00	Cycle Time (s): 75						

Park Street T- Junction

Scenario 10: '2026 Site H1'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 11: '2026 Site H1'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
	A	B	C	Tot.	
A	0	354	266	620	
B	210	0	183	393	
C	318	310	0	628	
Tot.	528	664	449	1641	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	20	-	628	3600	2657	744	84.4	-	-	-	6.7	38.5	14.3	
3/1	The Crescent (W) Right Ahead	O	A		1	23	-	620	1800	2351	752	82.4	220	0	46	6.6	38.3	8.8	
5/1	The Crescent (E) Left Ahead	U	B		1	23	-	393	3600	3000	960	40.9	-	-	-	2.5	22.6	6.6	
PRC for Signalled Links (%):						6.6	Total Delay for Signalled Links (pcuHr):					15.78							
PRC Over All Links (%):						6.6	Total Delay Over All Links(pcuHr):					15.78	Cycle Time (s): 75						

Park Street T- Junction

Scenario 11: '2026 Site H2'

Staging Plan 1: 'Staging Plan No. 1'

Flow Group 12: '2026 Site H2'

Traffic Flow Matrix

Desired Flow :

Origin	Destination				
	A	B	C	Tot.	
A	0	420	250	670	
B	222	0	118	340	
C	302	290	0	592	
Tot.	524	710	368	1602	

Link Results

Link Num	Link Desc	Link Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
1/1	Park Street Left Right	U	C		1	18	-	592	3600	2747	696	85.1	-	-	-	6.8	41.5	13.9	
3/1	The Crescent (W) Right Ahead	O	A		1	25	-	670	1800	2273	788	85.0	247	0	3	6.9	37.1	11.2	
5/1	The Crescent (E) Left Ahead	U	B		1	25	-	340	3600	2908	1008	33.7	-	-	-	1.9	20.4	5.4	
PRC for Signalled Links (%):						5.8	Total Delay for Signalled Links (pcuHr):					15.66							
PRC Over All Links (%):						5.8	Total Delay Over All Links(pcuHr):					15.66	Cycle Time (s): 75						

APPENDIX F TRIP GENERATION

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : A - OFFICE
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	HC HAMPSHIRE	2 days
	KC KENT	2 days
	SC SURREY	2 days
03	SOUTH WEST	
	CW CORNWALL	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 10000 to 175000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 11/12/08

Selected survey days:

Monday 2 days
Tuesday 2 days
Thursday 7 days

Selected survey types:

Manual count 11 days
Directional ATC Count 0 days

Selected Locations:

Town Centre 1
Edge of Town Centre 3
Suburban Area (PPS6 Out of Centre) 3
Edge of Town 4

Selected Location Sub Categories:

Commercial Zone 3
Residential Zone 3
Built-Up Zone 3
No Sub Category 2

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	11	18519	0.163	11	18519	0.022	11	18519	0.185
07:30 - 08:00	11	18519	0.445	11	18519	0.047	11	18519	0.492
08:00 - 08:30	11	18519	0.709	11	18519	0.078	11	18519	0.787
08:30 - 09:00	11	18519	0.713	11	18519	0.086	11	18519	0.799
09:00 - 09:30	11	18519	0.471	11	18519	0.090	11	18519	0.561
09:30 - 10:00	11	18519	0.274	11	18519	0.070	11	18519	0.344
10:00 - 10:30	11	18519	0.149	11	18519	0.081	11	18519	0.230
10:30 - 11:00	11	18519	0.123	11	18519	0.077	11	18519	0.200
11:00 - 11:30	11	18519	0.092	11	18519	0.102	11	18519	0.194
11:30 - 12:00	11	18519	0.092	11	18519	0.085	11	18519	0.177
12:00 - 12:30	11	18519	0.101	11	18519	0.179	11	18519	0.280
12:30 - 13:00	11	18519	0.148	11	18519	0.182	11	18519	0.330
13:00 - 13:30	11	18519	0.144	11	18519	0.129	11	18519	0.273
13:30 - 14:00	11	18519	0.162	11	18519	0.134	11	18519	0.296
14:00 - 14:30	11	18519	0.143	11	18519	0.113	11	18519	0.256
14:30 - 15:00	11	18519	0.090	11	18519	0.105	11	18519	0.195
15:00 - 15:30	11	18519	0.087	11	18519	0.148	11	18519	0.235
15:30 - 16:00	11	18519	0.082	11	18519	0.178	11	18519	0.260
16:00 - 16:30	11	18519	0.076	11	18519	0.420	11	18519	0.496
16:30 - 17:00	11	18519	0.082	11	18519	0.450	11	18519	0.532
17:00 - 17:30	11	18519	0.077	11	18519	0.741	11	18519	0.818
17:30 - 18:00	11	18519	0.047	11	18519	0.468	11	18519	0.515
18:00 - 18:30	11	18519	0.032	11	18519	0.277	11	18519	0.309
18:30 - 19:00	11	18519	0.015	11	18519	0.118	11	18519	0.133
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			4.517			4.380			8.897

Parameter summary

Trip rate parameter range selected:	10000 - 175000 (units: sqm)
Survey date date range:	01/01/01 - 11/12/08
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : D - INDUSTRIAL ESTATE
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
	NT NOTTINGHAMSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 20484 to 234115 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 07/09/08

Selected survey days:

Monday	1 days
Tuesday	2 days
Thursday	2 days
Friday	2 days

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	5

Selected Location Sub Categories:

Industrial Zone	4
Built-Up Zone	1
No Sub Category	2

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	0	0	0.000	0	0	0.000	0	0	0.000
06:30 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 07:30	7	44885	0.130	7	44885	0.054	7	44885	0.184
07:30 - 08:00	7	44885	0.165	7	44885	0.078	7	44885	0.243
08:00 - 08:30	7	44885	0.154	7	44885	0.068	7	44885	0.222
08:30 - 09:00	7	44885	0.173	7	44885	0.076	7	44885	0.249
09:00 - 09:30	7	44885	0.126	7	44885	0.078	7	44885	0.204
09:30 - 10:00	7	44885	0.090	7	44885	0.088	7	44885	0.178
10:00 - 10:30	7	44885	0.097	7	44885	0.096	7	44885	0.193
10:30 - 11:00	7	44885	0.090	7	44885	0.088	7	44885	0.178
11:00 - 11:30	7	44885	0.091	7	44885	0.096	7	44885	0.187
11:30 - 12:00	7	44885	0.101	7	44885	0.111	7	44885	0.212
12:00 - 12:30	7	44885	0.087	7	44885	0.120	7	44885	0.207
12:30 - 13:00	7	44885	0.094	7	44885	0.104	7	44885	0.198
13:00 - 13:30	7	44885	0.113	7	44885	0.126	7	44885	0.239
13:30 - 14:00	7	44885	0.114	7	44885	0.096	7	44885	0.210
14:00 - 14:30	7	44885	0.098	7	44885	0.109	7	44885	0.207
14:30 - 15:00	7	44885	0.086	7	44885	0.096	7	44885	0.182
15:00 - 15:30	7	44885	0.078	7	44885	0.101	7	44885	0.179
15:30 - 16:00	7	44885	0.081	7	44885	0.113	7	44885	0.194
16:00 - 16:30	7	44885	0.074	7	44885	0.137	7	44885	0.211
16:30 - 17:00	7	44885	0.075	7	44885	0.173	7	44885	0.248
17:00 - 17:30	7	44885	0.051	7	44885	0.167	7	44885	0.218
17:30 - 18:00	7	44885	0.036	7	44885	0.122	7	44885	0.158
18:00 - 18:30	7	44885	0.034	7	44885	0.068	7	44885	0.102
18:30 - 19:00	7	44885	0.026	7	44885	0.046	7	44885	0.072
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.264			2.411			4.675

Parameter summary

Trip rate parameter range selected:	20484 - 234115 (units: sqm)
Survey date date range:	01/01/01 - 07/09/08
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : F - WAREHOUSING (COMMERCIAL)
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BU BUCKINGHAMSHIRE	1 days
	HF HERTFORDSHIRE	2 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
09	NORTH	
	TV TEES VALLEY	2 days
10	WALES	
	NW NEWPORT	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 15881 to 80066 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 07/10/08

Selected survey days:

Tuesday	1 days
Thursday	4 days
Friday	2 days

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	2
Edge of Town	5

Selected Location Sub Categories:

Industrial Zone	4
Commercial Zone	2
No Sub Category	1

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 00:30	0	0	0.000	0	0	0.000	0	0	0.000
00:30 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 01:30	0	0	0.000	0	0	0.000	0	0	0.000
01:30 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 02:30	0	0	0.000	0	0	0.000	0	0	0.000
02:30 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 03:30	0	0	0.000	0	0	0.000	0	0	0.000
03:30 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 04:30	0	0	0.000	0	0	0.000	0	0	0.000
04:30 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 05:30	0	0	0.000	0	0	0.000	0	0	0.000
05:30 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 06:30	1	30187	0.036	1	30187	0.086	1	30187	0.122
06:30 - 07:00	1	30187	0.056	1	30187	0.063	1	30187	0.119
07:00 - 07:30	7	44096	0.040	7	44096	0.046	7	44096	0.086
07:30 - 08:00	7	44096	0.068	7	44096	0.033	7	44096	0.101
08:00 - 08:30	7	44096	0.039	7	44096	0.028	7	44096	0.067
08:30 - 09:00	7	44096	0.058	7	44096	0.030	7	44096	0.088
09:00 - 09:30	7	44096	0.050	7	44096	0.033	7	44096	0.083
09:30 - 10:00	7	44096	0.056	7	44096	0.035	7	44096	0.091
10:00 - 10:30	7	44096	0.035	7	44096	0.039	7	44096	0.074
10:30 - 11:00	7	44096	0.035	7	44096	0.032	7	44096	0.067
11:00 - 11:30	7	44096	0.037	7	44096	0.031	7	44096	0.068
11:30 - 12:00	7	44096	0.040	7	44096	0.036	7	44096	0.076
12:00 - 12:30	7	44096	0.040	7	44096	0.041	7	44096	0.081
12:30 - 13:00	7	44096	0.038	7	44096	0.039	7	44096	0.077
13:00 - 13:30	7	44096	0.064	7	44096	0.046	7	44096	0.110
13:30 - 14:00	7	44096	0.116	7	44096	0.098	7	44096	0.214
14:00 - 14:30	7	44096	0.052	7	44096	0.092	7	44096	0.144
14:30 - 15:00	7	44096	0.060	7	44096	0.075	7	44096	0.135
15:00 - 15:30	7	44096	0.038	7	44096	0.061	7	44096	0.099
15:30 - 16:00	7	44096	0.051	7	44096	0.060	7	44096	0.111
16:00 - 16:30	7	44096	0.040	7	44096	0.061	7	44096	0.101
16:30 - 17:00	7	44096	0.036	7	44096	0.065	7	44096	0.101
17:00 - 17:30	7	44096	0.027	7	44096	0.053	7	44096	0.080
17:30 - 18:00	7	44096	0.047	7	44096	0.056	7	44096	0.103
18:00 - 18:30	6	46414	0.019	6	46414	0.038	6	46414	0.057
18:30 - 19:00	6	46414	0.018	6	46414	0.023	6	46414	0.041
19:00 - 19:30	0	0	0.000	0	0	0.000	0	0	0.000
19:30 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 20:30	0	0	0.000	0	0	0.000	0	0	0.000
20:30 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 21:30	0	0	0.000	0	0	0.000	0	0	0.000
21:30 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 22:30	0	0	0.000	0	0	0.000	0	0	0.000
22:30 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 23:30	0	0	0.000	0	0	0.000	0	0	0.000
23:30 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			1.196			1.300			2.496

Parameter summary

Trip rate parameter range selected:	15881 - 80066 (units: sqm)
Survey date date range:	01/01/01 - 07/10/08
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	EX ESSEX	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	3 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	TV TEES VALLEY	1 days
10	WALES	
	CF CARDIFF	1 days

Filtering Stage 2 selection:

Parameter: Number of dwellings
 Range: 201 to 1216 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 26/11/08

Selected survey days:

Tuesday	1 days
Thursday	8 days
Friday	2 days

Selected survey types:

Manual count	11 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	7
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Residential Zone	7
No Sub Category	4

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
 VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	11	330	0.068	11	330	0.239	11	330	0.307
08:00 - 09:00	11	330	0.144	11	330	0.410	11	330	0.554
09:00 - 10:00	11	330	0.157	11	330	0.204	11	330	0.361
10:00 - 11:00	11	330	0.142	11	330	0.175	11	330	0.317
11:00 - 12:00	11	330	0.177	11	330	0.166	11	330	0.343
12:00 - 13:00	11	330	0.185	11	330	0.165	11	330	0.350
13:00 - 14:00	11	330	0.165	11	330	0.159	11	330	0.324
14:00 - 15:00	11	330	0.181	11	330	0.181	11	330	0.362
15:00 - 16:00	11	330	0.264	11	330	0.198	11	330	0.462
16:00 - 17:00	11	330	0.287	11	330	0.182	11	330	0.469
17:00 - 18:00	11	330	0.382	11	330	0.205	11	330	0.587
18:00 - 19:00	11	330	0.293	11	330	0.219	11	330	0.512
19:00 - 20:00	0	0	0.000	0	0	0.000	0	0	0.000
20:00 - 21:00	0	0	0.000	0	0	0.000	0	0	0.000
21:00 - 22:00	0	0	0.000	0	0	0.000	0	0	0.000
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			2.445			2.503			4.948

Parameter summary

Trip rate parameter range selected: 201 - 1216 (units:)
 Survey date date range: 01/01/01 - 26/11/08
 Number of weekdays (Monday-Friday): 11
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
 Category : A - HOTELS
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	KC KENT	1 days
	SC SURREY	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	NR NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
	WO WORCESTERSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	GM GREATER MANCHESTER	1 days
10	WALES	
	CF CARDIFF	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
 Range: 5700 to 9700 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 25/11/08

Selected survey days:

Monday	1 days
Tuesday	4 days
Wednesday	1 days
Thursday	1 days
Friday	2 days

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

Selected Locations:

Town Centre	2
Edge of Town Centre	3
Neighbourhood Centre (PPS6 Local Centre)	2
Free Standing (PPS6 Out of Town)	2

Selected Location Sub Categories:

Built-Up Zone	2
Village	1
Out of Town	1
No Sub Category	5

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/A - HOTELS
 VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	3	7983	0.129	3	7983	0.100	3	7983	0.229
07:00 - 08:00	9	7257	0.155	9	7257	0.184	9	7257	0.339
08:00 - 09:00	9	7257	0.299	9	7257	0.296	9	7257	0.595
09:00 - 10:00	9	7257	0.263	9	7257	0.207	9	7257	0.470
10:00 - 11:00	9	7257	0.149	9	7257	0.149	9	7257	0.298
11:00 - 12:00	9	7257	0.182	9	7257	0.165	9	7257	0.347
12:00 - 13:00	9	7257	0.201	9	7257	0.199	9	7257	0.400
13:00 - 14:00	9	7257	0.171	9	7257	0.159	9	7257	0.330
14:00 - 15:00	9	7257	0.199	9	7257	0.196	9	7257	0.395
15:00 - 16:00	9	7257	0.214	9	7257	0.254	9	7257	0.468
16:00 - 17:00	9	7257	0.199	9	7257	0.247	9	7257	0.446
17:00 - 18:00	9	7257	0.276	9	7257	0.273	9	7257	0.549
18:00 - 19:00	9	7257	0.308	9	7257	0.214	9	7257	0.522
19:00 - 20:00	6	7291	0.359	6	7291	0.256	6	7291	0.615
20:00 - 21:00	6	7291	0.222	6	7291	0.187	6	7291	0.409
21:00 - 22:00	5	7164	0.165	5	7164	0.195	5	7164	0.360
22:00 - 23:00	2	7850	0.217	2	7850	0.318	2	7850	0.535
23:00 - 24:00	2	7850	0.051	2	7850	0.134	2	7850	0.185
Total Rates:			3.759			3.733			7.492

Parameter summary

Trip rate parameter range selected: 5700 - 9700 (units: sqm)
 Survey date date range: 01/01/01 - 25/11/08
 Number of weekdays (Monday-Friday): 9
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK

Category : C - PUB/RESTAURANT

VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	HC HAMPSHIRE	1 days
03	SOUTH WEST	
	CW CORNWALL	1 days
05	EAST MIDLANDS	
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NO NORTH LINCOLNSHIRE	1 days
09	NORTH	
	TV TEES VALLEY	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 112 to 2384 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 18/10/08

Selected survey days:

Friday 8 days

Selected survey types:

Manual count 8 days
Directional ATC Count 0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre) 5
Edge of Town 2
Neighbourhood Centre (PPS6 Local Centre) 1

Selected Location Sub Categories:

Residential Zone 2
No Sub Category 6

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/C - PUB/RESTAURANT
 VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	0	0	0.000	0	0	0.000	0	0	0.000
07:00 - 08:00	0	0	0.000	0	0	0.000	0	0	0.000
08:00 - 09:00	0	0	0.000	0	0	0.000	0	0	0.000
09:00 - 10:00	0	0	0.000	0	0	0.000	0	0	0.000
10:00 - 11:00	7	978	0.380	7	978	0.204	7	978	0.584
11:00 - 12:00	8	925	1.555	8	925	0.635	8	925	2.190
12:00 - 13:00	8	925	3.313	8	925	1.717	8	925	5.030
13:00 - 14:00	8	925	2.488	8	925	2.880	8	925	5.368
14:00 - 15:00	8	925	1.650	8	925	2.691	8	925	4.341
15:00 - 16:00	8	925	1.474	8	925	1.609	8	925	3.083
16:00 - 17:00	8	925	2.028	8	925	1.366	8	925	3.394
17:00 - 18:00	8	925	3.110	8	925	2.258	8	925	5.368
18:00 - 19:00	8	925	2.812	8	925	2.610	8	925	5.422
19:00 - 20:00	8	925	2.961	8	925	2.474	8	925	5.435
20:00 - 21:00	8	925	1.893	8	925	2.299	8	925	4.192
21:00 - 22:00	8	925	1.379	8	925	2.258	8	925	3.637
22:00 - 23:00	8	925	0.663	8	925	1.650	8	925	2.313
23:00 - 24:00	8	925	0.243	8	925	1.420	8	925	1.663
Total Rates:			25.949			26.071			52.020

Parameter summary

Trip rate parameter range selected: 112 - 2384 (units: sqm)
 Survey date date range: 01/01/01 - 18/10/08
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
Category : C - LEISURE CENTRE
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	GS GLOUCESTERSHIRE	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	CB CUMBRIA	1 days

Filtering Stage 2 selection:

Parameter: Gross floor area
Range: 5000 to 17000 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 16/10/08

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	3 days
Friday	1 days

Selected survey types:

Manual count	6 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Edge of Town	4

Selected Location Sub Categories:

Residential Zone	2
Built-Up Zone	2
No Sub Category	2

TRIP RATE for Land Use 07 - LEISURE/C - LEISURE CENTRE
 VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00	0	0	0.000	0	0	0.000	0	0	0.000
01:00 - 02:00	0	0	0.000	0	0	0.000	0	0	0.000
02:00 - 03:00	0	0	0.000	0	0	0.000	0	0	0.000
03:00 - 04:00	0	0	0.000	0	0	0.000	0	0	0.000
04:00 - 05:00	0	0	0.000	0	0	0.000	0	0	0.000
05:00 - 06:00	0	0	0.000	0	0	0.000	0	0	0.000
06:00 - 07:00	2	12500	0.180	2	12500	0.016	2	12500	0.196
07:00 - 08:00	6	8308	0.510	6	8308	0.171	6	8308	0.681
08:00 - 09:00	6	8308	0.538	6	8308	0.455	6	8308	0.993
09:00 - 10:00	6	8308	0.754	6	8308	0.399	6	8308	1.153
10:00 - 11:00	6	8308	0.459	6	8308	0.449	6	8308	0.908
11:00 - 12:00	6	8308	0.361	6	8308	0.485	6	8308	0.846
12:00 - 13:00	6	8308	0.463	6	8308	0.421	6	8308	0.884
13:00 - 14:00	6	8308	0.496	6	8308	0.510	6	8308	1.006
14:00 - 15:00	6	8308	0.445	6	8308	0.490	6	8308	0.935
15:00 - 16:00	6	8308	0.806	6	8308	0.620	6	8308	1.426
16:00 - 17:00	6	8308	1.083	6	8308	0.831	6	8308	1.914
17:00 - 18:00	6	8308	1.515	6	8308	1.180	6	8308	2.695
18:00 - 19:00	6	8308	1.705	6	8308	1.507	6	8308	3.212
19:00 - 20:00	6	8308	1.465	6	8308	1.563	6	8308	3.028
20:00 - 21:00	6	8308	0.666	6	8308	1.348	6	8308	2.014
21:00 - 22:00	6	8308	0.183	6	8308	0.859	6	8308	1.042
22:00 - 23:00	0	0	0.000	0	0	0.000	0	0	0.000
23:00 - 24:00	0	0	0.000	0	0	0.000	0	0	0.000
Total Rates:			11.629			11.304			22.933

Parameter summary

Trip rate parameter range selected: 5000 - 17000 (units: sqm)
 Survey date date range: 01/01/01 - 16/10/08
 Number of weekdays (Monday-Friday): 6
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 14 - CAR SHOW ROOMS
 Category : A - CAR SHOW ROOMS
 VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	2 days
	NR NORTHAMPTONSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	2 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
09	NORTH	
	TV TEES VALLEY	3 days

Filtering Stage 2 selection:

Parameter: Site area
 Range: 0.50 to 2.00 (units: hect)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/01 to 26/11/08

Selected survey days:

Monday	1 days
Tuesday	4 days
Wednesday	2 days
Thursday	2 days
Friday	4 days

Selected survey types:

Manual count	13 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	4
Edge of Town	7
Neighbourhood Centre (PPS6 Local Centre)	1

Selected Location Sub Categories:

Industrial Zone	5
Commercial Zone	2
Residential Zone	2
Built-Up Zone	1
Village	1
No Sub Category	2

TRIP RATE for Land Use 14 - CAR SHOW ROOMS/A - CAR SHOW ROOMS
 VEHICLES

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate
00:00 - 01:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
01:00 - 02:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
02:00 - 03:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
03:00 - 04:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
04:00 - 05:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
05:00 - 06:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
06:00 - 07:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
07:00 - 08:00	7	0.74	18.605	7	0.74	5.039	7	0.74	23.644
08:00 - 09:00	13	0.65	45.873	13	0.65	14.741	13	0.65	60.614
09:00 - 10:00	13	0.65	34.906	13	0.65	23.585	13	0.65	58.491
10:00 - 11:00	13	0.65	26.297	13	0.65	26.415	13	0.65	52.712
11:00 - 12:00	13	0.65	25.825	13	0.65	26.297	13	0.65	52.122
12:00 - 13:00	13	0.65	28.892	13	0.65	30.542	13	0.65	59.434
13:00 - 14:00	13	0.65	31.840	13	0.65	25.943	13	0.65	57.783
14:00 - 15:00	13	0.65	27.712	13	0.65	29.363	13	0.65	57.075
15:00 - 16:00	13	0.65	24.528	13	0.65	29.599	13	0.65	54.127
16:00 - 17:00	13	0.65	23.349	13	0.65	27.123	13	0.65	50.472
17:00 - 18:00	13	0.65	14.623	13	0.65	41.038	13	0.65	55.661
18:00 - 19:00	13	0.65	3.538	13	0.65	14.033	13	0.65	17.571
19:00 - 20:00	7	0.66	3.017	7	0.66	8.405	7	0.66	11.422
20:00 - 21:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
21:00 - 22:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
22:00 - 23:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
23:00 - 24:00	0	0.00	0.000	0	0.00	0.000	0	0.00	0.000
Total Rates:			309.005			302.123			611.128

Parameter summary

Trip rate parameter range selected: 0.50 to 2.00 (units: hect)
 Survey date date range: 01/01/01 - 26/11/08
 Number of weekdays (Monday-Friday): 13
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0