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Rory Ringer – Democratic Services Team Leader
General Enquiries: Telephone No. 01362 656870
Member Services Fax No. 01362 690821
DX743950 Dereham 2

To The Chairman and Members of the Local Plan Working Group

All other Members of the Council – for information

Your Ref:	
Our Ref:	JB/L.3
Contact:	Julie Britton
Direct Dial:	01362 656343
E-mail:	julie.britton@breckland.gov.uk
Date	23 October 2013

AGENDA SUPPLEMENT (4) – APPENDIX D/PART 4

Dear Sir/Madam

LOCAL PLAN WORKING GROUP - TUESDAY 29 OCTOBER 2013

I refer to the agenda for the above-mentioned meeting and enclose the following item:

Item No	Report Title	Page Nos
8.	Attleborough Link Road Study – Appendix D/Part 4 Report by Phil Mileham, Deputy Planning Manager. Unfortunately, due to the size of Appendix D, I have had to split the document into 9 parts – this is part 4 of 9. NB: There will be a limited number of hard copies available on the day.	258 - 356

Yours faithfully

Julie Britton

Senior Committee Officer

Appendix B Arcady Analysis

B.1 Breckland Lodge Roundabout

```
                    ARCADY 6

    ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


    Analysis Program: Release 7.0 (FEBRUARY 2010)

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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:\schemes_cg\cg0063xx\cg006312\Arcady\A11 Arcady\Hunters lodge 2031AM.vai"
(drive-on-the-left ) at 09:27:11 on Friday, 3 May 2013
```

.FILE PROPERTIES
****

```
   RUN TITLE: Hunters Lodge Roundabout
    LOCATION: Attleborough, Norfolk
        DATE: 21/09/12
      CLIENT:
 ENUMERATOR: david.cooke2 [HW62393]
 JOB NUMBER:
      STATUS: Preliminary
DESCRIPTION:
```

.INPUT DATA
****

```
ARM A - London Rd (A)
ARM B - A11 South (B)
ARM C - Wroo Road (C)
ARM D - A11 North (D)
```

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.20	9.43	5.40	35.30	82.00	56.0	0.391	21.287
ARM B	7.30	11.89	20.00	33.50	82.00	39.0	0.651	49.651
ARM C	4.80	6.59	7.00	14.80	82.00	39.0	0.453	27.797
ARM D	7.60	12.64	9.30	35.00	82.00	30.0	0.650	48.688

```
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
```
.SCALING FACTORS
.---------------------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -
```

.DEMAND SET TITLE: SC1-3 2031 with Town Centre Improvements & Internal Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	08.00	08.30	09.00	2.43	3.64	2.43
ARM B	08.00	08.30	09.00	25.36	38.04	25.36
ARM C	08.00	08.30	09.00	1.60	2.40	1.60
ARM D	08.00	08.30	09.00	23.16	34.74	23.16

DEMAND SET TITLE: SC1-3 2031 with Town Centre Improvements & Internal Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
		TURNING PROPORTIONS (PERCENTAGE OF H.V.S)			
07.45 - 09.15	ARM A	0.000 (0.0)	0.790 (0.6)	0.050 (0.0)	0.160 (46.6)
	ARM B	0.150 (11.0)	0.000 (0.0)	0.020 (12.5)	0.830 (9.5)
	ARM C	0.220 (0.0)	0.360 (0.0)	0.000 (0.0)	0.420 (0.0)
	ARM D	0.030 (39.2)	0.970 (5.4)	0.000 (0.0)	0.000 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	2.43	10.96	0.222	- -	0.0	0.3	4.1	-	0.117
ARM B	25.36	44.82	0.566	- -	0.0	1.3	18.8	-	0.051
ARM C	1.60	15.24	0.105	- -	0.0	0.1	1.7	-	0.073
ARM D	23.16	42.62	0.543	- -	0.0	1.2	17.2	-	0.051
08.00-08.15									
ARM A	2.90	9.25	0.314	- -	0.3	0.5	6.5	-	0.157
ARM B	30.28	44.74	0.677	- -	1.3	2.1	30.0	-	0.069
ARM C	1.91	12.78	0.149	- -	0.1	0.2	2.6	-	0.092
ARM D	27.66	42.00	0.658	- -	1.2	1.9	27.6	-	0.069
08.15-08.30									
ARM A	3.55	6.93	0.512	- -	0.5	1.0	14.1	-	0.290
ARM B	37.09	44.63	0.831	- -	2.1	4.7	64.6	-	0.127
ARM C	2.34	9.46	0.247	- -	0.2	0.3	4.7	-	0.140
ARM D	33.87	41.17	0.823	- -	1.9	4.4	61.0	-	0.131
08.30-08.45									
ARM A	3.55	6.87	0.516	- -	1.0	1.0	15.5	-	0.300
ARM B	37.09	44.63	0.831	- -	4.7	4.8	71.3	-	0.132
ARM C	2.34	9.38	0.250	- -	0.3	0.3	4.9	-	0.142
ARM D	33.87	41.15	0.823	- -	4.4	4.5	67.4	-	0.137
08.45-09.00									
ARM A	2.90	9.16	0.316	- -	1.0	0.5	7.4	-	0.161
ARM B	30.28	44.73	0.677	- -	4.8	2.1	33.4	-	0.071
ARM C	1.91	12.66	0.151	- -	0.3	0.2	2.8	-	0.093
ARM D	27.66	41.97	0.659	- -	4.5	2.0	30.8	-	0.072
09.00-09.15									
ARM A	2.43	10.91	0.223	- -	0.5	0.3	4.5	-	0.118
ARM B	25.36	44.81	0.566	- -	2.1	1.3	20.2	-	0.052
ARM C	1.60	15.17	0.105	- -	0.2	0.1	1.8	-	0.074
ARM D	23.16	42.60	0.544	- -	2.0	1.2	18.5	-	0.052

QUEUE AT ARM A

```
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   08.00           0.3
   08.15           0.5
   08.30           1.0  *
   08.45           1.0  *
   09.00           0.5
   09.15           0.3


.QUEUE AT ARM B
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   08.00           1.3  *
   08.15           2.1  **
   08.30           4.7  *****
   08.45           4.8  *****
   09.00           2.1  **
   09.15           1.3  *


.QUEUE AT ARM C
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   08.00           0.1
   08.15           0.2
   08.30           0.3
   08.45           0.3
   09.00           0.2
   09.15           0.1


.QUEUE AT ARM D
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   08.00           1.2  *
   08.15           1.9  **
   08.30           4.4  ****
   08.45           4.5  *****
   09.00           2.0  **
   09.15           1.2  *

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD
                 ------------------------------------------

 ------------------------------------------------------------------------------ T75
 I  ARM  I   TOTAL DEMAND  I     * QUEUEING *    I  * INCLUSIVE QUEUEING *  I
 I       I                 I      * DELAY *      I         * DELAY *        I
 I       I-------------------------------------------------------------------I
 I       I  (VEH)  (VEH/H) I  (MIN)    (MIN/VEH) I    (MIN)      (MIN/VEH)  I
 ------------------------------------------------------------------------------
 I   A   I  266.4 I  177.6 I    52.0 I    0.20   I      52.0  I     0.20    I
 I   B   I 2781.9 I 1854.6 I   238.3 I    0.09   I     238.3  I     0.09    I
 I   C   I  175.5 I  117.0 I    18.5 I    0.11   I      18.5  I     0.11    I
 I   D   I 2540.6 I 1693.7 I   222.4 I    0.09   I     222.4  I     0.09    I
 ------------------------------------------------------------------------------
 I  ALL  I 5764.4 I 3842.9 I   531.2 I    0.09   I     531.2  I     0.09    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

============================================== end of file ==============================================
```

```
                    ARCADY 6

       ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


       Analysis Program: Release 7.0 (FEBRUARY 2010)

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 Run with file:-
 "p:\schemes_cg\cg0063xx\cg006312\Arcady\A11 Arcady\Same as AM Hunters lodge Rbt 2031PM.vai"
(drive-on-the-left ) at 09:31:31 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Hunters Lodge Roundabout
    LOCATION: Attleborough, Norfolk
        DATE: 21/09/12
      CLIENT:
  ENUMERATOR: david.cooke2 [HW62393]
  JOB NUMBER:
      STATUS: Preliminary
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - London Rd (A)
 ARM B - A11 South (B)
 ARM C - Wroo Road (C)
 ARM D - A11 North (D)

.GEOMETRIC DATA
 --------------


 ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.20   I     9.43   I     5.40   I    35.30   I   82.00   I     56.0     I  0.391  I       21.287        I
 I ARM  B I    7.30   I    11.89   I    20.00   I    33.50   I   82.00   I     39.0     I  0.651  I       49.651        I
 I ARM  C I    4.80   I     6.59   I     7.00   I    14.80   I   82.00   I     39.0     I  0.453  I       27.797        I
 I ARM  D I    7.60   I    12.64   I     9.30   I    35.00   I   82.00   I     30.0     I  0.650  I       48.688        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
.SCALING FACTORS
.---------------------- T13
 IARM  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(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC1-3 2031 with Town Centre Improvements & Internal Link Road PM
 ------------------------------------------------------------------------------------------------------
 I        I TIME WHEN        I TIME WHEN        I  TIME WHEN       I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS      I TOP OF PEAK      I FLOW STOPS       I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE        I IS REACHED       I FALLING          I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------
 I ARM  A I        16.00      I        16.30      I        17.00     I  1.06      I   1.59    I  1.06    I
 I ARM  B I        16.00      I        16.30      I        17.00     I 23.13      I  34.69    I 23.13    I
 I ARM  C I        16.00      I        16.30      I        17.00     I  0.78      I   1.16    I  0.78    I
 I ARM  D I        16.00      I        16.30      I        17.00     I 11.61      I  17.42    I 11.61    I
 ------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC1-3 2031 with Town Centre Improvements & Internal Link Road PM

T33

TIME	FROM/T	TURNING PROPORTIONS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
15.45 - 17.15	ARM A	0.000	0.540	0.180	0.280
		(0.0)	(4.3)	(0.0)	(29.2)
	ARM B	0.340	0.000	0.020	0.640
		(2.1)	(0.0)	(5.0)	(5.3)
	ARM C	0.310	0.560	0.000	0.130
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.040	0.950	0.010	0.000
		(21.1)	(5.2)	(22.2)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	1.06	14.96	0.071	- - -	0.0	0.1	1.1	-	0.072
ARM B	23.13	47.20	0.490	- - -	0.0	1.0	14.0	-	0.041
ARM C	0.78	16.97	0.046	- - -	0.0	0.0	0.7	-	0.062
ARM D	11.61	40.60	0.286	- - -	0.0	0.4	5.9	-	0.034
16.00-16.15									
ARM A	1.27	14.12	0.090	- - -	0.1	0.1	1.4	-	0.078
ARM B	27.62	47.11	0.586	- - -	1.0	1.4	20.6	-	0.051
ARM C	0.93	14.84	0.063	- - -	0.0	0.1	1.0	-	0.072
ARM D	13.87	39.56	0.350	- - -	0.4	0.5	8.0	-	0.039
16.15-16.30									
ARM A	1.55	12.97	0.120	- - -	0.1	0.1	2.0	-	0.088
ARM B	33.82	46.99	0.720	- - -	1.4	2.5	36.3	-	0.075
ARM C	1.13	11.95	0.095	- - -	0.1	0.1	1.5	-	0.092
ARM D	16.98	38.14	0.445	- - -	0.5	0.8	11.8	-	0.047
16.30-16.45									
ARM A	1.55	12.96	0.120	- - -	0.1	0.1	2.0	-	0.088
ARM B	33.82	46.99	0.720	- - -	2.5	2.5	38.1	-	0.076
ARM C	1.13	11.92	0.095	- - -	0.1	0.1	1.6	-	0.093
ARM D	16.98	38.12	0.445	- - -	0.8	0.8	12.0	-	0.047
16.45-17.00									
ARM A	1.27	14.11	0.090	- - -	0.1	0.1	1.5	-	0.078
ARM B	27.62	47.11	0.586	- - -	2.5	1.4	22.0	-	0.052
ARM C	0.93	14.79	0.063	- - -	0.1	0.1	1.0	-	0.072
ARM D	13.87	39.54	0.351	- - -	0.8	0.5	8.3	-	0.039
17.00-17.15									
ARM A	1.06	14.95	0.071	- - -	0.1	0.1	1.2	-	0.072
ARM B	23.13	47.20	0.490	- - -	1.4	1.0	14.8	-	0.042
ARM C	0.78	16.92	0.046	- - -	0.1	0.0	0.7	-	0.062
ARM D	11.61	40.58	0.286	- - -	0.5	0.4	6.1	-	0.035

QUEUE AT ARM A

```
 TIME SEGMENT NO. OF
  ENDING      VEHICLES
              IN QUEUE

  16.00           0.1
  16.15           0.1
  16.30           0.1
  16.45           0.1
  17.00           0.1
  17.15           0.1


.QUEUE AT ARM B
 --------------

 TIME SEGMENT NO. OF
  ENDING      VEHICLES
              IN QUEUE

  16.00           1.0  *
  16.15           1.4  *
  16.30           2.5  ***
  16.45           2.5  ***
  17.00           1.4  *
  17.15           1.0  *


.QUEUE AT ARM C
 --------------

 TIME SEGMENT NO. OF
  ENDING      VEHICLES
              IN QUEUE

  16.00           0.0
  16.15           0.1
  16.30           0.1
  16.45           0.1
  17.00           0.1
  17.15           0.0


.QUEUE AT ARM D
 --------------

 TIME SEGMENT NO. OF
  ENDING      VEHICLES
              IN QUEUE

  16.00           0.4
  16.15           0.5  *
  16.30           0.8  *
  16.45           0.8  *
  17.00           0.5  *
  17.15           0.4

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD
                -----------------------------------------

 ------------------------------------------------------------------------------ T75
 I  ARM  I   TOTAL DEMAND  I     * QUEUEING *    I  * INCLUSIVE QUEUEING *  I
 I       I                I      * DELAY *      I         * DELAY *        I
 I       I----------------------------------------------------------------I
 I       I  (VEH)  (VEH/H) I  (MIN)    (MIN/VEH) I    (MIN)      (MIN/VEH)  I
 ------------------------------------------------------------------------------
 I   A   I  116.3 I   77.5 I     9.3 I    0.08   I       9.3  I     0.08    I
 I   B   I 2537.1 I 1691.4 I   145.8 I    0.06   I     145.8  I     0.06    I
 I   C   I   85.2 I   56.8 I     6.5 I    0.08   I       6.5  I     0.08    I
 I   D   I 1273.8 I  849.2 I    52.0 I    0.04   I      52.0  I     0.04    I
 ------------------------------------------------------------------------------
 I  ALL  I 4012.3 I 2674.9 I   213.5 I    0.05   I     213.6  I     0.05    I
 ------------------------------------------------------------------------------
 * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
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 END OF JOB

============================================= end of file ==============================================
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                    ____________________ A R C A D Y  6 ____________________

                        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


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 ------------------------------------------------------------------------------

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(drive-on-the-left ) at 09:29:16 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Hunters Lodge Roundabout
    LOCATION: Attleborough, Norfolk
        DATE: 21/09/12
      CLIENT:
  ENUMERATOR: david.cooke2 [HW62393]
  JOB NUMBER:
      STATUS: Preliminary
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - London Rd (A)
 ARM B - A11 South (B)
 ARM C - Wroo Road (C)
 ARM D - A11 North (D)

.GEOMETRIC DATA
 --------------


 ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.20   I     9.43   I     5.40   I    35.30   I   82.00   I     56.0     I  0.391  I       21.287        I
 I ARM  B I    7.30   I    11.89   I    20.00   I    33.50   I   82.00   I     39.0     I  0.651  I       49.651        I
 I ARM  C I    4.80   I     6.59   I     7.00   I    14.80   I   82.00   I     39.0     I  0.453  I       27.797        I
 I ARM  D I    7.60   I    12.64   I     9.30   I    35.00   I   82.00   I     30.0     I  0.650  I       48.688        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
.SCALING FACTORS
.---------------------- T13
 IARM  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(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC1-4 2031 with Town Centre Improvements & External Link Road AM
 ------------------------------------------------------------------------------------------------
 I        I TIME WHEN         I TIME WHEN         I  TIME WHEN        I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS       I TOP OF PEAK       I FLOW STOPS        I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE         I IS REACHED        I FALLING           I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------------
 I ARM  A I        08.00      I        08.30      I        09.00      I  2.81      I   4.22    I  2.81    I
 I ARM  B I        08.00      I        08.30      I        09.00      I 25.40      I  38.10    I 25.40    I
 I ARM  C I        08.00      I        08.30      I        09.00      I  1.60      I   2.40    I  1.60    I
```

I ARM	D I	08.00	I	08.30	I	09.00	I 22.69	I 34.03	I 22.69	I

DEMAND SET TITLE: SC1-4 2031 with Town Centre Improvements & External Link Road AM

T33

TIME	FROM/T	TURNING PROPORTIONS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
07.45 - 09.15	ARM A	0.000	0.780	0.050	0.170
		(0.0)	(1.7)	(0.0)	(36.8)
	ARM B	0.170	0.000	0.010	0.820
		(9.5)	(0.0)	(10.0)	(9.6)
	ARM C	0.190	0.360	0.000	0.450
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.040	0.960	0.000	0.000
		(26.9)	(5.3)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	2.81	11.27	0.249	- -	-	0.0	0.3	4.8	-	0.118
ARM B	25.40	44.84	0.566	- -	-	0.0	1.3	18.9	-	0.051
ARM C	1.60	15.08	0.106	- -	-	0.0	0.1	1.7	-	0.074
ARM D	22.69	42.44	0.535	- -	-	0.0	1.1	16.6	-	0.050
08.00-08.15									
ARM A	3.36	9.60	0.350	- -	-	0.3	0.5	7.6	-	0.159
ARM B	30.33	44.75	0.678	- -	-	1.3	2.1	30.1	-	0.069
ARM C	1.91	12.58	0.152	- -	-	0.1	0.2	2.6	-	0.094
ARM D	27.09	41.77	0.649	- -	-	1.1	1.8	26.5	-	0.068
08.15-08.30									
ARM A	4.11	7.35	0.560	- -	-	0.5	1.2	16.8	-	0.300
ARM B	37.15	44.62	0.832	- -	-	2.1	4.7	65.2	-	0.128
ARM C	2.34	9.22	0.254	- -	-	0.2	0.3	4.9	-	0.145
ARM D	33.18	40.86	0.812	- -	-	1.8	4.1	57.3	-	0.125
08.30-08.45									
ARM A	4.11	7.29	0.564	- -	-	1.2	1.3	18.7	-	0.313
ARM B	37.15	44.62	0.833	- -	-	4.7	4.8	72.0	-	0.134
ARM C	2.34	9.13	0.256	- -	-	0.3	0.3	5.1	-	0.147
ARM D	33.18	40.84	0.812	- -	-	4.1	4.2	62.9	-	0.130
08.45-09.00									
ARM A	3.36	9.52	0.353	- -	-	1.3	0.6	8.8	-	0.165
ARM B	30.33	44.74	0.678	- -	-	4.8	2.1	33.6	-	0.071
ARM C	1.91	12.46	0.153	- -	-	0.3	0.2	2.8	-	0.095
ARM D	27.09	41.74	0.649	- -	-	4.2	1.9	29.4	-	0.070
09.00-09.15									
ARM A	2.81	11.22	0.250	- -	-	0.6	0.3	5.2	-	0.119
ARM B	25.40	44.83	0.567	- -	-	2.1	1.3	20.3	-	0.052
ARM C	1.60	15.00	0.107	- -	-	0.2	0.1	1.8	-	0.075
ARM D	22.69	42.42	0.535	- -	-	1.9	1.2	17.8	-	0.051

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	*
08.30	1.2	*
08.45	1.3	*
09.00	0.6	*
09.15	0.3	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.3	*
08.15	2.1	**
08.30	4.7	*****
08.45	4.8	*****
09.00	2.1	**
09.15	1.3	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.3
08.45	0.3
09.00	0.2
09.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	1.1	*
08.15	1.8	**
08.30	4.1	****
08.45	4.2	****
09.00	1.9	**
09.15	1.2	*

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	308.4	205.6	61.9	0.20	61.9	0.20
B	2786.3	1857.5	240.0	0.09	240.0	0.09
C	175.5	117.0	18.9	0.11	18.9	0.11
D	2488.8	1659.2	210.6	0.08	210.6	0.08
ALL	5759.1	3839.4	531.4	0.09	531.5	0.09

* 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

========== end of file ==========

```
                    ARCADY 6

    ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


    Analysis Program: Release 7.0 (FEBRUARY 2010)

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TRL Limited            Tel:   +44 (0) 1344 770758
Crowthorne House       Fax:   +44 (0) 1344 770356
Nine Mile Ride         Email: software@trl.co.uk
Wokingham, Berks.      Web:   www.trlsoftware.co.uk
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 -------------------------------------------------------------------------------
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 -------------------------------------------------------------------------------

 Run with file:-
 "p:\schemes_cg\cg0063xx\cg006312\Arcady\A11 Arcady\Same as AM Hunters lodge Rbt 2031PM.vai"
(drive-on-the-left ) at 09:32:25 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Hunters Lodge Roundabout
    LOCATION: Attleborough, Norfolk
        DATE: 21/09/12
      CLIENT:
  ENUMERATOR: david.cooke2 [HW62393]
  JOB NUMBER:
      STATUS: Preliminary
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - London Rd (A)
 ARM B - A11 South (B)
 ARM C - Wroo Road (C)
 ARM D - A11 North (D)

.GEOMETRIC DATA
 --------------


 ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.20   I     9.43   I     5.40   I    35.30   I   82.00   I     56.0     I  0.391  I       21.287        I
 I ARM  B I    7.30   I    11.89   I    20.00   I    33.50   I   82.00   I     39.0     I  0.651  I       49.651        I
 I ARM  C I    4.80   I     6.59   I     7.00   I    14.80   I   82.00   I     39.0     I  0.453  I       27.797        I
 I ARM  D I    7.60   I    12.64   I     9.30   I    35.00   I   82.00   I     30.0     I  0.650  I       48.688        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
.SCALING FACTORS
.---------------------- T13
 IARM  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(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC1-4 2031 with Town Centre Improvements & External Link Road PM
 ------------------------------------------------------------------------------------------------------
 I        I TIME WHEN         I TIME WHEN         I  TIME WHEN       I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS       I TOP OF PEAK       I FLOW STOPS       I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE         I IS REACHED        I FALLING          I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------
 I ARM  A I        16.00      I        16.30      I        17.00     I  2.18      I   3.26    I  2.18    I
 I ARM  B I        16.00      I        16.30      I        17.00     I 30.01      I  45.02    I 30.01    I
 I ARM  C I        16.00      I        16.30      I        17.00     I  0.90      I   1.35    I  0.90    I
 I ARM  D I        16.00      I        16.30      I        17.00     I  9.08      I  13.61    I  9.08    I
 ------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC1-4 2031 with Town Centre Improvements & External Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
		TURNING PROPORTIONS (PERCENTAGE OF H.V.S)			
15.45 - 17.15	ARM A	0.000 (0.0)	0.370 (3.1)	0.150 (4.0)	0.480 (17.9)
	ARM B	0.360 (2.0)	0.000 (0.0)	0.020 (3.8)	0.620 (5.1)
	ARM C	0.380 (0.0)	0.560 (0.0)	0.000 (0.0)	0.060 (0.0)
	ARM D	0.110 (5.1)	0.880 (4.8)	0.010 (33.3)	0.000 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	2.18	16.11	0.135	- -	-	0.0	0.2	2.3	-	0.072
ARM B	30.01	46.70	0.643	- -	-	0.0	1.8	25.7	-	0.059
ARM C	0.90	13.46	0.067	- -	-	0.0	0.1	1.0	-	0.080
ARM D	9.08	39.01	0.233	- -	-	0.0	0.3	4.5	-	0.033
16.00-16.15									
ARM A	2.60	15.49	0.168	- -	-	0.2	0.2	3.0	-	0.078
ARM B	35.84	46.50	0.771	- -	-	1.8	3.3	46.5	-	0.092
ARM C	1.07	10.66	0.101	- -	-	0.1	0.1	1.6	-	0.104
ARM D	10.84	37.58	0.288	- -	-	0.3	0.4	6.0	-	0.037
16.15-16.30									
ARM A	3.18	14.64	0.217	- -	-	0.2	0.3	4.0	-	0.087
ARM B	43.89	46.21	0.950	- -	-	3.3	13.5	159.0	-	0.286
ARM C	1.32	7.06	0.186	- -	-	0.1	0.2	3.3	-	0.174
ARM D	13.27	35.74	0.371	- -	-	0.4	0.6	8.7	-	0.044
16.30-16.45									
ARM A	3.18	14.63	0.217	- -	-	0.3	0.3	4.1	-	0.087
ARM B	43.89	46.21	0.950	- -	-	13.5	15.4	218.3	-	0.373
ARM C	1.32	6.81	0.193	- -	-	0.2	0.2	3.5	-	0.182
ARM D	13.27	35.61	0.373	- -	-	0.6	0.6	8.9	-	0.045
16.45-17.00									
ARM A	2.60	15.48	0.168	- -	-	0.3	0.2	3.1	-	0.078
ARM B	35.84	46.49	0.771	- -	-	15.4	3.5	63.3	-	0.109
ARM C	1.07	10.24	0.105	- -	-	0.2	0.1	1.8	-	0.109
ARM D	10.84	37.37	0.290	- -	-	0.6	0.4	6.2	-	0.038
17.00-17.15									
ARM A	2.18	16.10	0.135	- -	-	0.2	0.2	2.4	-	0.072
ARM B	30.01	46.70	0.643	- -	-	3.5	1.8	28.2	-	0.061
ARM C	0.90	13.35	0.067	- -	-	0.1	0.1	1.1	-	0.080
ARM D	9.08	38.95	0.233	- -	-	0.4	0.3	4.6	-	0.033

QUEUE AT ARM A

  TIME SEGMENT NO. OF
   ENDING   VEHICLES
               IN QUEUE

   16.00   0.2
   16.15   0.2
   16.30   0.3
   16.45   0.3
   17.00   0.2
   17.15   0.2

.QUEUE AT ARM B

  TIME SEGMENT NO. OF
   ENDING   VEHICLES
               IN QUEUE

   16.00   1.8 **
   16.15   3.3 ***
   16.30   13.5 *************
   16.45   15.4 ***************
   17.00   3.5 ***
   17.15   1.8 **

.QUEUE AT ARM C

  TIME SEGMENT NO. OF
   ENDING   VEHICLES
               IN QUEUE

   16.00   0.1
   16.15   0.1
   16.30   0.2
   16.45   0.2
   17.00   0.1
   17.15   0.1

.QUEUE AT ARM D

  TIME SEGMENT NO. OF
   ENDING   VEHICLES
               IN QUEUE

   16.00   0.3
   16.15   0.4
   16.30   0.6 *
   16.45   0.6 *
   17.00   0.4
   17.15   0.3

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

 -- T75
 I ARM I   TOTAL DEMAND I   * QUEUEING *   I * INCLUSIVE QUEUEING * I
 I   I   I   * DELAY *   I   * DELAY *   I
 I   I---I
 I   I (VEH) (VEH/H) I (MIN)   (MIN/VEH) I   (MIN)   (MIN/VEH) I

 I   A   I 238.8 I 159.2 I   18.9 I   0.08   I   18.9 I   0.08   I
 I   B   I 3292.2 I 2194.8 I   541.1 I   0.16   I   541.1 I   0.16   I
 I   C   I   98.7 I   65.8 I   12.4 I   0.13   I   12.4 I   0.13   I
 I   D   I 995.7 I 663.8 I   38.9 I   0.04   I   38.9 I   0.04   I

 I ALL I 4625.4 I 3083.6 I   611.3 I   0.13   I   611.3 I   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

== end of file ==

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\A11 Arcady\Hunters lodge 2031AM.vai"
(drive-on-the-left) at 09:30:03 on Friday, 3 May 2013

.FILE PROPERTIES

****

RUN TITLE: Hunters Lodge Roundabout
LOCATION: Attleborough, Norfolk
DATE: 21/09/12
CLIENT:
ENUMERATOR: david.cooke2 [HW62393]
JOB NUMBER:
STATUS: Preliminary
DESCRIPTION:

.INPUT DATA

****

ARM A - London Rd (A)
ARM B - A11 South (B)
ARM C - Wroo Road (C)
ARM D - A11 North (D)

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.20	9.43	5.40	35.30	82.00	56.0	0.391	21.287
ARM B	7.30	11.89	20.00	33.50	82.00	39.0	0.651	49.651
ARM C	4.80	6.59	7.00	14.80	82.00	39.0	0.453	27.797
ARM D	7.60	12.64	9.30	35.00	82.00	30.0	0.650	48.688

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

.SCALING FACTORS

.---------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-3 2031 with Town Centre Improvements & Internal Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
ARM A	08.00	08.30	09.00	2.28	3.41	2.28
ARM B	08.00	08.30	09.00	25.29	37.93	25.29
ARM C	08.00	08.30	09.00	1.60	2.40	1.60
ARM D	08.00	08.30	09.00	22.61	33.92	22.61

DEMAND SET TITLE: SC2-3 2031 with Town Centre Improvements & Internal Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
		TURNING PROPORTIONS (PERCENTAGE OF H.V.S)			
07.45 - 09.15	ARM A	0.000 (0.0)	0.800 (1.4)	0.060 (0.0)	0.140 (32.0)
	ARM B	0.150 (11.0)	0.000 (0.0)	0.020 (8.8)	0.830 (9.4)
	ARM C	0.190 (0.0)	0.360 (0.0)	0.000 (0.0)	0.450 (0.0)
	ARM D	0.020 (46.2)	0.980 (5.3)	0.000 (0.0)	0.000 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	2.28	11.33	0.201	- -	-	0.0	0.2	3.6	-	0.110
ARM B	25.29	44.96	0.562	- -	-	0.0	1.3	18.6	-	0.050
ARM C	1.60	15.35	0.104	- -	-	0.0	0.1	1.7	-	0.073
ARM D	22.61	42.77	0.529	- -	-	0.0	1.1	16.3	-	0.049
08.00-08.15									
ARM A	2.72	9.60	0.283	- -	-	0.2	0.4	5.7	-	0.145
ARM B	30.20	44.90	0.673	- -	-	1.3	2.0	29.4	-	0.068
ARM C	1.91	12.91	0.148	- -	-	0.1	0.2	2.5	-	0.091
ARM D	27.00	42.16	0.640	- -	-	1.1	1.8	25.6	-	0.066
08.15-08.30									
ARM A	3.33	7.26	0.458	- -	-	0.4	0.8	11.5	-	0.251
ARM B	36.98	44.81	0.825	- -	-	2.0	4.5	62.5	-	0.122
ARM C	2.34	9.62	0.243	- -	-	0.2	0.3	4.6	-	0.137
ARM D	33.07	41.34	0.800	- -	-	1.8	3.9	53.7	-	0.117
08.30-08.45									
ARM A	3.33	7.21	0.461	- -	-	0.8	0.8	12.5	-	0.257
ARM B	36.98	44.81	0.825	- -	-	4.5	4.6	68.6	-	0.127
ARM C	2.34	9.54	0.245	- -	-	0.3	0.3	4.8	-	0.139
ARM D	33.07	41.32	0.800	- -	-	3.9	3.9	58.5	-	0.121
08.45-09.00									
ARM A	2.72	9.53	0.285	- -	-	0.8	0.4	6.3	-	0.148
ARM B	30.20	44.89	0.673	- -	-	4.6	2.1	32.7	-	0.070
ARM C	1.91	12.80	0.149	- -	-	0.3	0.2	2.7	-	0.092
ARM D	27.00	42.14	0.641	- -	-	3.9	1.8	28.2	-	0.067
09.00-09.15									
ARM A	2.28	11.29	0.202	- -	-	0.4	0.3	3.9	-	0.111
ARM B	25.29	44.96	0.563	- -	-	2.1	1.3	19.9	-	0.051
ARM C	1.60	15.28	0.105	- -	-	0.2	0.1	1.8	-	0.073
ARM D	22.61	42.76	0.529	- -	-	1.8	1.1	17.4	-	0.050

QUEUE AT ARM A

TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE

08.00	0.2	
08.15	0.4	
08.30	0.8	*
08.45	0.8	*
09.00	0.4	
09.15	0.3	

.QUEUE AT ARM B

TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE

08.00	1.3	*
08.15	2.0	**
08.30	4.5	*****
08.45	4.6	*****
09.00	2.1	**
09.15	1.3	*

.QUEUE AT ARM C

TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE

08.00	0.1	
08.15	0.2	
08.30	0.3	
08.45	0.3	
09.00	0.2	
09.15	0.1	

.QUEUE AT ARM D

TIME SEGMENT ENDING | NO. OF VEHICLES IN QUEUE

08.00	1.1	*
08.15	1.8	**
08.30	3.9	****
08.45	3.9	****
09.00	1.8	**
09.15	1.1	*

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	249.7	166.5	43.6	0.17	43.6	0.17
B	2774.0	1849.4	231.7	0.08	231.8	0.08
C	175.5	117.0	18.2	0.10	18.2	0.10
D	2480.4	1653.6	199.6	0.08	199.6	0.08
ALL	5679.7	3786.5	493.1	0.09	493.2	0.09

* 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

========== end of file ==========

```
                    ARCADY 6

    ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


    Analysis Program: Release 7.0 (FEBRUARY 2010)

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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:\schemes_cg\cg0063xx\cg006312\Arcady\A11 Arcady\Same as AM Hunters lodge Rbt 2031PM.vai"
(drive-on-the-left ) at 09:33:14 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Hunters Lodge Roundabout
    LOCATION: Attleborough, Norfolk
        DATE: 21/09/12
      CLIENT:
  ENUMERATOR: david.cooke2 [HW62393]
  JOB NUMBER:
      STATUS: Preliminary
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - London Rd (A)
 ARM B - A11 South (B)
 ARM C - Wroo Road (C)
 ARM D - A11 North (D)

.GEOMETRIC DATA
 --------------


 ------------------------------------------------------------------------------------------------------------------- T5
 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    3.20   I     9.43   I     5.40   I    35.30   I   82.00   I     56.0     I  0.391  I       21.287        I
 I ARM  B I    7.30   I    11.89   I    20.00   I    33.50   I   82.00   I     39.0     I  0.651  I       49.651        I
 I ARM  C I    4.80   I     6.59   I     7.00   I    14.80   I   82.00   I     39.0     I  0.453  I       27.797        I
 I ARM  D I    7.60   I    12.64   I     9.30   I    35.00   I   82.00   I     30.0     I  0.650  I       48.688        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
.SCALING FACTORS
.---------------------- T13
 IARM  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(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC2-3 2031 with Town Centre Improvements & Internal Link Road PM
 ------------------------------------------------------------------------------------------------------
 I        I TIME WHEN         I TIME WHEN         I  TIME WHEN       I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS       I TOP OF PEAK       I FLOW STOPS       I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE         I IS REACHED        I FALLING          I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------
 I ARM  A I        16.00      I        16.30      I        17.00     I  2.36      I   3.54    I  2.36    I
 I ARM  B I        16.00      I        16.30      I        17.00     I 30.88      I  46.31    I 30.88    I
 I ARM  C I        16.00      I        16.30      I        17.00     I  0.98      I   1.46    I  0.98    I
 I ARM  D I        16.00      I        16.30      I        17.00     I 14.93      I  22.39    I 14.93    I
 ------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC2-3 2031 with Town Centre Improvements & Internal Link Road PM

T33

TIME	FROM/T	TURNING PROPORTIONS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
15.45 - 17.15	ARM A	0.000 (0.0)	0.700 (1.5)	0.110 (4.8)	0.190 (19.4)
	ARM B	0.250 (2.6)	0.000 (0.0)	0.020 (1.9)	0.730 (4.3)
	ARM C	0.170 (0.0)	0.590 (0.0)	0.000 (0.0)	0.240 (0.0)
	ARM D	0.030 (16.1)	0.960 (5.4)	0.010 (17.6)	0.000 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	2.36	14.35	0.165	- - -	0.0	0.2	2.9	-	0.083
ARM B	30.88	47.21	0.654	- - -	0.0	1.9	27.0	-	0.060
ARM C	0.98	13.39	0.073	- - -	0.0	0.1	1.1	-	0.080
ARM D	14.93	40.70	0.367	- - -	0.0	0.6	8.5	-	0.039
16.00-16.15									
ARM A	2.82	13.19	0.214	- - -	0.2	0.3	4.0	-	0.096
ARM B	36.87	47.09	0.783	- - -	1.9	3.5	49.7	-	0.096
ARM C	1.17	10.58	0.110	- - -	0.1	0.1	1.8	-	0.106
ARM D	17.83	39.66	0.449	- - -	0.6	0.8	12.0	-	0.046
16.15-16.30									
ARM A	3.45	11.62	0.297	- - -	0.3	0.4	6.1	-	0.122
ARM B	45.15	46.92	0.962	- - -	3.5	15.8	180.6	-	0.316
ARM C	1.42	7.02	0.203	- - -	0.1	0.3	3.6	-	0.178
ARM D	21.83	38.35	0.569	- - -	0.8	1.3	19.1	-	0.060
16.30-16.45									
ARM A	3.45	11.61	0.297	- - -	0.4	0.4	6.3	-	0.122
ARM B	45.15	46.92	0.962	- - -	15.8	18.7	261.5	-	0.438
ARM C	1.42	6.74	0.211	- - -	0.3	0.3	3.9	-	0.188
ARM D	21.83	38.25	0.571	- - -	1.3	1.3	19.8	-	0.061
16.45-17.00									
ARM A	2.82	13.17	0.214	- - -	0.4	0.3	4.2	-	0.097
ARM B	36.87	47.08	0.783	- - -	18.7	3.7	72.9	-	0.120
ARM C	1.17	10.06	0.116	- - -	0.3	0.1	2.0	-	0.113
ARM D	17.83	39.48	0.451	- - -	1.3	0.8	12.7	-	0.046
17.00-17.15									
ARM A	2.36	14.32	0.165	- - -	0.3	0.2	3.0	-	0.084
ARM B	30.88	47.20	0.654	- - -	3.7	1.9	29.8	-	0.062
ARM C	0.98	13.28	0.074	- - -	0.1	0.1	1.2	-	0.081
ARM D	14.93	40.66	0.367	- - -	0.8	0.6	8.9	-	0.039

QUEUE AT ARM A

```
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   16.00           0.2
   16.15           0.3
   16.30           0.4
   16.45           0.4
   17.00           0.3
   17.15           0.2


.QUEUE AT ARM B
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   16.00           1.9  **
   16.15           3.5  ****
   16.30          15.8  ***************
   16.45          18.7  ******************
   17.00           3.7  ****
   17.15           1.9  **


.QUEUE AT ARM C
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   16.00           0.1
   16.15           0.1
   16.30           0.3
   16.45           0.3
   17.00           0.1
   17.15           0.1


.QUEUE AT ARM D
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   16.00           0.6  *
   16.15           0.8  *
   16.30           1.3  *
   16.45           1.3  *
   17.00           0.8  *
   17.15           0.6  *

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD
                 ------------------------------------------

 ------------------------------------------------------------------------------ T75
 I  ARM  I   TOTAL DEMAND  I     * QUEUEING *    I  * INCLUSIVE QUEUEING *  I
 I       I                 I      * DELAY *      I         * DELAY *        I
 I       I-----------------------------------------------------------------I
 I       I  (VEH)  (VEH/H) I  (MIN)    (MIN/VEH) I    (MIN)      (MIN/VEH)  I
 ------------------------------------------------------------------------------
 I   A   I  258.9 I  172.6 I    26.4 I    0.10   I      26.4  I     0.10    I
 I   B   I 3387.1 I 2258.0 I   621.4 I    0.18   I     621.4  I     0.18    I
 I   C   I  107.1 I   71.4 I    13.8 I    0.13   I      13.8  I     0.13    I
 I   D   I 1637.6 I 1091.7 I    80.9 I    0.05   I      80.9  I     0.05    I
 ------------------------------------------------------------------------------
 I  ALL  I 5390.7 I 3593.8 I   742.5 I    0.14   I     742.5  I     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

============================================ end of file ============================================
```

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\A11 Arcady\Hunters lodge 2031AM.vai"
(drive-on-the-left) at 09:30:44 on Friday, 3 May 2013

.FILE PROPERTIES

****

RUN TITLE: Hunters Lodge Roundabout
LOCATION: Attleborough, Norfolk
DATE: 21/09/12
CLIENT:
ENUMERATOR: david.cooke2 [HW62393]
JOB NUMBER:
STATUS: Preliminary
DESCRIPTION:

.INPUT DATA

****

ARM A - London Rd (A)
ARM B - A11 South (B)
ARM C - Wroo Road (C)
ARM D - A11 North (D)

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.20	9.43	5.40	35.30	82.00	56.0	0.391	21.287
ARM B	7.30	11.89	20.00	33.50	82.00	39.0	0.651	49.651
ARM C	4.80	6.59	7.00	14.80	82.00	39.0	0.453	27.797
ARM D	7.60	12.64	9.30	35.00	82.00	30.0	0.650	48.688

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

.SCALING FACTORS

.---------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-4 2031 with Town Centre Improvements & External Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
ARM A	08.00	08.30	09.00	2.73	4.09	2.73
ARM B	08.00	08.30	09.00	25.34	38.01	25.34
ARM C	08.00	08.30	09.00	1.59	2.38	1.59
ARM D	08.00	08.30	09.00	22.54	33.81	22.54

DEMAND SET TITLE: SC2-4 2031 with Town Centre Improvements & External Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
		TURNING PROPORTIONS (PERCENTAGE OF H.V.S)			
07.45 - 09.15	ARM A	0.000 (0.0)	0.790 (0.6)	0.050 (0.0)	0.160 (19.4)
	ARM B	0.170 (9.9)	0.000 (0.0)	0.010 (9.4)	0.820 (9.9)
	ARM C	0.220 (0.0)	0.370 (0.0)	0.000 (0.0)	0.410 (0.0)
	ARM D	0.040 (14.9)	0.960 (5.0)	0.000 (0.0)	0.000 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	2.73	11.78	0.232	- -	-	0.0	0.3	4.3	-	0.110
ARM B	25.34	44.79	0.566	- -	-	0.0	1.3	18.8	-	0.051
ARM C	1.59	15.13	0.105	- -	-	0.0	0.1	1.7	-	0.074
ARM D	22.54	42.71	0.528	- -	-	0.0	1.1	16.2	-	0.049
08.00-08.15									
ARM A	3.26	10.06	0.324	- -	-	0.3	0.5	6.8	-	0.147
ARM B	30.26	44.72	0.677	- -	-	1.3	2.1	29.9	-	0.069
ARM C	1.90	12.64	0.150	- -	-	0.1	0.2	2.6	-	0.093
ARM D	26.91	42.02	0.640	- -	-	1.1	1.8	25.6	-	0.066
08.15-08.30									
ARM A	3.99	7.74	0.515	- -	-	0.5	1.0	14.4	-	0.262
ARM B	37.06	44.62	0.831	- -	-	2.1	4.7	64.5	-	0.127
ARM C	2.32	9.30	0.250	- -	-	0.2	0.3	4.8	-	0.143
ARM D	32.96	41.10	0.802	- -	-	1.8	3.9	54.3	-	0.119
08.30-08.45									
ARM A	3.99	7.68	0.519	- -	-	1.0	1.1	15.7	-	0.270
ARM B	37.06	44.61	0.831	- -	-	4.7	4.8	71.1	-	0.132
ARM C	2.32	9.21	0.252	- -	-	0.3	0.3	5.0	-	0.145
ARM D	32.96	41.08	0.802	- -	-	3.9	4.0	59.2	-	0.123
08.45-09.00									
ARM A	3.26	9.99	0.326	- -	-	1.1	0.5	7.7	-	0.150
ARM B	30.26	44.71	0.677	- -	-	4.8	2.1	33.4	-	0.071
ARM C	1.90	12.53	0.151	- -	-	0.3	0.2	2.8	-	0.094
ARM D	26.91	41.99	0.641	- -	-	4.0	1.8	28.2	-	0.068
09.00-09.15									
ARM A	2.73	11.73	0.233	- -	-	0.5	0.3	4.7	-	0.111
ARM B	25.34	44.79	0.566	- -	-	2.1	1.3	20.2	-	0.052
ARM C	1.59	15.06	0.106	- -	-	0.2	0.1	1.8	-	0.074
ARM D	22.54	42.69	0.528	- -	-	1.8	1.1	17.3	-	0.050

QUEUE AT ARM A

```
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   08.00           0.3
   08.15           0.5
   08.30           1.0  *
   08.45           1.1  *
   09.00           0.5
   09.15           0.3


.QUEUE AT ARM B
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   08.00           1.3  *
   08.15           2.1  **
   08.30           4.7  *****
   08.45           4.8  *****
   09.00           2.1  **
   09.15           1.3  *


.QUEUE AT ARM C
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   08.00           0.1
   08.15           0.2
   08.30           0.3
   08.45           0.3
   09.00           0.2
   09.15           0.1


.QUEUE AT ARM D
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   08.00           1.1  *
   08.15           1.8  **
   08.30           3.9  ****
   08.45           4.0  ****
   09.00           1.8  **
   09.15           1.1  *

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD
                 ------------------------------------------

 ------------------------------------------------------------------------------ T75
 I  ARM  I   TOTAL DEMAND  I     * QUEUEING *    I  * INCLUSIVE QUEUEING *  I
 I       I                 I      * DELAY *      I         * DELAY *        I
 I       I-----------------------------------------------------------------I
 I       I  (VEH)  (VEH/H) I  (MIN)    (MIN/VEH) I    (MIN)      (MIN/VEH)  I
 ------------------------------------------------------------------------------
 I   A   I  299.3 I  199.5 I    53.7 I    0.18   I      53.7  I     0.18    I
 I   B   I 2779.7 I 1853.1 I   237.9 I    0.09   I     237.9  I     0.09    I
 I   C   I  174.2 I  116.2 I    18.6 I    0.11   I      18.6  I     0.11    I
 I   D   I 2472.6 I 1648.4 I   200.8 I    0.08   I     200.8  I     0.08    I
 ------------------------------------------------------------------------------
 I  ALL  I 5725.8 I 3817.2 I   511.1 I    0.09   I     511.1  I     0.09    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

============================================== end of file ==============================================
```

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\A11 Arcady\Same as AM Hunters lodge Rbt 2031PM.vai"
(drive-on-the-left) at 09:33:50 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Hunters Lodge Roundabout
LOCATION: Attleborough, Norfolk
DATE: 21/09/12
CLIENT:
ENUMERATOR: david.cooke2 [HW62393]
JOB NUMBER:
STATUS: Preliminary
DESCRIPTION:

.INPUT DATA

ARM A - London Rd (A)
ARM B - A11 South (B)
ARM C - Wroo Road (C)
ARM D - A11 North (D)

.GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.20	9.43	5.40	35.30	82.00	56.0	0.391	21.287
ARM B	7.30	11.89	20.00	33.50	82.00	39.0	0.651	49.651
ARM C	4.80	6.59	7.00	14.80	82.00	39.0	0.453	27.797
ARM D	7.60	12.64	9.30	35.00	82.00	30.0	0.650	48.688

T5

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

.SCALING FACTORS

.---------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-4 2031 with Town Centre Improvements & External Link Road PM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	16.00	16.30	17.00	1.84	2.76	1.84
ARM B	16.00	16.30	17.00	30.99	46.48	30.99
ARM C	16.00	16.30	17.00	0.93	1.39	0.93
ARM D	16.00	16.30	17.00	13.66	20.49	13.66

DEMAND SET TITLE: SC2-4 2031 with Town Centre Improvements & External Link Road PM

T33

TIME	FROM/T	TURNING PROPORTIONS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C	ARM D
15.45 - 17.15	ARM A	0.000	0.610	0.200	0.190
		(0.0)	(1.1)	(0.0)	(27.6)
	ARM B	0.290	0.000	0.020	0.690
		(2.7)	(0.0)	(3.6)	(4.7)
	ARM C	0.360	0.590	0.000	0.050
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.040	0.950	0.010	0.000
		(12.5)	(4.8)	(18.2)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	1.84	14.83	0.124	- -	0.0	0.1	2.1	-	0.077
ARM B	30.99	47.09	0.658	- -	0.0	1.9	27.4	-	0.061
ARM C	0.93	13.35	0.070	- -	0.0	0.1	1.1	-	0.080
ARM D	13.66	40.04	0.341	- -	0.0	0.5	7.6	-	0.038
16.00-16.15									
ARM A	2.20	13.79	0.159	- -	0.1	0.2	2.8	-	0.086
ARM B	37.00	46.97	0.788	- -	1.9	3.6	50.9	-	0.098
ARM C	1.11	10.53	0.105	- -	0.1	0.1	1.7	-	0.106
ARM D	16.31	38.83	0.420	- -	0.5	0.7	10.6	-	0.044
16.15-16.30									
ARM A	2.69	12.38	0.217	- -	0.2	0.3	4.0	-	0.103
ARM B	45.32	46.81	0.968	- -	3.6	17.0	191.7	-	0.336
ARM C	1.36	6.99	0.194	- -	0.1	0.2	3.4	-	0.177
ARM D	19.98	37.30	0.536	- -	0.7	1.1	16.8	-	0.058
16.30-16.45									
ARM A	2.69	12.37	0.217	- -	0.3	0.3	4.1	-	0.103
ARM B	45.32	46.80	0.968	- -	17.0	20.6	285.7	-	0.479
ARM C	1.36	6.69	0.203	- -	0.2	0.3	3.7	-	0.187
ARM D	19.98	37.17	0.537	- -	1.1	1.2	17.3	-	0.058
16.45-17.00									
ARM A	2.20	13.78	0.159	- -	0.3	0.2	2.9	-	0.086
ARM B	37.00	46.97	0.788	- -	20.6	3.8	78.5	-	0.127
ARM C	1.11	9.96	0.111	- -	0.3	0.1	2.0	-	0.113
ARM D	16.31	38.59	0.423	- -	1.2	0.7	11.2	-	0.045
17.00-17.15									
ARM A	1.84	14.81	0.124	- -	0.2	0.1	2.2	-	0.077
ARM B	30.99	47.08	0.658	- -	3.8	1.9	30.3	-	0.063
ARM C	0.93	13.23	0.070	- -	0.1	0.1	1.2	-	0.081
ARM D	13.66	39.99	0.342	- -	0.7	0.5	7.9	-	0.038

QUEUE AT ARM A

```
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   16.00           0.1
   16.15           0.2
   16.30           0.3
   16.45           0.3
   17.00           0.2
   17.15           0.1


.QUEUE AT ARM B
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   16.00           1.9  **
   16.15           3.6  ****
   16.30          17.0  *****************
   16.45          20.6  ********************
   17.00           3.8  ****
   17.15           1.9  **


.QUEUE AT ARM C
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   16.00           0.1
   16.15           0.1
   16.30           0.2
   16.45           0.3
   17.00           0.1
   17.15           0.1


.QUEUE AT ARM D
 --------------

  TIME SEGMENT NO. OF
   ENDING      VEHICLES
               IN QUEUE

   16.00           0.5  *
   16.15           0.7  *
   16.30           1.1  *
   16.45           1.2  *
   17.00           0.7  *
   17.15           0.5  *

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD
                 ------------------------------------------

 ------------------------------------------------------------------------------ T75
 I  ARM  I   TOTAL DEMAND  I     * QUEUEING *    I  * INCLUSIVE QUEUEING *  I
 I       I                 I      * DELAY *      I         * DELAY *        I
 I       I-----------------------------------------------------------------I
 I       I  (VEH)  (VEH/H) I  (MIN)    (MIN/VEH) I    (MIN)      (MIN/VEH)  I
 ------------------------------------------------------------------------------
 I   A   I  201.8 I  134.6 I    18.1 I    0.09   I      18.1  I     0.09    I
 I   B   I 3399.3 I 2266.2 I   664.5 I    0.20   I     664.6  I     0.20    I
 I   C   I  101.8 I   67.9 I    13.1 I    0.13   I      13.1  I     0.13    I
 I   D   I 1498.5 I  999.0 I    71.4 I    0.05   I      71.4  I     0.05    I
 ------------------------------------------------------------------------------
 I  ALL  I 5201.4 I 3467.6 I   767.1 I    0.15   I     767.2  I     0.15    I
 ------------------------------------------------------------------------------
 * DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
 * INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD.
 * THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

 END OF JOB

============================================== end of file ==============================================
```

B.2 Roundabout at Western End of the Link Road (All Options)

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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TRL Limited
Crowthorne House
Nine Mile Ride
Wokingham, Berks.
RG40 3GA,UK

Tel: +44 (0) 1344 770758
Fax: +44 (0) 1344 770356
Email: software@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\London Road Roundabout\London Road roundabout AM.vai"
(drive-on-the-left) at 09:40:23 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Link Road London Road Roundabout
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A London Road south
ARM B - Arm B New Development
ARM C - Arm C London Road north
ARM D - Arm D Link Road

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.86	20.00	30.00	55.00	38.0	0.586	28.808
ARM B	3.65	6.80	10.00	20.00	55.00	28.0	0.567	26.537
ARM C	3.65	7.00	14.00	30.00	55.00	17.0	0.617	29.734
ARM D	3.65	6.80	45.00	30.00	55.00	35.0	0.617	31.396

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-3 2031 with Town Centre Improvements & Internal Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	08.00	08.30	09.00	5.28	7.91	5.28
ARM B	08.00	08.30	09.00	1.11	1.67	1.11
ARM C	08.00	08.30	09.00	4.94	7.41	4.94
ARM D	08.00	08.30	09.00	7.01	10.52	7.01

DEMAND SET TITLE: SC1-3 2031 with Town Centre Improvements & Internal Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.069	0.341	0.590
		0.0	29.0	144.0	249.0
		(0.0)	(31.0)	(1.4)	(17.3)
	ARM B	0.472	0.000	0.360	0.169
		42.0	0.0	32.0	15.0
		(21.4)	(0.0)	(0.0)	(0.0)
	ARM C	0.803	0.078	0.000	0.119
		317.0	31.0	0.0	47.0
		(0.0)	(0.0)	(0.0)	(2.1)
	ARM D	0.877	0.061	0.062	0.000
		492.0	34.0	35.0	0.0
		(3.7)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	5.28	24.89	0.212	- -	0.0	0.3	3.9	-	0.051
ARM B	1.11	21.07	0.053	- -	0.0	0.1	0.8	-	0.050
ARM C	4.94	26.92	0.184	- -	0.0	0.2	3.3	-	0.045
ARM D	7.01	27.44	0.256	- -	0.0	0.3	5.0	-	0.049
08.00-08.15									
ARM A	6.30	24.76	0.254	- -	0.3	0.3	5.0	-	0.054
ARM B	1.33	20.47	0.065	- -	0.1	0.1	1.0	-	0.052
ARM C	5.90	26.37	0.224	- -	0.2	0.3	4.2	-	0.049
ARM D	8.37	26.85	0.312	- -	0.3	0.5	6.7	-	0.054
08.15-08.30									
ARM A	7.71	24.59	0.314	- -	0.3	0.5	6.7	-	0.059
ARM B	1.63	19.66	0.083	- -	0.1	0.1	1.3	-	0.055
ARM C	7.22	25.64	0.282	- -	0.3	0.4	5.8	-	0.054
ARM D	10.26	26.05	0.394	- -	0.5	0.6	9.5	-	0.063
08.30-08.45									
ARM A	7.71	24.59	0.314	- -	0.5	0.5	6.8	-	0.059
ARM B	1.63	19.65	0.083	- -	0.1	0.1	1.4	-	0.056
ARM C	7.22	25.63	0.282	- -	0.4	0.4	5.9	-	0.054
ARM D	10.26	26.04	0.394	- -	0.6	0.6	9.7	-	0.063
08.45-09.00									
ARM A	6.30	24.76	0.255	- -	0.5	0.3	5.2	-	0.054
ARM B	1.33	20.46	0.065	- -	0.1	0.1	1.1	-	0.052
ARM C	5.90	26.37	0.224	- -	0.4	0.3	4.4	-	0.049
ARM D	8.37	26.84	0.312	- -	0.6	0.5	7.0	-	0.054
09.00-09.15									
ARM A	5.28	24.89	0.212	- -	0.3	0.3	4.1	-	0.051
ARM B	1.11	21.05	0.053	- -	0.1	0.1	0.8	-	0.050
ARM C	4.94	26.90	0.184	- -	0.3	0.2	3.4	-	0.046
ARM D	7.01	27.42	0.256	- -	0.5	0.3	5.2	-	0.049

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

.QUEUE AT ARM D

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	578.8	385.9	31.8	0.06	31.8	0.06
B	122.0	81.3	6.4	0.05	6.4	0.05
C	541.9	361.3	27.0	0.05	27.0	0.05
D	769.2	512.8	43.1	0.06	43.1	0.06
ALL	2011.8	1341.2	108.4	0.05	108.4	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

========== end of file ==========

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                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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Crowthorne House — Fax: +44 (0) 1344 770356
Nine Mile Ride — Email: software@trl.co.uk
Wokingham, Berks. — Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\London Road Roundabout\London Road roundabout PM.vai"
(drive-on-the-left) at 09:43:41 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Link Road London Road Roundabout
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A London Road south
ARM B - Arm B New Development
ARM C - Arm C London Road north
ARM D - Arm D Link Road

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.86	20.00	30.00	55.00	38.0	0.586	28.808
ARM B	3.65	6.80	10.00	20.00	55.00	28.0	0.567	26.537
ARM C	3.65	7.00	14.00	30.00	55.00	17.0	0.617	29.734
ARM D	3.65	6.80	45.00	30.00	55.00	35.0	0.617	31.396

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-3 2031 with Town Centre Improvements & Internal Link Road PM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	16.00	16.30	17.00	8.78	13.16	8.78
ARM B	16.00	16.30	17.00	0.99	1.48	0.99
ARM C	16.00	16.30	17.00	2.44	3.66	2.44
ARM D	16.00	16.30	17.00	2.65	3.98	2.65

DEMAND SET TITLE: SC1-3 2031 with Town Centre Improvements & Internal Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
15.45 - 17.15		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.034	0.645	0.321
		0.0	24.0	453.0	225.0
		(0.0)	(20.8)	(0.9)	(4.9)
	ARM B	0.241	0.000	0.544	0.215
		19.0	0.0	43.0	17.0
		(26.3)	(0.0)	(0.0)	(0.0)
	ARM C	0.774	0.087	0.000	0.138
		151.0	17.0	0.0	27.0
		(2.0)	(0.0)	(0.0)	(3.7)
	ARM D	0.693	0.038	0.269	0.000
		147.0	8.0	57.0	0.0
		(6.8)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	8.78	27.42	0.320	- -	0.0	0.5	6.9	-	0.053
ARM B	0.99	19.98	0.050	- -	0.0	0.1	0.8	-	0.053
ARM C	2.44	27.05	0.090	- -	0.0	0.1	1.5	-	0.041
ARM D	2.65	28.55	0.093	- -	0.0	0.1	1.5	-	0.039
16.00-16.15									
ARM A	10.48	27.31	0.384	- -	0.5	0.6	9.1	-	0.059
ARM B	1.18	19.00	0.062	- -	0.1	0.1	1.0	-	0.056
ARM C	2.91	26.64	0.109	- -	0.1	0.1	1.8	-	0.042
ARM D	3.17	28.26	0.112	- -	0.1	0.1	1.9	-	0.040
16.15-16.30									
ARM A	12.83	27.15	0.473	- -	0.6	0.9	13.0	-	0.070
ARM B	1.44	17.66	0.082	- -	0.1	0.1	1.3	-	0.062
ARM C	3.57	26.08	0.137	- -	0.1	0.2	2.3	-	0.044
ARM D	3.88	27.88	0.139	- -	0.1	0.2	2.4	-	0.042
16.30-16.45									
ARM A	12.83	27.15	0.473	- -	0.9	0.9	13.4	-	0.070
ARM B	1.44	17.65	0.082	- -	0.1	0.1	1.3	-	0.062
ARM C	3.57	26.08	0.137	- -	0.2	0.2	2.4	-	0.044
ARM D	3.88	27.88	0.139	- -	0.2	0.2	2.4	-	0.042
16.45-17.00									
ARM A	10.48	27.31	0.384	- -	0.9	0.6	9.6	-	0.060
ARM B	1.18	18.98	0.062	- -	0.1	0.1	1.0	-	0.056
ARM C	2.91	26.63	0.109	- -	0.2	0.1	1.9	-	0.042
ARM D	3.17	28.26	0.112	- -	0.2	0.1	1.9	-	0.040
17.00-17.15									
ARM A	8.78	27.42	0.320	- -	0.6	0.5	7.2	-	0.054
ARM B	0.99	19.95	0.050	- -	0.1	0.1	0.8	-	0.053
ARM C	2.44	27.04	0.090	- -	0.1	0.1	1.5	-	0.041
ARM D	2.65	28.54	0.093	- -	0.1	0.1	1.6	-	0.039

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.5	
16.15	0.6	*
16.30	0.9	*
16.45	0.9	*
17.00	0.6	*
17.15	0.5	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.2
16.45	0.2
17.00	0.1
17.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.2
16.45	0.2
17.00	0.1
17.15	0.1

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	962.8	641.8	59.2	0.06	59.2	0.06
B	108.4	72.3	6.2	0.06	6.2	0.06
C	267.7	178.4	11.4	0.04	11.4	0.04
D	290.9	193.9	11.7	0.04	11.7	0.04
ALL	1629.7	1086.5	88.4	0.05	88.4	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\London Road Roundabout\London Road roundabout AM.vai"
(drive-on-the-left) at 09:41:34 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Link Road London Road Roundabout
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A London Road south
ARM B - Arm B New Development
ARM C - Arm C London Road north
ARM D - Arm D Link Road

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.86	20.00	30.00	55.00	38.0	0.586	28.808
ARM B	3.65	6.80	10.00	20.00	55.00	28.0	0.567	26.537
ARM C	3.65	7.00	14.00	30.00	55.00	17.0	0.617	29.734
ARM D	3.65	6.80	45.00	30.00	55.00	35.0	0.617	31.396

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-4 2031 with Town Centre Improvements & External Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
ARM A	08.00	08.30	09.00	5.60	8.40	5.60
ARM B	08.00	08.30	09.00	1.09	1.63	1.09
ARM C	08.00	08.30	09.00	5.63	8.44	5.63
ARM D	08.00	08.30	09.00	9.05	13.58	9.05

DEMAND SET TITLE: SC1-4 2031 with Town Centre Improvements & External Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15					
	ARM A	0.000	0.058	0.094	0.848
		0.0	26.0	42.0	380.0
		(0.0)	(34.6)	(0.0)	(11.1)
	ARM B	0.529	0.000	0.287	0.184
		46.0	0.0	25.0	16.0
		(17.4)	(0.0)	(0.0)	(0.0)
	ARM C	0.744	0.073	0.000	0.182
		335.0	33.0	0.0	82.0
		(0.9)	(0.0)	(0.0)	(1.2)
	ARM D	0.881	0.058	0.061	0.000
		638.0	42.0	44.0	0.0
		(2.8)	(0.0)	(0.0)	(0.0)

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

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	5.60	25.07	0.223	- -	0.0	0.3	4.2	-	0.051
ARM B	1.09	21.02	0.052	- -	0.0	0.1	0.8	-	0.050
ARM C	5.63	25.72	0.219	- -	0.0	0.3	4.1	-	0.050
ARM D	9.05	27.45	0.330	- -	0.0	0.5	7.2	-	0.054
08.00-08.15									
ARM A	6.69	24.92	0.268	- -	0.3	0.4	5.4	-	0.055
ARM B	1.30	20.37	0.064	- -	0.1	0.1	1.0	-	0.052
ARM C	6.72	24.99	0.269	- -	0.3	0.4	5.4	-	0.055
ARM D	10.81	26.82	0.403	- -	0.5	0.7	9.9	-	0.062
08.15-08.30									
ARM A	8.19	24.71	0.331	- -	0.4	0.5	7.3	-	0.060
ARM B	1.59	19.49	0.082	- -	0.1	0.1	1.3	-	0.056
ARM C	8.23	23.98	0.343	- -	0.4	0.5	7.6	-	0.063
ARM D	13.24	25.96	0.510	- -	0.7	1.0	15.0	-	0.078
08.30-08.45									
ARM A	8.19	24.71	0.331	- -	0.5	0.5	7.4	-	0.060
ARM B	1.59	19.48	0.082	- -	0.1	0.1	1.3	-	0.056
ARM C	8.23	23.97	0.343	- -	0.5	0.5	7.8	-	0.063
ARM D	13.24	25.96	0.510	- -	1.0	1.0	15.5	-	0.079
08.45-09.00									
ARM A	6.69	24.92	0.268	- -	0.5	0.4	5.6	-	0.055
ARM B	1.30	20.36	0.064	- -	0.1	0.1	1.0	-	0.052
ARM C	6.72	24.98	0.269	- -	0.5	0.4	5.6	-	0.055
ARM D	10.81	26.81	0.403	- -	1.0	0.7	10.4	-	0.063
09.00-09.15									
ARM A	5.60	25.07	0.223	- -	0.4	0.3	4.4	-	0.051
ARM B	1.09	21.00	0.052	- -	0.1	0.1	0.8	-	0.050
ARM C	5.63	25.71	0.219	- -	0.4	0.3	4.3	-	0.050
ARM D	9.05	27.43	0.330	- -	0.7	0.5	7.6	-	0.054

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.5	
08.15	0.7	*
08.30	1.0	*
08.45	1.0	*
09.00	0.7	*
09.15	0.5	

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	614.3	409.5	34.3	0.06	34.3	0.06
B	119.4	79.6	6.3	0.05	6.3	0.05
C	617.4	411.6	34.9	0.06	34.9	0.06
D	992.9	662.0	65.6	0.07	65.6	0.07
ALL	2344.0	1562.7	141.1	0.06	141.1	0.06

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

END OF JOB

========== end of file ==========

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                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\London Road Roundabout\London Road roundabout PM.vai"
(drive-on-the-left) at 09:44:36 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Link Road London Road Roundabout
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A London Road south
ARM B - Arm B New Development
ARM C - Arm C London Road north
ARM D - Arm D Link Road

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.86	20.00	30.00	55.00	38.0	0.586	28.808
ARM B	3.65	6.80	10.00	20.00	55.00	28.0	0.567	26.537
ARM C	3.65	7.00	14.00	30.00	55.00	17.0	0.617	29.734
ARM D	3.65	6.80	45.00	30.00	55.00	35.0	0.617	31.396

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-4 2031 with Town Centre Improvements & External Link Road PM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	16.00	16.30	17.00	10.60	15.90	10.60
ARM B	16.00	16.30	17.00	1.41	2.12	1.41
ARM C	16.00	16.30	17.00	3.48	5.21	3.48
ARM D	16.00	16.30	17.00	7.80	11.70	7.80

DEMAND SET TITLE: SC1-4 2031 with Town Centre Improvements & External Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
15.45 - 17.15		TURNING PROPORTIONS			
		TURNING COUNTS			
		(PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.029	0.246	0.724
		0.0	25.0	209.0	614.0
		(0.0)	(12.0)	(1.4)	(1.8)
	ARM B	0.239	0.000	0.416	0.345
		27.0	0.0	47.0	39.0
		(14.8)	(0.0)	(0.0)	(0.0)
	ARM C	0.694	0.025	0.000	0.281
		193.0	7.0	0.0	78.0
		(4.1)	(0.0)	(0.0)	(1.3)
	ARM D	0.721	0.053	0.226	0.000
		450.0	33.0	141.0	0.0
		(6.4)	(3.0)	(1.4)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	10.60	26.93	0.394	- -	0.0	0.6	9.4	-	0.061
ARM B	1.41	18.95	0.074	- -	0.0	0.1	1.2	-	0.057
ARM C	3.48	23.64	0.147	- -	0.0	0.2	2.5	-	0.050
ARM D	7.80	28.12	0.277	- -	0.0	0.4	5.6	-	0.049
16.00-16.15									
ARM A	12.66	26.67	0.475	- -	0.6	0.9	13.1	-	0.071
ARM B	1.69	17.64	0.096	- -	0.1	0.1	1.6	-	0.063
ARM C	4.15	22.62	0.184	- -	0.2	0.2	3.3	-	0.054
ARM D	9.31	27.78	0.335	- -	0.4	0.5	7.4	-	0.054
16.15-16.30									
ARM A	15.50	26.31	0.589	- -	0.9	1.4	20.5	-	0.092
ARM B	2.07	15.85	0.130	- -	0.1	0.1	2.2	-	0.072
ARM C	5.08	21.23	0.239	- -	0.2	0.3	4.6	-	0.062
ARM D	11.41	27.31	0.418	- -	0.5	0.7	10.5	-	0.063
16.30-16.45									
ARM A	15.50	26.31	0.589	- -	1.4	1.4	21.3	-	0.092
ARM B	2.07	15.83	0.131	- -	0.1	0.1	2.2	-	0.073
ARM C	5.08	21.22	0.239	- -	0.3	0.3	4.7	-	0.062
ARM D	11.41	27.31	0.418	- -	0.7	0.7	10.7	-	0.063
16.45-17.00									
ARM A	12.66	26.66	0.475	- -	1.4	0.9	14.1	-	0.072
ARM B	1.69	17.61	0.096	- -	0.1	0.1	1.6	-	0.063
ARM C	4.15	22.60	0.184	- -	0.3	0.2	3.4	-	0.054
ARM D	9.31	27.78	0.335	- -	0.7	0.5	7.7	-	0.054
17.00-17.15									
ARM A	10.60	26.92	0.394	- -	0.9	0.7	10.0	-	0.061
ARM B	1.41	18.92	0.075	- -	0.1	0.1	1.2	-	0.057
ARM C	3.48	23.61	0.147	- -	0.2	0.2	2.6	-	0.050
ARM D	7.80	28.12	0.277	- -	0.5	0.4	5.9	-	0.049

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.6	*
16.15	0.9	*
16.30	1.4	*
16.45	1.4	*
17.00	0.9	*
17.15	0.7	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.2
16.15	0.2
16.30	0.3
16.45	0.3
17.00	0.2
17.15	0.2

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.4	
16.15	0.5	*
16.30	0.7	*
16.45	0.7	*
17.00	0.5	*
17.15	0.4	

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1162.8	775.2	88.4	0.08	88.4	0.08
B	154.9	103.2	10.0	0.06	10.0	0.06
C	381.4	254.2	21.2	0.06	21.2	0.06
D	855.6	570.4	47.8	0.06	47.8	0.06
ALL	2554.7	1703.1	167.5	0.07	167.5	0.07

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

END OF JOB

========== end of file ==========

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                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\London Road Roundabout\London Road roundabout AM.vai"
(drive-on-the-left) at 09:42:19 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Link Road London Road Roundabout
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A London Road south
ARM B - Arm B New Development
ARM C - Arm C London Road north
ARM D - Arm D Link Road

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.86	20.00	30.00	55.00	38.0	0.586	28.808
ARM B	3.65	6.80	10.00	20.00	55.00	28.0	0.567	26.537
ARM C	3.65	7.00	14.00	30.00	55.00	17.0	0.617	29.734
ARM D	3.65	6.80	45.00	30.00	55.00	35.0	0.617	31.396

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

.---------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-3 2031 with Town Centre Improvements & Internal Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
ARM A	08.00	08.30	09.00	4.71	7.07	4.71
ARM B	08.00	08.30	09.00	0.80	1.20	0.80
ARM C	08.00	08.30	09.00	4.91	7.37	4.91
ARM D	08.00	08.30	09.00	6.23	9.34	6.23

DEMAND SET TITLE: SC2-3 2031 with Town Centre Improvements & Internal Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.069	0.297	0.634
		0.0	26.0	112.0	239.0
		(0.0)	(26.9)	(0.0)	(17.2)
	ARM B	0.516	0.000	0.375	0.109
		33.0	0.0	24.0	7.0
		(12.1)	(0.0)	(0.0)	(0.0)
	ARM C	0.875	0.043	0.000	0.081
		344.0	17.0	0.0	32.0
		(0.0)	(0.0)	(0.0)	(0.0)
	ARM D	0.922	0.026	0.052	0.000
		459.0	13.0	26.0	0.0
		(3.7)	(0.0)	(0.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	4.71	25.18	0.187	- -	0.0	0.2	3.4	-	0.049
ARM B	0.80	22.19	0.036	- -	0.0	0.0	0.6	-	0.047
ARM C	4.91	27.24	0.180	- -	0.0	0.2	3.2	-	0.045
ARM D	6.23	27.39	0.227	- -	0.0	0.3	4.3	-	0.047
08.00-08.15									
ARM A	5.63	25.11	0.224	- -	0.2	0.3	4.3	-	0.051
ARM B	0.96	21.65	0.044	- -	0.0	0.0	0.7	-	0.048
ARM C	5.86	26.75	0.219	- -	0.2	0.3	4.1	-	0.048
ARM D	7.44	26.82	0.277	- -	0.3	0.4	5.6	-	0.052
08.15-08.30									
ARM A	6.89	25.02	0.276	- -	0.3	0.4	5.6	-	0.055
ARM B	1.17	20.91	0.056	- -	0.0	0.1	0.9	-	0.051
ARM C	7.19	26.08	0.275	- -	0.3	0.4	5.6	-	0.053
ARM D	9.11	26.02	0.350	- -	0.4	0.5	7.9	-	0.059
08.30-08.45									
ARM A	6.89	25.02	0.276	- -	0.4	0.4	5.7	-	0.055
ARM B	1.17	20.90	0.056	- -	0.1	0.1	0.9	-	0.051
ARM C	7.19	26.08	0.276	- -	0.4	0.4	5.7	-	0.053
ARM D	9.11	26.02	0.350	- -	0.5	0.5	8.0	-	0.059
08.45-09.00									
ARM A	5.63	25.11	0.224	- -	0.4	0.3	4.4	-	0.051
ARM B	0.96	21.65	0.044	- -	0.1	0.0	0.7	-	0.048
ARM C	5.86	26.75	0.219	- -	0.4	0.3	4.3	-	0.048
ARM D	7.44	26.81	0.277	- -	0.5	0.4	5.9	-	0.052
09.00-09.15									
ARM A	4.71	25.18	0.187	- -	0.3	0.2	3.5	-	0.049
ARM B	0.80	22.18	0.036	- -	0.0	0.0	0.6	-	0.047
ARM C	4.91	27.23	0.180	- -	0.3	0.2	3.4	-	0.045
ARM D	6.23	27.38	0.228	- -	0.4	0.3	4.5	-	0.047

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.4	
08.45	0.4	
09.00	0.3	
09.15	0.2	

.QUEUE AT ARM B

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

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.4	
08.45	0.4	
09.00	0.3	
09.15	0.2	

.QUEUE AT ARM D

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	516.9	344.6	26.8	0.05	26.8	0.05
B	87.8	58.5	4.3	0.05	4.3	0.05
C	538.8	359.2	26.3	0.05	26.3	0.05
D	683.2	455.5	36.3	0.05	36.3	0.05
ALL	1826.6	1217.8	93.7	0.05	93.7	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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TRL Limited            Tel:   +44 (0) 1344 770758
Crowthorne House       Fax:   +44 (0) 1344 770356
Nine Mile Ride         Email: software@trl.co.uk
Wokingham, Berks.      Web:   www.trlsoftware.co.uk
RG40 3GA,UK

-------------------------------------------------------------------------------
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-------------------------------------------------------------------------------

 Run with file:-
 "p:\schemes_cg\cg0063xx\cg006312\Arcady\London Road Roundabout\London Road roundabout PM.vai"
(drive-on-the-left ) at 09:45:21 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Link Road London Road Roundabout
    LOCATION: Attleborough
        DATE: 01/05/13
      CLIENT: Breckland Council
  ENUMERATOR: LloydM [HW62357]
  JOB NUMBER: CS060268
      STATUS:
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - Arm A London Road south
 ARM B - Arm B New Development
 ARM C - Arm C London Road north
 ARM D - Arm D Link Road

.GEOMETRIC DATA
 --------------

 ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.65   I     6.86   I    20.00   I    30.00   I   55.00   I     38.0     I  0.586  I       28.808        I
 I ARM  B I    3.65   I     6.80   I    10.00   I    20.00   I   55.00   I     28.0     I  0.567  I       26.537        I
 I ARM  C I    3.65   I     7.00   I    14.00   I    30.00   I   55.00   I     17.0     I  0.617  I       29.734        I
 I ARM  D I    3.65   I     6.80   I    45.00   I    30.00   I   55.00   I     35.0     I  0.617  I       31.396        I
 ------------------------------------------------------------------------------------------------------------------------

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

 **WARNING** ARM D Effective flare length is outside normal range.
  Treat capacities with increasing caution.


.TRAFFIC DEMAND DATA
 -------------------

 Only sets included in the current run are shown
.SCALING FACTORS
.---------------------- T13
 IARM  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(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC2-3 2031 with Town Centre Improvements & Internal Link Road PM
 ------------------------------------------------------------------------------------------------------
 I        I TIME WHEN         I TIME WHEN         I  TIME WHEN        I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS       I TOP OF PEAK       I FLOW STOPS        I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE         I IS REACHED        I FALLING           I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------
 I ARM  A I        16.00      I        16.30      I        17.00      I  8.34      I  12.51    I  8.34    I
 I ARM  B I        16.00      I        16.30      I        17.00      I  1.11      I   1.67    I  1.11    I
 I ARM  C I        16.00      I        16.30      I        17.00      I  3.30      I   4.95    I  3.30    I
 I ARM  D I        16.00      I        16.30      I        17.00      I  4.69      I   7.03    I  4.69    I
 ------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC2-3 2031 with Town Centre Improvements & Internal Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
15.45 - 17.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.042	0.421	0.537
		0.0	28.0	281.0	358.0
		(0.0)%	(25.0)%	(2.1)%	(2.0)%
	ARM B	0.213	0.000	0.562	0.225
		19.0	0.0	50.0	20.0
		(5.3)%	(0.0)%	(0.0)%	(0.0)%
	ARM C	0.818	0.049	0.000	0.133
		216.0	13.0	0.0	35.0
		(0.0)%	(0.0)%	(0.0)%	(2.9)%
	ARM D	0.853	0.040	0.107	0.000
		320.0	15.0	40.0	0.0
		(5.9)%	(0.0)%	(2.5)%	(0.0)%

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	8.34	27.48	0.304	- -	0.0	0.4	6.4	-	0.052
ARM B	1.11	21.40	0.052	- -	0.0	0.1	0.8	-	0.049
ARM C	3.30	26.52	0.124	- -	0.0	0.1	2.1	-	0.043
ARM D	4.69	28.00	0.168	- -	0.0	0.2	3.0	-	0.043
16.00-16.15									
ARM A	9.96	27.38	0.364	- -	0.4	0.6	8.4	-	0.057
ARM B	1.33	20.45	0.065	- -	0.1	0.1	1.0	-	0.052
ARM C	3.94	25.91	0.152	- -	0.1	0.2	2.7	-	0.045
ARM D	5.60	27.64	0.203	- -	0.2	0.3	3.8	-	0.045
16.15-16.30									
ARM A	12.20	27.25	0.448	- -	0.6	0.8	11.8	-	0.066
ARM B	1.63	19.15	0.085	- -	0.1	0.1	1.4	-	0.057
ARM C	4.83	25.08	0.192	- -	0.2	0.2	3.5	-	0.049
ARM D	6.85	27.15	0.252	- -	0.3	0.3	5.0	-	0.049
16.30-16.45									
ARM A	12.20	27.25	0.448	- -	0.8	0.8	12.1	-	0.066
ARM B	1.63	19.14	0.085	- -	0.1	0.1	1.4	-	0.057
ARM C	4.83	25.07	0.193	- -	0.2	0.2	3.6	-	0.049
ARM D	6.85	27.15	0.253	- -	0.3	0.3	5.1	-	0.049
16.45-17.00									
ARM A	9.96	27.38	0.364	- -	0.8	0.6	8.8	-	0.058
ARM B	1.33	20.43	0.065	- -	0.1	0.1	1.1	-	0.052
ARM C	3.94	25.90	0.152	- -	0.2	0.2	2.7	-	0.046
ARM D	5.60	27.63	0.203	- -	0.3	0.3	3.9	-	0.045
17.00-17.15									
ARM A	8.34	27.48	0.304	- -	0.6	0.4	6.7	-	0.052
ARM B	1.11	21.38	0.052	- -	0.1	0.1	0.8	-	0.049
ARM C	3.30	26.51	0.124	- -	0.2	0.1	2.2	-	0.043
ARM D	4.69	27.99	0.168	- -	0.3	0.2	3.1	-	0.043

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.4	
16.15	0.6	*
16.30	0.8	*
16.45	0.8	*
17.00	0.6	*
17.15	0.4	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.2
16.30	0.2
16.45	0.2
17.00	0.2
17.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.2
16.15	0.3
16.30	0.3
16.45	0.3
17.00	0.3
17.15	0.2

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	914.9	609.9	54.1	0.06	54.1	0.06	
B	122.0	81.3	6.5	0.05	6.5	0.05	
C	362.0	241.3	16.7	0.05	16.7	0.05	
D	514.3	342.9	23.7	0.05	23.7	0.05	
ALL	1913.1	1275.4	101.0	0.05	101.0	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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TRL Limited — Tel: +44 (0) 1344 770758
Crowthorne House — Fax: +44 (0) 1344 770356
Nine Mile Ride — Email: software@trl.co.uk
Wokingham, Berks. — Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\London Road Roundabout\London Road roundabout AM.vai"
(drive-on-the-left) at 09:43:01 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Link Road London Road Roundabout
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A London Road south
ARM B - Arm B New Development
ARM C - Arm C London Road north
ARM D - Arm D Link Road

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.86	20.00	30.00	55.00	38.0	0.586	28.808
ARM B	3.65	6.80	10.00	20.00	55.00	28.0	0.567	26.537
ARM C	3.65	7.00	14.00	30.00	55.00	17.0	0.617	29.734
ARM D	3.65	6.80	45.00	30.00	55.00	35.0	0.617	31.396

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

.---------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-4 2031 with Town Centre Improvements & External Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
ARM A	08.00	08.30	09.00	5.69	8.53	5.69
ARM B	08.00	08.30	09.00	0.90	1.35	0.90
ARM C	08.00	08.30	09.00	5.21	7.82	5.21
ARM D	08.00	08.30	09.00	8.68	13.01	8.68

DEMAND SET TITLE: SC2-4 2031 with Town Centre Improvements & External Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15					
	ARM A	0.000	0.035	0.108	0.857
		0.0	16.0	49.0	390.0
		(0.0)	(31.3)	(0.0)	(10.3)
	ARM B	0.583	0.000	0.278	0.139
		42.0	0.0	20.0	10.0
		(14.3)	(0.0)	(0.0)	(0.0)
	ARM C	0.779	0.046	0.000	0.175
		325.0	19.0	0.0	73.0
		(1.5)	(5.3)	(0.0)	(4.1)
	ARM D	0.914	0.035	0.052	0.000
		634.0	24.0	36.0	0.0
		(2.4)	(0.0)	(0.0)	(0.0)

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

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	5.69	25.67	0.222	- -	-	0.0	0.3	4.2	-	0.050
ARM B	0.90	21.14	0.043	- -	-	0.0	0.0	0.7	-	0.049
ARM C	5.21	25.44	0.205	- -	-	0.0	0.3	3.8	-	0.049
ARM D	8.68	27.73	0.313	- -	-	0.0	0.5	6.7	-	0.052
08.00-08.15									
ARM A	6.79	25.57	0.266	- -	-	0.3	0.4	5.3	-	0.053
ARM B	1.07	20.47	0.052	- -	-	0.0	0.1	0.8	-	0.052
ARM C	6.22	24.72	0.252	- -	-	0.3	0.3	5.0	-	0.054
ARM D	10.36	27.14	0.382	- -	-	0.5	0.6	9.0	-	0.060
08.15-08.30									
ARM A	8.32	25.43	0.327	- -	-	0.4	0.5	7.1	-	0.058
ARM B	1.32	19.57	0.067	- -	-	0.1	0.1	1.1	-	0.055
ARM C	7.62	23.73	0.321	- -	-	0.3	0.5	6.9	-	0.062
ARM D	12.69	26.33	0.482	- -	-	0.6	0.9	13.5	-	0.073
08.30-08.45									
ARM A	8.32	25.43	0.327	- -	-	0.5	0.5	7.3	-	0.058
ARM B	1.32	19.57	0.067	- -	-	0.1	0.1	1.1	-	0.055
ARM C	7.62	23.73	0.321	- -	-	0.5	0.5	7.1	-	0.062
ARM D	12.69	26.33	0.482	- -	-	0.9	0.9	13.9	-	0.073
08.45-09.00									
ARM A	6.79	25.57	0.266	- -	-	0.5	0.4	5.5	-	0.053
ARM B	1.07	20.47	0.053	- -	-	0.1	0.1	0.8	-	0.052
ARM C	6.22	24.71	0.252	- -	-	0.5	0.3	5.2	-	0.054
ARM D	10.36	27.13	0.382	- -	-	0.9	0.6	9.5	-	0.060
09.00-09.15									
ARM A	5.69	25.67	0.222	- -	-	0.4	0.3	4.3	-	0.050
ARM B	0.90	21.12	0.043	- -	-	0.1	0.0	0.7	-	0.049
ARM C	5.21	25.43	0.205	- -	-	0.3	0.3	3.9	-	0.049
ARM D	8.68	27.72	0.313	- -	-	0.6	0.5	7.0	-	0.053

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	624.0	416.0	33.8	0.05	33.8	0.05	
B	98.7	65.8	5.1	0.05	5.1	0.05	
C	571.7	381.1	31.8	0.06	31.8	0.06	
D	951.8	634.5	59.5	0.06	59.5	0.06	
ALL	2246.2	1497.5	130.3	0.06	130.3	0.06	

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

END OF JOB

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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TRL Limited — Tel: +44 (0) 1344 770758
Crowthorne House — Fax: +44 (0) 1344 770356
Nine Mile Ride — Email: software@trl.co.uk
Wokingham, Berks. — Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\London Road Roundabout\London Road roundabout PM.vai"
(drive-on-the-left) at 09:46:05 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Link Road London Road Roundabout
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A London Road south
ARM B - Arm B New Development
ARM C - Arm C London Road north
ARM D - Arm D Link Road

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.86	20.00	30.00	55.00	38.0	0.586	28.808
ARM B	3.65	6.80	10.00	20.00	55.00	28.0	0.567	26.537
ARM C	3.65	7.00	14.00	30.00	55.00	17.0	0.617	29.734
ARM D	3.65	6.80	45.00	30.00	55.00	35.0	0.617	31.396

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

.---------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-4 2031 with Town Centre Improvements & External Link Road PM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	16.00	16.30	17.00	9.60	14.40	9.60
ARM B	16.00	16.30	17.00	1.11	1.67	1.11
ARM C	16.00	16.30	17.00	3.98	5.96	3.98
ARM D	16.00	16.30	17.00	5.53	8.29	5.53

DEMAND SET TITLE: SC2-4 2031 with Town Centre Improvements & External Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
15.45 - 17.15					
	ARM A	0.000	0.035	0.074	0.891
		0.0	27.0	57.0	684.0
		(0.0)%	(18.5)%	(7.0)%	(2.2)%
	ARM B	0.270	0.000	0.483	0.247
		24.0	0.0	43.0	22.0
		(16.7)%	(0.0)%	(0.0)%	(0.0)%
	ARM C	0.689	0.047	0.000	0.264
		219.0	15.0	0.0	84.0
		(2.3)%	(0.0)%	(0.0)%	(0.0)%
	ARM D	0.790	0.036	0.174	0.000
		349.0	16.0	77.0	0.0
		(5.2)%	(0.0)%	(2.6)%	(0.0)%

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	9.60	27.15	0.354	- -	0.0	0.5	8.0	-	0.057
ARM B	1.11	19.73	0.056	- -	0.0	0.1	0.9	-	0.054
ARM C	3.98	23.61	0.169	- -	0.0	0.2	3.0	-	0.051
ARM D	5.53	28.06	0.197	- -	0.0	0.2	3.6	-	0.044
16.00-16.15									
ARM A	11.46	27.00	0.425	- -	0.5	0.7	10.8	-	0.064
ARM B	1.33	18.61	0.071	- -	0.1	0.1	1.1	-	0.058
ARM C	4.75	22.49	0.211	- -	0.2	0.3	3.9	-	0.056
ARM D	6.60	27.67	0.239	- -	0.2	0.3	4.6	-	0.047
16.15-16.30									
ARM A	14.04	26.79	0.524	- -	0.7	1.1	15.9	-	0.078
ARM B	1.63	17.09	0.095	- -	0.1	0.1	1.5	-	0.065
ARM C	5.81	20.97	0.277	- -	0.3	0.4	5.6	-	0.066
ARM D	8.08	27.15	0.298	- -	0.3	0.4	6.2	-	0.052
16.30-16.45									
ARM A	14.04	26.79	0.524	- -	1.1	1.1	16.4	-	0.078
ARM B	1.63	17.08	0.095	- -	0.1	0.1	1.6	-	0.065
ARM C	5.81	20.96	0.277	- -	0.4	0.4	5.7	-	0.066
ARM D	8.08	27.14	0.298	- -	0.4	0.4	6.3	-	0.052
16.45-17.00									
ARM A	11.46	27.00	0.425	- -	1.1	0.7	11.4	-	0.065
ARM B	1.33	18.59	0.071	- -	0.1	0.1	1.2	-	0.058
ARM C	4.75	22.47	0.211	- -	0.4	0.3	4.1	-	0.056
ARM D	6.60	27.67	0.239	- -	0.4	0.3	4.8	-	0.048
17.00-17.15									
ARM A	9.60	27.15	0.354	- -	0.7	0.6	8.4	-	0.057
ARM B	1.11	19.70	0.056	- -	0.1	0.1	0.9	-	0.054
ARM C	3.98	23.58	0.169	- -	0.3	0.2	3.1	-	0.051
ARM D	5.53	28.05	0.197	- -	0.3	0.2	3.7	-	0.044

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.5	*
16.15	0.7	*
16.30	1.1	*
16.45	1.1	*
17.00	0.7	*
17.15	0.6	*

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.2
16.15	0.3
16.30	0.4
16.45	0.4
17.00	0.3
17.15	0.2

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.2
16.15	0.3
16.30	0.4
16.45	0.4
17.00	0.3
17.15	0.2

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1053.1	702.1	70.8	0.07	70.8	0.07
B	122.0	81.3	7.2	0.06	7.2	0.06
C	436.2	290.8	25.5	0.06	25.5	0.06
D	606.4	404.3	29.3	0.05	29.3	0.05
ALL	2217.7	1478.5	132.8	0.06	132.8	0.06

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

END OF JOB

========== end of file ==========

B.3 Roundabout at Eastern End of the Link Road (All Options)

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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TRL Limited
Crowthorne House
Nine Mile Ride
Wokingham, Berks.
RG40 3GA,UK

Tel: +44 (0) 1344 770758
Fax: +44 (0) 1344 770356
Email: software@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\3 arm\Buckenham Road Roundabout AM.vai"
(drive-on-the-left) at 09:57:11 on Friday, 3 May 2013

.FILE PROPERTIES

****

RUN TITLE: Buckenham Road Link Road Roundabout AM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

****

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Buckenham Road south

.GEOMETRIC DATA

I ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
I ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
I ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
I ARM C	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

T5

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

.---------- T13

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-3 2031 with TC Improvements & Internal Link Road AM

I ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
I ARM A	08.00	08.30	09.00	3.53	5.29	3.53
I ARM B	08.00	08.30	09.00	4.04	6.06	4.04
I ARM C	08.00	08.30	09.00	3.53	5.29	3.53

DEMAND SET TITLE: SC1-3 2031 with TC Improvements & Internal Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.801	0.199
		0.0	226.0	56.0
		(0.0)	(2.2)	(17.9)
	ARM B	0.520	0.000	0.480
		168.0	0.0	155.0
		(0.6)	(0.0)	(1.9)
	ARM C	0.063	0.937	0.000
		25.0	370.0	0.0
		(4.0)	(0.8)	(0.0)

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

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	3.53	27.14	0.130	- -	-	0.0	0.1	2.2	-	0.042
ARM B	4.04	24.05	0.168	- -	-	0.0	0.2	3.0	-	0.050
ARM C	3.53	32.73	0.108	- -	-	0.0	0.1	1.8	-	0.034
08.00-08.15									
ARM A	4.21	26.78	0.157	- -	-	0.1	0.2	2.8	-	0.044
ARM B	4.82	23.97	0.201	- -	-	0.2	0.3	3.7	-	0.052
ARM C	4.21	32.46	0.130	- -	-	0.1	0.1	2.2	-	0.035
08.15-08.30									
ARM A	5.16	26.30	0.196	- -	-	0.2	0.2	3.6	-	0.047
ARM B	5.91	23.86	0.248	- -	-	0.3	0.3	4.8	-	0.056
ARM C	5.16	32.11	0.161	- -	-	0.1	0.2	2.8	-	0.037
08.30-08.45									
ARM A	5.16	26.30	0.196	- -	-	0.2	0.2	3.6	-	0.047
ARM B	5.91	23.86	0.248	- -	-	0.3	0.3	4.9	-	0.056
ARM C	5.16	32.11	0.161	- -	-	0.2	0.2	2.9	-	0.037
08.45-09.00									
ARM A	4.21	26.78	0.157	- -	-	0.2	0.2	2.8	-	0.044
ARM B	4.82	23.97	0.201	- -	-	0.3	0.3	3.9	-	0.052
ARM C	4.21	32.46	0.130	- -	-	0.2	0.1	2.3	-	0.035
09.00-09.15									
ARM A	3.53	27.13	0.130	- -	-	0.2	0.2	2.3	-	0.042
ARM B	4.04	24.05	0.168	- -	-	0.3	0.2	3.1	-	0.050
ARM C	3.53	32.72	0.108	- -	-	0.1	0.1	1.8	-	0.034

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	387.0	258.0	17.3	0.04	17.3	0.04	
B	443.2	295.5	23.4	0.05	23.4	0.05	
C	387.0	258.0	13.8	0.04	13.8	0.04	
ALL	1217.3	811.5	54.5	0.04	54.5	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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TRL Limited
Crowthorne House
Nine Mile Ride
Wokingham, Berks.
RG40 3GA,UK

Tel: +44 (0) 1344 770758
Fax: +44 (0) 1344 770356
Email: software@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\3 arm\Buckenham Road Roundabout PM.vai"
(drive-on-the-left) at 10:00:20 on Friday, 3 May 2013

.FILE PROPERTIES

****

RUN TITLE: Buckenham Road Link Road Roundabout PM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

****

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Buckenham Road south

.GEOMETRIC DATA

I ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
I ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
I ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
I ARM C	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

T5

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS
.---------- T13

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

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-3 2031 with TC Improvements & Internal Link Road PM

I ARM	I TIME WHEN I FLOW STARTS I TO RISE	I TIME WHEN I TOP OF PEAK I IS REACHED	I TIME WHEN I FLOW STOPS I FALLING	I RATE OF FLOW (VEH/MIN) I BEFORE I PEAK	IAT TOP I OF PEAK	I AFTER I PEAK
I ARM A	16.00	16.30	17.00	1.80	2.70	1.80
I ARM B	16.00	16.30	17.00	2.59	3.88	2.59
I ARM C	16.00	16.30	17.00	1.78	2.66	1.78

DEMAND SET TITLE: SC1-3 2031 with TC Improvements & Internal Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C
15.45 - 17.15				
	ARM A	0.000	0.757	0.243
		0.0	109.0	35.0
		(0.0)	(0.9)	(2.9)
	ARM B	0.671	0.000	0.329
		139.0	0.0	68.0
		(0.7)	(0.0)	(1.5)
	ARM C	0.211	0.789	0.000
		30.0	112.0	0.0
		(10.0)	(3.6)	(0.0)

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

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	1.80	29.25	0.062	- -	0.0	0.1	1.0	-	0.036
ARM B	2.59	24.30	0.107	- -	0.0	0.1	1.8	-	0.046
ARM C	1.78	31.72	0.056	- -	0.0	0.1	0.9	-	0.033
16.00-16.15									
ARM A	2.15	29.09	0.074	- -	0.1	0.1	1.2	-	0.037
ARM B	3.09	24.25	0.127	- -	0.1	0.1	2.2	-	0.047
ARM C	2.12	31.51	0.067	- -	0.1	0.1	1.1	-	0.034
16.15-16.30									
ARM A	2.63	28.87	0.091	- -	0.1	0.1	1.5	-	0.038
ARM B	3.78	24.19	0.156	- -	0.1	0.2	2.7	-	0.049
ARM C	2.59	31.22	0.083	- -	0.1	0.1	1.3	-	0.035
16.30-16.45									
ARM A	2.63	28.87	0.091	- -	0.1	0.1	1.5	-	0.038
ARM B	3.78	24.19	0.156	- -	0.2	0.2	2.8	-	0.049
ARM C	2.59	31.22	0.083	- -	0.1	0.1	1.4	-	0.035
16.45-17.00									
ARM A	2.15	29.09	0.074	- -	0.1	0.1	1.2	-	0.037
ARM B	3.09	24.25	0.127	- -	0.2	0.1	2.2	-	0.047
ARM C	2.12	31.51	0.067	- -	0.1	0.1	1.1	-	0.034
17.00-17.15									
ARM A	1.80	29.25	0.062	- -	0.1	0.1	1.0	-	0.036
ARM B	2.59	24.30	0.107	- -	0.1	0.1	1.8	-	0.046
ARM C	1.78	31.72	0.056	- -	0.1	0.1	0.9	-	0.033

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.2
16.45	0.2
17.00	0.1
17.15	0.1

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	197.5	131.6	7.3	0.04	7.3	0.04	
B	283.9	189.3	13.5	0.05	13.5	0.05	
C	194.9	129.9	6.6	0.03	6.6	0.03	
ALL	676.3	450.8	27.5	0.04	27.5	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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Crowthorne House — Fax: +44 (0) 1344 770356
Nine Mile Ride — Email: software@trl.co.uk
Wokingham, Berks. — Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\3 arm\Buckenham Road Roundabout AM.vai"
(drive-on-the-left) at 09:58:08 on Friday, 3 May 2013

.FILE PROPERTIES

****

RUN TITLE: Buckenham Road Link Road Roundabout AM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

****

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Buckenham Road south

.GEOMETRIC DATA

I ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
I ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
I ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
I ARM C	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

T5

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

.---------- T13

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

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-4 2031 with TC Improvements & External Link Road AM

I ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
I ARM A	08.00	08.30	09.00	6.33	9.49	6.33
I ARM B	08.00	08.30	09.00	5.38	8.06	5.38
I ARM C	08.00	08.30	09.00	4.30	6.45	4.30

DEMAND SET TITLE: SC1-4 2031 with TC Improvements & External Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.800	0.200
		0.0	405.0	101.0
		(0.0)	(2.2)	(14.9)
	ARM B	0.649	0.000	0.351
		279.0	0.0	151.0
		(0.0)	(0.0)	(1.3)
	ARM C	0.076	0.924	0.000
		26.0	318.0	0.0
		(3.6)	(3.8)	(0.0)

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

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	6.33	26.86	0.236	- -	0.0	0.3	4.5	-	0.049
ARM B	5.38	23.92	0.225	- -	0.0	0.3	4.2	-	0.054
ARM C	4.30	31.01	0.139	- -	0.0	0.2	2.4	-	0.037
08.00-08.15									
ARM A	7.56	26.42	0.286	- -	0.3	0.4	5.9	-	0.053
ARM B	6.42	23.78	0.270	- -	0.3	0.4	5.4	-	0.058
ARM C	5.13	30.58	0.168	- -	0.2	0.2	3.0	-	0.039
08.15-08.30									
ARM A	9.25	25.82	0.358	- -	0.4	0.6	8.2	-	0.060
ARM B	7.86	23.58	0.333	- -	0.4	0.5	7.3	-	0.064
ARM C	6.29	30.00	0.210	- -	0.2	0.3	3.9	-	0.042
08.30-08.45									
ARM A	9.25	25.81	0.358	- -	0.6	0.6	8.3	-	0.060
ARM B	7.86	23.58	0.333	- -	0.5	0.5	7.5	-	0.064
ARM C	6.29	30.00	0.210	- -	0.3	0.3	4.0	-	0.042
08.45-09.00									
ARM A	7.56	26.42	0.286	- -	0.6	0.4	6.1	-	0.053
ARM B	6.42	23.77	0.270	- -	0.5	0.4	5.7	-	0.058
ARM C	5.13	30.57	0.168	- -	0.3	0.2	3.1	-	0.039
09.00-09.15									
ARM A	6.33	26.85	0.236	- -	0.4	0.3	4.7	-	0.049
ARM B	5.38	23.92	0.225	- -	0.4	0.3	4.4	-	0.054
ARM C	4.30	31.00	0.139	- -	0.2	0.2	2.4	-	0.037

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	694.2	462.8	37.8	0.05	37.8	0.05
B	589.8	393.2	34.6	0.06	34.6	0.06
C	471.7	314.5	18.8	0.04	18.8	0.04
ALL	1755.7	1170.5	91.1	0.05	91.1	0.05

T75

* 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

========== end of file ==========

```
                    ARCADY 6

                ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


                Analysis Program: Release 7.0 (FEBRUARY 2010)

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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:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\3 arm\Buckenham Road Roundabout PM.vai"
(drive-on-the-left ) at 10:01:09 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Buckenham Road Link Road Roundabout PM
    LOCATION: Attleborough
        DATE: 01/05/13
      CLIENT: Breckland Council
  ENUMERATOR: LloydM [HW62357]
  JOB NUMBER: CS060268
      STATUS:
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - Arm A Link Road
 ARM B - Arm B Buckenham Road north
 ARM C - Arm C Buckenham Road south

.GEOMETRIC DATA
 --------------


 ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.65   I     6.77   I    46.00   I    25.00   I    60.00   I     41.0     I  0.572  I       30.488        I
 I ARM  B I    2.78   I     7.70   I    15.00   I    22.50   I    60.00   I     47.0     I  0.506  I       24.760        I
 I ARM  C I    3.30   I     7.25   I    37.00   I    76.00   I    60.00   I     14.0     I  0.644  I       34.420        I
 ------------------------------------------------------------------------------------------------------------------------

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

 **WARNING** ARM A Effective flare length is outside normal range.
  Treat capacities with increasing caution.

 **WARNING** ARM C Effective flare length is outside normal range.
  Treat capacities with increasing caution.


.TRAFFIC DEMAND DATA
 -------------------

 Only sets included in the current run are shown
.SCALING FACTORS
.---------------------- T13
 IARM  I FLOW SCALE(%) I
 ----------------------
 I A   I      100      I
 I B   I      100      I
 I C   I      100      I
 ----------------------

 TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC1-4 2031 with TC Improvements & External Link Road PM
 ------------------------------------------------------------------------------------------------------
 I        I TIME WHEN        I TIME WHEN        I  TIME WHEN       I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS      I TOP OF PEAK      I FLOW STOPS       I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE        I IS REACHED       I FALLING          I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------
 I ARM  A I        16.00      I        16.30     I        17.00     I  4.58      I   6.86    I  4.58    I
 I ARM  B I        16.00      I        16.30     I        17.00     I  5.91      I   8.87    I  5.91    I
 I ARM  C I        16.00      I        16.30     I        17.00     I  6.30      I   9.45    I  6.30    I
 ------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC1-4 2031 with TC Improvements & External Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C
15.45 - 17.15				
	ARM A	0.000	0.593	0.407
		0.0	217.0	149.0
		(0.0)	(0.9)	(1.3)
	ARM B	0.702	0.000	0.298
		332.0	0.0	141.0
		(0.6)	(0.0)	(5.0)
	ARM C	0.448	0.552	0.000
		226.0	278.0	0.0
		(6.6)	(4.7)	(0.0)

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

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	4.58	28.11	0.163	- -	0.0	0.2	2.9	-	0.042
ARM B	5.91	23.36	0.253	- -	0.0	0.3	4.9	-	0.057
ARM C	6.30	30.07	0.209	- -	0.0	0.3	3.9	-	0.042
16.00-16.15									
ARM A	5.47	27.71	0.197	- -	0.2	0.2	3.6	-	0.045
ARM B	7.06	23.18	0.305	- -	0.3	0.4	6.4	-	0.062
ARM C	7.52	29.57	0.254	- -	0.3	0.3	5.0	-	0.045
16.15-16.30									
ARM A	6.69	27.16	0.246	- -	0.2	0.3	4.8	-	0.049
ARM B	8.65	22.93	0.377	- -	0.4	0.6	8.8	-	0.070
ARM C	9.21	28.89	0.319	- -	0.3	0.5	6.9	-	0.051
16.30-16.45									
ARM A	6.69	27.16	0.246	- -	0.3	0.3	4.9	-	0.049
ARM B	8.65	22.93	0.377	- -	0.6	0.6	9.0	-	0.070
ARM C	9.21	28.88	0.319	- -	0.5	0.5	7.0	-	0.051
16.45-17.00									
ARM A	5.47	27.71	0.197	- -	0.3	0.2	3.7	-	0.045
ARM B	7.06	23.18	0.305	- -	0.6	0.4	6.7	-	0.062
ARM C	7.52	29.56	0.254	- -	0.5	0.3	5.2	-	0.045
17.00-17.15									
ARM A	4.58	28.11	0.163	- -	0.2	0.2	3.0	-	0.043
ARM B	5.91	23.36	0.253	- -	0.4	0.3	5.2	-	0.057
ARM C	6.30	30.06	0.210	- -	0.3	0.3	4.0	-	0.042

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.2	
16.15	0.2	
16.30	0.3	
16.45	0.3	
17.00	0.2	
17.15	0.2	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.3	
16.15	0.4	
16.30	0.6	*
16.45	0.6	*
17.00	0.4	
17.15	0.3	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.3
16.15	0.3
16.30	0.5
16.45	0.5
17.00	0.3
17.15	0.3

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	502.0	334.7	22.9	0.05	22.9	0.05	
B	648.5	432.3	41.2	0.06	41.2	0.06	
C	691.1	460.7	32.1	0.05	32.1	0.05	
ALL	1841.6	1227.7	96.1	0.05	96.1	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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TRL Limited
Crowthorne House
Nine Mile Ride
Wokingham, Berks.
RG40 3GA,UK

Tel: +44 (0) 1344 770758
Fax: +44 (0) 1344 770356
Email: software@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\3 arm\Buckenham Road Roundabout AM.vai"
(drive-on-the-left) at 09:59:08 on Friday, 3 May 2013

.FILE PROPERTIES

****

RUN TITLE: Buckenham Road Link Road Roundabout AM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

****

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Buckenham Road south

.GEOMETRIC DATA

I ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
I ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
I ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
I ARM C	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

(T5)

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

.---------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-3 2031 with TC Improvements & Internal Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
ARM A	08.00	08.30	09.00	3.70	5.55	3.70
ARM B	08.00	08.30	09.00	4.60	6.90	4.60
ARM C	08.00	08.30	09.00	4.79	7.18	4.79

DEMAND SET TITLE: SC2-3 2031 with TC Improvements & Internal Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.831	0.169
		0.0	246.0	50.0
		(0.0)	(3.7)	(20.0)
	ARM B	0.560	0.000	0.440
		206.0	0.0	162.0
		(3.4)	(0.0)	(1.2)
	ARM C	0.063	0.937	0.000
		24.0	359.0	0.0
		(4.2)	(0.8)	(0.0)

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

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	3.70	26.21	0.141	- -	0.0	0.2	2.4	-	0.044
ARM B	4.60	23.80	0.193	- -	0.0	0.2	3.5	-	0.052
ARM C	4.79	32.38	0.148	- -	0.0	0.2	2.6	-	0.036
08.00-08.15									
ARM A	4.42	25.73	0.172	- -	0.2	0.2	3.1	-	0.047
ARM B	5.49	23.73	0.231	- -	0.2	0.3	4.4	-	0.055
ARM C	5.72	32.04	0.178	- -	0.2	0.2	3.2	-	0.038
08.15-08.30									
ARM A	5.41	25.09	0.216	- -	0.2	0.3	4.1	-	0.051
ARM B	6.73	23.63	0.285	- -	0.3	0.4	5.8	-	0.059
ARM C	7.00	31.59	0.222	- -	0.2	0.3	4.2	-	0.041
08.30-08.45									
ARM A	5.41	25.09	0.216	- -	0.3	0.3	4.1	-	0.051
ARM B	6.73	23.63	0.285	- -	0.4	0.4	5.9	-	0.059
ARM C	7.00	31.59	0.222	- -	0.3	0.3	4.3	-	0.041
08.45-09.00									
ARM A	4.42	25.73	0.172	- -	0.3	0.2	3.2	-	0.047
ARM B	5.49	23.73	0.231	- -	0.4	0.3	4.6	-	0.055
ARM C	5.72	32.04	0.178	- -	0.3	0.2	3.3	-	0.038
09.00-09.15									
ARM A	3.70	26.20	0.141	- -	0.2	0.2	2.5	-	0.044
ARM B	4.60	23.80	0.193	- -	0.3	0.2	3.7	-	0.052
ARM C	4.79	32.37	0.148	- -	0.2	0.2	2.6	-	0.036

.QUEUE AT ARM A

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

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.4
08.45	0.4
09.00	0.3
09.15	0.2

.QUEUE AT ARM C

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND	* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	405.9	270.6	19.3	0.05	19.3	0.05
B	504.6	336.4	28.0	0.06	28.0	0.06
C	525.3	350.2	20.2	0.04	20.2	0.04
ALL	1435.7	957.2	67.5	0.05	67.5	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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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:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\3 arm\Buckenham Road Roundabout PM.vai"
(drive-on-the-left ) at 10:02:12 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Buckenham Road Link Road Roundabout PM
    LOCATION: Attleborough
        DATE: 01/05/13
      CLIENT: Breckland Council
  ENUMERATOR: LloydM [HW62357]
  JOB NUMBER: CS060268
      STATUS:
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - Arm A Link Road
 ARM B - Arm B Buckenham Road north
 ARM C - Arm C Buckenham Road south

.GEOMETRIC DATA
 --------------


 ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.65   I     6.77   I    46.00   I    25.00   I    60.00   I     41.0     I  0.572  I       30.488        I
 I ARM  B I    2.78   I     7.70   I    15.00   I    22.50   I    60.00   I     47.0     I  0.506  I       24.760        I
 I ARM  C I    3.30   I     7.25   I    37.00   I    76.00   I    60.00   I     14.0     I  0.644  I       34.420        I
 ------------------------------------------------------------------------------------------------------------------------

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

 **WARNING** ARM A Effective flare length is outside normal range.
  Treat capacities with increasing caution.

 **WARNING** ARM C Effective flare length is outside normal range.
  Treat capacities with increasing caution.


.TRAFFIC DEMAND DATA
 -------------------

 Only sets included in the current run are shown
.SCALING FACTORS
.---------------------- T13
 IARM  I FLOW SCALE(%) I
 ----------------------
 I A   I      100      I
 I B   I      100      I
 I C   I      100      I
 ----------------------

 TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC2-3 2031 with TC Improvements & Internal Link Road PM
 ------------------------------------------------------------------------------------------------------
 I        I TIME WHEN        I TIME WHEN        I  TIME WHEN       I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS      I TOP OF PEAK      I FLOW STOPS       I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE        I IS REACHED       I FALLING          I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------
 I ARM  A I        16.00      I        16.30     I        17.00     I  4.71      I   7.07    I  4.71    I
 I ARM  B I        16.00      I        16.30     I        17.00     I  6.16      I   9.24    I  6.16    I
 I ARM  C I        16.00      I        16.30     I        17.00     I  3.41      I   5.12    I  3.41    I
 ------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC2-3 2031 with TC Improvements & Internal Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C
15.45 - 17.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.828	0.172
		0.0	312.0	65.0
		(0.0)%	(1.0)%	(1.5)%
	ARM B	0.718	0.000	0.282
		354.0	0.0	139.0
		(2.3)%	(0.0)%	(2.2)%
	ARM C	0.209	0.791	0.000
		57.0	216.0	0.0
		(12.3)%	(2.8)%	(0.0)%

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	4.71	28.59	0.165	- -	0.0	0.2	2.9	-	0.042
ARM B	6.16	23.80	0.259	- -	0.0	0.3	5.1	-	0.057
ARM C	3.41	30.08	0.113	- -	0.0	0.1	1.9	-	0.037
16.00-16.15									
ARM A	5.63	28.29	0.199	- -	0.2	0.2	3.7	-	0.044
ARM B	7.36	23.72	0.310	- -	0.3	0.4	6.6	-	0.061
ARM C	4.07	29.53	0.138	- -	0.1	0.2	2.4	-	0.039
16.15-16.30									
ARM A	6.89	27.86	0.247	- -	0.2	0.3	4.8	-	0.048
ARM B	9.01	23.61	0.382	- -	0.4	0.6	9.0	-	0.068
ARM C	4.99	28.78	0.173	- -	0.2	0.2	3.1	-	0.042
16.30-16.45									
ARM A	6.89	27.86	0.247	- -	0.3	0.3	4.9	-	0.048
ARM B	9.01	23.61	0.382	- -	0.6	0.6	9.2	-	0.069
ARM C	4.99	28.78	0.173	- -	0.2	0.2	3.1	-	0.042
16.45-17.00									
ARM A	5.63	28.28	0.199	- -	0.3	0.2	3.8	-	0.044
ARM B	7.36	23.72	0.310	- -	0.6	0.5	6.9	-	0.061
ARM C	4.07	29.52	0.138	- -	0.2	0.2	2.4	-	0.039
17.00-17.15									
ARM A	4.71	28.59	0.165	- -	0.2	0.2	3.0	-	0.042
ARM B	6.16	23.80	0.259	- -	0.5	0.4	5.3	-	0.057
ARM C	3.41	30.06	0.113	- -	0.2	0.1	1.9	-	0.038

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.2	
16.15	0.2	
16.30	0.3	
16.45	0.3	
17.00	0.2	
17.15	0.2	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.3	
16.15	0.4	
16.30	0.6	*
16.45	0.6	*
17.00	0.5	
17.15	0.4	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.2
16.30	0.2
16.45	0.2
17.00	0.2
17.15	0.1

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	516.9	344.6	23.1	0.04	23.1	0.04	
B	675.7	450.5	42.2	0.06	42.2	0.06	
C	374.3	249.5	14.9	0.04	14.9	0.04	
ALL	1566.9	1044.6	80.2	0.05	80.2	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\3 arm\Buckenham Road Roundabout AM.vai"
(drive-on-the-left) at 09:59:41 on Friday, 3 May 2013

.FILE PROPERTIES

****

RUN TITLE: Buckenham Road Link Road Roundabout AM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

****

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Buckenham Road south

.GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
ARM C	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

T5

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

.---------- T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-4 2031 with TC Improvements & External Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
ARM A	08.00	08.30	09.00	6.78	10.16	6.78
ARM B	08.00	08.30	09.00	5.91	8.87	5.91
ARM C	08.00	08.30	09.00	4.35	6.53	4.35

DEMAND SET TITLE: SC2-4 2031 with TC Improvements & External Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C
07.45 - 09.15		TURNING PROPORTIONS		
		TURNING COUNTS		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.828	0.172
		0.0	449.0	93.0
		(0.0)%	(3.1)%	(17.2)%
	ARM B	0.647	0.000	0.353
		306.0	0.0	167.0
		(2.0)%	(0.0)%	(1.2)%
	ARM C	0.069	0.931	0.000
		24.0	324.0	0.0
		(4.2)%	(0.6)%	(0.0)%

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	6.78	26.69	0.254	- - -	0.0	0.3	5.0	-	0.050
ARM B	5.91	23.67	0.250	- - -	0.0	0.3	4.9	-	0.056
ARM C	4.35	31.65	0.137	- - -	0.0	0.2	2.4	-	0.037
08.00-08.15									
ARM A	8.09	26.26	0.308	- - -	0.3	0.4	6.5	-	0.055
ARM B	7.06	23.53	0.300	- - -	0.3	0.4	6.3	-	0.061
ARM C	5.20	31.16	0.167	- - -	0.2	0.2	3.0	-	0.039
08.15-08.30									
ARM A	9.91	25.66	0.386	- - -	0.4	0.6	9.2	-	0.063
ARM B	8.65	23.35	0.370	- - -	0.4	0.6	8.6	-	0.068
ARM C	6.37	30.49	0.209	- - -	0.2	0.3	3.9	-	0.041
08.30-08.45									
ARM A	9.91	25.66	0.386	- - -	0.6	0.6	9.4	-	0.063
ARM B	8.65	23.35	0.370	- - -	0.6	0.6	8.8	-	0.068
ARM C	6.37	30.48	0.209	- - -	0.3	0.3	3.9	-	0.041
08.45-09.00									
ARM A	8.09	26.25	0.308	- - -	0.6	0.4	6.8	-	0.055
ARM B	7.06	23.53	0.300	- - -	0.6	0.4	6.6	-	0.061
ARM C	5.20	31.15	0.167	- - -	0.3	0.2	3.0	-	0.039
09.00-09.15									
ARM A	6.78	26.68	0.254	- - -	0.4	0.3	5.2	-	0.050
ARM B	5.91	23.66	0.250	- - -	0.4	0.3	5.1	-	0.056
ARM C	4.35	31.64	0.138	- - -	0.2	0.2	2.4	-	0.037

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	743.4	495.6	42.2	0.06	42.2	0.06	
B	648.5	432.3	40.2	0.06	40.2	0.06	
C	477.4	318.2	18.6	0.04	18.6	0.04	
ALL	1869.2	1246.2	101.0	0.05	101.0	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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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:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\3 arm\Buckenham Road Roundabout PM.vai"
(drive-on-the-left ) at 10:03:07 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Buckenham Road Link Road Roundabout PM
    LOCATION: Attleborough
        DATE: 01/05/13
      CLIENT: Breckland Council
  ENUMERATOR: LloydM [HW62357]
  JOB NUMBER: CS060268
      STATUS:
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - Arm A Link Road
 ARM B - Arm B Buckenham Road north
 ARM C - Arm C Buckenham Road south

.GEOMETRIC DATA
 --------------


 ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.65   I     6.77   I    46.00   I    25.00   I    60.00   I     41.0     I  0.572  I       30.488        I
 I ARM  B I    2.78   I     7.70   I    15.00   I    22.50   I    60.00   I     47.0     I  0.506  I       24.760        I
 I ARM  C I    3.30   I     7.25   I    37.00   I    76.00   I    60.00   I     14.0     I  0.644  I       34.420        I
 ------------------------------------------------------------------------------------------------------------------------

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

 **WARNING** ARM A Effective flare length is outside normal range.
  Treat capacities with increasing caution.

 **WARNING** ARM C Effective flare length is outside normal range.
  Treat capacities with increasing caution.


.TRAFFIC DEMAND DATA
 -------------------

 Only sets included in the current run are shown
.SCALING FACTORS
.---------------------- T13
 IARM  I FLOW SCALE(%) I
 ----------------------
 I A   I      100      I
 I B   I      100      I
 I C   I      100      I
 ----------------------

 TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC2-4 2031 with TC Improvements & External Link Road PM
 ------------------------------------------------------------------------------------------------------
 I        I TIME WHEN        I TIME WHEN        I  TIME WHEN       I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS      I TOP OF PEAK      I FLOW STOPS       I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE        I IS REACHED       I FALLING          I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------
 I ARM  A I        16.00      I        16.30     I        17.00     I  4.86      I   7.29    I  4.86    I
 I ARM  B I        16.00      I        16.30     I        17.00     I  7.19      I  10.78    I  7.19    I
 I ARM  C I        16.00      I        16.30     I        17.00     I  6.21      I   9.32    I  6.21    I
 ------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC2-4 2031 with TC Improvements & External Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C
15.45 - 17.15				
	ARM A	0.000	0.761	0.239
		0.0	296.0	93.0
		(0.0)	(0.7)	(2.2)
	ARM B	0.805	0.000	0.195
		463.0	0.0	112.0
		(1.5)	(0.0)	(4.5)
	ARM C	0.326	0.674	0.000
		162.0	335.0	0.0
		(8.6)	(3.6)	(0.0)

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

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	4.86	27.72	0.175	- - -	0.0	0.2	3.1	-	0.044
ARM B	7.19	23.67	0.304	- - -	0.0	0.4	6.4	-	0.060
ARM C	6.21	29.13	0.213	- - -	0.0	0.3	4.0	-	0.044
16.00-16.15									
ARM A	5.80	27.24	0.213	- - -	0.2	0.3	4.0	-	0.047
ARM B	8.58	23.55	0.364	- - -	0.4	0.6	8.4	-	0.067
ARM C	7.42	28.42	0.261	- - -	0.3	0.4	5.2	-	0.048
16.15-16.30									
ARM A	7.11	26.58	0.267	- - -	0.3	0.4	5.4	-	0.051
ARM B	10.51	23.39	0.449	- - -	0.6	0.8	11.8	-	0.077
ARM C	9.09	27.46	0.331	- - -	0.4	0.5	7.3	-	0.054
16.30-16.45									
ARM A	7.11	26.58	0.267	- - -	0.4	0.4	5.5	-	0.051
ARM B	10.51	23.39	0.449	- - -	0.8	0.8	12.2	-	0.078
ARM C	9.09	27.45	0.331	- - -	0.5	0.5	7.4	-	0.054
16.45-17.00									
ARM A	5.80	27.23	0.213	- - -	0.4	0.3	4.1	-	0.047
ARM B	8.58	23.55	0.364	- - -	0.8	0.6	8.8	-	0.067
ARM C	7.42	28.41	0.261	- - -	0.5	0.4	5.4	-	0.048
17.00-17.15									
ARM A	4.86	27.71	0.175	- - -	0.3	0.2	3.2	-	0.044
ARM B	7.19	23.67	0.304	- - -	0.6	0.4	6.7	-	0.061
ARM C	6.21	29.11	0.213	- - -	0.4	0.3	4.1	-	0.044

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.2	
16.15	0.3	
16.30	0.4	
16.45	0.4	
17.00	0.3	
17.15	0.2	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.4	
16.15	0.6	*
16.30	0.8	*
16.45	0.8	*
17.00	0.6	*
17.15	0.4	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.3
16.15	0.4
16.30	0.5
16.45	0.5
17.00	0.4
17.15	0.3

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	533.1	355.4	25.3	0.05	25.3	0.05	
B	788.5	525.7	54.3	0.07	54.3	0.07	
C	681.4	454.3	33.4	0.05	33.4	0.05	
ALL	2003.1	1335.4	113.0	0.06	113.0	0.06	

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

END OF JOB

========== end of file ==========

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                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\Buckenham Road Roundabout AM.vai"
(drive-on-the-left) at 09:48:08 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Buckenham Road Link Road Roundabout AM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Bunn's Bank Road
ARM D - Arm D Buckenham Road south

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
ARM C	2.66	6.70	5.20	27.50	60.00	46.0	0.443	18.472
ARM D	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-3 2031 with TC Improvements & Internal Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	IAT TOP OF PEAK	AFTER PEAK
ARM A	08.00	08.30	09.00	3.53	5.29	3.53
ARM B	08.00	08.30	09.00	4.85	7.28	4.85
ARM C	08.00	08.30	09.00	1.10	1.65	1.10
ARM D	08.00	08.30	09.00	4.96	7.44	4.96

DEMAND SET TITLE: SC1-3 2031 with TC Improvements & Internal Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000 0.0 (0.0)	0.801 226.0 (2.2)	0.000 0.0 (0.0)	0.199 56.0 (17.9)
	ARM B	0.433 168.0 (0.6)	0.000 0.0 (0.0)	0.168 65.0 (16.9)	0.399 155.0 (1.9)
	ARM C	0.000 0.0 (0.0)	0.256 22.0 (9.1)	0.000 0.0 (0.0)	0.744 64.0 (0.0)
	ARM D	0.063 25.0 (4.0)	0.932 370.0 (0.8)	0.005 2.0 (100.0)	0.000 0.0 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	3.53	26.22	0.135	- - -	0.0	0.2	2.3	-	0.044
ARM B	4.85	23.42	0.207	- - -	0.0	0.3	3.8	-	0.054
ARM C	1.10	15.92	0.069	- - -	0.0	0.1	1.1	-	0.067
ARM D	4.96	32.37	0.153	- - -	0.0	0.2	2.7	-	0.036
08.00-08.15									
ARM A	4.21	25.70	0.164	- - -	0.2	0.2	2.9	-	0.047
ARM B	5.79	23.33	0.248	- - -	0.3	0.3	4.9	-	0.057
ARM C	1.31	15.51	0.085	- - -	0.1	0.1	1.4	-	0.070
ARM D	5.92	32.08	0.185	- - -	0.2	0.2	3.4	-	0.038
08.15-08.30									
ARM A	5.16	24.97	0.207	- - -	0.2	0.3	3.8	-	0.050
ARM B	7.10	23.22	0.306	- - -	0.3	0.4	6.5	-	0.062
ARM C	1.61	14.94	0.108	- - -	0.1	0.1	1.8	-	0.075
ARM D	7.25	31.67	0.229	- - -	0.2	0.3	4.4	-	0.041
08.30-08.45									
ARM A	5.16	24.96	0.207	- - -	0.3	0.3	3.9	-	0.051
ARM B	7.10	23.22	0.306	- - -	0.4	0.4	6.6	-	0.062
ARM C	1.61	14.94	0.108	- - -	0.1	0.1	1.8	-	0.075
ARM D	7.25	31.66	0.229	- - -	0.3	0.3	4.4	-	0.041
08.45-09.00									
ARM A	4.21	25.69	0.164	- - -	0.3	0.2	3.0	-	0.047
ARM B	5.79	23.33	0.248	- - -	0.4	0.3	5.1	-	0.057
ARM C	1.31	15.51	0.085	- - -	0.1	0.1	1.4	-	0.070
ARM D	5.92	32.07	0.185	- - -	0.3	0.2	3.4	-	0.038
09.00-09.15									
ARM A	3.53	26.22	0.135	- - -	0.2	0.2	2.4	-	0.044
ARM B	4.85	23.41	0.207	- - -	0.3	0.3	4.0	-	0.054
ARM C	1.10	15.91	0.069	- - -	0.1	0.1	1.1	-	0.068
ARM D	4.96	32.37	0.153	- - -	0.2	0.2	2.7	-	0.036

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	387.0	258.0	18.3	0.05	18.3	0.05
B	532.2	354.8	30.8	0.06	30.8	0.06
C	120.7	80.4	8.6	0.07	8.6	0.07
D	544.1	362.7	21.1	0.04	21.1	0.04
ALL	1584.0	1056.0	78.7	0.05	78.7	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

========== end of file ==========

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                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\Buckenham Road Roundabout PM.vai"
(drive-on-the-left) at 09:51:30 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Buckenham Road Link Road Roundabout PM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Bunn's Bank Road
ARM D - Arm D Buckenham Road south

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
ARM C	2.66	6.70	5.20	27.50	60.00	46.0	0.443	18.472
ARM D	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-3 2031 with TC Improvements & Internal Link Road PM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	16.00	16.30	17.00	1.80	2.70	1.80
ARM B	16.00	16.30	17.00	3.40	5.10	3.40
ARM C	16.00	16.30	17.00	1.08	1.61	1.08
ARM D	16.00	16.30	17.00	1.79	2.68	1.79

DEMAND SET TITLE: SC1-3 2031 with TC Improvements & Internal Link Road PM

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
15.45 - 17.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000 0.0 (0.0)	0.757 109.0 (0.9)	0.000 0.0 (0.0)	0.243 35.0 (2.9)
	ARM B	0.511 139.0 (0.7)	0.000 0.0 (0.0)	0.239 65.0 (16.9)	0.250 68.0 (1.5)
	ARM C	0.000 0.0 (0.0)	0.256 22.0 (9.1)	0.000 0.0 (0.0)	0.744 64.0 (0.0)
	ARM D	0.208 30.0 (10.0)	0.778 112.0 (3.6)	0.014 2.0 (100.0)	0.000 0.0 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	1.80	29.06	0.062	- -	0.0	0.1	1.0	-	0.037
ARM B	3.40	23.39	0.145	- -	0.0	0.2	2.5	-	0.050
ARM C	1.08	16.72	0.065	- -	0.0	0.1	1.0	-	0.064
ARM D	1.79	31.14	0.057	- -	0.0	0.1	0.9	-	0.034
16.00-16.15									
ARM A	2.15	28.86	0.074	- -	0.1	0.1	1.2	-	0.037
ARM B	4.06	23.34	0.174	- -	0.2	0.2	3.1	-	0.052
ARM C	1.29	16.46	0.078	- -	0.1	0.1	1.2	-	0.066
ARM D	2.14	30.90	0.069	- -	0.1	0.1	1.1	-	0.035
16.15-16.30									
ARM A	2.63	28.59	0.092	- -	0.1	0.1	1.5	-	0.039
ARM B	4.97	23.28	0.214	- -	0.2	0.3	4.0	-	0.055
ARM C	1.57	16.11	0.098	- -	0.1	0.1	1.6	-	0.069
ARM D	2.61	30.57	0.085	- -	0.1	0.1	1.4	-	0.036
16.30-16.45									
ARM A	2.63	28.59	0.092	- -	0.1	0.1	1.5	-	0.039
ARM B	4.97	23.28	0.214	- -	0.3	0.3	4.1	-	0.055
ARM C	1.57	16.10	0.098	- -	0.1	0.1	1.6	-	0.069
ARM D	2.61	30.56	0.085	- -	0.1	0.1	1.4	-	0.036
16.45-17.00									
ARM A	2.15	28.86	0.074	- -	0.1	0.1	1.2	-	0.037
ARM B	4.06	23.34	0.174	- -	0.3	0.2	3.2	-	0.052
ARM C	1.29	16.46	0.078	- -	0.1	0.1	1.3	-	0.066
ARM D	2.14	30.90	0.069	- -	0.1	0.1	1.1	-	0.035
17.00-17.15									
ARM A	1.80	29.06	0.062	- -	0.1	0.1	1.0	-	0.037
ARM B	3.40	23.39	0.145	- -	0.2	0.2	2.6	-	0.050
ARM C	1.08	16.72	0.065	- -	0.1	0.1	1.1	-	0.064
ARM D	1.79	31.14	0.057	- -	0.1	0.1	0.9	-	0.034

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.2
16.15	0.2
16.30	0.3
16.45	0.3
17.00	0.2
17.15	0.2

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	197.5	131.6	7.4	0.04	7.4	0.04
B	373.0	248.6	19.5	0.05	19.5	0.05
C	118.1	78.7	7.8	0.07	7.8	0.07
D	196.2	130.8	6.8	0.03	6.8	0.03
ALL	884.7	589.8	41.5	0.05	41.5	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

========== end of file ==========

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                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\Buckenham Road Roundabout AM.vai"
(drive-on-the-left) at 09:49:11 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Buckenham Road Link Road Roundabout AM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Bunn's Bank Road
ARM D - Arm D Buckenham Road south

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
ARM C	2.66	6.70	5.20	27.50	60.00	46.0	0.443	18.472
ARM D	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

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

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-4 2031 with TC Improvements & External Link Road AM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	08.00	08.30	09.00	6.33	9.49	6.33
ARM B	08.00	08.30	09.00	6.19	9.28	6.19
ARM C	08.00	08.30	09.00	1.10	1.65	1.10
ARM D	08.00	08.30	09.00	4.31	6.47	4.31

DEMAND SET TITLE: SC1-4 2031 with TC Improvements & External Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.800	0.000	0.200
		0.0	405.0	0.0	101.0
		(0.0)	(2.2)	(0.0)	(14.9)
	ARM B	0.564	0.000	0.131	0.305
		279.0	0.0	65.0	151.0
		(0.0)	(0.0)	(24.6)	(1.3)
	ARM C	0.000	0.261	0.000	0.739
		0.0	23.0	0.0	65.0
		(0.0)	(13.0)	(0.0)	(0.0)
	ARM D	0.075	0.922	0.003	0.000
		26.0	318.0	1.0	0.0
		(3.8)	(0.9)	(100.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	6.33	26.74	0.237	- -	0.0	0.3	4.5	-	0.049
ARM B	6.19	23.18	0.267	- -	0.0	0.4	5.3	-	0.059
ARM C	1.10	14.94	0.074	- -	0.0	0.1	1.2	-	0.072
ARM D	4.31	31.53	0.137	- -	0.0	0.2	2.3	-	0.037
08.00-08.15									
ARM A	7.56	26.27	0.288	- -	0.3	0.4	5.9	-	0.053
ARM B	7.39	23.03	0.321	- -	0.4	0.5	6.9	-	0.064
ARM C	1.31	14.36	0.091	- -	0.1	0.1	1.5	-	0.077
ARM D	5.15	31.05	0.166	- -	0.2	0.2	2.9	-	0.039
08.15-08.30									
ARM A	9.25	25.63	0.361	- -	0.4	0.6	8.3	-	0.061
ARM B	9.05	22.84	0.396	- -	0.5	0.7	9.6	-	0.072
ARM C	1.61	13.57	0.119	- -	0.1	0.1	2.0	-	0.084
ARM D	6.31	30.41	0.207	- -	0.2	0.3	3.9	-	0.041
08.30-08.45									
ARM A	9.25	25.63	0.361	- -	0.6	0.6	8.4	-	0.061
ARM B	9.05	22.84	0.396	- -	0.7	0.7	9.8	-	0.073
ARM C	1.61	13.57	0.119	- -	0.1	0.1	2.0	-	0.084
ARM D	6.31	30.40	0.207	- -	0.3	0.3	3.9	-	0.041
08.45-09.00									
ARM A	7.56	26.26	0.288	- -	0.6	0.4	6.2	-	0.054
ARM B	7.39	23.03	0.321	- -	0.7	0.5	7.3	-	0.064
ARM C	1.31	14.35	0.092	- -	0.1	0.1	1.5	-	0.077
ARM D	5.15	31.05	0.166	- -	0.3	0.2	3.0	-	0.039
09.00-09.15									
ARM A	6.33	26.73	0.237	- -	0.4	0.3	4.7	-	0.049
ARM B	6.19	23.17	0.267	- -	0.5	0.4	5.6	-	0.059
ARM C	1.10	14.92	0.074	- -	0.1	0.1	1.2	-	0.072
ARM D	4.31	31.52	0.137	- -	0.2	0.2	2.4	-	0.037

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	694.2	462.8	38.1	0.05	38.1	0.05
B	678.8	452.6	44.4	0.07	44.4	0.07
C	120.7	80.4	9.4	0.08	9.4	0.08
D	473.0	315.3	18.5	0.04	18.5	0.04
ALL	1966.7	1311.1	110.4	0.06	110.5	0.06

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

END OF JOB

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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For sales and distribution information, program advice and maintenance, contact:

TRL Limited
Crowthorne House
Nine Mile Ride
Wokingham, Berks.
RG40 3GA,UK

Tel: +44 (0) 1344 770758
Fax: +44 (0) 1344 770356
Email: software@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\Buckenham Road Roundabout PM.vai"
(drive-on-the-left) at 09:52:24 on Friday, 3 May 2013

.FILE PROPERTIES

****

RUN TITLE: Buckenham Road Link Road Roundabout PM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

****

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Bunn's Bank Road
ARM D - Arm D Buckenham Road south

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
C	2.66	6.70	5.20	27.50	60.00	46.0	0.443	18.472
D	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

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

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC1-4 2031 with TC Improvements & External Link Road PM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
A	16.00	16.30	17.00	4.58	6.86	4.58
B	16.00	16.30	17.00	6.73	10.09	6.73
C	16.00	16.30	17.00	1.10	1.65	1.10
D	16.00	16.30	17.00	6.31	9.47	6.31

DEMAND SET TITLE: SC1-4 2031 with TC Improvements & External Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
15.45 - 17.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000 0.0 (0.0)	0.593 217.0 (0.9)	0.000 0.0 (0.0)	0.407 149.0 (1.3)
	ARM B	0.617 332.0 (0.6)	0.000 0.0 (0.0)	0.121 65.0 (24.6)	0.262 141.0 (5.0)
	ARM C	0.000 0.0 (0.0)	0.261 23.0 (13.0)	0.000 0.0 (0.0)	0.739 65.0 (0.0)
	ARM D	0.448 226.0 (6.6)	0.550 278.0 (4.7)	0.002 1.0 (100.0)	0.000 0.0 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	4.58	27.92	0.164	- -	0.0	0.2	2.9	-	0.043
ARM B	6.73	22.74	0.296	- -	0.0	0.4	6.1	-	0.062
ARM C	1.10	14.48	0.076	- -	0.0	0.1	1.2	-	0.075
ARM D	6.31	29.82	0.212	- -	0.0	0.3	3.9	-	0.042
16.00-16.15									
ARM A	5.47	27.47	0.199	- -	0.2	0.2	3.7	-	0.045
ARM B	8.03	22.56	0.356	- -	0.4	0.5	8.1	-	0.069
ARM C	1.31	13.81	0.095	- -	0.1	0.1	1.5	-	0.080
ARM D	7.54	29.28	0.257	- -	0.3	0.3	5.1	-	0.046
16.15-16.30									
ARM A	6.69	26.87	0.249	- -	0.2	0.3	4.9	-	0.050
ARM B	9.84	22.31	0.441	- -	0.5	0.8	11.4	-	0.080
ARM C	1.61	12.91	0.125	- -	0.1	0.1	2.1	-	0.088
ARM D	9.23	28.55	0.323	- -	0.3	0.5	7.0	-	0.052
16.30-16.45									
ARM A	6.69	26.87	0.249	- -	0.3	0.3	5.0	-	0.050
ARM B	9.84	22.31	0.441	- -	0.8	0.8	11.8	-	0.080
ARM C	1.61	12.90	0.125	- -	0.1	0.1	2.1	-	0.089
ARM D	9.23	28.54	0.323	- -	0.5	0.5	7.1	-	0.052
16.45-17.00									
ARM A	5.47	27.47	0.199	- -	0.3	0.2	3.8	-	0.045
ARM B	8.03	22.55	0.356	- -	0.8	0.6	8.5	-	0.069
ARM C	1.31	13.80	0.095	- -	0.1	0.1	1.6	-	0.080
ARM D	7.54	29.27	0.257	- -	0.5	0.3	5.3	-	0.046
17.00-17.15									
ARM A	4.58	27.91	0.164	- -	0.2	0.2	3.0	-	0.043
ARM B	6.73	22.73	0.296	- -	0.6	0.4	6.5	-	0.063
ARM C	1.10	14.46	0.076	- -	0.1	0.1	1.3	-	0.075
ARM D	6.31	29.80	0.212	- -	0.3	0.3	4.1	-	0.043

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.2	
16.15	0.2	
16.30	0.3	
16.45	0.3	
17.00	0.2	
17.15	0.2	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.4	
16.15	0.5	*
16.30	0.8	*
16.45	0.8	*
17.00	0.6	*
17.15	0.4	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.3
16.15	0.3
16.30	0.5
16.45	0.5
17.00	0.3
17.15	0.3

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	502.0	334.7	23.2	0.05	23.2	0.05
B	738.1	492.0	52.4	0.07	52.4	0.07
C	120.7	80.4	9.8	0.08	9.8	0.08
D	692.4	461.6	32.6	0.05	32.6	0.05
ALL	2053.1	1368.8	118.0	0.06	118.0	0.06

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

END OF JOB

========== end of file ==========

```
                    ARCADY 6

          ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


          Analysis Program: Release 7.0 (FEBRUARY 2010)

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      TRL Limited            Tel:   +44 (0) 1344 770758
      Crowthorne House       Fax:   +44 (0) 1344 770356
      Nine Mile Ride         Email: software@trl.co.uk
      Wokingham, Berks.      Web:   www.trlsoftware.co.uk
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 ------------------------------------------------------------------------------
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 ------------------------------------------------------------------------------

 Run with file:-
 "p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\Buckenham Road Roundabout AM.vai"
(drive-on-the-left ) at 09:49:56 on Friday, 3 May 2013

 .FILE PROPERTIES
 ***************

   RUN TITLE: Buckenham Road Link Road Roundabout AM
    LOCATION: Attleborough
        DATE: 01/05/13
      CLIENT: Breckland Council
  ENUMERATOR: LloydM [HW62357]
  JOB NUMBER: CS060268
      STATUS:
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - Arm A Link Road
 ARM B - Arm B Buckenham Road north
 ARM C - Arm C Bunn's Bank Road
 ARM D - Arm D Buckenham Road south

.GEOMETRIC DATA
 --------------
 ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.65   I     6.77   I    46.00   I    25.00   I   60.00   I     41.0     I  0.572  I       30.488        I
 I ARM  B I    2.78   I     7.70   I    15.00   I    22.50   I   60.00   I     47.0     I  0.506  I       24.760        I
 I ARM  C I    2.66   I     6.70   I     5.20   I    27.50   I   60.00   I     46.0     I  0.443  I       18.472        I
 I ARM  D I    3.30   I     7.25   I    37.00   I    76.00   I   60.00   I     14.0     I  0.644  I       34.420        I
 ------------------------------------------------------------------------------------------------------------------------

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

 **WARNING** ARM A Effective flare length is outside normal range.
  Treat capacities with increasing caution.

 **WARNING** ARM D Effective flare length is outside normal range.
  Treat capacities with increasing caution.


.TRAFFIC DEMAND DATA
 -------------------
  Only sets included in the current run are shown
.SCALING FACTORS
.---------------------- T13
 IARM  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(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -


.DEMAND SET TITLE: SC2-3 2031 with TC Improvements & Internal Link Road AM
 ------------------------------------------------------------------------------------------------------
 I        I TIME WHEN         I TIME WHEN         I  TIME WHEN        I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS       I TOP OF PEAK       I FLOW STOPS        I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE         I IS REACHED        I FALLING           I  PEAK       I OF PEAK  I PEAK     I
 ------------------------------------------------------------------------------------------------------
 I ARM  A I        08.00      I        08.30      I        09.00      I  3.70      I   5.55    I  3.70    I
 I ARM  B I        08.00      I        08.30      I        09.00      I  5.38      I   8.06    I  5.38    I
 I ARM  C I        08.00      I        08.30      I        09.00      I  1.10      I   1.65    I  1.10    I
 I ARM  D I        08.00      I        08.30      I        09.00      I  4.80      I   7.20    I  4.80    I
 ------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC2-3 2031 with TC Improvements & Internal Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000 0.0 (0.0)	0.831 246.0 (3.7)	0.000 0.0 (0.0)	0.169 50.0 (20.0)
	ARM B	0.479 206.0 (3.4)	0.000 0.0 (0.0)	0.144 62.0 (17.7)	0.377 162.0 (1.2)
	ARM C	0.000 0.0 (0.0)	0.250 22.0 (9.1)	0.000 0.0 (0.0)	0.750 66.0 (0.0)
	ARM D	0.063 24.0 (4.2)	0.935 359.0 (0.8)	0.003 1.0 (100.0)	0.000 0.0 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	3.70	26.03	0.142	- - -	0.0	0.2	2.4	-	0.045
ARM B	5.38	23.29	0.231	- - -	0.0	0.3	4.4	-	0.056
ARM C	1.10	15.69	0.070	- - -	0.0	0.1	1.1	-	0.068
ARM D	4.80	32.10	0.150	- - -	0.0	0.2	2.6	-	0.037
08.00-08.15									
ARM A	4.42	25.53	0.173	- - -	0.2	0.2	3.1	-	0.047
ARM B	6.42	23.22	0.277	- - -	0.3	0.4	5.6	-	0.060
ARM C	1.31	15.23	0.086	- - -	0.1	0.1	1.4	-	0.072
ARM D	5.73	31.74	0.181	- - -	0.2	0.2	3.3	-	0.038
08.15-08.30									
ARM A	5.41	24.83	0.218	- - -	0.2	0.3	4.1	-	0.051
ARM B	7.86	23.12	0.340	- - -	0.4	0.5	7.5	-	0.065
ARM C	1.61	14.60	0.110	- - -	0.1	0.1	1.8	-	0.077
ARM D	7.02	31.24	0.225	- - -	0.2	0.3	4.3	-	0.041
08.30-08.45									
ARM A	5.41	24.83	0.218	- - -	0.3	0.3	4.2	-	0.052
ARM B	7.86	23.12	0.340	- - -	0.5	0.5	7.7	-	0.066
ARM C	1.61	14.60	0.110	- - -	0.1	0.1	1.9	-	0.077
ARM D	7.02	31.23	0.225	- - -	0.3	0.3	4.3	-	0.041
08.45-09.00									
ARM A	4.42	25.53	0.173	- - -	0.3	0.2	3.2	-	0.047
ARM B	6.42	23.22	0.277	- - -	0.5	0.4	5.9	-	0.060
ARM C	1.31	15.23	0.086	- - -	0.1	0.1	1.4	-	0.072
ARM D	5.73	31.73	0.181	- - -	0.3	0.2	3.4	-	0.038
09.00-09.15									
ARM A	3.70	26.03	0.142	- - -	0.2	0.2	2.5	-	0.045
ARM B	5.38	23.29	0.231	- - -	0.4	0.3	4.6	-	0.056
ARM C	1.10	15.69	0.070	- - -	0.1	0.1	1.2	-	0.069
ARM D	4.80	32.10	0.150	- - -	0.2	0.2	2.7	-	0.037

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	405.9	270.6	19.5	0.05	19.5	0.05
B	589.8	393.2	35.7	0.06	35.7	0.06
C	120.7	80.4	8.8	0.07	8.8	0.07
D	526.5	351.0	20.5	0.04	20.5	0.04
ALL	1642.9	1095.3	84.5	0.05	84.5	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

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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Crowthorne House — Fax: +44 (0) 1344 770356
Nine Mile Ride — Email: software@trl.co.uk
Wokingham, Berks. — Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\Buckenham Road Roundabout PM.vai"
(drive-on-the-left) at 09:53:23 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Buckenham Road Link Road Roundabout PM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Bunn's Bank Road
ARM D - Arm D Buckenham Road south

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
ARM C	2.66	6.70	5.20	27.50	60.00	46.0	0.443	18.472
ARM D	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-3 2031 with TC Improvements & Internal Link Road PM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	16.00	16.30	17.00	4.71	7.07	4.71
ARM B	16.00	16.30	17.00	6.94	10.41	6.94
ARM C	16.00	16.30	17.00	1.10	1.65	1.10
ARM D	16.00	16.30	17.00	3.43	5.14	3.43

DEMAND SET TITLE: SC2-3 2031 with TC Improvements & Internal Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
15.45 - 17.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000 0.0 (0.0)	0.828 312.0 (1.0)	0.000 0.0 (0.0)	0.172 65.0 (1.5)
	ARM B	0.638 354.0 (2.3)	0.000 0.0 (0.0)	0.112 62.0 (17.7)	0.250 139.0 (2.2)
	ARM C	0.000 0.0 (0.0)	0.250 22.0 (9.1)	0.000 0.0 (0.0)	0.750 66.0 (0.0)
	ARM D	0.208 57.0 (12.3)	0.788 216.0 (2.8)	0.004 1.0 (100.0)	0.000 0.0 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	4.71	28.41	0.166	- -	0.0	0.2	2.9	-	0.042
ARM B	6.94	23.40	0.297	- -	0.0	0.4	6.1	-	0.061
ARM C	1.10	14.98	0.073	- -	0.0	0.1	1.2	-	0.072
ARM D	3.43	29.79	0.115	- -	0.0	0.1	1.9	-	0.038
16.00-16.15									
ARM A	5.63	28.06	0.200	- -	0.2	0.2	3.7	-	0.045
ARM B	8.29	23.32	0.355	- -	0.4	0.5	8.1	-	0.066
ARM C	1.31	14.37	0.091	- -	0.1	0.1	1.5	-	0.077
ARM D	4.09	29.21	0.140	- -	0.1	0.2	2.4	-	0.040
16.15-16.30									
ARM A	6.89	27.59	0.250	- -	0.2	0.3	4.9	-	0.048
ARM B	10.15	23.20	0.437	- -	0.5	0.8	11.3	-	0.076
ARM C	1.61	13.55	0.119	- -	0.1	0.1	2.0	-	0.084
ARM D	5.01	28.42	0.176	- -	0.2	0.2	3.2	-	0.043
16.30-16.45									
ARM A	6.89	27.59	0.250	- -	0.3	0.3	5.0	-	0.048
ARM B	10.15	23.20	0.437	- -	0.8	0.8	11.6	-	0.077
ARM C	1.61	13.54	0.119	- -	0.1	0.1	2.0	-	0.084
ARM D	5.01	28.41	0.176	- -	0.2	0.2	3.2	-	0.043
16.45-17.00									
ARM A	5.63	28.06	0.200	- -	0.3	0.3	3.8	-	0.045
ARM B	8.29	23.32	0.355	- -	0.8	0.6	8.5	-	0.067
ARM C	1.31	14.36	0.091	- -	0.1	0.1	1.5	-	0.077
ARM D	4.09	29.20	0.140	- -	0.2	0.2	2.5	-	0.040
17.00-17.15									
ARM A	4.71	28.40	0.166	- -	0.3	0.2	3.0	-	0.042
ARM B	6.94	23.40	0.297	- -	0.6	0.4	6.5	-	0.061
ARM C	1.10	14.97	0.073	- -	0.1	0.1	1.2	-	0.072
ARM D	3.43	29.78	0.115	- -	0.2	0.1	2.0	-	0.038

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.2	
16.15	0.2	
16.30	0.3	
16.45	0.3	
17.00	0.3	
17.15	0.2	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.4	
16.15	0.5	*
16.30	0.8	*
16.45	0.8	*
17.00	0.6	*
17.15	0.4	

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.2
16.30	0.2
16.45	0.2
17.00	0.2
17.15	0.1

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *		T75
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)	
A	516.9	344.6	23.4	0.05	23.4	0.05	
B	761.3	507.5	52.1	0.07	52.1	0.07	
C	120.7	80.4	9.4	0.08	9.4	0.08	
D	376.1	250.7	15.2	0.04	15.2	0.04	
ALL	1774.9	1183.3	100.0	0.06	100.0	0.06	

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

END OF JOB

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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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:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\Buckenham Road Roundabout AM.vai"
(drive-on-the-left ) at 09:50:41 on Friday, 3 May 2013


.FILE PROPERTIES
 ***************

   RUN TITLE: Buckenham Road Link Road Roundabout AM
    LOCATION: Attleborough
        DATE: 01/05/13
      CLIENT: Breckland Council
  ENUMERATOR: LloydM [HW62357]
  JOB NUMBER: CS060268
      STATUS:
 DESCRIPTION:

.INPUT DATA
 **********
 ARM A - Arm A Link Road
 ARM B - Arm B Buckenham Road north
 ARM C - Arm C Bunn's Bank Road
 ARM D - Arm D Buckenham Road south

.GEOMETRIC DATA
 --------------
  ------------------------------------------------------------------------------------------------------------------------ T5
 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    3.65   I     6.77   I    46.00   I    25.00   I   60.00   I     41.0     I  0.572  I       30.488        I
 I ARM  B I    2.78   I     7.70   I    15.00   I    22.50   I   60.00   I     47.0     I  0.506  I       24.760        I
 I ARM  C I    2.66   I     6.70   I     5.20   I    27.50   I   60.00   I     46.0     I  0.443  I       18.472        I
 I ARM  D I    3.30   I     7.25   I    37.00   I    76.00   I   60.00   I     14.0     I  0.644  I       34.420        I
 ------------------------------------------------------------------------------------------------------------------------

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

 **WARNING** ARM A Effective flare length is outside normal range.
  Treat capacities with increasing caution.

 **WARNING** ARM D Effective flare length is outside normal range.
  Treat capacities with increasing caution.

.TRAFFIC DEMAND DATA
 -------------------

 Only sets included in the current run are shown
.SCALING FACTORS
.---------------------- T13
 IARM  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(07.45)AND ENDS(09.15)
.LENGTH OF TIME PERIOD -(  90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-4 2031 with TC Improvements & External Link Road AM
 ---------------------------------------------------------------------------------------------------------
 I        I TIME WHEN        I TIME WHEN        I  TIME WHEN       I   RATE OF FLOW (VEH/MIN)          I
 I  ARM   I FLOW STARTS      I TOP OF PEAK      I FLOW STOPS       I BEFORE      IAT TOP    I AFTER    I
 I        I   TO RISE        I IS REACHED       I FALLING          I  PEAK       I OF PEAK  I PEAK     I
 ---------------------------------------------------------------------------------------------------------
 I ARM  A I        08.00      I        08.30     I        09.00     I  6.78      I  10.16    I  6.78    I
 I ARM  B I        08.00      I        08.30     I        09.00     I  6.74      I  10.11    I  6.74    I
 I ARM  C I        08.00      I        08.30     I        09.00     I  1.08      I   1.61    I  1.08    I
 I ARM  D I        08.00      I        08.30     I        09.00     I  4.36      I   6.54    I  4.36    I
 ---------------------------------------------------------------------------------------------------------
```

DEMAND SET TITLE: SC2-4 2031 with TC Improvements & External Link Road AM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
07.45 - 09.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000	0.828	0.000	0.172
		0.0	449.0	0.0	93.0
		(0.0)	(3.1)	(0.0)	(17.2)
	ARM B	0.568	0.000	0.122	0.310
		306.0	0.0	66.0	167.0
		(2.0)	(0.0)	(24.2)	(1.2)
	ARM C	0.000	0.256	0.000	0.744
		0.0	22.0	0.0	64.0
		(0.0)	(9.1)	(0.0)	(0.0)
	ARM D	0.069	0.928	0.003	0.000
		24.0	324.0	1.0	0.0
		(4.2)	(0.6)	(100.0)	(0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	6.78	26.52	0.256	- -	0.0	0.3	5.0	-	0.051
ARM B	6.74	23.03	0.293	- -	0.0	0.4	6.0	-	0.061
ARM C	1.08	14.87	0.073	- -	0.0	0.1	1.1	-	0.072
ARM D	4.36	31.37	0.139	- -	0.0	0.2	2.4	-	0.037
08.00-08.15									
ARM A	8.09	26.05	0.311	- -	0.3	0.4	6.6	-	0.056
ARM B	8.05	22.90	0.351	- -	0.4	0.5	7.9	-	0.067
ARM C	1.29	14.24	0.090	- -	0.1	0.1	1.5	-	0.077
ARM D	5.21	30.84	0.169	- -	0.2	0.2	3.0	-	0.039
08.15-08.30									
ARM A	9.91	25.41	0.390	- -	0.4	0.6	9.3	-	0.064
ARM B	9.86	22.72	0.434	- -	0.5	0.8	11.1	-	0.078
ARM C	1.57	13.38	0.117	- -	0.1	0.1	1.9	-	0.085
ARM D	6.38	30.12	0.212	- -	0.2	0.3	4.0	-	0.042
08.30-08.45									
ARM A	9.91	25.41	0.390	- -	0.6	0.6	9.5	-	0.064
ARM B	9.86	22.72	0.434	- -	0.8	0.8	11.4	-	0.078
ARM C	1.57	13.38	0.117	- -	0.1	0.1	2.0	-	0.085
ARM D	6.38	30.12	0.212	- -	0.3	0.3	4.0	-	0.042
08.45-09.00									
ARM A	8.09	26.04	0.311	- -	0.6	0.5	6.9	-	0.056
ARM B	8.05	22.90	0.351	- -	0.8	0.5	8.4	-	0.067
ARM C	1.29	14.23	0.090	- -	0.1	0.1	1.5	-	0.077
ARM D	5.21	30.83	0.169	- -	0.3	0.2	3.1	-	0.039
09.00-09.15									
ARM A	6.78	26.51	0.256	- -	0.5	0.3	5.3	-	0.051
ARM B	6.74	23.03	0.293	- -	0.5	0.4	6.4	-	0.061
ARM C	1.08	14.85	0.073	- -	0.1	0.1	1.2	-	0.073
ARM D	4.36	31.35	0.139	- -	0.2	0.2	2.5	-	0.037

.QUEUE AT ARM A

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

.QUEUE AT ARM B

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

.QUEUE AT ARM C

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

.QUEUE AT ARM D

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

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	743.4	495.6	42.7	0.06	42.7	0.06
B	739.4	492.9	51.2	0.07	51.2	0.07
C	118.1	78.7	9.3	0.08	9.3	0.08
D	478.3	318.9	18.9	0.04	18.9	0.04
ALL	2079.1	1386.1	122.1	0.06	122.1	0.06

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

END OF JOB

========== end of file ==========

```
                    ARCADY 6

        ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY


        Analysis Program: Release 7.0 (FEBRUARY 2010)

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Crowthorne House — Fax: +44 (0) 1344 770356
Nine Mile Ride — Email: software@trl.co.uk
Wokingham, Berks. — Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0063xx\cg006312\Arcady\Buckenham Road Roundabout\Buckenham Road Roundabout PM.vai"
(drive-on-the-left) at 09:54:39 on Friday, 3 May 2013

.FILE PROPERTIES

RUN TITLE: Buckenham Road Link Road Roundabout PM
LOCATION: Attleborough
DATE: 01/05/13
CLIENT: Breckland Council
ENUMERATOR: LloydM [HW62357]
JOB NUMBER: CS060268
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - Arm A Link Road
ARM B - Arm B Buckenham Road north
ARM C - Arm C Bunn's Bank Road
ARM D - Arm D Buckenham Road south

.GEOMETRIC DATA

T5

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.77	46.00	25.00	60.00	41.0	0.572	30.488
ARM B	2.78	7.70	15.00	22.50	60.00	47.0	0.506	24.760
ARM C	2.66	6.70	5.20	27.50	60.00	46.0	0.443	18.472
ARM D	3.30	7.25	37.00	76.00	60.00	14.0	0.644	34.420

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

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

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

.TRAFFIC DEMAND DATA

Only sets included in the current run are shown

.SCALING FACTORS

T13

IARM	FLOW SCALE(%)
A	100
B	100
C	100
D	100

TIME PERIOD BEGINS(15.45)AND ENDS(17.15)
.LENGTH OF TIME PERIOD -(90) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM THE FOLLOWING INPUT DATA -

.DEMAND SET TITLE: SC2-4 2031 with TC Improvements & External Link Road PM

ARM	TIME WHEN FLOW STARTS TO RISE	TIME WHEN TOP OF PEAK IS REACHED	TIME WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) IAT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	16.00	16.30	17.00	4.86	7.29	4.86
ARM B	16.00	16.30	17.00	8.01	12.02	8.01
ARM C	16.00	16.30	17.00	1.08	1.61	1.08
ARM D	16.00	16.30	17.00	6.23	9.34	6.23

DEMAND SET TITLE: SC2-4 2031 with TC Improvements & External Link Road PM

T33

TIME	FROM/T	ARM A	ARM B	ARM C	ARM D
15.45 - 17.15		TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S)			
	ARM A	0.000 0.0 (0.0)	0.761 296.0 (0.7)	0.000 0.0 (0.0)	0.239 93.0 (2.2)
	ARM B	0.722 463.0 (1.5)	0.000 0.0 (0.0)	0.103 66.0 (24.2)	0.175 112.0 (4.5)
	ARM C	0.000 0.0 (0.0)	0.256 22.0 (9.1)	0.000 0.0 (0.0)	0.744 64.0 (0.0)
	ARM D	0.325 162.0 (8.6)	0.673 335.0 (3.6)	0.002 1.0 (100.0)	0.000 0.0 (0.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

T70

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
15.45-16.00									
ARM A	4.86	27.53	0.177	- -	0.0	0.2	3.2	-	0.044
ARM B	8.01	23.14	0.346	- -	0.0	0.5	7.7	-	0.066
ARM C	1.08	14.37	0.075	- -	0.0	0.1	1.2	-	0.075
ARM D	6.23	28.89	0.216	- -	0.0	0.3	4.0	-	0.044
16.00-16.15									
ARM A	5.80	27.02	0.215	- -	0.2	0.3	4.0	-	0.047
ARM B	9.57	23.02	0.415	- -	0.5	0.7	10.4	-	0.074
ARM C	1.29	13.65	0.094	- -	0.1	0.1	1.5	-	0.081
ARM D	7.44	28.15	0.264	- -	0.3	0.4	5.3	-	0.048
16.15-16.30									
ARM A	7.11	26.31	0.270	- -	0.3	0.4	5.4	-	0.052
ARM B	11.72	22.87	0.512	- -	0.7	1.0	15.1	-	0.089
ARM C	1.57	12.66	0.124	- -	0.1	0.1	2.1	-	0.090
ARM D	9.11	27.14	0.336	- -	0.4	0.5	7.4	-	0.055
16.30-16.45									
ARM A	7.11	26.31	0.270	- -	0.4	0.4	5.5	-	0.052
ARM B	11.72	22.87	0.513	- -	1.0	1.0	15.6	-	0.090
ARM C	1.57	12.65	0.124	- -	0.1	0.1	2.1	-	0.090
ARM D	9.11	27.13	0.336	- -	0.5	0.5	7.5	-	0.056
16.45-17.00									
ARM A	5.80	27.01	0.215	- -	0.4	0.3	4.2	-	0.047
ARM B	9.57	23.02	0.416	- -	1.0	0.7	11.0	-	0.075
ARM C	1.29	13.63	0.094	- -	0.1	0.1	1.6	-	0.081
ARM D	7.44	28.13	0.264	- -	0.5	0.4	5.5	-	0.048
17.00-17.15									
ARM A	4.86	27.52	0.177	- -	0.3	0.2	3.3	-	0.044
ARM B	8.01	23.14	0.346	- -	0.7	0.5	8.2	-	0.066
ARM C	1.08	14.35	0.075	- -	0.1	0.1	1.2	-	0.075
ARM D	6.23	28.87	0.216	- -	0.4	0.3	4.2	-	0.044

.QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.2	
16.15	0.3	
16.30	0.4	
16.45	0.4	
17.00	0.3	
17.15	0.2	

.QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.5	*
16.15	0.7	*
16.30	1.0	*
16.45	1.0	*
17.00	0.7	*
17.15	0.5	*

.QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
16.00	0.1
16.15	0.1
16.30	0.1
16.45	0.1
17.00	0.1
17.15	0.1

.QUEUE AT ARM D

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
16.00	0.3	
16.15	0.4	
16.30	0.5	*
16.45	0.5	*
17.00	0.4	
17.15	0.3	

.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

T75

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	533.1	355.4	25.6	0.05	25.6	0.05
B	878.9	585.9	68.0	0.08	68.0	0.08
C	118.1	78.7	9.7	0.08	9.7	0.08
D	683.2	455.5	34.0	0.05	34.0	0.05
ALL	2213.3	1475.5	137.3	0.06	137.3	0.06

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

END OF JOB

========== end of file ==========