

A R C A D Y 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 7.0 (FEBRUARY 2010)

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Run with file:-

"p:\17000 PROJECTS\M17132 Plas Coch Retail Park\Tech\Junction Assessments & Modelling\Arcady\Working\September\
M17132 B5101 Plas Coch Rd 2023 Base + Dev + Hotel Saturday Peak.vai"
(drive-on-the-left) at 16:37:49 on Monday, 3 September 2018

.FILE PROPERTIES

RUN TITLE: Plas Coch Road
LOCATION: Wrexham
DATE: 03/09/18
CLIENT:
ENUMERATOR: WS
JOB NUMBER: M17132
STATUS:
DESCRIPTION:

.INPUT DATA

ARM A - B5101 Plas Coch Rd N
ARM B - University
ARM C - B5101 Plas Coch Rd S
ARM D - Retail Park

.GEOMETRIC DATA

I	ARM	I	V (M)	I	E (M)	I	L (M)	I	R (M)	I	D (M)	I	PHI (DEG)	I	SLOPE	I	INTERCEPT (PCU/MIN)	I	T5
I	ARM A	I	5.54	I	5.97	I	0.40	I	23.30	I	35.90	I	45.0	I	0.622	I	27.182	I	
I	ARM B	I	2.67	I	4.07	I	2.00	I	13.70	I	35.90	I	61.0	I	0.432	I	13.628	I	
I	ARM C	I	4.88	I	10.11	I	4.50	I	27.90	I	35.90	I	52.0	I	0.631	I	28.351	I	
I	ARM D	I	7.36	I	7.36	I	0.00	I	30.90	I	35.90	I	11.0	I	0.820	I	40.260	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

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

TIME PERIOD BEGINS(11.45)AND ENDS(12.45)
.LENGTH OF TIME PERIOD -(60) MINUTES
.LENGTH OF TIME SEGMENT - (15) MINUTES

.DEMAND FLOW PROFILES ARE INPUT DIRECTLY.
.DEMAND SET TITLE: Plas Coch Road

DEMAND SET TITLE: Plas Coch Road

----- T33

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

		Base + Dev + Hotel_Saturday											
I		I	FROM/T	I	ARM A	I	ARM B	I	ARM C	I	ARM D	I	
	TIME												
I	11.45 - 12.45	I		I		I		I		I		I	
I			ARM A	I	0.000	I	0.013	I	0.533	I	0.454	I	
I				I	0.0	I	0.7	I	28.8	I	24.5	I	
I				I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	
I				I		I		I		I		I	
I				ARM B	I	0.240	I	0.000	I	0.680	I	0.080	I
I					I	0.6	I	0.0	I	1.7	I	0.2	I
I					I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I					I		I		I		I		I
I					I		I		I		I		I
I				ARM C	I	0.167	I	0.016	I	0.000	I	0.817	I
I					I	21.4	I	2.1	I	0.0	I	104.6	I
I					I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I
I					I		I		I		I		I
I				ARM D	I	0.196	I	0.004	I	0.799	I	0.000	I
I					I	23.3	I	0.5	I	94.9	I	0.0	I
I				I	(0.0)	I	(0.0)	I	(0.0)	I	(0.0)	I	
I				I		I		I		I		I	

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

I	TIME	I	DEMAND	I	CAPACITY	I	DEMAND/	I	PEDESTRIAN	I	START	I	END	I	DELAY	I	GEOMETRIC DELAY	I	AVERAGE DELAY	I
I		I	(VEH/MIN)	I	(VEH/MIN)	I	CAPACITY	I	FLOW	I	QUEUE	I	QUEUE	I	(VEH.MIN/	I	(VEH.MIN/	I	PER ARRIVING	I
I		I		I		I	(RFC)	I	(PEDS/MIN)	I	(VEHS)	I	(VEHS)	I	TIME SEGMENT)	I	TIME SEGMENT)	I	VEHICLE (MIN)	I
I	11.45-12.00	I		I		I		I		I		I		I		I		I		I
I	ARM A	I	7.55	I	16.24	I	0.465	I	- -	I	0.0	I	0.9	I	12.3	I	-	I	0.114	I
I	ARM B	I	0.55	I	3.03	I	0.182	I	- -	I	0.0	I	0.2	I	3.0	I	-	I	0.399	I
I	ARM C	I	20.90	I	26.10	I	0.801	I	- -	I	0.0	I	3.8	I	50.8	I	-	I	0.176	I
I	ARM D	I	21.55	I	37.05	I	0.582	I	- -	I	0.0	I	1.4	I	19.9	I	-	I	0.064	I
I		I		I		I		I		I		I		I		I		I		I
I	12.00-12.15	I		I		I		I		I		I		I		I		I		I
I	ARM A	I	9.00	I	17.10	I	0.526	I	- -	I	0.9	I	1.1	I	15.9	I	-	I	0.123	I
I	ARM B	I	0.42	I	2.99	I	0.140	I	- -	I	0.2	I	0.2	I	2.6	I	-	I	0.390	I
I	ARM C	I	21.30	I	25.69	I	0.829	I	- -	I	3.8	I	4.5	I	64.8	I	-	I	0.222	I
I	ARM D	I	19.70	I	36.98	I	0.533	I	- -	I	1.4	I	1.1	I	17.6	I	-	I	0.058	I
I		I		I		I		I		I		I		I		I		I		I
I	12.15-12.30	I		I		I		I		I		I		I		I		I		I
I	ARM A	I	9.00	I	17.11	I	0.526	I	- -	I	1.1	I	1.1	I	16.5	I	-	I	0.123	I
I	ARM B	I	0.42	I	2.99	I	0.140	I	- -	I	0.2	I	0.2	I	2.5	I	-	I	0.390	I
I	ARM C	I	21.30	I	25.69	I	0.829	I	- -	I	4.5	I	4.7	I	69.3	I	-	I	0.226	I
I	ARM D	I	19.70	I	36.97	I	0.533	I	- -	I	1.1	I	1.1	I	17.2	I	-	I	0.058	I
I		I		I		I		I		I		I		I		I		I		I
I	12.30-12.45	I		I		I		I		I		I		I		I		I		I
I	ARM A	I	9.00	I	17.11	I	0.526	I	- -	I	1.1	I	1.1	I	16.5	I	-	I	0.123	I
I	ARM B	I	0.42	I	2.99	I	0.140	I	- -	I	0.2	I	0.2	I	2.5	I	-	I	0.390	I
I	ARM C	I	21.30	I	25.69	I	0.829	I	- -	I	4.7	I	4.7	I	70.5	I	-	I	0.227	I
I	ARM D	I	19.70	I	36.97	I	0.533	I	- -	I	1.1	I	1.1	I	17.2	I	-	I	0.058	I

QUEUE AT ARM A

TIME SEGMENT	NO. OF
ENDING	VEHICLES
	IN QUEUE
12.00	0.9 *
12.15	1.1 *
12.30	1.1 *
12.45	1.1 *

QUEUE AT ARM B

TIME SEGMENT	NO. OF
ENDING	VEHICLES
	IN QUEUE
12.00	0.2
12.15	0.2

12.30 0.2
12.45 0.2

.QUEUE AT ARM C

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TIME SEGMENT NO. OF
ENDING      VEHICLES
            IN QUEUE

12.00      3.8 ****
12.15      4.5 *****
12.30      4.7 *****
12.45      4.7 *****
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.QUEUE AT ARM D

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TIME SEGMENT NO. OF
ENDING      VEHICLES
            IN QUEUE

12.00      1.4 *
12.15      1.1 *
12.30      1.1 *
12.45      1.1 *
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.QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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-----
I ARM I TOTAL DEMAND I * QUEUEING * I * INCLUSIVE QUEUEING * I T75
I I I I I * DELAY * I I * DELAY * I I
I I I-----I
I I I (VEH) (VEH/H) I (MIN) (MIN/VEH) I (MIN) (MIN/VEH) I I
-----
I A I 518.3 I 518.3 I 61.2 I 0.12 I 61.2 I 0.12 I
I B I 27.1 I 27.1 I 10.6 I 0.39 I 10.6 I 0.39 I
I C I 1272.0 I 1272.0 I 255.4 I 0.20 I 255.9 I 0.20 I
I D I 1209.7 I 1209.7 I 71.9 I 0.06 I 71.9 I 0.06 I
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I ALL I 3027.1 I 3027.1 I 399.0 I 0.13 I 399.5 I 0.13 I
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* 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 =====