```
****************************************** 5  GWENT CONSULTANCY.
****  ---------- HANDI-COUNT ------v02zm ****  LOCATION:_____________________
****  MANUAL CLASSIFIED JUNCTION SURVEY  ****        _____________________
****   COPYRIGHT  ISCA DEVELOPMENTS.     ****
******************************************
 STANDARD TURNS
UNIT NUMBER ..... 5        PORT RD/PORTKERRY   CR3670
SITE NUMBER..... 9          RD/TERMINAL        DAY..... WEDNESDAY
APPROACH DIRECTION.             BUILDINGS      DATE..... 17:11:2004
START CLOCK TIME... 07:10                      OPERATOR Nr.. 002□□□
TIME OF LAST INPUT. 17:59                      P/SET PERIOD. 07:30-18:00
INTERVAL.(mins).... 15                         WEATHER ..... CLOUDY
```

START TIME	FROM PORT RD R/A TO PORTKERRY RD PCL	CAR	BUS	LGV	GV1	GV2	TO TERMINAL BUILDINGS PCL	CAR	BUS	LGV	GV1	GV2	FROM TERMINAL BUILDINGS TO PORTHKERRY RD PCL	CAR	BUS	LGV	GV1	GV2
07:30	0	14	2	6	0	0	0	1	0	0	0	2	0	0	0	0	0	0
07:45	0	32	5	8	2	0	0	7	0	0	1	0	0	1	0	0	0	0
H/tot	0	46	7	14	2	0	0	8	0	0	1	2	0	1	0	0	0	0
DIR-TOTALS.(MVs):		69								11						1	..=	81
08:00	0	23	0	5	0	1	0	1	0	2	0	0	1	0	0	0	0	0
08:15	0	44	0	6	1	1	0	2	0	0	0	0	0	1	0	0	0	0
08:30	0	35	1	10	1	0	0	4	0	3	0	1	0	0	0	1	0	1
08:45	0	32	0	14	0	0	0	6	0	3	0	0	0	0	0	0	0	0
H/tot	0	134	1	35	2	2	0	13	0	8	0	1	1	1	0	1	0	1
DIR-TOTALS.(MVs):		174								22						3	..=	199
09:00	0	30	1	8	2	0	0	3	0	2	0	0	0	0	0	0	0	0
09:15	0	29	1	9	4	0	0	5	0	1	0	0	0	0	0	0	1	1
09:30	0	30	1	3	2	0	0	1	0	1	0	1	0	0	0	0	0	0
09:45	0	39	1	10	2	0	0	2	0	1	0	2	0	0	0	0	0	0
H/tot	0	128	4	30	10	0	0	11	0	5	0	3	0	0	0	0	1	1
DIR-TOTALS.(MVs):		172								19						2	..=	193
12:00	0	60	2	10	1	0	0	1	0	1	0	0	0	0	0	0	0	0
12:15	0	49	1	9	2	0	0	0	0	1	0	0	0	2	0	0	0	0
12:30	0	41	2	9	3	0	0	3	0	0	1	0	0	1	0	0	0	0
12:45	0	62	1	7	3	0	0	4	0	1	0	0	0	3	0	0	0	0
H/tot	0	212	6	35	9	0	0	8	0	3	1	0	0	6	0	0	0	0
DIR-TOTALS.(MVs):		262								12						6	..=	280
13:00	0	40	2	1	3	1	0	3	0	0	0	0	0	2	0	0	0	0
13:15	0	56	0	11	2	0	0	2	0	1	0	1	0	0	0	0	0	0
13:30	0	31	1	5	3	0	0	0	0	3	0	0	0	1	0	0	0	0
13:45	0	56	1	9	0	1	0	2	0	2	1	0	0	0	0	0	0	0
H/tot	0	183	4	26	8	2	0	7	0	6	1	1	0	3	0	0	0	0
DIR-TOTALS.(MVs):		223								15						3	..=	241
15:30	0	65	4	4	2	0	0	3	0	0	0	2	0	0	0	0	0	0
15:45	0	86	3	5	2	0	0	1	0	2	0	0	0	1	0	0	0	0
H/tot	0	151	7	9	4	0	0	4	0	2	0	2	0	1	0	0	0	0

DIR-TOTALS.(MVs):	171	:.....:	:.....:		8	:.....:	:.....:		1	..= 180									
16:00	0	86	10	8	0	0	0	1	0	0	0	1	0	2	0	0	0	0	
16:15	0	110	1	8	0	0	0	2	0	2	2	1	0	3	0	0	0	0	
16:30	0	109	1	4	1	0	0	0	0	2	0	0	0	0	0	0	0	0	
16:45	0	116	0	6	1	0	0	2	0	1	0	0	0	1	0	0	0	0	
H/tot	0	421	12	26	2	0	0	5	0	5	2	2	0	6	0	0	0	0	
DIR-TOTALS.(MVs):	461	:.....:	:.....:		14	:.....:	:.....:		6	..= 481									
17:00	0	108	1	13	0	0	0	1	0	1	3	0	0	1	0	0	0	0	
17:15	0	118	1	7	0	0	0	0	0	2	0	0	0	1	0	0	0	0	
17:30	0	122	1	14	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
17:45	0	134	1	12	0	1	0	1	0	1	0	0	0	1	0	0	0	0	
H/tot	0	482	4	46	0	1	0	3	0	4	3	0	0	3	0	0	0	0	
DIR-TOTALS.(MVs):	533	:.....:	:.....:		10	:.....:	:.....:		3	..= 546									

DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER

DIRECTIONAL TOTALS:-			TOTAL
PEDAL CYCLES.....	0	0	1 = 1
CARS & MOTORCYCLES.....	1757	59	21 = 1837
BUSES & PSV.....*****	45	0	0 = 45
LIGHT GOODS.....	221	33	1 = 255
OGV1 GOODS.....*****	37	8	1 = 46
OGV2 GOODS.....*****	5	11	2 = 18
GRAND TOTALS	2065	111	25 = 2201

** Total GOODS Vehicles ** = 109
** Percentage OGV2 .... ** = 14.6

NB U-TURNS FROM PORT RD R/A
07.30 - 10.00 14 CARS 1LGV
12.00 - 14.00 12 CARS 1LGV 1GV1
15.30 - 18.00 14 CARS

BUILDINGS START TIME	FROM PORTHKERRY ROAD TO PORT RD R/A PCL	CAR	BUS	LGV	GV1	GV2	TO TERMINAL BUILDINGS PCL	CAR	BUS	LGV	GV1	GV2	FROM TERMINAL TO PORT RD R/A PCL	CAR	BUS	LGV	GV1	GV2
07:30	0	110	2	18	0	0	0	0	0	1	0	0	0	0	0	1	0	0
07:45	0	112	4	6	1	0	0	5	0	0	0	0	0	0	0	1	0	0
H/tot	0	222	6	24	1	0	0	5	0	1	0	0	0	0	0	2	0	0
DIR-TOTALS.(MVs):	253	:.....:	:.....:		6	:.....:	:.....:		2	..= 261								

08:00	0	111	2	12	1	0	0	2	0	0	0	0	0	1	0	3	1	1	
08:15	0	118	3	7	1	0	0	1	0	0	0	0	0	1	0	2	0	2	
08:30	0	146	2	4	0	1	0	2	0	0	0	0	0	3	0	0	0	0	
08:45	0	87	1	4	4	0	0	2	0	0	0	0	0	1	0	1	0	1	
H/tot	0	462	8	27	6	1	0	7	0	0	0	0	0	6	0	6	1	4	
DIR-TOTALS.(MVs):		504	:	:			:	:		7	:	:		:	:		17	..=	528
09:00	0	92	1	10	2	0	1	3	0	0	0	0	0	4	0	0	1	0	
09:15	0	75	0	5	2	0	0	1	0	0	0	0	0	2	0	1	0	0	
09:30	1	58	1	8	1	1	0	0	0	0	0	0	0	3	0	1	1	1	
09:45	0	72	4	8	0	0	0	2	0	1	0	0	0	2	0	3	0	1	
H/tot	1	297	6	31	5	1	1	6	0	1	0	0	0	11	0	5	2	2	
DIR-TOTALS.(MVs):		340	:	:			:	:		7	:	:		:	:		20	..=	367
12:00	0	43	0	9	0	0	0	0	0	0	0	0	0	2	0	0	0	0	
12:15	0	50	0	12	1	0	0	0	0	1	0	0	0	0	0	2	0	0	
12:30	0	67	3	8	0	0	0	2	0	1	0	0	0	0	0	3	1	0	
12:45	0	42	1	7	0	0	0	4	0	0	0	0	0	2	0	3	0	0	
H/tot	0	202	4	36	1	0	0	6	0	2	0	0	0	4	0	8	1	0	
DIR-TOTALS.(MVs):		243	:	:			:	:		8	:	:		:	:		13	..=	264
13:00	0	50	0	6	1	0	0	1	0	1	0	0	0	3	0	2	0	0	
13:15	0	66	2	7	2	0	1	1	0	2	0	0	0	1	0	3	0	1	
13:30	0	42	0	2	4	0	0	0	0	1	0	0	0	2	0	3	0	1	
13:45	0	52	1	4	1	0	0	3	0	0	0	0	0	0	0	0	0	0	
H/tot	0	210	3	19	8	0	1	5	0	4	0	0	0	6	0	8	0	2	
DIR-TOTALS.(MVs):		240	:	:			:	:		9	:	:		:	:		16	..=	265
15:30	0	49	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	
15:45	0	53	1	9	3	0	0	1	0	0	0	0	0	4	0	1	0	0	
H/tot	0	102	1	11	3	0	0	3	0	0	0	0	0	4	0	1	0	0	
DIR-TOTALS.(MVs):		117	:	:			:	:		3	:	:		:	:		5	..=	125
16:00	0	57	3	14	2	0	0	2	0	0	0	0	0	0	0	2	0	0	
16:15	0	55	3	5	0	0	0	0	0	0	0	0	0	1	0	1	1	0	
16:30	0	64	2	8	1	0	0	1	0	0	0	0	0	3	0	0	1	0	
16:45	0	53	1	7	0	0	0	1	0	0	0	0	0	3	0	2	0	0	
H/tot	0	229	9	34	3	0	0	4	0	0	0	0	0	7	0	5	2	0	
DIR-TOTALS.(MVs):		275	:	:			:	:		4	:	:		:	:		14	..=	293
17:00	0	46	0	9	0	0	0	1	0	0	0	0	0	6	0	0	0	0	
17:15	0	47	1	4	0	0	0	0	0	1	0	0	0	2	0	2	0	0	
17:30	0	47	0	1	0	0	0	0	0	0	0	0	0	9	0	2	1	0	
17:45	0	60	2	4	0	0	0	1	0	0	0	0	0	3	0	1	0	0	
H/tot	0	200	3	18	0	0	0	2	0	1	0	0	0	20	0	5	1	0	
DIR-TOTALS.(MVs):		221	:	:			:	:		3	:	:		:	:		26	..=	250

DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER

DIRECTIONAL TOTALS:-			TOTAL
PEDAL CYCLES.....	1	2	0 = 3

CARS & MOTORCYCLES.....	1924	38	58 =	2020
BUSES & PSV.....*****	40	0	0 =	40
LIGHT GOODS.....	200	9	40 =	249
OGV1 GOODS.....*****	27	0	7 =	34
OGV2 GOODS.....*****	2	0	8 =	10
GRAND TOTALS	2193	47	113 =	2353

** Total GOODS Vehicles ** = 84
** Percentage OGV2 .... ** = 11.9

```
****************************************** 4   GWENT CONSULTANCY.
****  ---------- HANDI-COUNT ------v02zm ****   LOCATION:_____________________
****  MANUAL CLASSIFIED JUNCTION SURVEY  ****   _____________________
****   COPYRIGHT  ISCA DEVELOPMENTS.     ****
******************************************
 STANDARD TURNS
UNIT NUMBER ..... 20        PORTKERRY RD/        CR3671
SITE NUMBER..... 7             RHOOSE POINT     DAY..... WEDNESDAY
APPROACH DIRECTION.               R/A           DATE..... 17:11:2004
START CLOCK TIME... 07:06                       OPERATOR Nr.. 0□□□□□
TIME OF LAST INPUT. 17:59                       P/SET PERIOD. 07:30-18:00
INTERVAL.(mins).... 15                          WEATHER ..... SUNNY
```

START TIME	FROM RHOOSE POINT TO PORTKERRY RD WEST PCL	CAR	BUS	LGV	GV1	GV2	FROM PORTHKERRY RD EAST TO RHOOSE POINT PCL	CAR	BUS	LGV	GV1	GV2	TO PORTKERRY RD WEST PCL	CAR	BUS	LGV	GV1	GV2
07:30	0	8	0	0	1	0	0	4	0	4	0	0	0	10	2	2	1	0
07:45	0	5	0	2	0	0	0	6	1	2	0	1	0	14	3	2	2	0
H/tot	0	13	0	2	1	0	0	10	1	6	0	1	0	24	5	4	3	0
DIR-TOTALS.(MVs):		16								18						36	..=	70
08:00	0	13	1	0	0	0	0	6	0	3	1	1	1	23	1	2	1	0
08:15	0	4	0	0	0	0	0	4	0	1	1	0	0	32	0	5	3	0
08:30	0	12	0	0	1	0	0	9	0	2	0	0	0	26	1	4	1	0
08:45	0	37	0	0	1	0	0	5	0	0	0	0	0	24	0	12	0	0
H/tot	0	66	1	0	2	0	0	24	0	6	2	1	1	105	2	23	5	0
DIR-TOTALS.(MVs):		69								33						135	..=	237
09:00	0	10	0	2	0	0	0	5	0	3	1	0	0	22	1	5	3	0
09:15	0	7	0	1	0	0	0	9	0	3	1	0	0	21	1	4	5	0
09:30	0	5	0	0	1	0	1	6	0	2	0	0	0	24	1	3	2	0
09:45	0	7	0	1	0	0	0	13	0	2	0	1	0	29	1	7	0	0
H/tot	0	29	0	4	1	0	1	33	0	10	2	1	0	96	4	19	10	0
DIR-TOTALS.(MVs):		34								46						129	..=	209
12:00	0	7	0	3	1	0	0	5	0	3	1	0	0	44	2	3	0	0
12:15	0	3	0	3	0	0	0	9	0	4	1	1	0	40	1	1	3	0
12:30	0	3	0	1	1	0	0	7	0	3	1	1	0	43	2	7	0	0
12:45	0	3	0	2	0	0	0	8	0	2	0	0	0	53	2	4	0	0
H/tot	0	16	0	9	2	0	0	29	0	12	3	2	0	180	7	15	3	0
DIR-TOTALS.(MVs):		27								46						205	..=	278
13:00	0	6	0	2	0	0	0	13	0	2	1	1	0	37	2	0	1	1
13:15	0	2	0	0	0	0	0	12	0	5	0	0	2	40	0	5	0	1
13:30	0	3	0	1	1	1	0	5	0	0	2	0	0	29	1	1	2	0
13:45	0	4	0	1	0	0	0	7	0	0	0	0	0	47	1	10	0	1
H/tot	0	15	0	4	1	1	0	37	0	7	3	1	2	153	4	16	3	3
DIR-TOTALS.(MVs):		21								48						179	..=	248
15:30	0	6	3	2	0	0	0	19	1	1	1	0	0	43	4	2	0	0
15:45	0	6	1	0	0	0	0	8	2	1	0	1	1	73	1	4	0	0
H/tot	0	12	4	2	0	0	0	27	3	2	1	1	1	116	5	6	0	0

DIR-TOTALS.(MVs):			18	:.....:		:.....:			34	:.....:		:.....:			127	..=	179		
16:00	0	5	2	0	1	1	0	12	1	1	0	0	0	73	2	6	0	0	
16:15	1	10	0	2	0	0	0	24	0	0	0	0	0	66	1	7	1	0	
16:30	0	10	1	1	1	0	0	22	1	1	0	0	0	88	0	6	1	0	
16:45	0	6	0	1	0	0	0	23	0	3	0	0	0	82	3	7	1	0	
H/tot	1	31	3	4	2	1	0	81	2	5	0	0	0	309	6	26	3	0	
DIR-TOTALS.(MVs):			41	:.....:		:.....:			88	:.....:		:.....:			344	..=	473		
17:00	0	6	0	1	0	0	0	27	0	1	2	0	1	85	1	8	1	0	
17:15	0	5	0	0	0	0	0	26	0	1	0	0	0	84	1	6	0	0	
17:30	0	3	0	0	0	0	0	41	0	1	0	0	0	99	1	8	0	0	
17:45	0	7	0	0	0	0	0	32	0	0	0	0	0	94	0	5	0	1	
H/tot	0	21	0	1	0	0	0	126	0	3	2	0	1	362	3	27	1	1	
DIR-TOTALS.(MVs):			22	:.....:		:.....:			131	:.....:		:.....:			394	..=	547		

DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER

DIRECTIONAL TOTALS:-			TOTAL
PEDAL CYCLES.....	1	1 =	7
CARS & MOTORCYCLES.....	203	367 1345 =	1915
BUSES & PSV.....*****	8	6 36 =	50
LIGHT GOODS.....	26	51 136 =	213
OGV1 GOODS.....*****	9	13 28 =	50
OGV2 GOODS.....*****	2	7 4 =	13
GRAND TOTALS	248	444 1549 =	2241

** Total GOODS Vehicles ** = 113
** Percentage OGV2 .... ** = 11.5

START TIME	FROM RHOOSE POINT TO PORTHKERRY RD EAST PCL	CAR	BUS	LGV	GV1	GV2	FROM PORTHKERRY RD WEST TO RHOOSE POINT PCL	CAR	BUS	LGV	GV1	GV2	TO PORTHKERRY RD EAST PCL	CAR	BUS	LGV	GV1	GV2
07:30	0	36	1	8	0	0	0	1	1	2	0	0	0	74	1	9	2	0
07:45	0	44	0	1	0	0	0	1	1	0	0	0	1	72	4	5	1	0
H/tot	0	80	1	9	0	0	0	2	2	2	0	0	1	146	5	14	3	0
DIR-TOTALS.(MVs):		90	:.....:		:.....:			6	:.....:		:.....:			168	..=	264		

08:00	0	43	3	2	0	0	0	1	2	0	0	0	0	79	3	5	2	0
08:15	0	28	2	2	0	0	0	3	3	1	2	0	1	78	0	5	1	0
08:30	0	49	1	0	0	1	0	2	0	0	1	0	0	88	1	2	2	0
08:45	0	25	0	2	2	0	0	3	0	1	0	0	2	66	1	2	1	0
H/tot	0	145	6	6	2	1	0	9	5	2	3	0	3	311	5	14	6	0
DIR-TOTALS.(MVs):		160	:.....:				:.....:			19	:.....:		:.....:		336	..=	515	
09:00	0	14	0	1	2	0	0	17	0	1	0	0	0	70	1	9	1	0
09:15	0	12	0	1	0	0	0	14	0	0	0	0	0	55	0	2	3	1
09:30	0	11	0	2	0	0	0	2	0	0	0	0	1	61	1	5	2	0
09:45	0	7	0	2	0	0	0	5	0	0	0	0	0	49	4	6	2	0
H/tot	0	44	0	6	2	0	0	38	0	1	0	0	1	235	6	22	8	1
DIR-TOTALS.(MVs):		52	:.....:				:.....:			39	:.....:		:.....:		272	..=	363	
12:00	0	3	0	2	0	0	0	11	0	2	0	0	0	36	0	4	1	0
12:15	0	8	0	3	0	0	0	8	0	1	0	0	0	44	1	7	4	0
12:30	0	12	0	3	0	0	0	0	0	1	0	0	0	52	2	3	2	0
12:45	0	10	0	1	0	0	0	6	0	1	0	0	2	32	1	5	1	0
H/tot	0	33	0	9	0	0	0	25	0	5	0	0	2	164	4	19	8	0
DIR-TOTALS.(MVs):		42	:.....:				:.....:			30	:.....:		:.....:		195	..=	267	
13:00	0	15	0	2	1	0	0	6	0	1	0	0	1	45	0	1	0	0
13:15	0	12	0	0	2	0	0	5	0	1	0	0	0	38	1	6	3	0
13:30	0	8	0	1	2	0	0	1	0	0	0	0	0	38	0	2	0	0
13:45	0	9	0	2	1	0	0	3	0	0	1	0	0	52	1	1	0	0
H/tot	0	44	0	5	6	0	0	15	0	2	1	0	1	173	2	10	3	0
DIR-TOTALS.(MVs):		55	:.....:				:.....:			18	:.....:		:.....:		188	..=	261	
15:30	0	10	0	1	0	0	0	11	0	0	0	0	0	44	0	3	0	0
15:45	0	6	0	0	2	0	0	17	1	1	0	0	0	39	3	5	2	0
H/tot	0	16	0	1	2	0	0	28	1	1	0	0	0	83	3	8	2	0
DIR-TOTALS.(MVs):		19	:.....:				:.....:			30	:.....:		:.....:		96	..=	145	
16:00	0	16	0	4	1	0	0	12	0	1	0	0	1	32	2	6	2	0
16:15	1	10	0	3	0	0	0	11	0	2	0	0	0	43	0	1	0	0
16:30	0	12	0	2	1	0	0	9	0	3	0	0	0	41	2	4	2	0
16:45	0	4	0	1	0	0	0	8	0	0	0	0	0	31	1	8	1	0
H/tot	1	42	0	10	2	0	0	40	0	6	0	0	1	147	5	19	5	0
DIR-TOTALS.(MVs):		54	:.....:				:.....:			46	:.....:		:.....:		176	..=	276	
17:00	0	11	0	0	1	0	0	7	0	1	0	0	0	28	0	5	0	0
17:15	0	11	0	1	0	0	0	9	0	0	0	0	0	35	1	1	1	0
17:30	0	6	0	0	0	0	0	9	0	0	0	0	0	44	1	1	0	0
17:45	0	11	0	0	0	0	0	7	0	0	0	0	0	40	1	3	0	0
H/tot	0	39	0	1	1	0	0	32	0	1	0	0	0	147	3	10	1	0
DIR-TOTALS.(MVs):		41	:.....:				:.....:			33	:.....:		:.....:		161	..=	235	

DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER

DIRECTIONAL TOTALS:-			TOTAL
PEDAL CYCLES.....	1	0	9 = 10

CARS & MOTORCYCLES.....	443	189	1406 =	2038
BUSES & PSV.....*****	7	8	33 =	48
LIGHT GOODS.....	47	20	116 =	183
OGV1 GOODS.....*****	15	4	36 =	55
OGV2 GOODS.....*****	1	0	1 =	2
GRAND TOTALS	513	221	1592 =	2326

** Total GOODS Vehicles ** = 105
** Percentage OGV2 .... ** = 1.9

```
****************************************** 2  GWENT CONSULTANCY.
****  ---------- HANDI-COUNT ------v02zm ****  LOCATION:_____________________
****  MANUAL CLASSIFIED JUNCTION SURVEY  ****  _____________________
****   COPYRIGHT  ISCA DEVELOPMENTS.     ****
******************************************
 STANDARD TURNS
UNIT NUMBER ..... 7        FONTYGARY RD/        CR3672
SITE NUMBER..... 8         FONMON RD/CARAVAN    DAY..... WEDNESDAY
APPROACH DIRECTION.            PARK             DATE..... 17:11:2004
START CLOCK TIME... 07:29                       OPERATOR Nr.. 1□□□□□
TIME OF LAST INPUT. 17:58                       P/SET PERIOD. 07:30-18:00
INTERVAL.(mins).... 15                          WEATHER ..... CLOUDY
```

START TIME	TO EAST ABERTHAW						FROM CARAVAN PARK TO FONMON RD						TO FONTYGARY RD					
	PCL	CAR	BUS	LGV	GV1	GV2	PCL	CAR	BUS	LGV	GV1	GV2	PCL	CAR	BUS	LGV	GV1	GV2
07:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	2	0	0	0	0	0	4	0	0	0	0
H/tot	0	1	0	0	0	0	0	2	0	0	0	0	0	4	0	0	0	0
DIR-TOTALS.(MVs):		1								2						4	..=	7
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0
08:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
08:30	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
H/tot	0	3	0	0	0	0	0	1	0	0	0	0	0	15	0	0	0	0
DIR-TOTALS.(MVs):		3								1						15	..=	19
09:00	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	1	0	0
09:15	0	1	0	0	0	0	0	1	0	1	0	0	0	6	0	0	0	0
09:30	0	1	0	0	0	0	0	2	0	1	0	0	0	4	0	1	0	0
09:45	0	1	0	1	0	0	0	3	0	0	0	0	0	4	0	0	1	0
H/tot	0	3	0	1	0	0	0	7	0	2	0	0	0	17	0	2	1	0
DIR-TOTALS.(MVs):		4								9						20	..=	33
12:00	0	0	0	0	0	0	0	1	0	0	0	0	0	5	0	0	0	0
12:15	0	0	0	0	0	0	0	1	0	0	0	0	0	6	0	0	0	0
12:30	0	0	0	1	0	0	0	1	0	0	0	0	0	3	0	1	0	0
12:45	0	2	0	0	0	0	0	3	0	0	0	0	0	4	0	0	0	0
H/tot	0	2	0	1	0	0	0	6	0	0	0	0	0	18	0	1	0	0
DIR-TOTALS.(MVs):		3								6						19	..=	28
13:00	0	2	0	0	0	0	0	2	0	1	0	0	0	4	0	1	0	0
13:15	0	0	0	0	0	0	0	1	0	0	0	0	0	5	0	0	0	0
13:30	0	1	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0
13:45	1	3	0	0	0	0	0	2	0	0	0	0	0	6	0	0	0	0
H/tot	1	6	0	0	0	0	0	6	0	1	0	0	0	19	0	1	0	0
DIR-TOTALS.(MVs):		6								7						20	..=	33
15:30	0	0	0	0	0	0	0	2	0	0	0	0	0	3	0	0	0	0
15:45	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0
H/tot	0	0	0	0	0	0	0	4	0	0	0	0	0	4	0	1	0	0

DIR-TOTALS.(MVs):			0	:.....:		:.....:			4	:.....:		:.....:			5	..=		9	
16:00	0	2	0	0	0	0	0	2	0	0	0	0	0	4	0	0	0	0	
16:15	0	0	0	1	0	0	1	2	0	0	0	0	0	6	0	0	0	0	
16:30	0	2	0	0	0	0	0	1	0	0	0	0	0	1	0	1	0	0	
16:45	0	2	0	0	0	0	0	1	0	0	0	0	0	11	0	1	0	0	
H/tot	0	6	0	1	0	0	1	6	0	0	0	0	0	22	0	2	0	0	
DIR-TOTALS.(MVs):			7	:.....:		:.....:			6	:.....:		:.....:			24	..=		37	
17:00	0	1	0	0	0	0	0	3	0	0	0	0	0	3	0	1	0	0	
17:15	0	1	0	0	0	0	0	1	0	0	0	0	0	8	0	0	0	0	
17:30	0	3	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	
17:45	0	1	0	0	0	0	0	2	0	0	0	0	0	5	0	0	0	0	
H/tot	0	6	0	0	0	0	1	6	0	0	0	0	0	20	0	1	0	0	
DIR-TOTALS.(MVs):			6	:.....:		:.....:			6	:.....:		:.....:			21	..=		33	

DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER

DIRECTIONAL TOTALS:-	1	2	0 =	TOTAL 3
PEDAL CYCLES.....				
CARS & MOTORCYCLES.....	27	38	119 =	184
BUSES & PSV.....*****	0	0	0 =	0
LIGHT GOODS.....	3	3	8 =	14
OGV1 GOODS.....*****	0	0	1 =	1
OGV2 GOODS.....*****	0	0	0 =	0
GRAND TOTALS	30	41	128 =	199

** Total GOODS Vehicles ** = 1
** Percentage OGV2 .... ** = 0.0

START TIME	TO CARAVAN PARK PCL	CAR	BUS	LGV	GV1	GV2	FROM FONTGARY RD TO EAST ABERTHAW PCL	CAR	BUS	LGV	GV1	GV2	TO FONMON RD PCL	CAR	BUS	LGV	GV1	GV2
07:30	0	1	0	0	0	0	0	19	1	0	0	0	0	8	3	1	0	0
07:45	0	1	0	0	0	0	0	15	1	5	1	0	0	14	0	2	0	0
H/tot	0	2	0	0	0	0	0	34	2	5	1	0	0	22	3	3	0	0
DIR-TOTALS.(MVs):		2	:.....:		:.....:			42	:.....:		:.....:			28	..=		72	
08:00	0	4	0	0	0	0	0	22	2	2	0	0	0	16	3	2	0	0

08:15	0	3	0	0	0	0	1	16	0	0	0	0	0	14	0	3	0	0	
08:30	0	2	0	0	0	0	0	23	1	3	1	0	0	10	0	0	0	0	
08:45	0	8	0	0	0	0	0	13	0	0	1	0	0	22	0	2	0	0	
H/tot	0	17	0	0	0	0	1	74	3	5	2	0	0	62	3	7	0	0	
DIR-TOTALS.(MVs):		17	:.....:				:.....:			84	:.....:		:.....:			72	..=	173	
09:00	0	5	0	1	0	0	0	16	0	4	0	0	0	29	0	7	0	0	
09:15	0	5	0	1	1	0	0	10	0	9	2	0	0	13	2	2	0	0	
09:30	0	5	0	0	1	0	0	13	0	3	1	0	0	18	0	4	0	0	
09:45	0	5	0	2	0	0	0	4	2	1	1	0	0	17	0	1	0	0	
H/tot	0	20	0	4	2	0	0	43	2	17	4	0	0	77	2	14	0	0	
DIR-TOTALS.(MVs):		26	:.....:				:.....:			66	:.....:		:.....:			93	..=	185	
12:00	0	1	0	0	0	0	0	6	0	1	0	0	0	19	1	5	0	0	
12:15	0	7	0	0	0	0	0	4	0	0	0	0	0	18	2	4	0	0	
12:30	0	3	0	1	0	0	0	8	1	2	0	0	0	22	0	1	0	0	
12:45	0	5	0	0	0	0	0	9	1	5	1	0	0	11	2	2	0	0	
H/tot	0	16	0	1	0	0	0	27	2	8	1	0	0	70	5	12	0	0	
DIR-TOTALS.(MVs):		17	:.....:				:.....:			38	:.....:		:.....:			87	..=	142	
13:00	0	4	0	1	0	0	0	9	1	2	0	0	0	19	0	2	0	0	
13:15	0	4	0	0	0	0	0	7	0	0	0	1	0	17	2	1	0	0	
13:30	0	2	0	0	0	0	0	11	1	2	0	0	0	11	0	3	0	0	
13:45	0	8	0	0	0	0	0	8	1	6	1	0	0	18	0	2	0	0	
H/tot	0	18	0	1	0	0	0	35	3	10	1	1	0	65	2	8	0	0	
DIR-TOTALS.(MVs):		19	:.....:				:.....:			50	:.....:		:.....:			75	..=	144	
15:30	0	2	0	0	0	0	0	16	2	3	0	0	0	38	2	1	0	0	
15:45	0	8	0	0	0	0	0	9	2	2	0	0	0	38	2	1	0	0	
H/tot	0	10	0	0	0	0	0	25	4	5	0	0	0	76	4	2	0	0	
DIR-TOTALS.(MVs):		10	:.....:				:.....:			34	:.....:		:.....:			82	..=	126	
16:00	0	4	0	1	0	0	0	12	4	4	1	0	0	40	1	2	0	0	
16:15	1	6	0	0	0	0	1	12	1	4	0	0	0	30	1	4	0	0	
16:30	0	8	0	0	0	0	0	12	1	3	2	0	0	33	0	0	0	0	
16:45	0	11	0	0	0	0	0	3	3	4	0	0	0	32	1	2	0	0	
H/tot	1	29	0	1	0	0	1	39	9	15	3	0	0	135	3	8	0	0	
DIR-TOTALS.(MVs):		30	:.....:				:.....:			66	:.....:		:.....:			146	..=	242	
17:00	0	4	0	1	0	0	0	8	1	3	0	0	1	34	0	5	0	0	
17:15	0	5	0	0	0	0	0	11	1	3	0	0	0	26	0	1	0	0	
17:30	0	13	0	0	0	0	0	9	1	0	0	0	0	24	0	2	0	0	
17:45	0	5	0	0	0	0	0	21	0	0	0	0	0	34	0	2	0	0	
H/tot	0	27	0	1	0	0	0	49	3	6	0	0	1	118	0	10	0	0	
DIR-TOTALS.(MVs):		28	:.....:				:.....:			58	:.....:		:.....:			128	..=	214	

DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER

DIRECTIONAL TOTALS:-				TOTAL
PEDAL CYCLES.....	1	2	1 =	4
CARS & MOTORCYCLES.....	139	326	625 =	1090

BUSES & PSV.....*****	0	28	22 =	50
LIGHT GOODS.....	8	71	64 =	143
OGV1 GOODS.....*****	2	12	0 =	14
OGV2 GOODS.....*****	0	1	0 =	1
GRAND TOTALS	149	438	711 =	1298

** Total GOODS Vehicles ** = 65
** Percentage OGV2 .... ** = 1.5

FROM EAST ABERTHAW

START TIME	TO CARAVAN PARK PCL	CAR	BUS	LGV	GV1	GV2	TO FONTYGARY RD PCL	CAR	BUS	LGV	GV1	GV2	TO FONMON RD PCL	CAR	BUS	LGV	GV1	GV2
07:30	0	0	0	0	0	0	0	2	3	1	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	4	3	0	0	0	0	0	0	0	0	0
H/tot	0	0	0	0	0	0	0	6	6	1	0	0	0	0	0	0	0	0
DIR-TOTALS.(MVs):		0								13						0	..=	13
08:00	0	1	0	0	0	0	0	7	4	4	1	0	0	2	0	0	0	0
08:15	0	0	0	0	0	0	0	11	2	2	0	0	0	1	0	0	0	0
08:30	0	0	0	0	0	0	1	10	0	1	1	0	0	1	0	0	0	0
08:45	0	0	0	0	0	0	0	12	0	1	0	0	0	3	0	1	0	0
H/tot	0	1	0	0	0	0	1	40	6	8	2	0	0	7	0	1	0	0
DIR-TOTALS.(MVs):		1								56						8	..=	65
09:00	0	4	0	1	0	0	0	11	1	2	0	0	0	3	0	0	0	0
09:15	0	4	0	0	0	0	1	8	1	2	1	1	0	1	0	0	0	0
09:30	0	1	0	0	1	0	0	2	0	2	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	7	1	3	1	0	0	2	0	0	0	0
H/tot	0	9	0	1	1	0	1	28	3	9	2	1	0	6	0	0	0	0
DIR-TOTALS.(MVs):		11								43						6	..=	60
12:00	0	1	0	0	0	0	0	8	0	3	0	0	0	2	0	0	0	0
12:15	0	1	0	0	0	0	0	7	1	2	1	0	0	1	0	1	0	0
12:30	0	1	0	1	0	0	0	14	0	3	0	0	0	0	0	1	0	0
12:45	0	1	0	0	0	0	0	9	1	1	0	0	0	3	0	0	0	0
H/tot	0	4	0	1	0	0	0	38	2	9	1	0	0	6	0	2	0	0
DIR-TOTALS.(MVs):		5								50						8	..=	63
13:00	0	2	0	1	0	0	1	10	0	4	0	0	0	0	0	0	0	0
13:15	0	1	0	0	0	0	0	9	1	1	0	0	0	1	0	1	0	0
13:30	0	0	0	0	0	0	0	5	0	0	0	0	0	1	0	1	0	0
13:45	0	1	0	0	0	0	0	9	1	0	0	1	0	1	0	0	0	0

H/tot	0	4	0	1	0	0	1	33	2	5	0	1	0	3	0	2	0	0	
DIR-TOTALS.(MVs):				5	:.....:		:.....:			41	:.....:		:.....:			5	..=	51	
15:30	0	1	0	0	0	0	0	15	1	0	0	0	0	8	0	1	0	0	
15:45	0	1	0	0	0	0	0	20	2	4	1	0	0	7	0	1	0	0	
H/tot	0	2	0	0	0	0	0	35	3	4	1	0	0	15	0	2	0	0	
DIR-TOTALS.(MVs):				2	:.....:		:.....:			43	:.....:		:.....:			17	..=	62	
16:00	0	0	0	0	0	0	0	20	1	4	0	0	0	3	0	0	0	0	
16:15	0	8	1	0	0	0	0	13	0	3	0	0	0	0	0	0	0	0	
16:30	0	4	0	0	0	0	2	26	0	3	0	0	0	5	0	0	0	0	
16:45	0	6	0	0	0	0	1	12	1	3	0	0	0	5	0	1	0	0	
H/tot	0	18	1	0	0	0	3	71	2	13	0	0	0	13	0	1	0	0	
DIR-TOTALS.(MVs):				19	:.....:		:.....:			86	:.....:		:.....:			14	..=	119	
17:00	0	2	0	0	0	0	0	17	0	2	0	0	0	7	0	1	0	0	
17:15	0	0	0	0	0	0	0	21	0	3	0	0	0	4	0	0	0	0	
17:30	0	1	0	0	0	0	0	22	1	2	1	0	0	5	0	0	0	0	
17:45	0	1	0	0	0	0	0	15	1	2	0	0	0	9	0	0	0	0	
H/tot	0	4	0	0	0	0	0	75	2	9	1	0	0	25	0	1	0	0	
DIR-TOTALS.(MVs):				4	:.....:		:.....:			87	:.....:		:.....:			26	..=	117	

DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER

DIRECTIONAL TOTALS:- TOTAL

PEDAL CYCLES.....

CARS & MOTORCYCLES..... =

BUSES & PSV.....***** =

LIGHT GOODS..... =

OGV1 GOODS.....***** =

OGV2 GOODS.....***** =

GRAND TOTALS =

** Total GOODS Vehicles ** =

** Percentage OGV2 .... ** =

START TIME	FROM FONMON ROAD TO FONTYGARY RD						FROM FONMON ROAD TO CARAVAN PARK						FROM FONMON ROAD TO EAST ABERTHAW					
	PCL	CAR	BUS	LGV	GV1	GV2	PCL	CAR	BUS	LGV	GV1	GV2	PCL	CAR	BUS	LGV	GV1	GV2

07:30	1	18	0	1	0	0	0	0	0	0	0	0	0	3	0	1	0	0	
07:45	0	17	1	4	0	0	0	2	0	0	0	0	0	4	0	0	0	0	
H/tot	1	35	1	5	0	0	0	2	0	0	0	0	0	7	0	1	0	0	
DIR-TOTALS.(MVs):		41								2						8	..=	51	
08:00	0	23	1	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	
08:15	0	20	1	0	0	0	0	0	0	0	0	0	0	7	0	0	1	0	
08:30	0	43	3	1	1	0	0	1	0	0	0	0	0	3	0	0	0	0	
08:45	0	48	0	0	2	0	0	1	0	0	0	0	0	3	0	0	0	0	
H/tot	0	134	5	1	3	0	0	3	0	0	0	0	0	15	0	0	1	0	
DIR-TOTALS.(MVs):		143								3						16	..=	162	
09:00	0	18	0	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	
09:15	0	33	0	2	0	0	0	3	0	0	0	0	0	0	0	1	0	0	
09:30	0	18	3	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
09:45	0	26	1	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	
H/tot	0	95	4	8	0	0	0	6	0	0	0	0	0	4	0	1	0	0	
DIR-TOTALS.(MVs):		107								6						5	..=	118	
12:00	0	22	0	4	0	0	0	1	0	2	0	0	0	0	0	0	0	0	
12:15	0	16	1	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
12:30	0	18	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
12:45	0	14	0	2	0	0	0	2	0	0	0	0	0	1	0	0	0	0	
H/tot	0	70	3	12	0	0	0	4	0	2	0	0	0	2	0	0	0	0	
DIR-TOTALS.(MVs):		85								6						2	..=	93	
13:00	0	21	0	1	0	0	0	3	0	0	0	0	0	1	0	0	0	0	
13:15	0	14	1	3	1	0	0	0	0	0	0	0	0	0	0	1	0	0	
13:30	0	10	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	
13:45	0	29	0	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	
H/tot	0	74	1	4	1	0	1	3	0	0	0	0	0	2	1	2	1	0	
DIR-TOTALS.(MVs):		80								3						6	..=	89	
15:30	0	8	0	0	0	0	0	1	0	0	0	0	0	2	0	1	0	0	
15:45	0	26	3	2	1	0	0	3	0	0	0	0	0	3	0	0	0	0	
H/tot	0	34	3	2	1	0	0	4	0	0	0	0	0	5	0	1	0	0	
DIR-TOTALS.(MVs):		40								4						6	..=	50	
16:00	0	20	0	1	0	0	0	7	0	0	0	0	0	0	0	0	0	0	
16:15	0	10	0	3	0	0	0	7	1	2	0	0	0	6	0	0	0	0	
16:30	0	17	0	3	0	0	0	6	0	0	0	0	0	2	0	0	0	0	
16:45	0	21	0	1	0	0	0	3	0	0	0	0	0	2	0	0	0	0	
H/tot	0	68	0	8	0	0	0	23	1	2	0	0	0	10	0	0	0	0	
DIR-TOTALS.(MVs):		76								26						10	..=	112	
17:00	0	22	0	3	0	0	0	3	0	0	0	0	0	1	0	0	0	0	
17:15	1	9	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	
17:30	0	11	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	
17:45	0	18	0	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	
H/tot	1	60	1	6	0	0	0	6	0	0	0	0	0	5	0	0	0	0	
DIR-TOTALS.(MVs):		67								6						5	..=	78	

DATA PRODUCED FROM A * HANDI-COUNT * PORTABLE DATA LOGGER

DIRECTIONAL TOTALS:-

				TOTAL
PEDAL CYCLES.....				
CARS & MOTORCYCLES.....				
BUSES & PSV.....*****				
LIGHT GOODS.....				
OGV1 GOODS.....*****				
OGV2 GOODS.....*****				
GRAND TOTALS				

** Total GOODS Vehicles ** =

** Percentage OGV2 .... ** =

```
*********************************************  HIGHWAY DESIGN.
****  ---------- HANDI-COUNT ------v01a  ****  LOCATION:_CARDIFF AIRPORT R/A
****  MANUAL CLASSIFIED JUNCTION SURVEY  ****  ____________________
****   COPYRIGHT  ISCA DEVELOPMENTS.     ****
*********************************************
 STANDARD TURNS
UNIT NUMBER ..... 1
SITE NUMBER..... 2                              DAY..... THURSDAY
APPROACH DIRECTION. FROM NORTH                  DATE..... 04:09:2003
START CLOCK TIME... 06:58                       OPERATOR Nr.. 1
TIME OF LAST INPUT. 09:29                       P/SET PERIOD. 07:00-19:00
INTERVAL.(mins).... 15                          WEATHER ..... SUNNY
```

START	BARRY TO RHOOSE						BARRY TO AIRPORT						AIRPORT TO RHOOSE					
TIME	PCL	CAR	BUS	LGV	GV1	GV2	PCL	CAR	BUS	LGV	GV1	GV2	PCL	CAR	BUS	LGV	GV1	GV2
07:00	0	17	0	2	0	0	0	52	0	6	0	0	0	5	0	0	0	1
07:15	0	25	0	8	0	0	1	33	1	6	0	0	0	2	0	0	0	0
07:30	0	28	1	10	1	2	0	27	2	4	0	0	0	3	1	2	0	0
07:45	0	38	2	9	0	1	1	32	0	4	0	0	0	4	2	2	0	0
H/tot	0	108	3	29	1	3	2	144	3	20	0	0	0	14	3	4	0	1
DIR-TOTALS.(MVs):		144	:.....:		:.....:			167	:.....:		:.....:			22	..= 333			
08:00	0	23	0	13	2	0	0	40	0	3	0	0	0	5	1	2	0	0
08:15	0	32	0	10	4	0	0	22	0	1	0	1	0	3	0	1	0	0
08:30	0	31	0	9	2	0	0	25	2	3	0	0	0	2	1	1	1	1
08:45	1	46	0	15	4	1	0	47	0	6	0	0	0	5	0	2	0	0
H/tot	1	132	0	47	12	1	0	134	2	13	0	1	0	15	2	6	1	1
DIR-TOTALS.(MVs):		192	:.....:		:.....:			150	:.....:		:.....:			25	..= 367			
09:00	1	37	0	10	2	0	0	43	3	4	0	1	0	9	1	0	0	0
09:15	1	28	0	9	3	0	1	30	0	4	0	0	0	5	1	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/tot	2	65	0	19	5	0	1	73	3	8	0	1	0	14	2	0	0	0
DIR-TOTALS.(MVs):		89	:.....:		:.....:			85	:.....:		:.....:			16	..= 190			

```
*********************************************  HIGHWAY DESIGN.
****  ---------- HANDI-COUNT ------v01a  ****  LOCATION: CARDIFF AIRPORT R/A
****  MANUAL CLASSIFIED JUNCTION SURVEY  ****
****   COPYRIGHT  ISCA DEVELOPMENTS.     ****
*********************************************
 STANDARD TURNS
UNIT NUMBER ..... 1
SITE NUMBER..... 1
APPROACH DIRECTION. FROM NORTH
START CLOCK TIME... 06:56
TIME OF LAST INPUT. 09:29
INTERVAL.(mins).... 15

DAY..... THURSDAY
DATE..... 04:09:2003
OPERATOR Nr.. 1
P/SET PERIOD. 07:00-19:00
WEATHER ..... SUNNY
```

START	RHOOSE TO BARRY						RHOOSE TO AIRPORT						AIRPORT TO BARRY					
TIME	PCL	CAR	BUS	LGV	GV1	GV2	PCL	CAR	BUS	LGV	GV1	GV2	PCL	CAR	BUS	LGV	GV1	GV2
07:00	0	58	0	4	0	0	0	6	0	0	1	0	0	31	2	0	0	0
07:15	0	86	1	8	0	3	0	11	0	0	2	0	0	18	4	0	0	0
07:30	0	95	0	12	0	0	0	8	0	0	0	0	0	16	4	0	0	0
07:45	0	97	2	13	1	0	0	2	0	1	0	0	0	12	5	0	0	0
H/tot	0	336	3	37	1	3	0	27	0	1	3	0	0	77	15	0	0	0
DIR-TOTALS.(MVs):		380	:.....:		:.....:			31	:.....:		:.....:			92	..= 503			
08:00	0	111	4	12	2	0	0	8	2	0	0	0	0	49	3	0	0	0
08:15	2	109	2	4	0	2	0	6	0	2	0	0	0	25	1	0	2	0
08:30	1	100	2	6	1	0	1	5	0	3	0	0	0	11	1	3	0	0
08:45	1	95	0	9	3	1	0	11	0	0	0	0	0	20	1	2	0	0
H/tot	4	415	8	31	6	3	1	30	2	5	0	0	0	105	6	5	2	0
DIR-TOTALS.(MVs):		463	:.....:		:.....:			37	:.....:		:.....:			118	..= 618			
09:00	0	76	2	2	3	0	0	7	0	2	1	0	0	32	0	4	0	0
09:15	0	75	0	9	2	0	0	8	2	0	0	0	0	20	1	4	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H/tot	0	151	2	11	5	0	0	15	2	2	1	0	0	52	1	8	0	0
DIR-TOTALS.(MVs):		169	:.....:		:.....:			20	:.....:		:.....:			61	..= 250			

CAPITA SYMONDS

Traffic Survey Report
Weekly Vehicle Counts

WeeklyVehicle-279 -- English (ENG)

Datasets:

Site:	**[84265034] CARDIFF Rhoose, B4265 Porthkerry Rd. A <30mph>**
Direction:	6 - West bound A>B, East bound B>A., **Lane:** 0
Survey Duration:	12:40 16 November 2004 => 14:37 26 November 2004
File:	X:\MetroCount Data\2004\8426503426Nov2004.EC0 (Plus)
Identifier:	L4170HD4 MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class, Speed, Count)

Profile:

Filter time:	**00:00 17 November 2004 => 00:00 25 November 2004**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Speed range:	6 - 99 mph.
Direction:	West (bound)
Separation:	All - (Headway)
Name:	Traffic Survey Profile
Scheme:	Vehicle classification (DfT-UK)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 27581 / 69473 (39.70%)

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Weekly Vehicle Counts

WeeklyVehicle-279
Site: 84265034.0EW
Description: CARDIFF Rhoose, B4265 Porthkerry Rd. A <30mph>
Filter time: 00:00 17 November 2004 => 00:00 25 November 2004
Scheme: Vehicle classification (DfT-UK)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11) Dir(W) Sp(6,99) Sep(>0)

Hour	Mon 15 Nov	Tue 16 Nov	Wed 17 Nov	Thu 18 Nov	Fri 19 Nov	Sat 20 Nov	Sun 21 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	*	*	23	21	16	54	44	20.0	31.6
0100-0200	*	*	2	1	12	29	35	5.0	15.8
0200-0300	*	*	4	6	4	15	15	4.7	8.8
0300-0400	*	*	10	3	3	9	15	5.3	8.0
0400-0500	*	*	6	6	6	5	6	6.0	5.8
0500-0600	*	*	10	17	10	14	7	12.3	11.6
0600-0700	*	*	42	34	34	31	18	36.7	31.8
0700-0800	*	*	75	74	82	46	20	77.0	59.4
0800-0900	*	*	202	197	191	87	44	196.7	144.2
0900-1000	*	*	157	152	185	149	83	164.7	145.2
1000-1100	*	*	167	158	187	217	129	170.7	171.6
1100-1200	*	*	**219<**	**198<**	**223<**	**265<**	**190<**	**213.3<**	**219.0<**
1200-1300	*	*	227	257	272	274	267	252.0	259.4
1300-1400	*	*	196	219	243	**305<**	252	219.3	243.0
1400-1500	*	*	222	239	270	250	257	243.7	247.6
1500-1600	*	*	303	309	336	265	245	316.0	291.6
1600-1700	*	*	377	341	**453<**	261	**271<**	390.3	**340.6<**
1700-1800	*	*	**411<**	**379<**	435	261	207	**408.3<**	338.6
1800-1900	*	*	304	264	310	204	176	292.7	251.6
1900-2000	*	*	181	196	249	165	134	208.7	185.0
2000-2100	*	*	145	176	141	146	84	154.0	138.4
2100-2200	*	*	118	137	102	79	104	119.0	108.0
2200-2300	*	*	107	89	130	87	37	108.7	90.0
2300-2400	*	*	51	58	76	67	41	61.7	58.6
Totals									
0700-1900	*	*	2860	2787	3187	2584	2141	2944.7	2711.8
0600-2200	*	*	3346	3330	3713	3005	2481	3463.0	3175.0
0600-0000	*	*	3504	3477	3919	3159	2559	3633.3	3323.6
0000-0000	*	*	3559	3531	3970	3285	2681	3686.7	3405.2
AM Peak	*	*	1100	1100	1100	1100	1100		
	*	*	219	198	223	265	190		
PM Peak	*	*	1700	1700	1600	1300	1600		
	*	*	411	379	453	305	271		

* - No data.

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Weekly Vehicle Counts

WeeklyVehicle-279
Site: 84265034.0EW
Description: CARDIFF Rhoose, B4265 Porthkerry Rd. A <30mph>
Filter time: 00:00 17 November 2004 => 00:00 25 November 2004
Scheme: Vehicle classification (DfT-UK)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11) Dir(W) Sp(6,99) Sep(>0)

Hour	Mon 22 Nov	Tue 23 Nov	Wed 24 Nov	Thu 25 Nov	Fri 26 Nov	Sat 27 Nov	Sun 28 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	21	15	22	*	*	*	*	19.3	19.3
0100-0200	12	7	4	*	*	*	*	7.7	7.7
0200-0300	5	8	7	*	*	*	*	6.7	6.7
0300-0400	3	3	1	*	*	*	*	2.3	2.3
0400-0500	4	5	3	*	*	*	*	4.0	4.0
0500-0600	8	6	16	*	*	*	*	10.0	10.0
0600-0700	35	36	41	*	*	*	*	37.3	37.3
0700-0800	88	84	89	*	*	*	*	87.0	87.0
0800-0900	205	197	169	*	*	*	*	190.3	190.3
0900-1000	158	145	174	*	*	*	*	159.0	159.0
1000-1100	153	157	170	*	*	*	*	160.0	160.0
1100-1200	214<	206<	203<	*	*	*	*	207.7<	207.7<
1200-1300	222	213	223	*	*	*	*	219.3	219.3
1300-1400	203	216	221	*	*	*	*	213.3	213.3
1400-1500	230	234	208	*	*	*	*	224.0	224.0
1500-1600	287	281	266	*	*	*	*	278.0	278.0
1600-1700	340	337	339	*	*	*	*	338.7	338.7
1700-1800	378<	460<	440<	*	*	*	*	426.0<	426.0<
1800-1900	328	304	357	*	*	*	*	329.7	329.7
1900-2000	187	218	192	*	*	*	*	199.0	199.0
2000-2100	120	146	152	*	*	*	*	139.3	139.3
2100-2200	112	118	130	*	*	*	*	120.0	120.0
2200-2300	83	88	96	*	*	*	*	89.0	89.0
2300-2400	57	36	59	*	*	*	*	50.7	50.7
Totals									
0700-1900	2806	2834	2859	*	*	*	*	2833.0	2833.0
0600-2200	3260	3352	3374	*	*	*	*	3328.7	3328.7
0600-0000	3400	3476	3529	*	*	*	*	3468.3	3468.3
0000-0000	3453	3520	3582	*	*	*	*	3518.3	3518.3
AM Peak	1100	1100	1100	*	*	*	*		
	214	206	203	*	*	*	*		
PM Peak	1700	1700	1700	*	*	*	*		
	378	460	440	*	*	*	*		

' - No data.

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

CAPITA SYMONDS

Traffic Survey Report
Weekly Vehicle Counts

WeeklyVehicle-279 -- English (ENG)

Datasets:

Site:	[84265034] CARDIFF Rhoose, B4265 Porthkerry Rd. A <30mph>
Direction:	6 - West bound A>B, East bound B>A., Lane: 0
Survey Duration:	12:40 16 November 2004 => 14:37 26 November 2004
File:	X:\MetroCount Data\2004\8426503426Nov2004.EC0 (Plus)
Identifier:	L4170HD4 MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class, Speed, Count)

Profile:

Filter time:	00:00 17 November 2004 => 00:00 25 November 2004
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Speed range:	6 - 99 mph.
Direction:	East (bound)
Separation:	All - (Headway)
Name:	Traffic Survey Profile
Scheme:	Vehicle classification (DfT-UK)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 26512 / 69473 (38.16%)

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Weekly Vehicle Counts

WeeklyVehicle-279
Site: 84265034.0EW
Description: CARDIFF Rhoose, B4265 Porthkerry Rd. A <30mph>
Filter time: 00:00 17 November 2004 => 00:00 25 November 2004
Scheme: Vehicle classification (DfT-UK)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11) Dir(E) Sp(6,99) Sep(>0)

Hour	Mon 15 Nov	Tue 16 Nov	Wed 17 Nov	Thu 18 Nov	Fri 19 Nov	Sat 20 Nov	Sun 21 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	*	*	11	4	9	40	41	8.0	21.0
0100-0200	*	*	3	5	3	18	26	3.7	11.0
0200-0300	*	*	6	2	4	13	15	4.0	8.0
0300-0400	*	*	4	5	2	10	6	3.7	5.4
0400-0500	*	*	16	10	14	15	11	13.3	13.2
0500-0600	*	*	48	47	46	34	22	47.0	39.4
0600-0700	*	*	110	114	97	46	16	107.0	76.6
0700-0800	*	*	309	291	313	89	31	304.3	206.6
0800-0900	*	*	350<	369<	356<	172	82	358.3<	265.8
0900-1000	*	*	310	336	295	272	165	313.7	275.6<
1000-1100	*	*	206	213	245	300	242	221.3	241.2
1100-1200	*	*	219	194	258	317<	256<	223.7	248.8
1200-1300	*	*	221	222<	258	249	246<	233.7<	239.2<
1300-1400	*	*	211	208	209	279<	242	209.3	229.8
1400-1500	*	*	171	169	233	210	230	191.0	202.6
1500-1600	*	*	212	210	256	200	200	226.0	215.6
1600-1700	*	*	227<	217	214	168	202	219.3	205.6
1700-1800	*	*	202	193	204	146	164	199.7	181.8
1800-1900	*	*	194	192	268<	152	142	218.0	189.6
1900-2000	*	*	141	132	181	129	113	151.3	139.2
2000-2100	*	*	104	108	96	98	61	102.7	93.4
2100-2200	*	*	67	68	75	60	52	70.0	64.4
2200-2300	*	*	50	52	55	58	38	52.3	50.6
2300-2400	*	*	23	36	44	43	25	34.3	34.2
Totals									
0700-1900	*	*	2832	2814	3109	2554	2202	2918.3	2702.2
0600-2200	*	*	3254	3236	3558	2887	2444	3349.3	3075.8
0600-0000	*	*	3327	3324	3657	2988	2507	3436.0	3160.6
0000-0000	*	*	3415	3397	3735	3118	2628	3515.7	3258.6
AM Peak	*	*	0800	0800	0800	1100	1100		
	*	*	350	369	356	317	256		
PM Peak	*	*	1600	1200	1800	1300	1200		
	*	*	227	222	268	279	246		

* - No data.

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Weekly Vehicle Counts

WeeklyVehicle-279
Site: 84265034.0EW
Description: CARDIFF Rhoose, B4265 Porthkerry Rd. A <30mph>
Filter time: 00:00 17 November 2004 => 00:00 25 November 2004
Scheme: Vehicle classification (DfT-UK)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11) Dir(E) Sp(6,99) Sep(>0)

Hour	Mon 22 Nov	Tue 23 Nov	Wed 24 Nov	Thu 25 Nov	Fri 26 Nov	Sat 27 Nov	Sun 28 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	9	6	9	*	*	*	*	8.0	8.0
0100-0200	6	4	3	*	*	*	*	4.3	4.3
0200-0300	5	4	3	*	*	*	*	4.0	4.0
0300-0400	7	5	4	*	*	*	*	5.3	5.3
0400-0500	13	22	16	*	*	*	*	17.0	17.0
0500-0600	50	45	47	*	*	*	*	47.3	47.3
0600-0700	104	109	127	*	*	*	*	113.3	113.3
0700-0800	333	342	334	*	*	*	*	336.3	336.3
0800-0900	390<	356<	354<	*	*	*	*	366.7<	366.7<
0900-1000	295	305	319	*	*	*	*	306.3	306.3
1000-1100	236	221	221	*	*	*	*	226.0	226.0
1100-1200	226	206	203	*	*	*	*	211.7	211.7
1200-1300	192	206	193	*	*	*	*	197.0	197.0
1300-1400	215<	214	204	*	*	*	*	211.0<	211.0<
1400-1500	190	202	203	*	*	*	*	198.3	198.3
1500-1600	206	217	181	*	*	*	*	201.3	201.3
1600-1700	198	219<	215<	*	*	*	*	210.7	210.7
1700-1800	196	202	193	*	*	*	*	197.0	197.0
1800-1900	176	191	187	*	*	*	*	184.7	184.7
1900-2000	118	112	168	*	*	*	*	132.7	132.7
2000-2100	64	101	108	*	*	*	*	91.0	91.0
2100-2200	64	65	59	*	*	*	*	62.7	62.7
2200-2300	38	49	52	*	*	*	*	46.3	46.3
2300-2400	21	24	37	*	*	*	*	27.3	27.3
Totals									
0700-1900	2853	2881	2807	*	*	*	*	2847.0	2847.0
0600-2200	3203	3268	3269	*	*	*	*	3246.7	3246.7
0600-0000	3262	3341	3358	*	*	*	*	3320.3	3320.3
0000-0000	3352	3427	3440	*	*	*	*	3406.3	3406.3
AM Peak	0800	0800	0800	*	*	*	*		
	390	356	354	*	*	*	*		
PM Peak	1300	1600	1600	*	*	*	*		
	215	219	215	*	*	*	*		

* - No data.

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

CAPITA SYMONDS

Traffic Survey Report
Weekly Vehicle Counts

WeeklyVehicle-280 -- English (ENG)

Datasets:

Site:	[84265045] CARDIFF Rhoose Porthkerry Rd B<30mph>
Direction:	6 - West bound A>B, East bound B>A., Lane: 0
Survey Duration:	12:59 16 November 2004 => 14:29 26 November 2004
File:	X:\MetroCount Data\2004\8426504526Nov2004.EC0 (Plus)
Identifier:	L454APAW MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class, Speed, Count)

Profile:

Filter time:	00:00 17 November 2004 => 00:00 25 November 2004
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Speed range:	6 - 99 mph.
Direction:	West (bound)
Separation:	All - (Headway)
Name:	Traffic Survey Profile
Scheme:	Vehicle classification (DfT-UK)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 31785 / 80087 (39.69%)

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Weekly Vehicle Counts

WeeklyVehicle-280
Site: 84265045.0EW
Description: CARDIFF Rhoose Porthkerry Rd B<30mph>
Filter time: 00:00 17 November 2004 => 00:00 25 November 2004
Scheme: Vehicle classification (DfT-UK)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11) Dir(W) Sp(6,99) Sep(>0)

Hour	Mon 15 Nov	Tue 16 Nov	Wed 17 Nov	Thu 18 Nov	Fri 19 Nov	Sat 20 Nov	Sun 21 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	*	*	25	22	24	67	62	23.7	40.0
0100-0200	*	*	4	2	18	40	44	8.0	21.6
0200-0300	*	*	4	7	6	15	22	5.7	10.8
0300-0400	*	*	12	3	7	11	15	7.3	9.6
0400-0500	*	*	7	8	6	5	9	7.0	7.0
0500-0600	*	*	8	16	11	15	8	11.7	11.6
0600-0700	*	*	47	38	39	35	22	41.3	36.2
0700-0800	*	*	91	92	92	48	22	91.7	69.0
0800-0900	*	*	177	151	155	85	38	161.0	121.2
0900-1000	*	*	172	172	203	155	76	182.3	155.6
1000-1100	*	*	183	177	203	227	127	187.7	183.4
1100-1200	*	*	228<	196<	259<	272<	214<	227.7<	233.8<
1200-1300	*	*	264	277	278	327<	303	273.0	289.8
1300-1400	*	*	214	244	272	325	286	243.3	268.2
1400-1500	*	*	257	254	296	293	294	269.0	278.8
1500-1600	*	*	317	338	367	321	277	340.7	324.0
1600-1700	*	*	422	395	493	293	322<	436.7	385.0
1700-1800	*	*	525<	500<	526<	316	256	517.0<	424.6<
1800-1900	*	*	392	346	371	240	214	369.7	312.6
1900-2000	*	*	239	272	298	189	160	269.7	231.6
2000-2100	*	*	188	218	195	171	111	200.3	176.6
2100-2200	*	*	158	172	122	99	118	150.7	133.8
2200-2300	*	*	141	127	153	107	49	140.3	115.4
2300-2400	*	*	68	75	98	87	48	80.3	75.2
Totals									
0700-1900	*	*	3242	3142	3515	2902	2429	3299.7	3046.0
0600-2200	*	*	3874	3842	4169	3396	2840	3961.7	3624.2
0600-0000	*	*	4083	4044	4420	3590	2937	4182.3	3814.8
0000-0000	*	*	4143	4102	4492	3743	3097	4245.7	3915.4
AM Peak	*	*	1100	1100	1100	1100	1100		
	*	*	228	196	259	272	214		
PM Peak	*	*	1700	1700	1700	1200	1600		
	*	*	525	500	526	327	322		

* - No data.

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Weekly Vehicle Counts

WeeklyVehicle-280
Site: 84265045.0EW
Description: CARDIFF Rhoose Porthkerry Rd B<30mph>
Filter time: 00:00 17 November 2004 => 00:00 25 November 2004
Scheme: Vehicle classification (DfT-UK)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11) Dir(W) Sp(6,99) Sep(>0)

Hour	Mon 22 Nov	Tue 23 Nov	Wed 24 Nov	Thu 25 Nov	Fri 26 Nov	Sat 27 Nov	Sun 28 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	27	20	29	*	*	*	*	25.3	25.3
0100-0200	17	7	4	*	*	*	*	9.3	9.3
0200-0300	5	8	10	*	*	*	*	7.7	7.7
0300-0400	4	3	2	*	*	*	*	3.0	3.0
0400-0500	4	10	2	*	*	*	*	5.3	5.3
0500-0600	6	5	18	*	*	*	*	9.7	9.7
0600-0700	32	37	41	*	*	*	*	36.7	36.7
0700-0800	93	97	93	*	*	*	*	94.3	94.3
0800-0900	169	154	138	*	*	*	*	153.7	153.7
0900-1000	171	152	180	*	*	*	*	167.7	167.7
1000-1100	173	173	187	*	*	*	*	177.7	177.7
1100-1200	216<	203<	216<	*	*	*	*	211.7<	211.7<
1200-1300	253	240	256	*	*	*	*	249.7	249.7
1300-1400	213	239	241	*	*	*	*	231.0	231.0
1400-1500	256	270	242	*	*	*	*	256.0	256.0
1500-1600	318	308	299	*	*	*	*	308.3	308.3
1600-1700	377	412	424	*	*	*	*	404.3	404.3
1700-1800	481<	569<	538<	*	*	*	*	529.3<	529.3<
1800-1900	420	383	446	*	*	*	*	416.3	416.3
1900-2000	251	297	243	*	*	*	*	263.7	263.7
2000-2100	160	184	189	*	*	*	*	177.7	177.7
2100-2200	145	146	161	*	*	*	*	150.7	150.7
2200-2300	97	113	137	*	*	*	*	115.7	115.7
2300-2400	71	52	71	*	*	*	*	64.7	64.7
Totals									
0700-1900	3140	3200	3260	*	*	*	*	3200.0	3200.0
0600-2200	3728	3864	3894	*	*	*	*	3828.7	3828.7
0600-0000	3896	4029	4102	*	*	*	*	4009.0	4009.0
0000-0000	3959	4082	4167	*	*	*	*	4069.3	4069.3
AM Peak	1100	1100	1100	*	*	*	*		
	216	203	216	*	*	*	*		
PM Peak	1700	1700	1700	*	*	*	*		
	481	569	538	*	*	*	*		

* - No data.

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

CAPITA SYMONDS

Traffic Survey Report
Weekly Vehicle Counts

WeeklyVehicle-280 -- English (ENG)

Datasets:

Site:	[84265045] CARDIFF Rhoose Porthkerry Rd B<30mph>
Direction:	6 - West bound A>B, East bound B>A., Lane: 0
Survey Duration:	12:59 16 November 2004 => 14:29 26 November 2004
File:	X:\MetroCount Data\2004\8426504526Nov2004.EC0 (Plus)
Identifier:	L454APAW MC56-6 [MC55] (c)Microcom 02/03/01
Algorithm:	Factory default
Data type:	Axle sensors - Paired (Class, Speed, Count)

Profile:

Filter time:	00:00 17 November 2004 => 00:00 25 November 2004
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Speed range:	6 - 99 mph.
Direction:	East (bound)
Separation:	All - (Headway)
Name:	Traffic Survey Profile
Scheme:	Vehicle classification (DfT-UK)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 30677 / 80087 (38.30%)

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Weekly Vehicle Counts

WeeklyVehicle-280
Site: 84265045.0EW
Description: **CARDIFF Rhoose Porthkerry Rd B<30mph>**
Filter time: **00:00 17 November 2004 => 00:00 25 November 2004**
Scheme: Vehicle classification (DfT-UK)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11) Dir(E) Sp(6,99) Sep(>0)

Hour	Mon 15 Nov	Tue 16 Nov	Wed 17 Nov	Thu 18 Nov	Fri 19 Nov	Sat 20 Nov	Sun 21 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	*	*	9	6	9	36	45	8.0	21.0
0100-0200	*	*	5	5	3	19	30	4.3	12.4
0200-0300	*	*	6	3	5	13	16	4.7	8.6
0300-0400	*	*	7	6	2	10	8	5.0	6.6
0400-0500	*	*	26	18	15	17	14	19.7	18.0
0500-0600	*	*	61	60	62	45	25	61.0	50.6
0600-0700	*	*	160	165	138	63	27	154.3	110.6
0700-0800	*	*	456	439	457	118	46	450.7	303.2
0800-0900	*	*	**491<**	**498<**	**488<**	227	89	**492.3<**	**358.6<**
0900-1000	*	*	327	364	339	330	208	343.3	313.6
1000-1100	*	*	233	251	284	347	304	256.0	283.8
1100-1200	*	*	250	207	279	**350<**	**309<**	245.3	279.0
1200-1300	*	*	239	**231<**	270	297	**290<**	**246.7<**	**265.4<**
1300-1400	*	*	**244<**	229	242	**312<**	272	238.3	259.8
1400-1500	*	*	204	206	**273<**	237	256	227.7	235.2
1500-1600	*	*	219	217	260	213	212	232.0	224.2
1600-1700	*	*	232	227	214	180	218	224.3	214.2
1700-1800	*	*	203	196	199	157	182	199.3	187.4
1800-1900	*	*	217	208	263	153	158	229.3	199.8
1900-2000	*	*	148	146	196	141	124	163.3	151.0
2000-2100	*	*	105	104	112	109	79	107.0	101.8
2100-2200	*	*	73	82	67	66	58	74.0	69.2
2200-2300	*	*	53	54	55	62	39	54.0	52.6
2300-2400	*	*	24	43	46	46	21	37.7	36.0
Totals									
0700-1900	*	*	3315	3273	3568	2921	2544	3385.3	3124.2
0600-2200	*	*	3801	3770	4081	3300	2832	3884.0	3556.8
0600-0000	*	*	3878	3867	4182	3408	2892	3975.7	3645.4
0000-0000	*	*	3992	3965	4278	3548	3030	4078.3	3762.6
AM Peak	*	*	0800	0800	0800	1100	1100		
	*	*	491	498	488	350	309		
PM Peak	*	*	1300	1200	1400	1300	1200		
	*	*	244	231	273	312	290		

* - No data.

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Weekly Vehicle Counts

WeeklyVehicle-280
Site: 84265045.0EW
Description: CARDIFF Rhoose Porthkerry Rd B<30mph>
Filter time: 00:00 17 November 2004 => 00:00 25 November 2004
Scheme: Vehicle classification (DfT-UK)
Filter: Cls(1 2 3 4 5 6 7 8 9 10 11) Dir(E) Sp(6,99) Sep(>0)

Hour	Mon 22 Nov	Tue 23 Nov	Wed 24 Nov	Thu 25 Nov	Fri 26 Nov	Sat 27 Nov	Sun 28 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	13	5	11	*	*	*	*	9.7	9.7
0100-0200	7	3	3	*	*	*	*	4.3	4.3
0200-0300	2	6	7	*	*	*	*	5.0	5.0
0300-0400	9	6	4	*	*	*	*	6.3	6.3
0400-0500	21	26	21	*	*	*	*	22.7	22.7
0500-0600	63	54	58	*	*	*	*	58.3	58.3
0600-0700	149	164	170	*	*	*	*	161.0	161.0
0700-0800	476	481	487<	*	*	*	*	481.3	481.3
0800-0900	528<	486<	480	*	*	*	*	498.0<	498.0<
0900-1000	313	328	361	*	*	*	*	334.0	334.0
1000-1100	264	245	255	*	*	*	*	254.7	254.7
1100-1200	246	227	228	*	*	*	*	233.7	233.7
1200-1300	226	229	210	*	*	*	*	221.7	221.7
1300-1400	239<	253<	227	*	*	*	*	239.7<	239.7<
1400-1500	204	238	236<	*	*	*	*	226.0	226.0
1500-1600	208	222	201	*	*	*	*	210.3	210.3
1600-1700	207	227	225	*	*	*	*	219.7	219.7
1700-1800	193	207	212	*	*	*	*	204.0	204.0
1800-1900	177	197	197	*	*	*	*	190.3	190.3
1900-2000	120	126	175	*	*	*	*	140.3	140.3
2000-2100	68	96	111	*	*	*	*	91.7	91.7
2100-2200	72	66	56	*	*	*	*	64.7	64.7
2200-2300	37	59	56	*	*	*	*	50.7	50.7
2300-2400	22	27	31	*	*	*	*	26.7	26.7
Totals									
0700-1900	3281	3340	3319	*	*	*	*	3313.3	3313.3
0600-2200	3690	3792	3831	*	*	*	*	3771.0	3771.0
0600-0000	3749	3878	3918	*	*	*	*	3848.3	3848.3
0000-0000	3864	3978	4022	*	*	*	*	3954.7	3954.7
AM Peak	0800	0800	0700	*	*	*	*		
	528	486	487	*	*	*	*		
PM Peak	1300	1300	1400	*	*	*	*		
	239	253	236	*	*	*	*		

* - No data.

Transport Survey Dept., Ty Gwent, Lake View, Llantarnam, Cwmbran, Gwent, NP44 3HR. email: gareth.williams@capita.co.uk

Appendix C

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

Calculation factor: 1 HHOLDS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate	No. Days	Ave. HHOLDS	Trip Rate
00:00 - 01:00	2	153	0.03	2	153	0.02	2	153	0.05
01:00 - 02:00	2	153	0.01	2	153	0.00	2	153	0.01
02:00 - 03:00	2	153	0.01	2	153	0.00	2	153	0.01
03:00 - 04:00	2	153	0.00	2	153	0.01	2	153	0.01
04:00 - 05:00	2	153	0.00	2	153	0.01	2	153	0.01
05:00 - 06:00	2	153	0.01	2	153	0.04	2	153	0.05
06:00 - 07:00	2	153	0.04	2	153	0.13	2	153	0.17
07:00 - 08:00	14	218	0.07	14	218	0.32	14	218	0.39
08:00 - 09:00	14	218	0.12	**14**	**218**	**0.45**	14	218	0.57
09:00 - 10:00	14	218	0.13	14	218	0.21	14	218	0.34
10:00 - 11:00	14	218	0.14	14	218	0.17	14	218	0.31
11:00 - 12:00	14	218	0.15	14	218	0.16	14	218	0.31
12:00 - 13:00	14	218	0.18	14	218	0.16	14	218	0.34
13:00 - 14:00	14	218	0.17	14	218	0.18	14	218	0.35
14:00 - 15:00	14	218	0.18	14	218	0.16	14	218	0.34
15:00 - 16:00	14	218	0.25	14	218	0.19	14	218	0.44
16:00 - 17:00	14	218	0.30	14	218	0.18	14	218	0.48
17:00 - 18:00	**14**	**218**	**0.40**	14	218	0.20	14	218	0.60
18:00 - 19:00	14	218	0.37	14	218	0.23	14	218	0.60
19:00 - 20:00	2	153	0.36	2	153	0.32	**2**	**153**	**0.68**
20:00 - 21:00	2	153	0.30	2	153	0.22	2	153	0.52
21:00 - 22:00	2	153	0.19	2	153	0.10	2	153	0.29
22:00 - 23:00	2	153	0.12	2	153	0.07	2	153	0.19
23:00 - 24:00	2	153	0.05	2	153	0.03	2	153	0.08
Daily Trip Rates:			3.57			3.57			7.14

Parameter summary

Trip rate parameter range selected:	50 - 4334 (units:)
Survey date date range:	01/01/96 - 12/11/02
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Optional parameters used in selection:	NO
Surveys manually removed from selection:	7

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Ranking Type: **ARRIVALS** Time Range: 08:00-09:00
WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.
15th Percentile = No. **12 (*)**
85th Percentile = No. **3 (*)**

Rank	Site-Ref	Description	Area	Day	Date	Trip Rate
1	TW-03-A-01	PRIVATE HOUSING, SUNDER	TYNE & WEAR	Wed	18/09/02	0.23
2	GM-03-A-05	TAMESIDE HOUSING	GREATER MANCHESTE	Wed	27/11/96	0.23
3 **	**GM-03-A-07**	**MANCHESTER HOUSING**	**GREATER MANCHESTE**	**Fri**	**09/11/01**	**0.20**
4	GM-03-A-01	BOLTON HOUSING	GREATER MANCHESTE	Fri	07/03/97	0.19
5	GM-03-A-04	BOLTON HOUSING	GREATER MANCHESTE	Wed	27/11/96	0.18
6	SC-03-A-03	DETACHED HOUSES, E. MOL	SURREY	Tue	12/11/02	0.15
7	GM-03-A-06	WIGAN HOUSING	GREATER MANCHESTE	Thu	18/06/98	0.15
8	HC-03-A-01	EASTLEIGH HOUSING	HAMPSHIRE	Thu	19/08/99	0.13
9	SC-03-A-02	EPSOM HOUSING	SURREY	Tue	03/10/00	0.11
10	GM-03-A-08	STOCKPORT HOUSING	GREATER MANCHESTE	Fri	12/10/01	0.11
11	NT-03-A-02	NOTTINGHAM HOUSING	NOTTINGHAMSHIRE	Tue	24/11/98	0.10
12 **	**FI-03-A-01**	**BALMULLO HOUSING,NEAR C**	**FIFE**	**Thu**	**24/06/99**	**0.08**
13	HC-03-A-10	EASTLEIGH HOUSING	HAMPSHIRE	Wed	18/08/99	0.07
14	NT-03-A-01	COLLINGHAM HOUSING	NOTTINGHAMSHIRE	Thu	26/11/98	0.04

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Ranking Type: **DEPARTURES** Time Range: 08:00-09:00
WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.
15th Percentile = No. **12 (*)**
85th Percentile = No. **3 (*)**

Rank	Site-Ref	Description	Area	Day	Date	Trip Rate
1	GM-03-A-05	TAMESIDE HOUSING	GREATER MANCHESTE	Wed	27/11/96	0.88
2	GM-03-A-06	WIGAN HOUSING	GREATER MANCHESTE	Thu	18/06/98	0.69
3 **	**GM-03-A-04**	**BOLTON HOUSING**	**GREATER MANCHESTE**	**Wed**	**27/11/96**	**0.60**
4	GM-03-A-01	BOLTON HOUSING	GREATER MANCHESTE	Fri	07/03/97	0.54
5	TW-03-A-01	PRIVATE HOUSING, SUNDER	TYNE & WEAR	Wed	18/09/02	0.51
6	NT-03-A-02	NOTTINGHAM HOUSING	NOTTINGHAMSHIRE	Tue	24/11/98	0.48
7	HC-03-A-01	EASTLEIGH HOUSING	HAMPSHIRE	Thu	19/08/99	0.43
8	HC-03-A-10	EASTLEIGH HOUSING	HAMPSHIRE	Wed	18/08/99	0.42
9	GM-03-A-07	MANCHESTER HOUSING	GREATER MANCHESTE	Fri	09/11/01	0.42
10	SC-03-A-03	DETACHED HOUSES, E. MOL	SURREY	Tue	12/11/02	0.39
11	SC-03-A-02	EPSOM HOUSING	SURREY	Tue	03/10/00	0.39
12 **	**GM-03-A-08**	**STOCKPORT HOUSING**	**GREATER MANCHESTE**	**Fri**	**12/10/01**	**0.38**
13	FI-03-A-01	BALMULLO HOUSING,NEAR C	FIFE	Thu	24/06/99	0.37
14	NT-03-A-01	COLLINGHAM HOUSING	NOTTINGHAMSHIRE	Thu	26/11/98	0.16

Capita Symonds Lake View Cwmbran Licence No: 726101

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Ranking Type: **ARRIVALS** Time Range: 17:00-18:00
WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.
15th Percentile = No. **12** (*)
85th Percentile = No. **3** (*)

Rank	Site-Ref	Description	Area	Day	Date	Trip Rate
1	HC-03-A-01	EASTLEIGH HOUSING	HAMPSHIRE	Thu	19/08/99	0.58
2	GM-03-A-04	BOLTON HOUSING	GREATER MANCHESTE	Wed	27/11/96	0.57
3 **	**TW-03-A-01**	**PRIVATE HOUSING, SUNDER**	**TYNE & WEAR**	**Wed**	**18/09/02**	**0.52**
4	GM-03-A-06	WIGAN HOUSING	GREATER MANCHESTE	Thu	18/06/98	0.49
5	NT-03-A-02	NOTTINGHAM HOUSING	NOTTINGHAMSHIRE	Tue	24/11/98	0.47
6	GM-03-A-05	TAMESIDE HOUSING	GREATER MANCHESTE	Wed	27/11/96	0.46
7	GM-03-A-08	STOCKPORT HOUSING	GREATER MANCHESTE	Fri	12/10/01	0.43
8	GM-03-A-01	BOLTON HOUSING	GREATER MANCHESTE	Fri	07/03/97	0.42
9	HC-03-A-10	EASTLEIGH HOUSING	HAMPSHIRE	Wed	18/08/99	0.41
10	GM-03-A-07	MANCHESTER HOUSING	GREATER MANCHESTE	Fri	09/11/01	0.34
11	FI-03-A-01	BALMULLO HOUSING,NEAR C	FIFE	Thu	24/06/99	0.32
12 **	**SC-03-A-03**	**DETACHED HOUSES, E. MOL**	**SURREY**	**Tue**	**12/11/02**	**0.30**
13	SC-03-A-02	EPSOM HOUSING	SURREY	Tue	03/10/00	0.23
14	NT-03-A-01	COLLINGHAM HOUSING	NOTTINGHAMSHIRE	Thu	26/11/98	0.07

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Ranking Type: **DEPARTURES** Time Range: 17:00-18:00
WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.
15th Percentile = No. **12 (*)**
85th Percentile = No. **3 (*)**

Rank	Site-Ref	Description	Area	Day	Date	Trip Rate
1	TW-03-A-01	PRIVATE HOUSING, SUNDER	TYNE & WEAR	Wed	18/09/02	0.26
2	GM-03-A-08	STOCKPORT HOUSING	GREATER MANCHESTE	Fri	12/10/01	0.26
3 **	**GM-03-A-07**	**MANCHESTER HOUSING**	**GREATER MANCHESTE**	**Fri**	**09/11/01**	**0.26**
4	HC-03-A-01	EASTLEIGH HOUSING	HAMPSHIRE	Thu	19/08/99	0.24
5	SC-03-A-02	EPSOM HOUSING	SURREY	Tue	03/10/00	0.23
6	GM-03-A-04	BOLTON HOUSING	GREATER MANCHESTE	Wed	27/11/96	0.22
7	NT-03-A-02	NOTTINGHAM HOUSING	NOTTINGHAMSHIRE	Tue	24/11/98	0.21
8	GM-03-A-06	WIGAN HOUSING	GREATER MANCHESTE	Thu	18/06/98	0.20
9	GM-03-A-01	BOLTON HOUSING	GREATER MANCHESTE	Fri	07/03/97	0.19
10	HC-03-A-10	EASTLEIGH HOUSING	HAMPSHIRE	Wed	18/08/99	0.14
11	GM-03-A-05	TAMESIDE HOUSING	GREATER MANCHESTE	Wed	27/11/96	0.14
12 **	**SC-03-A-03**	**DETACHED HOUSES, E. MOL**	**SURREY**	**Tue**	**12/11/02**	**0.13**
13	FI-03-A-01	BALMULLO HOUSING,NEAR C	FIFE	Thu	24/06/99	0.13
14	NT-03-A-01	COLLINGHAM HOUSING	NOTTINGHAMSHIRE	Thu	26/11/98	0.07

TRL LIMITED

CAPACITIES, QUEUES AND DELAYS AT ROUNDABOUTS

ARCADY 5.0 ANALYSIS PROGRAM
RELEASE 1.1 (MAY 2001)

ADAPTED FROM ARCADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

Run with file:-
"p:\schemes\75xx\7550\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2004 AM.vai"
(drive-on-the-right) at 16:03:15 on Monday, 9 October 2006

ROUNDABOUT CAPACITY AND DELAY
****

RUN TITLE
****
Rhoose Point - Rhoose Point R/A 2004 AM

INPUT DATA
****
ARM A - Porthkerry Road East
ARM B - Rhoose Point
ARM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

MAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.10	3.15	2.10
ARM B	15.00	45.00	75.00	2.86	4.29	2.86
ARM C	15.00	45.00	75.00	4.44	6.66	4.44

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.196	0.804
		0.0	33.0	135.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.699	0.000	0.301
		160.0	0.0	69.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.946	0.054	0.000
		336.0	19.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
FAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
ARM A	2.10	22.03	0.095		0.0	0.1	1.5	
ARM B	2.86	20.33	0.141		0.0	0.2	2.4	
ARM C	4.44	21.38	0.208		0.0	0.3	3.8	
08.00-08.15								
ARM A	2.51	22.01	0.114		0.1	0.1	1.9	
ARM B	3.42	20.14	0.170		0.2	0.2	3.0	
ARM C	5.30	21.15	0.251		0.3	0.3	4.9	
08.15-08.30								
ARM A	3.07	21.97	0.140		0.1	0.2	2.4	
ARM B	4.19	19.87	0.211		0.2	0.3	3.9	
ARM C	6.49	20.83	0.312		0.3	0.4	6.6	
08.30-08.45								
ARM A	3.07	21.97	0.140		0.2	0.2	2.4	
ARM B	4.19	19.87	0.211		0.3	0.3	4.0	
ARM C	6.49	20.83	0.312		0.4	0.5	6.8	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
8.45-09.00								
ARM A	2.51	22.00	0.114		0.2	0.1	2.0	
ARM B	3.42	20.14	0.170		0.3	0.2	3.1	
ARM C	5.30	21.15	0.251		0.5	0.3	5.1	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
9.00-09.15								
ARM A	2.10	22.03	0.095		0.1	0.1	1.6	
ARM B	2.86	20.33	0.141		0.2	0.2	2.5	
ARM C	4.44	21.38	0.208		0.3	0.3	4.0	

QUEUE AT ARM A

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

QUEUE AT ARM B

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 C

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

TRL TRL VIEWER 2.0 AE p:\schemes\75xx\7550\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2004 AM.vao -

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	230.4	153.6	11.8	0.05	11.8	0.05
B	314.0	209.3	19.0	0.06	19.0	0.06
C	486.8	324.5	31.3	0.06	31.3	0.06
ALL	1031.2	687.4	62.1	0.06	62.1	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

****** ARCADY 5 run completed.

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

[Printed at 16:03:30 on 09/10/2006]

TRL VIEWER 2.0 AE p:\schemes\75xx\7550\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2004 PM.vao -

TRL LIMITED

(C) COPYRIGHT 1990,1996,2000

CAPACITIES, QUEUES AND DELAYS AT ROUNDABOUTS

ARCADY 5.0 ANALYSIS PROGRAM
RELEASE 1.1 (MAY 2001)

ADAPTED FROM ARCADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

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

Run with file:-
"p:\schemes\75xx\7550\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2004 PM.vai"
(drive-on-the-right) at 16:15:00 on Monday, 9 October 2006

ROUNDABOUT CAPACITY AND DELAY

RUN TITLE

Rhoose Point - Rhoose Point R/A 2004 PM

INPUT DATA

ARM A - Porthkerry Road East
ARM B - Rhoose Point
ARM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

AND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	6.56	9.84	6.56
ARM B	15.00	45.00	75.00	0.79	1.18	0.79
ARM C	15.00	45.00	75.00	2.42	3.64	2.42

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.250	0.750
		0.0	131.0	394.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.651	0.000	0.349
		41.0	0.0	22.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.830	0.170	0.000
		161.0	33.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
FAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
16.45-17.00								
ARM A	6.56	21.93	0.299		0.0	0.4	6.2	
ARM B	0.79	18.43	0.043		0.0	0.0	0.7	
ARM C	2.42	22.27	0.109		0.0	0.1	1.8	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
ARM A	7.84	21.88	0.358		0.4	0.6	8.2	
ARM B	0.94	17.86	0.053		0.0	0.1	0.8	
ARM C	2.90	22.21	0.130		0.1	0.1	2.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
ARM A	9.60	21.82	0.440		0.6	0.8	11.4	
ARM B	1.15	17.09	0.067		0.1	0.1	1.1	
ARM C	3.55	22.13	0.160		0.1	0.2	2.8	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
ARM A	9.60	21.82	0.440		0.8	0.8	11.7	
ARM B	1.15	17.08	0.067		0.1	0.1	1.1	
ARM C	3.55	22.13	0.160		0.2	0.2	2.9	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
ARM A	7.84	21.88	0.358		0.8	0.6	8.6	
ARM B	0.94	17.85	0.053		0.1	0.1	0.8	
ARM C	2.90	22.21	0.130		0.2	0.2	2.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
18.00-18.15								
ARM A	6.56	21.93	0.299		0.6	0.4	6.6	
ARM B	0.79	18.42	0.043		0.1	0.0	0.7	
ARM C	2.42	22.27	0.109		0.2	0.1	1.9	

EUE AT ARM A

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

EUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE AT ARM C

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

TRL TRL VIEWER 2.0 AE p:\schemes\75xx\7550\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2004 PM.vao -

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	719.9	479.9	52.6	0.07	52.6	0.07
B	86.4	57.6	5.2	0.06	5.2	0.06
C	266.0	177.3	13.8	0.05	13.8	0.05
ALL	1072.3	714.9	71.6	0.07	71.6	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

****** ARCADY 5 run completed.

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

[Printed at 16:15:11 on 09/10/2006]

TRL TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 20

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

TRL Limited Tel: +44 (0) 1344 770018
Crowthorne House Fax: +44 (0) 1344 770864
Nine Mile Ride Email: softwarebureau@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2008 AM.vai"
(drive-on-the-right) at 15:32:40 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2008 AM
LOCATION:
DATE: 16/11/06
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Porthkerry Road East
ARM B - Rhoose Point
ARM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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)

ARM	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 TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2008 AM

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.34	3.51	2.34
ARM B	15.00	45.00	75.00	3.06	4.59	3.06
ARM C	15.00	45.00	75.00	4.95	7.42	4.95

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2008 AM

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.187	0.813
		0.0	35.0	152.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.698	0.000	0.302
		171.0	0.0	74.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.949	0.051	0.000
		376.0	20.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	2.34	22.03	0.106		0.0	0.1	1.7		0.05
ARM B	3.06	20.21	0.152		0.0	0.2	2.6		0.06
ARM C	4.95	21.30	0.232		0.0	0.3	4.4		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	2.79	22.00	0.127		0.1	0.1	2.1		0.05
ARM B	3.66	19.99	0.183		0.2	0.2	3.3		0.06
ARM C	5.91	21.05	0.281		0.3	0.4	5.7		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	3.42	21.96	0.156		0.1	0.2	2.7		0.05
ARM B	4.48	19.69	0.227		0.2	0.3	4.3		0.07
ARM C	7.24	20.71	0.350		0.4	0.5	7.8		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	3.42	21.96	0.156		0.2	0.2	2.8		0.05
ARM B	4.48	19.69	0.228		0.3	0.3	4.4		0.07
ARM C	7.24	20.71	0.350		0.5	0.5	8.0		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	2.79	22.00	0.127		0.2	0.1	2.2		0.05
ARM B	3.66	19.99	0.183		0.3	0.2	3.4		0.06
ARM C	5.91	21.05	0.281		0.5	0.4	6.0		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	2.34	22.02	0.106		0.1	0.1	1.8		0.05
ARM B	3.06	20.20	0.152		0.2	0.2	2.7		0.06
ARM C	4.95	21.30	0.232		0.4	0.3	4.6		0.06

QUEUE AT ARM A

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	

QUEUE AT ARM B

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 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	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	256.4	170.9	13.4	0.05	13.4	0.05
B	335.9	224.0	20.8	0.06	20.8	0.06
C	543.0	362.0	36.6	0.07	36.6	0.07
ALL	1135.4	756.9	70.8	0.06	70.8	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 ==========

rinted at 15:32:49 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2008 PM.vai"
(drive-on-the-right) at 15:31:40 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2008 PM
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Porthkerry Road East
ARM B - Rhoose Point
ARM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2008 PM

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS IFALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	7.19	10.78	7.19
ARM B	15.00	45.00	75.00	0.84	1.26	0.84
ARM C	15.00	45.00	75.00	2.75	4.13	2.75

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2008 PM

TIME	FROM/TO	TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.243	0.757
		0.0	140.0	435.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.657	0.000	0.343
		44.0	0.0	23.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.841	0.159	0.000
		185.0	35.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	7.19	21.92	0.328		0.0	0.5	7.1		0.07
ARM B	0.84	18.13	0.046		0.0	0.0	0.7		0.06
ARM C	2.75	22.25	0.124		0.0	0.1	2.1		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	8.58	21.86	0.393		0.5	0.6	9.4		0.08
ARM B	1.00	17.50	0.057		0.0	0.1	0.9		0.06
ARM C	3.28	22.18	0.148		0.1	0.2	2.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	10.51	21.80	0.482		0.6	0.9	13.4		0.09
ARM B	1.22	16.65	0.074		0.1	0.1	1.2		0.06
ARM C	4.02	22.10	0.182		0.2	0.2	3.3		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	10.51	21.80	0.482		0.9	0.9	13.9		0.09
ARM B	1.22	16.64	0.074		0.1	0.1	1.2		0.06
ARM C	4.02	22.10	0.182		0.2	0.2	3.3		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	8.58	21.86	0.393		0.9	0.7	10.0		0.08
ARM B	1.00	17.49	0.057		0.1	0.1	0.9		0.06
ARM C	3.28	22.18	0.148		0.2	0.2	2.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	7.19	21.91	0.328		0.7	0.5	7.5		0.07
ARM B	0.84	18.12	0.046		0.1	0.0	0.7		0.06
ARM C	2.75	22.25	0.124		0.2	0.1	2.1		0.05

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.5	
17.15	0.6	*
17.30	0.9	*
17.45	0.9	*
18.00	0.7	*
18.15	0.5	

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.1
17.30	0.1
17.45	0.1
18.00	0.1
18.15	0.0

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	788.4	525.6	61.3	0.08	61.3	0.08
B	91.9	61.2	5.6	0.06	5.6	0.06
C	301.7	201.1	16.0	0.05	16.0	0.05
ALL	1182.0	788.0	83.0	0.07	83.0	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 ==========

rinted at 15:31:50 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2018 AM.vai"
(ive-on-the-right) at 15:29:56 on Thursday, 16 November 2006

FILE PROPERTIES
****

RUN TITLE: Rhoose Point - Rhoose Point R/A 2018 AM
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
SCRIPTION:

INPUT DATA
****

M A - Porthkerry Road East
M B - Rhoose Point
RM C - Porthkerry West

EOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

nly sets included in the current run are shown)

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

IME 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 TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 AM

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	3.16	4.74	3.16
ARM B	15.00	45.00	75.00	3.53	5.29	3.53
ARM C	15.00	45.00	75.00	6.50	9.75	6.50

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 AM

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.162	0.838
		0.0	41.0	212.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.699	0.000	0.301
		197.0	0.0	85.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.956	0.044	0.000
		497.0	23.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	3.16	22.00	0.144		0.0	0.2	2.5		0.05
ARM B	3.53	19.77	0.178		0.0	0.2	3.2		0.06
ARM C	6.50	21.11	0.308		0.0	0.4	6.5		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	3.78	21.97	0.172		0.2	0.2	3.1		0.05
ARM B	4.21	19.46	0.216		0.2	0.3	4.1		0.07
ARM C	7.76	20.82	0.373		0.4	0.6	8.7		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	4.63	21.93	0.211		0.2	0.3	3.9		0.06
ARM B	5.16	19.04	0.271		0.3	0.4	5.4		0.07
ARM C	9.51	20.43	0.465		0.6	0.9	12.6		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	4.63	21.92	0.211		0.3	0.3	4.0		0.06
ARM B	5.16	19.04	0.271		0.4	0.4	5.5		0.07
ARM C	9.51	20.42	0.465		0.9	0.9	13.0		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	3.78	21.97	0.172		0.3	0.2	3.2		0.06
ARM B	4.21	19.46	0.216		0.4	0.3	4.2		0.07
ARM C	7.76	20.82	0.373		0.9	0.6	9.2		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	3.16	22.00	0.144		0.2	0.2	2.6		0.05
ARM B	3.53	19.76	0.178		0.3	0.2	3.3		0.06
ARM C	6.50	21.10	0.308		0.6	0.4	6.9		0.07

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	0.4	
08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.4	

TRL TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 20

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	346.9	231.3	19.2	0.06	19.2	0.06
B	386.7	257.8	25.8	0.07	25.8	0.07
C	713.0	475.4	56.7	0.08	56.7	0.08
ALL	1446.6	964.4	101.6	0.07	101.7	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 ==========

[Printed at 15:30:10 on 16/11/2006]

TRL TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 20

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2018 PM.vai"
(drive-on-the-right) at 15:29:15 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2018 PM
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Porthkerry Road East
ARM B - Rhoose Point
ARM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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)

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

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 PM

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	9.06	13.59	9.06
ARM B	15.00	45.00	75.00	0.96	1.44	0.96
ARM C	15.00	45.00	75.00	3.89	5.83	3.89

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
	ARM A	0.000	0.222	0.778
		0.0	161.0	564.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.649	0.000	0.351
		50.0	0.0	27.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.868	0.132	0.000
		270.0	41.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.06	21.87	0.414		0.0	0.7	10.2		0.08
ARM B	0.96	17.19	0.056		0.0	0.1	0.9		0.06
ARM C	3.89	22.21	0.175		0.0	0.2	3.1		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	10.82	21.81	0.496		0.7	1.0	14.2		0.09
ARM B	1.15	16.37	0.070		0.1	0.1	1.1		0.07
ARM C	4.64	22.13	0.210		0.2	0.3	3.9		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	13.25	21.73	0.610		1.0	1.5	22.1		0.12
ARM B	1.41	15.27	0.092		0.1	0.1	1.5		0.07
ARM C	5.69	22.03	0.258		0.3	0.3	5.1		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	13.25	21.73	0.610		1.5	1.5	23.1		0.12
ARM B	1.41	15.25	0.092		0.1	0.1	1.5		0.07
ARM C	5.69	22.03	0.258		0.3	0.3	5.2		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	10.82	21.81	0.496		1.5	1.0	15.4		0.09
ARM B	1.15	16.35	0.070		0.1	0.1	1.2		0.07
ARM C	4.64	22.13	0.210		0.3	0.3	4.1		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	9.06	21.87	0.414		1.0	0.7	11.0		0.08
ARM B	0.96	17.16	0.056		0.1	0.1	0.9		0.06
ARM C	3.89	22.20	0.175		0.3	0.2	3.2		0.05

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.7	*
17.15	1.0	*
17.30	1.5	**
17.45	1.5	**
18.00	1.0	*
18.15	0.7	*

QUEUE AT ARM B

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

QUEUE AT ARM C

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

TRL TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 20

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	994.1	662.8	96.0	0.10	96.0	0.10
B	105.6	70.4	7.1	0.07	7.1	0.07
C	426.4	284.3	24.6	0.06	24.6	0.06
ALL	1526.2	1017.4	127.7	0.08	127.7	0.08

* 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 ==========

rinted at 15:29:21 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2008 AM WITH DEV.vai"
(drive-on-the-right) at 15:28:02 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2008 AM WITH DEV
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

AM A - Porthkerry Road East
AM B - Rhoose Point
AM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

ARM	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 TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2008 AM WITH DEV

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	3.42	5.14	3.42
ARM B	15.00	45.00	75.00	8.23	12.34	8.23
ARM C	15.00	45.00	75.00	5.59	8.38	5.59

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2008 AM WITH DEV

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.445	0.555
		0.0	122.0	152.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.699	0.000	0.301
		460.0	0.0	198.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.841	0.159	0.000
		376.0	71.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	3.42	21.65	0.158		0.0	0.2	2.8		0.05
ARM B	8.23	20.21	0.407		0.0	0.7	9.9		0.08
ARM C	5.59	19.16	0.292		0.0	0.4	6.0		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	4.09	21.55	0.190		0.2	0.2	3.5		0.06
ARM B	9.82	19.99	0.491		0.7	1.0	13.9		0.10
ARM C	6.67	18.48	0.361		0.4	0.6	8.2		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	5.01	21.41	0.234		0.2	0.3	4.5		0.06
ARM B	12.03	19.69	0.611		1.0	1.5	22.0		0.13
ARM C	8.17	17.56	0.465		0.6	0.9	12.5		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	5.01	21.41	0.234		0.3	0.3	4.6		0.06
ARM B	12.03	19.69	0.611		1.5	1.6	23.2		0.13
ARM C	8.17	17.55	0.466		0.9	0.9	12.9		0.11

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	4.09	21.55	0.190		0.3	0.2	3.6		0.06
ARM B	9.82	19.99	0.491		1.6	1.0	15.2		0.10
ARM C	6.67	18.45	0.362		0.9	0.6	8.8		0.09

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	3.42	21.65	0.158		0.2	0.2	2.9		0.05
ARM B	8.23	20.20	0.407		1.0	0.7	10.7		0.08
ARM C	5.59	19.13	0.292		0.6	0.4	6.4		0.07

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	0.7	*
08.15	1.0	*
08.30	1.5	**
08.45	1.6	**
09.00	1.0	*
09.15	0.7	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.4	
08.15	0.6	*
08.30	0.9	*
08.45	0.9	*
09.00	0.6	*
09.15	0.4	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	375.7	250.5	21.7	0.06	21.7	0.06
B	902.3	601.5	94.9	0.11	94.9	0.11
C	612.9	408.6	54.8	0.09	54.8	0.09
ALL	1890.9	1260.6	171.4	0.09	171.4	0.09

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* NCLUSIVE 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 ==========

[inted at 15:28:08 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2008 PM WITH DEV.vai"
(drive-on-the-right) at 15:27:17 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2008 PM WITH DEV
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Porthkerry Road East
ARM B - Rhoose Point
ARM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2008 PM WITH DEV

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS IFALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	10.76	16.14	10.76
ARM B	15.00	45.00	75.00	3.08	4.61	3.08
ARM C	15.00	45.00	75.00	3.65	5.48	3.65

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2008 PM WITH DEV

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.495	0.505
		0.0	426.0	435.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.650	0.000	0.350
		160.0	0.0	86.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.634	0.366	0.000
		185.0	107.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	10.76	21.39	0.503		0.0	1.0	14.4		0.09
ARM B	3.08	18.14	0.170		0.0	0.2	3.0		0.07
ARM C	3.65	21.39	0.171		0.0	0.2	3.0		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	12.85	21.23	0.605		1.0	1.5	21.7		0.12
ARM B	3.67	17.51	0.210		0.2	0.3	3.9		0.07
ARM C	4.36	21.15	0.206		0.2	0.3	3.8		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	15.74	21.02	0.749		1.5	2.8	39.5		0.18
ARM B	4.50	16.67	0.270		0.3	0.4	5.4		0.08
ARM C	5.34	20.83	0.256		0.3	0.3	5.1		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	15.74	21.02	0.749		2.8	2.9	43.3		0.19
ARM B	4.50	16.64	0.270		0.4	0.4	5.5		0.08
ARM C	5.34	20.83	0.256		0.3	0.3	5.1		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	12.85	21.23	0.605		2.9	1.6	24.7		0.12
ARM B	3.67	17.47	0.210		0.4	0.3	4.1		0.07
ARM C	4.36	21.15	0.206		0.3	0.3	4.0		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	10.76	21.39	0.503		1.6	1.0	15.9		0.09
ARM B	3.08	18.11	0.170		0.3	0.2	3.1		0.07
ARM C	3.65	21.38	0.171		0.3	0.2	3.1		0.06

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	1.5	**
17.30	2.8	***
17.45	2.9	***
18.00	1.6	**
18.15	1.0	*

QUEUE AT ARM B

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

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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	1180.6	787.1	159.4	0.14	159.4	0.14
B	337.3	224.9	25.0	0.07	25.0	0.07
C	400.4	266.9	24.2	0.06	24.2	0.06
ALL	1918.3	1278.9	208.6	0.11	208.6	0.11

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

END OF JOB

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

[Printed at 15:27:28 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

TRL Limited Tel: +44 (0) 1344 770018
Crowthorne House Fax: +44 (0) 1344 770864
Nine Mile Ride Email: softwarebureau@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2018 AM WITH DEV.vai"
(drive-on-the-right) at 15:24:21 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2018 AM WITH DEV
LOCATION:
DATE: 16/11/06
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

A A - Porthkerry Road East
A B - Rhoose Point
A C - Porthkerry West

G METRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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)

ARM	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 TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 AM WITH DEV

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	4.25	6.38	4.25
ARM B	15.00	45.00	75.00	8.69	13.03	8.69
ARM C	15.00	45.00	75.00	7.14	10.71	7.14

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 AM WITH DEV

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.376	0.624
		0.0	128.0	212.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.699	0.000	0.301
		486.0	0.0	209.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.870	0.130	0.000
		497.0	74.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	4.25	21.63	0.196		0.0	0.2	3.6		0.06
ARM B	8.69	19.77	0.439		0.0	0.8	11.2		0.09
ARM C	7.14	18.96	0.376		0.0	0.6	8.7		0.08
08.00-08.15									
ARM A	5.07	21.52	0.236		0.2	0.3	4.5		0.06
ARM B	10.37	19.46	0.533		0.8	1.1	16.3		0.11
ARM C	8.52	18.25	0.467		0.6	0.9	12.6		0.10
08.15-08.30									
ARM A	6.22	21.38	0.291		0.3	0.4	6.0		0.07
ARM B	12.71	19.04	0.667		1.1	1.9	27.6		0.15
ARM C	10.44	17.28	0.604		0.9	1.5	21.3		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	6.22	21.38	0.291		0.4	0.4	6.1		0.07
ARM B	12.71	19.04	0.667		1.9	2.0	29.5		0.16
ARM C	10.44	17.26	0.605		1.5	1.5	22.5		0.15

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	5.07	21.52	0.236		0.4	0.3	4.7		0.06
ARM B	10.37	19.46	0.533		2.0	1.2	18.1		0.11
ARM C	8.52	18.21	0.468		1.5	0.9	13.9		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	4.25	21.63	0.197		0.3	0.2	3.7		0.06
ARM B	8.69	19.76	0.440		1.2	0.8	12.2		0.09
ARM C	7.14	18.93	0.377		0.9	0.6	9.4		0.09

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	0.8	*
08.15	1.1	*
08.30	1.9	**
08.45	2.0	**
09.00	1.2	*
09.15	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.9	*
08.30	1.5	*
08.45	1.5	**
09.00	0.9	*
09.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	466.2	310.8	28.7	0.06	28.7	0.06
B	953.0	635.3	114.9	0.12	114.9	0.12
C	783.0	522.0	88.3	0.11	88.3	0.11
ALL	2202.2	1468.1	232.0	0.11	232.0	0.11

* ELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* NCLUSIVE 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 ==========

[inted at 15:24:44 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2018 PM WITH DEV.vai"
(d ve-on-the-right) at 15:21:30 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2018 PM WITH DEV
LOCATION:
DATE: 16/11/06
CLIENT:
UMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

A 1 A - Porthkerry Road East
A 1 B - Rhoose Point
A 1 C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	20.00	35.00	45.0	0.588	24.389
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

(ly sets included in the current run are shown)

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

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 PM WITH DEV

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS IFALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	12.64	18.96	12.64
ARM B	15.00	45.00	75.00	3.20	4.80	3.20
ARM C	15.00	45.00	75.00	4.79	7.18	4.79

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 PM WITH DEV

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.442	0.558
		0.0	447.0	564.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.648	0.000	0.352
		166.0	0.0	90.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.705	0.295	0.000
		270.0	113.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	12.64	21.35	0.592		0.0	1.4	20.3		0.11
ARM B	3.20	17.20	0.186		0.0	0.2	3.3		0.07
ARM C	4.79	21.34	0.224		0.0	0.3	4.2		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	15.09	21.18	0.712		1.4	2.4	33.7		0.16
ARM B	3.82	16.39	0.233		0.2	0.3	4.4		0.08
ARM C	5.72	21.10	0.271		0.3	0.4	5.5		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	18.48	20.96	0.882		2.4	6.3	79.7		0.34
ARM B	4.68	15.34	0.305		0.3	0.4	6.4		0.09
ARM C	7.00	20.77	0.337		0.4	0.5	7.4		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	18.48	20.96	0.882		6.3	6.8	98.5		0.39
ARM B	4.68	15.26	0.307		0.4	0.4	6.6		0.09
ARM C	7.00	20.76	0.337		0.5	0.5	7.6		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	15.09	21.18	0.713		6.8	2.6	43.2		0.18
ARM B	3.82	16.27	0.235		0.4	0.3	4.7		0.08
ARM C	5.72	21.09	0.271		0.5	0.4	5.7		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	12.64	21.34	0.592		2.6	1.5	23.2		0.12
ARM B	3.20	17.15	0.187		0.3	0.2	3.5		0.07
ARM C	4.79	21.33	0.224		0.4	0.3	4.4		0.06

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.4	*
17.15	2.4	**
17.30	6.3	******
17.45	6.8	*******
18.00	2.6	***
18.15	1.5	*

QUEUE AT ARM B

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

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1386.3	924.2	298.6	0.22	298.6	0.22
B	351.0	234.0	29.0	0.08	29.0	0.08
C	525.2	350.1	34.8	0.07	34.8	0.07
ALL	2262.5	1508.3	362.4	0.16	362.4	0.16

* 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 ==========

rinted at 15:21:56 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2018 AM With Dev Fix.vaj"
(drive-on-the-right) at 14:41:43 on Friday, 17 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2018 AM - With Development With Flare
LOCATION:
DATE: 17/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Porthkerry Road East
ARM B - Rhoose Point
ARM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	8.00	30.00	20.00	35.00	45.0	0.676	31.697
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

ARM	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 TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 AM - With Development With Flare

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	4.25	6.38	4.25
ARM B	15.00	45.00	75.00	8.69	13.03	8.69
ARM C	15.00	45.00	75.00	7.14	10.71	7.14

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 AM - With Development With Flare

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.376	0.624
		0.0	128.0	212.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.699	0.000	0.301
		486.0	0.0	209.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.870	0.130	0.000
		497.0	74.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	4.25	28.19	0.151		0.0	0.2	2.6		0.04
ARM B	8.69	19.77	0.439		0.0	0.8	11.2		0.09
ARM C	7.14	18.96	0.376		0.0	0.6	8.7		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	5.07	28.07	0.181		0.2	0.2	3.3		0.04
ARM B	10.37	19.46	0.533		0.8	1.1	16.3		0.11
ARM C	8.52	18.25	0.467		0.6	0.9	12.6		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	6.22	27.90	0.223		0.2	0.3	4.2		0.05
ARM B	12.71	19.04	0.667		1.1	1.9	27.6		0.15
ARM C	10.44	17.28	0.604		0.9	1.5	21.3		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	6.22	27.90	0.223		0.3	0.3	4.3		0.05
ARM B	12.71	19.04	0.667		1.9	2.0	29.5		0.16
ARM C	10.44	17.26	0.605		1.5	1.5	22.5		0.15

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	5.07	28.06	0.181		0.3	0.2	3.4		0.04
ARM B	10.37	19.46	0.533		2.0	1.2	18.1		0.11
ARM C	8.52	18.21	0.468		1.5	0.9	13.9		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	4.25	28.19	0.151		0.2	0.2	2.7		0.04
ARM B	8.69	19.76	0.440		1.2	0.8	12.2		0.09
ARM C	7.14	18.93	0.377		0.9	0.6	9.4		0.09

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	0.8	*
08.15	1.1	*
08.30	1.9	**
08.45	2.0	**
09.00	1.2	*
09.15	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.9	*
08.30	1.5	*
08.45	1.5	**
09.00	0.9	*
09.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	466.2	310.8	20.5	0.04	20.5	0.04
B	953.0	635.3	114.9	0.12	114.9	0.12
C	783.0	522.0	88.3	0.11	88.3	0.11
ALL	2202.2	1468.1	223.7	0.10	223.7	0.10

* 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 ==========

[printed at 14:41:53 on 17/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2018 PM With Dev Fix.vai"
(drive-on-the-right) at 14:45:39 on Friday, 17 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2014 PM With Development With Flare
LOCATION:
DATE: 17/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Porthkerry Road East
ARM B - Rhoose Point
ARM C - Porthkerry West

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	8.00	30.00	20.00	35.00	45.0	0.676	31.697
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

(only sets included in the current run are shown)

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

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 PM With Development With Flare

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS IFALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	12.64	18.96	12.64
ARM B	15.00	45.00	75.00	3.20	4.80	3.20
ARM C	15.00	45.00	75.00	4.79	7.18	4.79

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 PM With Development With Flare

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
		TURNING COUNTS (VEH/HR)		
		(PERCENTAGE OF H.V.S)		
	ARM A	0.000	0.442	0.558
		0.0	447.0	564.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.648	0.000	0.352
		166.0	0.0	90.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.705	0.295	0.000
		270.0	113.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	12.64	27.86	0.454		0.0	0.8	12.0		0.07
ARM B	3.20	17.19	0.186		0.0	0.2	3.3		0.07
ARM C	4.79	21.34	0.224		0.0	0.3	4.2		0.06
17.00-17.15									
ARM A	15.09	27.68	0.545		0.8	1.2	17.3		0.08
ARM B	3.82	16.37	0.233		0.2	0.3	4.5		0.08
ARM C	5.72	21.10	0.271		0.3	0.4	5.5		0.06
17.15-17.30									
ARM A	18.48	27.42	0.674		1.2	2.0	28.9		0.11
ARM B	4.68	15.27	0.307		0.3	0.4	6.4		0.09
ARM C	7.00	20.77	0.337		0.4	0.5	7.4		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	18.48	27.42	0.674		2.0	2.0	30.5		0.11
ARM B	4.68	15.25	0.307		0.4	0.4	6.6		0.09
ARM C	7.00	20.76	0.337		0.5	0.5	7.6		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	15.09	27.67	0.545		2.0	1.2	18.8		0.08
ARM B	3.82	16.35	0.234		0.4	0.3	4.7		0.08
ARM C	5.72	21.09	0.271		0.5	0.4	5.7		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	12.64	27.86	0.454		1.2	0.8	12.9		0.07
ARM B	3.20	17.16	0.186		0.3	0.2	3.5		0.07
ARM C	4.79	21.33	0.224		0.4	0.3	4.4		0.06

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	1.2	*
17.30	2.0	**
17.45	2.0	**
18.00	1.2	*
18.15	0.8	*

QUEUE AT ARM B

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

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1386.3	924.2	120.5	0.09	120.5	0.09
B	351.0	234.0	29.0	0.08	29.0	0.08
C	525.2	350.1	34.8	0.07	34.8	0.07
ALL	2262.5	1508.3	184.3	0.08	184.3	0.08

* 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 ==========

[Printed at 14:45:55 on 17/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2018 AM With Dev ahead only.vai"
((ive-on-the-right) at 14:21:39 on Monday, 20 November 2006

LE PROPERTIES

RUN TITLE: Rhoose Point - Rhoose Point R/A 2014 AM - With Development Arm A Ahead Only
LOCATION:
DATE: 17/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
SCRIPTION:

INPUT DATA

M A - Porthkerry Road East
M B - Rhoose Point
RM C - Porthkerry West

OMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MI
ARM A	3.65	4.00	0.00	20.00	35.00	45.0	0.524	19.149
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

nly sets included in the current run are shown)

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

IME 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 TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 AM - With Development Arm A Ahead Only

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	2.65	3.98	2.65
ARM B	15.00	45.00	75.00	8.69	13.03	8.69
ARM C	15.00	45.00	75.00	7.14	10.71	7.14

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 AM - With Development Arm A Ahead Only

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.000	1.000
		0.0	0.0	212.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.699	0.000	0.301
		486.0	0.0	209.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.870	0.130	0.000
		497.0	74.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	2.65	16.93	0.157		0.0	0.2	2.7		0.07
ARM B	8.69	19.77	0.439		0.0	0.8	11.2		0.09
ARM C	7.14	18.96	0.376		0.0	0.6	8.7		0.08

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	3.16	16.83	0.188		0.2	0.2	3.4		0.07
ARM B	10.37	19.46	0.533		0.8	1.1	16.3		0.11
ARM C	8.52	18.25	0.467		0.6	0.9	12.6		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	3.88	16.70	0.232		0.2	0.3	4.4		0.08
ARM B	12.71	19.04	0.667		1.1	1.9	27.6		0.15
ARM C	10.44	17.28	0.604		0.9	1.5	21.3		0.14

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	3.88	16.70	0.232		0.3	0.3	4.5		0.08
ARM B	12.71	19.04	0.667		1.9	2.0	29.5		0.16
ARM C	10.44	17.26	0.605		1.5	1.5	22.5		0.15

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	3.16	16.83	0.188		0.3	0.2	3.6		0.07
ARM B	10.37	19.46	0.533		2.0	1.2	18.1		0.11
ARM C	8.52	18.21	0.468		1.5	0.9	13.9		0.10

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	2.65	16.92	0.157		0.2	0.2	2.8		0.07
ARM B	8.69	19.76	0.440		1.2	0.8	12.2		0.09
ARM C	7.14	18.93	0.377		0.9	0.6	9.4		0.09

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	0.8	*
08.15	1.1	*
08.30	1.9	**
08.45	2.0	**
09.00	1.2	*
09.15	0.8	*

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.9	*
08.30	1.5	*
08.45	1.5	**
09.00	0.9	*
09.15	0.6	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	290.7	193.8	21.4	0.07	21.4	0.07
B	953.0	635.3	114.9	0.12	114.9	0.12
C	783.0	522.0	88.3	0.11	88.3	0.11
ALL	2026.7	1351.1	224.7	0.11	224.7	0.11

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

END OF JOB

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

rinted at 14:21:52 on 20/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Rhoose Point RA\Rhoose Point RA 2018 PM With Dev ahead only.vai"
(ive-on-the-right) at 14:22:46 on Monday, 20 November 2006

FILE PROPERTIES
****

RUN TITLE: Rhoose Point - Rhoose Point R/A 2018 PM With Development Arm A Ahead Only
LOCATION:
DATE: 17/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
SCRIPTION:

INPUT DATA
****
M A - Porthkerry Road East
M B - Rhoose Point
M C - Porthkerry West

OMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	4.00	0.00	20.00	35.00	45.0	0.524	19.149
ARM B	3.65	6.00	6.00	40.00	35.00	40.0	0.589	23.456
ARM C	3.65	6.00	12.00	20.00	35.00	40.0	0.598	24.835

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

TRAFFIC DEMAND DATA

ly sets included in the current run are shown)

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

IME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 PM With Development Arm A Ahead Only

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	7.05	10.58	7.05
ARM B	15.00	45.00	75.00	3.20	4.80	3.20
ARM C	15.00	45.00	75.00	4.79	7.18	4.79

DEMAND SET TITLE: Rhoose Point - Rhoose Point R/A 2018 PM With Development Arm A Ahead Only

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.000	1.000
		0.0	0.0	564.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.648	0.000	0.352
		166.0	0.0	90.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.705	0.295	0.000
		270.0	113.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	7.05	16.67	0.423		0.0	0.7	10.4		0.10
ARM B	3.20	17.20	0.186		0.0	0.2	3.3		0.07
ARM C	4.79	21.34	0.224		0.0	0.3	4.2		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	8.42	16.53	0.509		0.7	1.0	14.8		0.12
ARM B	3.82	16.38	0.233		0.2	0.3	4.5		0.08
ARM C	5.72	21.10	0.271		0.3	0.4	5.5		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	10.31	16.33	0.631		1.0	1.7	23.7		0.16
ARM B	4.68	15.28	0.306		0.3	0.4	6.4		0.09
ARM C	7.00	20.77	0.337		0.4	0.5	7.4		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	10.31	16.33	0.632		1.7	1.7	25.2		0.17
ARM B	4.68	15.25	0.307		0.4	0.4	6.6		0.09
ARM C	7.00	20.76	0.337		0.5	0.5	7.6		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	8.42	16.52	0.510		1.7	1.1	16.5		0.12
ARM B	3.82	16.34	0.234		0.4	0.3	4.7		0.08
ARM C	5.72	21.09	0.271		0.5	0.4	5.7		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	7.05	16.67	0.423		1.1	0.7	11.5		0.10
ARM B	3.20	17.16	0.186		0.3	0.2	3.5		0.07
ARM C	4.79	21.33	0.224		0.4	0.3	4.4		0.06

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	773.4	515.6	102.1	0.13	102.1	0.13
B	351.0	234.0	29.0	0.08	29.0	0.08
C	525.2	350.1	34.8	0.07	34.8	0.07
ALL	1649.6	1099.7	166.0	0.10	166.0	0.10

* 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 ==========

[Printed at 14:23:02 on 20/11/2006]

TRL LIMITED

CAPACITIES, QUEUES AND DELAYS AT ROUNDABOUTS

ARCADY 5.0 ANALYSIS PROGRAM
RELEASE 1.1 (MAY 2001)

ADAPTED FROM ARCADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

Run with file:-
"p:\schemes\75xx\7550\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2004 AM.vai"
(drive-on-the-right) at 17:01:45 on Monday, 9 October 2006

ROUNDABOUT CAPACITY AND DELAY

RUN TITLE

Broose Point Port Road/Porthkerry Road R/A 2004 AM

INPUT DATA

ARM A - Port Road
ARM B - Porthkerry Road
ARM C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

RL TRL VIEWER 2.0 AE p:\schemes\75xx\7550\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2004 AM.

DE AND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
RM A	15.00	45.00	75.00	2.45	3.68	2.45
RM B	15.00	45.00	75.00	6.39	9.58	6.39
RM C	15.00	45.00	75.00	0.25	0.38	0.25

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.888	0.112
		0.0	174.0	22.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.986	0.000	0.014
		504.0	0.0	7.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.850	0.150	0.000
		17.0	3.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DE AULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
7.45-08.00								
ARM A	2.45	23.37	0.105		0.0	0.1	1.7	
ARM B	6.39	24.73	0.258		0.0	0.3	5.1	
RM C	0.25	21.62	0.012		0.0	0.0	0.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
RM A	2.93	23.37	0.125		0.1	0.1	2.1	
RM B	7.63	24.70	0.309		0.3	0.4	6.6	
RM C	0.30	20.93	0.014		0.0	0.0	0.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
ARM A	3.58	23.36	0.153		0.1	0.2	2.7	
ARM B	9.34	24.66	0.379		0.4	0.6	8.9	
ARM C	0.37	19.99	0.018		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
ARM A	3.58	23.36	0.153		0.2	0.2	2.7	
ARM B	9.34	24.66	0.379		0.6	0.6	9.1	
ARM C	0.37	19.99	0.018		0.0	0.0	0.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
8.45-09.00								
RM A	2.93	23.37	0.125		0.2	0.1	2.2	
ARM B	7.63	24.70	0.309		0.6	0.4	6.9	
ARM C	0.30	20.92	0.014		0.0	0.0	0.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
9.00-09.15								
ARM A	2.45	23.37	0.105		0.1	0.1	1.8	
ARM B	6.39	24.73	0.258		0.4	0.3	5.3	
RM C	0.25	21.61	0.012		0.0	0.0	0.2	

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.1
8.30	0.2
8.45	0.2
9.00	0.1
09.15	0.1

QUEUE AT ARM B

ME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
8.00	0.3	
8.15	0.4	
8.30	0.6	*
08.45	0.6	*
09.00	0.4	
9.15	0.3	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
8.00	0.0
08.15	0.0
08.30	0.0
8.45	0.0
9.00	0.0
9.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	268.8	179.2	13.2	0.05	13.2	0.05
B	700.7	467.1	41.8	0.06	41.8	0.06
C	27.4	18.3	1.3	0.05	1.3	0.05
ALL	996.9	664.6	56.4	0.06	56.4	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

*** ARCADY 5 run completed.

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

[inted at 17:02:06 on 09/10/2006]

TRL TRL VIEWER 2.0 AE p:\schemes\75xx\7550\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2004 PM.

TRL LIMITED

(C) COPYRIGHT 1990,1996,2000

CAPACITIES, QUEUES AND DELAYS AT ROUNDABOUTS

ARCADY 5.0 ANALYSIS PROGRAM
RELEASE 1.1 (MAY 2001)

ADAPTED FROM ARCADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

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

Run with file:-
"p:\schemes\75xx\7550\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2004 PM.vai"
(Drive-on-the-right) at 17:07:02 on Monday, 9 October 2006

ROUNDABOUT CAPACITY AND DELAY
****

RUN TITLE
****
Choose Point Port Road/Porthkerry Road R/A 2004 PM

INPUT DATA
****
ARM A - Port Road
ARM B - Porthkerry Road
ARM C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

MAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	6.79	10.18	6.79
ARM B	15.00	45.00	75.00	3.49	5.23	3.49
ARM C	15.00	45.00	75.00	0.21	0.32	0.21

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.982	0.018
		0.0	533.0	10.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.986	0.000	0.014
		275.0	0.0	4.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.824	0.176	0.000
		14.0	3.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
FAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
16.45-17.00								
ARM A	6.79	23.37	0.290		0.0	0.4	6.0	
ARM B	3.49	24.82	0.141		0.0	0.2	2.4	
ARM C	0.21	23.21	0.009		0.0	0.0	0.1	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
ARM A	8.10	23.37	0.347		0.4	0.5	7.8	
ARM B	4.16	24.80	0.168		0.2	0.2	3.0	
ARM C	0.25	22.84	0.011		0.0	0.0	0.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
ARM A	9.93	23.36	0.425		0.5	0.7	10.7	
ARM B	5.10	24.78	0.206		0.2	0.3	3.8	
ARM C	0.31	22.32	0.014		0.0	0.0	0.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
ARM A	9.93	23.36	0.425		0.7	0.7	11.0	
ARM B	5.10	24.78	0.206		0.3	0.3	3.9	
ARM C	0.31	22.32	0.014		0.0	0.0	0.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
ARM A	8.10	23.37	0.347		0.7	0.5	8.2	
ARM B	4.16	24.80	0.168		0.3	0.2	3.1	
ARM C	0.25	22.83	0.011		0.0	0.0	0.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
18.00-18.15								
ARM A	6.79	23.37	0.290		0.5	0.4	6.3	
ARM B	3.49	24.81	0.141		0.2	0.2	2.5	
ARM C	0.21	23.21	0.009		0.0	0.0	0.1	

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	744.6	496.4	50.0	0.07	50.0	0.07
B	382.6	255.0	18.6	0.05	18.6	0.05
C	23.3	15.5	1.0	0.04	1.0	0.04
ALL	1150.4	767.0	69.7	0.06	69.7	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

**** ARCADY 5 run completed.

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

rinted at 17:07:16 on 09/10/2006]

TRL TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2008 AM.vai"
(drive-on-the-right) at 15:46:37 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 AM
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Port Road
ARM B - Porthkerry Road
ARM C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

ARM	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 TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 AM

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	2.81	4.22	2.81
ARM B	15.00	45.00	75.00	7.01	10.52	7.01
ARM C	15.00	45.00	75.00	0.36	0.54	0.36

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 AM

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.858	0.142
		0.0	193.0	32.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.982	0.000	0.018
		551.0	0.0	10.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.862	0.138	0.000
		25.0	4.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	2.81	23.36	0.120		0.0	0.1	2.0		0.05
ARM B	7.01	24.67	0.284		0.0	0.4	5.8		0.06
ARM C	0.36	21.30	0.017		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	3.36	23.36	0.144		0.1	0.2	2.5		0.05
ARM B	8.37	24.62	0.340		0.4	0.5	7.6		0.06
ARM C	0.43	20.54	0.021		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	4.11	23.35	0.176		0.2	0.2	3.2		0.05
ARM B	10.26	24.56	0.418		0.5	0.7	10.4		0.07
ARM C	0.53	19.51	0.027		0.0	0.0	0.4		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	4.11	23.35	0.176		0.2	0.2	3.2		0.05
ARM B	10.26	24.56	0.418		0.7	0.7	10.7		0.07
ARM C	0.53	19.51	0.027		0.0	0.0	0.4		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	3.36	23.36	0.144		0.2	0.2	2.6		0.05
ARM B	8.37	24.62	0.340		0.7	0.5	7.9		0.06
ARM C	0.43	20.53	0.021		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	2.81	23.36	0.120		0.2	0.1	2.1		0.05
ARM B	7.01	24.66	0.284		0.5	0.4	6.1		0.06
ARM C	0.36	21.28	0.017		0.0	0.0	0.3		0.05

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	0.1	

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	0.0
08.15	0.0
08.30	0.0
08.45	0.0
09.00	0.0
09.15	0.0

TRL TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	308.5	205.7	15.5	0.05	15.5	0.05
B	769.2	512.8	48.5	0.06	48.5	0.06
C	39.8	26.5	2.0	0.05	2.0	0.05
ALL	1117.5	745.0	66.0	0.06	66.0	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 ==========

Printed at 15:46:46 on 16/11/2006]

TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2008 PM.vai"
(drive-on-the-right) at 15:47:40 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 PM
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Port Road
ARM B - Porthkerry Road
ARM C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 PM

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	7.47	11.21	7.47
ARM B	15.00	45.00	75.00	3.89	5.83	3.89
ARM C	15.00	45.00	75.00	0.30	0.45	0.30

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 PM

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.975	0.025
		0.0	583.0	15.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.981	0.000	0.019
		305.0	0.0	6.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.833	0.167	0.000
		20.0	4.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	7.47	23.36	0.320		0.0	0.5	6.8		0.06
ARM B	3.89	24.78	0.157		0.0	0.2	2.7		0.05
ARM C	0.30	23.01	0.013		0.0	0.0	0.2		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	8.93	23.36	0.382		0.5	0.6	9.0		0.07
ARM B	4.64	24.76	0.187		0.2	0.2	3.4		0.05
ARM C	0.36	22.59	0.016		0.0	0.0	0.2		0.04

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	10.93	23.35	0.468		0.6	0.9	12.7		0.08
ARM B	5.69	24.73	0.230		0.2	0.3	4.4		0.05
ARM C	0.44	22.02	0.020		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	10.93	23.35	0.468		0.9	0.9	13.1		0.08
ARM B	5.69	24.73	0.230		0.3	0.3	4.5		0.05
ARM C	0.44	22.02	0.020		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	8.93	23.36	0.382		0.9	0.6	9.6		0.07
ARM B	4.64	24.76	0.187		0.3	0.2	3.5		0.05
ARM C	0.36	22.58	0.016		0.0	0.0	0.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	7.47	23.36	0.320		0.6	0.5	7.2		0.06
ARM B	3.89	24.78	0.157		0.2	0.2	2.8		0.05
ARM C	0.30	23.00	0.013		0.0	0.0	0.2		0.04

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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	820.0	546.7	58.5	0.07	58.5	0.07
B	426.4	284.3	21.4	0.05	21.4	0.05
C	32.9	21.9	1.5	0.05	1.5	0.05
ALL	1279.3	852.9	81.4	0.06	81.4	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 ==========

[Printed at 15:47:47 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2018 AM.vai"
(drive-on-the-right) at 15:59:23 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 AM
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Port Road
ARM B - Porthkerry Road
ARM C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

ARM	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 TURNING COUNT DATA

D AND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 AM

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS IFALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	4.05	6.08	4.05
ARM B	15.00	45.00	75.00	8.90	13.35	8.90
ARM C	15.00	45.00	75.00	0.81	1.22	0.81

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 AM

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15		TURNING PROPORTIONS TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S)		
	ARM A	0.000 0.0 (10.0)	0.781 253.0 (10.0)	0.219 71.0 (10.0)
	ARM B	0.968 689.0 (10.0)	0.000 0.0 (10.0)	0.032 23.0 (10.0)
	ARM C	0.846 55.0 (10.0)	0.154 10.0 (10.0)	0.000 0.0 (10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	4.05	23.32	0.174		0.0	0.2	3.1		0.05
ARM B	8.90	24.40	0.365		0.0	0.6	8.3		0.06
ARM C	0.81	20.34	0.040		0.0	0.0	0.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	4.84	23.31	0.207		0.2	0.3	3.9		0.05
ARM B	10.63	24.30	0.437		0.6	0.8	11.3		0.07
ARM C	0.97	19.40	0.050		0.0	0.1	0.8		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	5.92	23.29	0.254		0.3	0.3	5.0		0.06
ARM B	13.02	24.17	0.538		0.8	1.2	16.8		0.09
ARM C	1.19	18.11	0.066		0.1	0.1	1.0		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	5.92	23.29	0.254		0.3	0.3	5.1		0.06
ARM B	13.02	24.17	0.538		1.2	1.2	17.3		0.09
ARM C	1.19	18.10	0.066		0.1	0.1	1.1		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	4.84	23.31	0.207		0.3	0.3	4.0		0.05
ARM B	10.63	24.30	0.437		1.2	0.8	12.1		0.07
ARM C	0.97	19.38	0.050		0.1	0.1	0.8		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	4.05	23.32	0.174		0.3	0.2	3.2		0.05
ARM B	8.90	24.40	0.365		0.8	0.6	8.8		0.06
ARM C	0.81	20.31	0.040		0.1	0.0	0.6		0.05

QUEUE AT ARM A

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 B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.6	*
08.15	0.8	*
08.30	1.2	*
08.45	1.2	*
09.00	0.8	*
09.15	0.6	*

QUEUE AT ARM C

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

TRL TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	444.3	296.2	24.3	0.05	24.3	0.05
B	976.3	650.9	74.7	0.08	74.7	0.08
C	89.1	59.4	4.9	0.06	4.9	0.06
ALL	1509.7	1006.5	103.8	0.07	103.8	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.

F"D OF JOB

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

rinted at 15:59:29 on 16/11/2006]

TRL TRL VIEWER 3.1 AD p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2018 PM.vai"
(c ive-on-the-right) at 16:02:21 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 PM
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Port Road
ARM B - Porthkerry Road
ARM C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

D. AND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 PM

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS IFALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	9.51	14.27	9.51
ARM B	15.00	45.00	75.00	5.19	7.78	5.19
ARM C	15.00	45.00	75.00	0.69	1.03	0.69

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 PM

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15		TURNING PROPORTIONS		
	ARM A	0.000	0.958	0.042
		0.0	729.0	32.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.969	0.000	0.031
		402.0	0.0	13.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.818	0.182	0.000
		45.0	10.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	9.51	23.32	0.408		0.0	0.7	9.9		0.07
ARM B	5.19	24.67	0.210		0.0	0.3	3.9		0.05
ARM C	0.69	22.33	0.031		0.0	0.0	0.5		0.05
17.00-17.15									
ARM A	11.36	23.31	0.487		0.7	0.9	13.7		0.08
ARM B	6.19	24.62	0.252		0.3	0.3	4.9		0.05
ARM C	0.82	21.78	0.038		0.0	0.0	0.6		0.05
17.15-17.30									
ARM A	13.91	23.29	0.597		0.9	1.5	21.0		0.11
ARM B	7.59	24.56	0.309		0.3	0.4	6.6		0.06
ARM C	1.01	21.03	0.048		0.0	0.1	0.7		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	13.91	23.29	0.597		1.5	1.5	22.0		0.11
RM B	7.59	24.56	0.309		0.4	0.4	6.7		0.06
RM C	1.01	21.03	0.048		0.1	0.1	0.8		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
RM A	11.36	23.31	0.487		1.5	1.0	14.9		0.08
RM B	6.19	24.62	0.252		0.4	0.3	5.1		0.05
RM C	0.82	21.77	0.038		0.1	0.0	0.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
8.00-18.15									
RM A	9.51	23.32	0.408		1.0	0.7	10.7		0.07
ARM B	5.19	24.66	0.210		0.3	0.3	4.1		0.05
ARM C	0.69	22.32	0.031		0.0	0.0	0.5		0.05

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
7.00	0.7	*
17.15	0.9	*
17.30	1.5	*
17.45	1.5	*
18.00	1.0	*
18.15	0.7	*

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1043.5	695.7	92.2	0.09	92.2	0.09
B	569.1	379.4	31.3	0.06	31.3	0.06
C	75.4	50.3	3.6	0.05	3.6	0.05
ALL	1688.0	1125.3	127.1	0.08	127.2	0.08

* ELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD.
* NCLUSIVE 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.

E OF JOB

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

[inted at 16:02:27 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2008 AM WITH DEV.vai"
(d ve-on-the-right) at 16:10:43 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 AM WITH DEV
LOCATION:
DATE: 16/11/06
CLIENT:
ENUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Port Road
ARM B - Porthkerry Road
ARM C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

ARM	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 TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 AM WITH DEV

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	3.90	5.85	3.90
ARM B	15.00	45.00	75.00	10.65	15.97	10.65
ARM C	15.00	45.00	75.00	0.36	0.54	0.36

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 AM WITH DEV

TIME	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.897	0.103
		0.0	280.0	32.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.988	0.000	0.012
		842.0	0.0	10.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.862	0.138	0.000
		25.0	4.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	3.90	23.36	0.167		0.0	0.2	2.9		0.05
ARM B	10.65	24.67	0.432		0.0	0.8	11.0		0.07
ARM C	0.36	19.28	0.019		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	4.66	23.36	0.199		0.2	0.2	3.7		0.05
ARM B	12.72	24.62	0.516		0.8	1.1	15.4		0.08
ARM C	0.43	18.13	0.024		0.0	0.0	0.4		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	5.70	23.35	0.244		0.2	0.3	4.8		0.06
ARM B	15.58	24.56	0.634		1.1	1.7	24.4		0.11
ARM C	0.53	16.56	0.032		0.0	0.0	0.5		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	5.70	23.35	0.244		0.3	0.3	4.8		0.06
RM B	15.58	24.56	0.634		1.7	1.7	25.6		0.11
RM C	0.53	16.54	0.032		0.0	0.0	0.5		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
RM A	4.66	23.36	0.199		0.3	0.3	3.8		0.05
RM B	12.72	24.62	0.517		1.7	1.1	16.7		0.08
ARM C	0.43	18.09	0.024		0.0	0.0	0.4		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
9.00-09.15									
RM A	3.90	23.36	0.167		0.3	0.2	3.1		0.05
ARM B	10.65	24.66	0.432		1.1	0.8	11.8		0.07
ARM C	0.36	19.24	0.019		0.0	0.0	0.3		0.05

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
8.00	0.2
08.15	0.2
08.30	0.3
8.45	0.3
9.00	0.3
9.15	0.2

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.1	*
08.30	1.7	**
08.45	1.7	**
09.00	1.1	*
09.15	0.8	*

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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	427.8	285.2	23.1	0.05	23.1	0.05
B	1168.3	778.8	105.0	0.09	105.0	0.09
C	39.8	26.5	2.3	0.06	2.3	0.06
ALL	1635.9	1090.6	130.3	0.08	130.3	0.08

* 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 ==========

[Printed at 16:10:52 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2008 PM WITH DEV.vai"
(ive-on-the-right) at 16:11:51 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 PM WITH DEV
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
SCRIPTION:

INPUT DATA

M A - Port Road
M B - Porthkerry Road
ARM C - Terminal Buildings

OMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

nly sets included in the current run are shown)

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

IME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 PM WITH DEV

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	11.05	16.58	11.05
ARM B	15.00	45.00	75.00	5.34	8.01	5.34
ARM C	15.00	45.00	75.00	0.30	0.45	0.30

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2008 PM WITH DEV

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.983	0.017
		0.0	869.0	15.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.986	0.000	0.014
		421.0	0.0	6.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.833	0.167	0.000
		20.0	4.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	11.05	23.36	0.473		0.0	0.9	12.9		0.08
ARM B	5.34	24.78	0.215		0.0	0.3	4.0		0.05
ARM C	0.30	22.20	0.014		0.0	0.0	0.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	13.19	23.36	0.565		0.9	1.3	18.6		0.10
ARM B	6.37	24.76	0.257		0.3	0.3	5.1		0.05
ARM C	0.36	21.62	0.017		0.0	0.0	0.2		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	16.16	23.35	0.692		1.3	2.2	31.0		0.14
ARM B	7.81	24.73	0.316		0.3	0.5	6.8		0.06
ARM C	0.44	20.84	0.021		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	16.16	23.35	0.692		2.2	2.2	33.0		0.14
ARM B	7.81	24.73	0.316		0.5	0.5	6.9		0.06
ARM C	0.44	20.83	0.021		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	13.19	23.36	0.565		2.2	1.3	20.6		0.10
ARM B	6.37	24.76	0.257		0.5	0.3	5.3		0.05
ARM C	0.36	21.62	0.017		0.0	0.0	0.3		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	11.05	23.36	0.473		1.3	0.9	14.0		0.08
ARM B	5.34	24.78	0.215		0.3	0.3	4.2		0.05
ARM C	0.30	22.19	0.014		0.0	0.0	0.2		0.05

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.3	*
17.30	2.2	**
17.45	2.2	**
18.00	1.3	*
18.15	0.9	*

QUEUE AT ARM B

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

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.0
17.45	0.0
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	1212.2	808.1	130.0	0.11	130.1	0.11
B	585.5	390.3	32.3	0.06	32.3	0.06
C	32.9	21.9	1.6	0.05	1.6	0.05
ALL	1830.6	1220.4	163.9	0.09	163.9	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 ==========

[Printed at 16:11:56 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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

TRL Limited Tel: +44 (0) 1344 770018
Crowthorne House Fax: +44 (0) 1344 770864
Nine Mile Ride Email: softwarebureau@trl.co.uk
Wokingham, Berks. Web: www.trlsoftware.co.uk
RG40 3GA,UK

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2018 AM WITH DEV.vai"
(d ve-on-the-right) at 16:14:08 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 AM WITH DEV
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

ARM A - Port Road
ARM B - Porthkerry Road
ARM C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

ARM	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 TURNING COUNT DATA

D AND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 AM WITH DEV

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	5.14	7.71	5.14
ARM B	15.00	45.00	75.00	12.54	18.81	12.54
ARM C	15.00	45.00	75.00	0.81	1.22	0.81

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 AM WITH DEV

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.827	0.173
		0.0	340.0	71.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.977	0.000	0.023
		980.0	0.0	23.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.846	0.154	0.000
		55.0	10.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
ARM A	5.14	23.32	0.220		0.0	0.3	4.1		0.05
ARM B	12.54	24.40	0.514		0.0	1.0	15.1		0.08
ARM C	0.81	18.33	0.044		0.0	0.0	0.7		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
ARM A	6.13	23.31	0.263		0.3	0.4	5.3		0.06
ARM B	14.97	24.30	0.616		1.0	1.6	22.7		0.11
ARM C	0.97	16.99	0.057		0.0	0.1	0.9		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
ARM A	7.51	23.29	0.323		0.4	0.5	7.0		0.06
ARM B	18.34	24.17	0.758		1.6	3.0	41.8		0.17
ARM C	1.19	15.18	0.078		0.1	0.1	1.2		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
ARM A	7.51	23.29	0.323		0.5	0.5	7.1		0.06
ARM B	18.34	24.17	0.759		3.0	3.1	45.7		0.17
ARM C	1.19	15.13	0.079		0.1	0.1	1.3		0.07

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
ARM A	6.13	23.31	0.263		0.5	0.4	5.5		0.06
ARM B	14.97	24.30	0.616		3.1	1.6	25.7		0.11
ARM C	0.97	16.91	0.057		0.1	0.1	0.9		0.06

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
ARM A	5.14	23.32	0.220		0.4	0.3	4.3		0.06
ARM B	12.54	24.40	0.514		1.6	1.1	16.6		0.08
ARM C	0.81	18.27	0.044		0.1	0.0	0.7		0.06

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	1.0	*
08.15	1.6	**
08.30	3.0	***
08.45	3.1	***
09.00	1.6	**
09.15	1.1	*

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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	563.6	375.7	33.3	0.06	33.3	0.06
B	1375.3	916.9	167.6	0.12	167.6	0.12
C	89.1	59.4	5.7	0.06	5.7	0.06
ALL	2028.0	1352.0	206.6	0.10	206.6	0.10

* 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 ==========

[Printed at 16:14:17 on 16/11/2006]

ARCADY 6

ASSESSMENT OF ROUNDABOUT CAPACITY AND DELAY

Analysis Program: Release 4.0 (FEBRUARY 2006)

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 770018
Fax: +44 (0) 1344 770864
Email: softwarebureau@trl.co.uk
Web: www.trlsoftware.co.uk

Run with file:-
"p:\schemes_cg\cg0023xx\cg002394\2006 Analysis\Port-Porthkerry RA\Port-Porthkerry RA 2018 PM WITH DEV.vai"
(drive-on-the-right) at 16:15:41 on Thursday, 16 November 2006

FILE PROPERTIES

RUN TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 PM WITH DEV
LOCATION:
DATE: 16/11/06
CLIENT:
NUMERATOR:
JOB NUMBER:
STATUS:
DESCRIPTION:

INPUT DATA

A 1 A - Port Road
A 1 B - Porthkerry Road
A 1 C - Terminal Buildings

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.50	7.00	13.00	30.00	60.00	50.0	0.516	25.727
ARM B	3.65	7.00	12.00	35.00	60.00	36.0	0.547	27.372
ARM C	3.50	7.00	12.00	45.00	60.00	29.0	0.558	27.639

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

TRAFFIC DEMAND DATA

(Only sets included in the current run are shown)

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

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
L GTH OF TIME SEGMENT - 15 MINUTES.

DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

D AND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 PM WITH DEV

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	13.09	19.63	13.09
ARM B	15.00	45.00	75.00	6.64	9.96	6.64
RM C	15.00	45.00	75.00	0.69	1.03	0.69

DEMAND SET TITLE: Rhoose Point Port Road/Porthkerry Road R/A 2018 PM WITH DEV

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) / (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.969	0.031
		0.0	1015.0	32.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.976	0.000	0.024
		518.0	0.0	13.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.818	0.182	0.000
		45.0	10.0	0.0
		(10.0)	(10.0)	(10.0)

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
ARM A	13.09	23.32	0.561		0.0	1.3	18.1		0.10
ARM B	6.64	24.67	0.269		0.0	0.4	5.4		0.06
ARM C	0.69	21.53	0.032		0.0	0.0	0.5		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
ARM A	15.63	23.31	0.670		1.3	2.0	28.3		0.13
ARM B	7.93	24.62	0.322		0.4	0.5	7.0		0.06
ARM C	0.82	20.82	0.039		0.0	0.0	0.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
ARM A	19.14	23.29	0.822		2.0	4.3	57.3		0.23
ARM B	9.71	24.57	0.395		0.5	0.6	9.5		0.07
ARM C	1.01	19.85	0.051		0.0	0.1	0.8		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
ARM A	19.14	23.29	0.822		4.3	4.4	65.3		0.24
ARM B	9.71	24.56	0.395		0.6	0.7	9.8		0.07
ARM C	1.01	19.84	0.051		0.1	0.1	0.8		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
ARM A	15.63	23.31	0.670		4.4	2.1	33.4		0.14
ARM B	7.93	24.62	0.322		0.7	0.5	7.3		0.06
ARM C	0.82	20.81	0.039		0.1	0.0	0.6		0.05

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
ARM A	13.09	23.32	0.561		2.1	1.3	20.2		0.10
ARM B	6.64	24.66	0.269		0.5	0.4	5.6		0.06
ARM C	0.69	21.51	0.032		0.0	0.0	0.5		0.05

QUEUE AT ARM A

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.3	*
17.15	2.0	**
17.30	4.3	****
17.45	4.4	****
18.00	2.1	**
18.15	1.3	*

QUEUE AT ARM B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	
17.30	0.6	*
17.45	0.7	*
18.00	0.5	
18.15	0.4	

QUEUE AT ARM C

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

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	1435.7	957.1	222.7	0.16	222.8	0.16
B	728.1	485.4	44.6	0.06	44.6	0.06
C	75.4	50.3	3.8	0.05	3.8	0.05
ALL	2239.2	1492.8	271.1	0.12	271.1	0.12

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

END OF JOB

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

[Printed at 16:16:00 on 16/11/2006]

TRL LIMITED

CAPACITIES, QUEUES AND DELAYS AT ROUNDABOUTS

ARCADY 5.0 ANALYSIS PROGRAM
RELEASE 1.1 (MAY 2001)

ADAPTED FROM ARCADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

Run with file:-
"p:\schemes\75xx\7550\2006 Analysis\Access RA\2008 Am Peak WITH DEV.vai"
(drive-on-the-left) at 08:37:20 on Tuesday, 10 October 2006

ROUNDABOUT CAPACITY AND DELAY
****

RUN TITLE
****
evelopment Access R/A 2008 AM Peak WITH DEV

INPUT DATA
****
M A - Pentir Y De (N)
ARM B - Pentir Y De (S)
ARM C - Development Access

OMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	25.00	35.00	28.0	0.630	26.158
ARM B	3.65	6.00	12.00	20.00	35.00	23.0	0.635	26.353
ARM C	3.65	6.00	6.00	17.50	35.00	20.0	0.612	24.356

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

TRAFFIC DEMAND DATA

ME PERIOD BEGINS 07.45 AND ENDS 09.15

NGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

D AND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
RM A	15.00	45.00	75.00	2.26	3.39	2.26
RM B	15.00	45.00	75.00	3.88	5.81	3.88
RM C	15.00	45.00	75.00	4.50	6.75	4.50

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.403	0.597
		0.0	73.0	108.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.961	0.000	0.039
		298.0	0.0	12.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.900	0.100	0.000
		324.0	36.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
ARM A	2.26	23.50	0.096		0.0	0.1	1.6	
ARM B	3.88	23.10	0.168		0.0	0.2	3.0	
ARM C	4.50	19.86	0.227		0.0	0.3	4.3	
08.00-08.15								
ARM A	2.70	23.44	0.115		0.1	0.1	1.9	
ARM B	4.63	22.93	0.202		0.2	0.3	3.7	
ARM C	5.37	19.42	0.277		0.3	0.4	5.6	
08.15-08.30								
ARM A	3.31	23.37	0.142		0.1	0.2	2.4	
ARM B	5.67	22.70	0.250		0.3	0.3	4.9	
ARM C	6.58	18.81	0.350		0.4	0.5	7.8	
08.30-08.45								
ARM A	3.31	23.37	0.142		0.2	0.2	2.5	
ARM B	5.67	22.70	0.250		0.3	0.3	5.0	
ARM C	6.58	18.81	0.350		0.5	0.5	8.0	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
ARM A	2.70	23.44	0.115		0.2	0.1	2.0	
ARM B	4.63	22.93	0.202		0.3	0.3	3.9	
ARM C	5.37	19.42	0.277		0.5	0.4	5.9	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.00-09.15								
ARM A	2.26	23.50	0.096		0.1	0.1	1.6	
ARM B	3.88	23.10	0.168		0.3	0.2	3.1	
ARM C	4.50	19.85	0.227		0.4	0.3	4.5	

QUEUE AT ARM A

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	

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	0.3	
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

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	248.2	165.5	12.0	0.05	12.0	0.05
B	425.1	283.4	23.5	0.06	23.5	0.06
C	493.6	329.1	36.1	0.07	36.1	0.07
ALL	1166.9	777.9	71.6	0.06	71.6	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

* *** ARCADY 5 run completed.

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

[Printed at 08:37:36 on 10/10/2006]

TRL LIMITED

CAPACITIES, QUEUES AND DELAYS AT ROUNDABOUTS

ARCADY 5.0 ANALYSIS PROGRAM
RELEASE 1.1 (MAY 2001)

ADAPTED FROM ARCADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

Run with file:-
"p:\schemes\75xx\7550\2006 Analysis\Access RA\2008 PM Peak WITH DEV.vai"
(d ive-on-the-left) at 08:40:04 on Tuesday, 10 October 2006

ROUNDABOUT CAPACITY AND DELAY
****

RUN TITLE
****
evelopment Acces R/A 2008 PM Peak WITH DEV

PUT DATA
****
M A - Pentir Y De (N)
ARM B - Pentir Y De (S)
ARM C - Development Access

OMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	25.00	35.00	28.0	0.630	26.158
ARM B	3.65	6.00	12.00	20.00	35.00	23.0	0.635	26.353
ARM C	3.65	6.00	6.00	17.50	35.00	20.0	0.612	24.356

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

AFFIC DEMAND DATA

ME PERIOD BEGINS 16.45 AND ENDS 18.15

ENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

) MAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	6.29	9.43	6.29
ARM B	15.00	45.00	75.00	1.52	2.29	1.52
ARM C	15.00	45.00	75.00	1.95	2.93	1.95

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.441	0.559
		0.0	222.0	281.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.746	0.000	0.254
		91.0	0.0	31.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.897	0.103	0.000
		140.0	16.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
) FAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
16.45-17.00								
ARM A	6.29	23.65	0.266		0.0	0.4	5.3	
ARM B	1.52	21.74	0.070		0.0	0.1	1.1	
ARM C	1.95	21.45	0.091		0.0	0.1	1.5	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
ARM A	7.51	23.63	0.318		0.4	0.5	6.8	
ARM B	1.82	21.30	0.086		0.1	0.1	1.4	
ARM C	2.33	21.31	0.109		0.1	0.1	1.8	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
ARM A	9.20	23.60	0.390		0.5	0.6	9.3	
ARM B	2.23	20.70	0.108		0.1	0.1	1.8	
ARM C	2.85	21.12	0.135		0.1	0.2	2.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
ARM A	9.20	23.60	0.390		0.6	0.6	9.5	
ARM B	2.23	20.70	0.108		0.1	0.1	1.8	
ARM C	2.85	21.12	0.135		0.2	0.2	2.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
ARM A	7.51	23.63	0.318		0.6	0.5	7.2	
ARM B	1.82	21.29	0.086		0.1	0.1	1.4	
ARM C	2.33	21.31	0.109		0.2	0.1	1.9	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
18.00-18.15								
ARM A	6.29	23.65	0.266		0.5	0.4	5.5	
ARM B	1.52	21.72	0.070		0.1	0.1	1.1	
ARM C	1.95	21.45	0.091		0.1	0.1	1.5	

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	689.7	459.8	43.7	0.06	43.7	0.06
B	167.3	111.5	8.7	0.05	8.7	0.05
C	213.9	142.6	11.3	0.05	11.3	0.05
ALL	1070.9	713.9	63.6	0.06	63.6	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

* **** ARCADY 5 run completed.

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

rinted at 08:41:13 on 10/10/2006]

TRL LIMITED

CAPACITIES, QUEUES AND DELAYS AT ROUNDABOUTS

ARCADY 5.0 ANALYSIS PROGRAM
RELEASE 1.1 (MAY 2001)

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

Run with file:-
"p:\schemes\75xx\7550\2006 Analysis\Access RA\2023 AM Peak WITH DEV.vai"
(drive-on-the-left) at 08:46:38 on Tuesday, 10 October 2006

ROUNDABOUT CAPACITY AND DELAY

RUN TITLE

Development Access R/A 2023 AM Peak WITH DEV

INPUT DATA

ARM A - Pentir Y De (N)
ARM B - Pentir Y De (S)
ARM C - Development Access

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	25.00	35.00	28.0	0.630	26.158
ARM B	3.65	6.00	12.00	20.00	35.00	23.0	0.635	26.353
ARM C	3.65	6.00	6.00	17.50	35.00	20.0	0.612	24.356

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

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

D AND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	2.41	3.62	2.41
ARM B	15.00	45.00	75.00	4.54	6.81	4.54
ARM C	15.00	45.00	75.00	4.50	6.75	4.50

TURNING PROPORTIONS
TURNING COUNTS (VEH/HR)
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.440	0.560
		0.0	85.0	108.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.967	0.000	0.033
		351.0	0.0	12.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.900	0.100	0.000
		324.0	36.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
DEFAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
07.45-08.00								
ARM A	2.41	23.50	0.103		0.0	0.1	1.7	
ARM B	4.54	23.10	0.196		0.0	0.2	3.6	
ARM C	4.50	19.46	0.231		0.0	0.3	4.4	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.00-08.15								
ARM A	2.88	23.44	0.123		0.1	0.1	2.1	
ARM B	5.42	22.93	0.236		0.2	0.3	4.6	
ARM C	5.37	18.94	0.284		0.3	0.4	5.8	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.15-08.30								
ARM A	3.53	23.37	0.151		0.1	0.2	2.6	
ARM B	6.64	22.70	0.292		0.3	0.4	6.1	
ARM C	6.58	18.22	0.361		0.4	0.6	8.2	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.30-08.45								
ARM A	3.53	23.37	0.151		0.2	0.2	2.7	
ARM B	6.64	22.70	0.292		0.4	0.4	6.2	
ARM C	6.58	18.22	0.361		0.6	0.6	8.4	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
08.45-09.00								
ARM A	2.88	23.44	0.123		0.2	0.1	2.1	
ARM B	5.42	22.93	0.236		0.4	0.3	4.7	
ARM C	5.37	18.93	0.284		0.6	0.4	6.1	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
09.00-09.15								
ARM A	2.41	23.50	0.103		0.1	0.1	1.7	
ARM B	4.54	23.10	0.196		0.3	0.2	3.7	
ARM C	4.50	19.46	0.231		0.4	0.3	4.6	

EUE AT ARM A

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	

QUEUE AT ARM B

IME 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	0.3	
08.15	0.4	
08.30	0.6	*
08.45	0.6	*
09.00	0.4	
09.15	0.3	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
A	264.6	176.4	12.9	0.05	12.9	0.05
B	497.7	331.8	28.8	0.06	28.8	0.06
C	493.6	329.1	37.5	0.08	37.6	0.08
ALL	1256.0	837.4	79.3	0.06	79.3	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

****** ARCADY 5 run completed.

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

[Printed at 08:46:46 on 10/10/2006]

TRL LIMITED

CAPACITIES, QUEUES AND DELAYS AT ROUNDABOUTS

ARCADY 5.0 ANALYSIS PROGRAM
RELEASE 1.1 (MAY 2001)

ADAPTED FROM ARCADY/3 WHICH IS CROWN COPYRIGHT
BY PERMISSION OF THE CONTROLLER OF HMSO

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770864
EMAIL: SoftwareBureau@trl.co.uk

Run with file:-
"p:\schemes\75xx\7550\2006 Analysis\Access RA\2023 PM Peak WITH DEV.vai"
(drive-on-the-left) at 08:48:43 on Tuesday, 10 October 2006

ROUNDABOUT CAPACITY AND DELAY

RUN TITLE

Development Access R/A 2023 PM Peak WITH DEV

INPUT DATA

ARM A - Pentir Y Dd (N)
ARM B - Pentir Y Dd (S)
ARM C - Development Access

GEOMETRIC DATA

ARM	V (M)	E (M)	L (M)	R (M)	D (M)	PHI (DEG)	SLOPE	INTERCEPT (PCU/MIN)
ARM A	3.65	6.00	12.00	25.00	35.00	28.0	0.630	26.158
ARM B	3.65	6.00	12.00	20.00	35.00	23.0	0.635	26.353
ARM C	3.65	6.00	6.00	17.50	35.00	20.0	0.612	24.356

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

TRAFFIC DEMAND DATA

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MINUTES.
LENGTH OF TIME SEGMENT - 15 MINUTES.

I MAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START TO RISE	NUMBER OF MINUTES FROM START TO TOP OF PEAK	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	6.76	10.14	6.76
ARM B	15.00	45.00	75.00	1.71	2.57	1.71
ARM C	15.00	45.00	75.00	1.95	2.93	1.95

TIME	FROM/TO	TURNING PROPORTIONS / TURNING COUNTS (VEH/HR) (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
16.45 - 18.15	ARM A	0.000	0.481	0.519
		0.0	260.0	281.0
		(10.0)	(10.0)	(10.0)
	ARM B	0.774	0.000	0.226
		106.0	0.0	31.0
		(10.0)	(10.0)	(10.0)
	ARM C	0.897	0.103	0.000
		140.0	16.0	0.0
		(10.0)	(10.0)	(10.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA
FAULT PROPORTIONS OF HEAVY VEHICLES ARE USED

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)
16.45-17.00								
ARM A	6.76	23.65	0.286		0.0	0.4	5.8	
ARM B	1.71	21.74	0.079		0.0	0.1	1.3	
ARM C	1.95	21.33	0.091		0.0	0.1	1.5	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.00-17.15								
ARM A	8.08	23.63	0.342		0.4	0.5	7.6	
ARM B	2.04	21.30	0.096		0.1	0.1	1.6	
ARM C	2.33	21.17	0.110		0.1	0.1	1.8	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.15-17.30								
ARM A	9.89	23.60	0.419		0.5	0.7	10.5	
ARM B	2.50	20.70	0.121		0.1	0.1	2.0	
ARM C	2.85	20.96	0.136		0.1	0.2	2.3	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.30-17.45								
ARM A	9.89	23.60	0.419		0.7	0.7	10.8	
ARM B	2.50	20.70	0.121		0.1	0.1	2.1	
ARM C	2.85	20.96	0.136		0.2	0.2	2.4	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
17.45-18.00								
ARM A	8.08	23.63	0.342		0.7	0.5	8.0	
ARM B	2.04	21.29	0.096		0.1	0.1	1.6	
ARM C	2.33	21.17	0.110		0.2	0.1	1.9	

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)
18.00-18.15								
ARM A	6.76	23.65	0.286		0.5	0.4	6.1	
ARM B	1.71	21.72	0.079		0.1	0.1	1.3	
ARM C	1.95	21.33	0.091		0.1	0.1	1.5	

QUEUE AT ARM A

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

QUEUE AT ARM B

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

QUEUE AT ARM C

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

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

ARM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
A	741.8	494.6	48.8	0.07	48.8	0.07
B	187.9	125.2	9.8	0.05	9.8	0.05
C	213.9	142.6	11.4	0.05	11.4	0.05
ALL	1143.6	762.4	70.1	0.06	70.1	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

****** ARCADY 5 run completed.

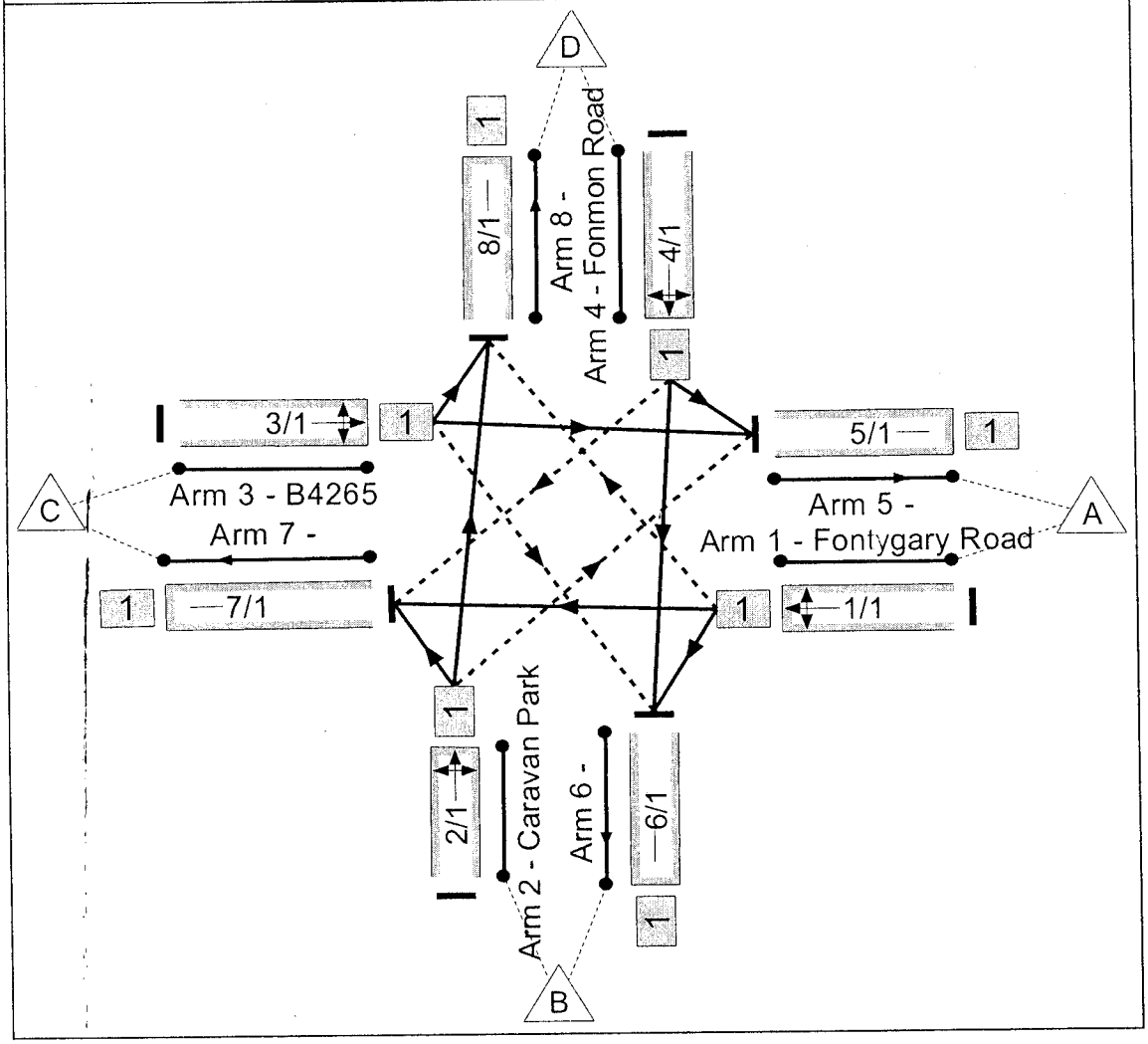
========== end of file ==========

rinted at 08:48:56 on 10/10/2006]

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Junction Layout Diagram

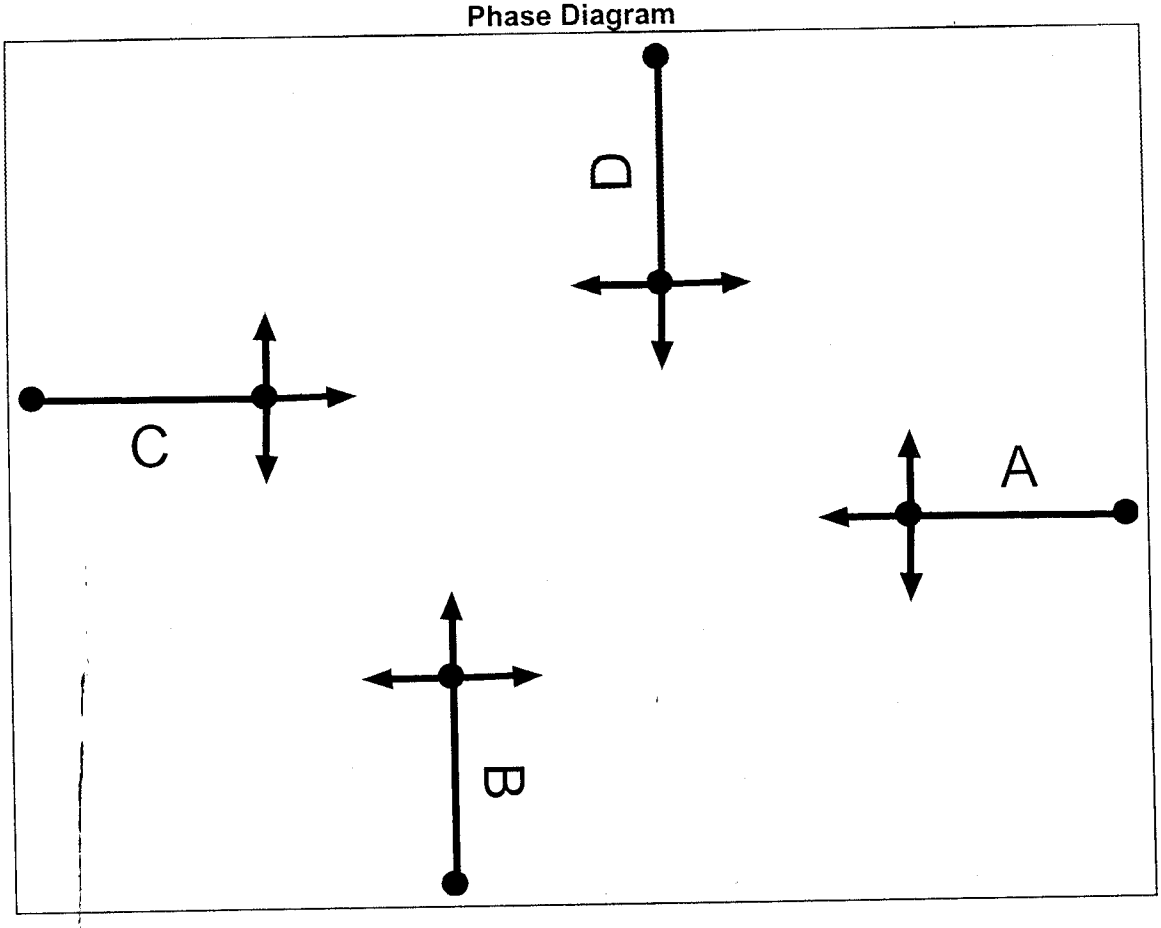
Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 1: '2004 AM Base'



Phase Input data

Phase Name	Phase type	Assoc Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7

Phase Diagram



Intergreens Table

		Starting Phase			
		A	B	C	D
Terminating Phase	A		5	-	6
	B	5		8	-
	C	-	6		5
	D	10	-	5	

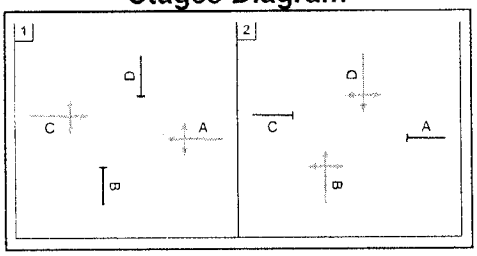
Stage Data table

Stage No.	Phases in Stage
1	A C
2	B D

Signal Plans Data table

Signal Plan Num	Signal Plan Name	Stream No.		1	2
1	Signal Plan No. 1	1	Stage Num	1	2
			Stage Duration	23	21

Stages Diagram



Link data table

Arm/ Link	Link Name	Link Type	Num Lanes	Full Phs	Arrow Phs	Start Disp.	End Disp.
1/1	Fontygary Road Left Ahead Right	O	1	A		2	3
2/1	Caravan Park Right Left Ahead	O	1	B		2	3
3/1	B4265 Ahead Right Left	O	1	C		2	3
4/1	Fonmon Road Left Ahead Right	O	1	D		2	3
5/1		U	1			2	3
6/1		U	1			2	3
7/1		U	1			2	3
8/1		U	1			2	3

Traffic Flow Matrix - Desired Flow

Flow Group 1: 2004 AM Base						
		Destination				
Origin		A	B	C	D	Tot.
	A	0	17	84	72	173
	B	15	0	3	9	27
	C	56	1	0	8	65
	D	143	3	16	0	162
	Tot.	214	21	103	89	427

Traffic Flow Groups Data

Group Num	Title	Start Time	End Time	Duration	Formula
1	2004 AM Base	08:00	09:00	01:00	
2	2004 PM Base	17:00	18:00	01:00	
3	2008 AM No Dev	08:00	09:00	01:00	
4	2008 PM No Dev	17:00	18:00	01:00	
5	2018 AM No Dev	08:00	09:00	01:00	
6	2018 PM No Dev	17:00	18:00	01:00	
7	2008 AM With Dev	08:00	09:00	01:00	
8	2008 PM With Dev	17:00	18:00	01:00	
9	2018 AM With Dev	08:00	09:00	01:00	
10	2018 PM With Dev	17:00	18:00	01:00	

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 1: '2004 AM Base'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	23	173	1800	1800	720	24.0
2/1	Caravan Park Right Left Ahead	O	B	1	21	27	1800	1800	660	4.1
3/1	B4265 Ahead Right Left	O	C	1	25	65	1800	1800	780	8.3
4/1	Fonmon Road Left Ahead Right	O	D	1	21	162	1800	1800	660	24.5
5/1		U	-			214	1800	1800	1800	11.9
6/1		U	-			21	1800	1800	1800	1.2
7/1		U	-			103	1800	1800	1800	5.7
8/1		U	-			89	1800	1800	1800	4.9

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	173	173	72	0	0	0.6	0.7	15.2	1.9	2.0
2/1	27	27	15	0	0	0.1	0.1	15.2	0.3	0.3
3/1	65	65	1	0	0	0.2	0.2	12.6	0.6	0.7
4/1	162	162	15	0	0	0.6	0.8	16.9	1.8	2.0
5/1	214	214				0.0	0.1	1.1	0.0	0.1
6/1	21	21				0.0	0.0	1.0	0.0	0.0
7/1	102	102				0.0	0.0	1.1	0.0	0.0
8/1	89	89				0.0	0.0	1.1	0.0	0.0

PRC for Signalled Links (%): 266.7 Total Delay for Signalled Links (pcuHr): 1.83

PRC Over All Links (%): 266.7 Total Delay Over All Links(pcuHr): 1.96 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	23
B	Caravan Park Right Left Ahead	Traffic	1	21
C	B4265 Ahead Right Left	Traffic	1	25
D	Fonmon Road Left Ahead Right	Traffic	1	21

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 1: '2004 AM Base'
Total Network delay: 1.96 pcuHr
Worst PRC: 266.67 % (On Link 4/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 2: 2004 PM Base						
		Destination				
		A	B	C	D	Tot.
Origin	A	0	28	58	128	214
	B	21	0	6	6	33
	C	87	4	0	14	105
	D	67	6	5	0	78
	Tot.	175	38	69	148	430

Traffic Flow Groups Data

Group Num	Title	Start Time	End Time	Duration	Formula
1	2004 AM Base	08:00	09:00	01:00	
2	2004 PM Base	17:00	18:00	01:00	
3	2008 AM No Dev	08:00	09:00	01:00	
4	2008 PM No Dev	17:00	18:00	01:00	
5	2018 AM No Dev	08:00	09:00	01:00	
6	2018 PM No Dev	17:00	18:00	01:00	
7	2008 AM With Dev	08:00	09:00	01:00	
8	2008 PM With Dev	17:00	18:00	01:00	
9	2018 AM With Dev	08:00	09:00	01:00	
10	2018 PM With Dev	17:00	18:00	01:00	

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 2: '2004 PM Base'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	32	214	1800	1800	990	21.6
2/1	Caravan Park Right Left Ahead	O	B	1	12	33	1800	1800	390	8.5
3/1	B4265 Ahead Right Left	O	C	1	34	105	1800	1800	1050	10.0
4/1	Fonmon Road Left Ahead Right	O	D	1	12	78	1800	1800	390	20.0
5/1		U	-			175	1800	1800	1800	9.7
6/1		U	-			38	1800	1800	1800	2.1
7/1		U	-			69	1800	1800	1800	3.8
8/1		U	-			148	1800	1800	1800	8.2

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	214	214	128	0	0	0.4	0.5	9.2	1.8	1.9
2/1	33	33	20	0	0	0.2	0.2	23.9	0.4	0.5
3/1	105	105	4	0	0	0.2	0.2	7.5	0.8	0.8
4/1	78	78	5	0	0	0.4	0.5	25.0	1.1	1.2
5/1	174	174				0.0	0.1	1.1	0.0	0.1
6/1	38	38				0.0	0.0	1.0	0.0	0.0
7/1	69	69				0.0	0.0	1.0	0.0	0.0
8/1	148	148				0.0	0.0	1.1	0.0	0.0

PRC for Signalled Links (%): 316.4 Total Delay for Signalled Links (pcuHr): 1.53
PRC Over All Links (%): 316.4 Total Delay Over All Links(pcuHr): 1.66 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	32
B	Caravan Park Right Left Ahead	Traffic	1	12
C	B4265 Ahead Right Left	Traffic	1	34
D	Fonmon Road Left Ahead Right	Traffic	1	12

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 2: '2004 PM Base'
Total Network delay: 1.66 pcuHr
Worst PRC: 316.36 % (On Link 1/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 3: 2008 AM No Dev						
		Destination				
Origin		A	B	C	D	Tot.
	A	0	18	98	77	193
	B	16	0	3	10	29
	C	76	1	0	9	86
	D	152	3	17	0	172
	Tot.	244	22	118	96	480

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 3: '2008 AM No Dev'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	23	193	1800	1800	720	26.8
2/1	Caravan Park Right Left Ahead	O	B	1	21	29	1800	1800	660	4.4
3/1	B4265 Ahead Right Left	O	C	1	25	86	1800	1800	780	11.0
4/1	Fonmon Road Left Ahead Right	O	D	1	21	172	1800	1800	660	26.1
5/1		U	-			244	1800	1800	1800	13.5
6/1		U	-			22	1800	1800	1800	1.2
7/1		U	-			118	1800	1800	1800	6.5
8/1		U	-			96	1800	1800	1800	5.3

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	193	193	77	0	0	0.6	0.8	15.5	2.1	2.3
2/1	29	29	15	0	0	0.1	0.1	15.2	0.3	0.3
3/1	86	86	1	0	0	0.2	0.3	12.8	0.8	0.9
4/1	172	172	16	0	0	0.6	0.8	17.0	2.0	2.2
5/1	243	243				0.0	0.1	1.2	0.0	0.1
6/1	22	22				0.0	0.0	1.0	0.0	0.0
7/1	117	117				0.0	0.0	1.1	0.0	0.0
8/1	96	96				0.0	0.0	1.1	0.0	0.0

PRC for Signalled Links (%): 235.8 Total Delay for Signalled Links (pcuHr): 2.07
PRC Over All Links (%): 235.8 Total Delay Over All Links(pcuHr): 2.22 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	23
B	Caravan Park Right Left Ahead	Traffic	1	21
C	B4265 Ahead Right Left	Traffic	1	25
D	Fonmon Road Left Ahead Right	Traffic	1	21

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 3: '2008 AM No Dev'
Total Network delay: 2.22 pcuHr
Worst PRC: 235.75 % (On Link 1/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 4: 2008 PM No Dev						
		Destination				
		A	B	C	D	Tot.
Origin	A	0	30	77	136	243
	B	22	0	6	6	34
	C	106	4	0	15	125
	D	71	6	5	0	82
	Tot.	199	40	88	157	484

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 4: '2008 PM No Dev'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	33	243	1800	1800	1020	23.8
2/1	Caravan Park Right Left Ahead	O	B	1	11	34	1800	1800	360	9.4
3/1	B4265 Ahead Right Left	O	C	1	35	125	1800	1800	1080	11.6
4/1	Fonmon Road Left Ahead Right	O	D	1	11	82	1800	1800	360	22.8
5/1		U	-			199	1800	1800	1800	11.0
6/1		U	-			40	1800	1800	1800	2.2
7/1		U	-			88	1800	1800	1800	4.9
8/1		U	-			157	1800	1800	1800	8.7

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	243	243	136	0	0	0.4	0.6	8.8	2.0	2.2
2/1	34	34	21	0	0	0.2	0.2	25.2	0.5	0.5
3/1	125	125	4	0	0	0.2	0.2	7.1	0.9	0.9
4/1	82	82	5	0	0	0.5	0.6	26.6	1.1	1.3
5/1	198	198				0.0	0.1	1.1	0.0	0.1
6/1	40	40				0.0	0.0	1.0	0.0	0.0
7/1	88	88				0.0	0.0	1.0	0.0	0.0
8/1	157	157				0.0	0.0	1.1	0.0	0.0

PRC for Signalled Links (%): 277.8 Total Delay for Signalled Links (pcuHr): 1.69
PRC Over All Links (%): 277.8 Total Delay Over All Links(pcuHr): 1.83 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	33
B	Caravan Park Right Left Ahead	Traffic	1	11
C	B4265 Ahead Right Left	Traffic	1	35
D	Fonmon Road Left Ahead Right	Traffic	1	11

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 4: '2008 PM No Dev'
Total Network delay: 1.83 pcuHr
Worst PRC: 277.78 % (On Link 1/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 5: 2018 AM No Dev						
		Destination				
Origin		A	B	C	D	Tot.
	A	0	21	149	88	258
	B	18	0	4	11	33
	C	153	1	0	10	164
	D	176	4	20	0	200
	Tot.	347	26	173	109	655

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 5: '2018 AM No Dev'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	25	258	1800	1800	780	33.1
2/1	Caravan Park Right Left Ahead	O	B	1	19	33	1800	1800	600	5.5
3/1	B4265 Ahead Right Left	O	C	1	27	164	1800	1800	840	19.5
4/1	Fonmon Road Left Ahead Right	O	D	1	19	200	1800	1800	600	33.3
5/1		U	-			347	1800	1800	1800	19.2
6/1		U	-			26	1800	1800	1800	1.4
7/1		U	-			173	1800	1800	1800	9.6
8/1		U	-			109	1800	1800	1800	6.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	258	258	88	0	0	0.8	1.1	14.7	2.8	3.0
2/1	33	33	17	0	0	0.1	0.2	16.9	0.4	0.4
3/1	164	164	1	0	0	0.4	0.5	12.1	1.6	1.7
4/1	200	200	19	0	0	0.8	1.1	19.5	2.4	2.7
5/1	346	346				0.0	0.1	1.2	0.0	0.1
6/1	26	26				0.0	0.0	1.0	0.0	0.0
7/1	172	172				0.0	0.1	1.1	0.0	0.1
8/1	109	109				0.0	0.0	1.1	0.0	0.0

PRC for Signalled Links (%): 170.0 Total Delay for Signalled Links (pcuHr): 2.84
PRC Over All Links (%): 170.0 Total Delay Over All Links(pcuHr): 3.05 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	25
B	Caravan Park Right Left Ahead	Traffic	1	19
C	B4265 Ahead Right Left	Traffic	1	27
D	Fonmon Road Left Ahead Right	Traffic	1	19

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 5: '2018 AM No Dev'
Total Network delay: 3.05 pcuHr
Worst PRC: 170.00 % (On Link 4/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 6: 2018 PM No Dev						
		Destination				
Origin		A	B	C	D	Tot.
	A	0	34	151	157	342
	B	26	0	7	7	40
	C	179	5	0	17	201
	D	82	7	6	0	95
	Tot.	287	46	164	181	678

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 6: '2018 PM No Dev'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	35	342	1800	1800	1080	31.7
2/1	Caravan Park Right Left Ahead	O	B	1	9	40	1800	1800	300	13.3
3/1	B4265 Ahead Right Left	O	C	1	37	201	1800	1800	1140	17.6
4/1	Fonmon Road Left Ahead Right	O	D	1	9	95	1800	1800	300	31.7
5/1		U	-			287	1800	1800	1800	15.9
6/1		U	-			46	1800	1800	1800	2.6
7/1		U	-			164	1800	1800	1800	9.1
8/1		U	-			181	1800	1800	1800	10.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	342	342	157	0	0	0.6	0.8	8.4	2.8	3.0
2/1	40	40	25	0	0	0.2	0.3	28.3	0.6	0.6
3/1	201	201	5	0	0	0.3	0.4	6.5	1.3	1.4
4/1	95	95	6	0	0	0.6	0.8	30.8	1.4	1.6
5/1	286	286				0.0	0.1	1.2	0.0	0.1
6/1	46	46				0.0	0.0	1.0	0.0	0.0
7/1	164	164				0.0	0.1	1.1	0.0	0.1
8/1	181	181				0.0	0.1	1.1	0.0	0.1

PRC for Signalled Links (%): 184.2 Total Delay for Signalled Links (pcuHr): 2.28
PRC Over All Links (%): 184.2 Total Delay Over All Links(pcuHr): 2.50 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	35
B	Caravan Park Right Left Ahead	Traffic	1	9
C	B4265 Ahead Right Left	Traffic	1	37
D	Fonmon Road Left Ahead Right	Traffic	1	9

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 6: '2018 PM No Dev'
Total Network delay: 2.50 pcuHr
Worst PRC: 184.21 % (On Link 1/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 7: 2008 AM With Dev						
	Destination					
Origin		A	B	C	D	Tot.
	A	0	18	222	77	317
	B	16	0	3	10	29
	C	127	1	0	9	137
	D	152	3	17	0	172
	Tot.	295	22	242	96	655

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 7: '2008 AM With Dev'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	35	317	1800	1800	1080	29.4
2/1	Caravan Park Right Left Ahead	O	B	1	9	29	1800	1800	300	9.7
3/1	B4265 Ahead Right Left	O	C	1	37	137	1800	1800	1140	12.0
4/1	Fonmon Road Left Ahead Right	O	D	1	9	172	1800	1800	300	57.3
5/1		U	-			295	1800	1800	1800	16.4
6/1		U	-			22	1800	1800	1800	1.2
7/1		U	-			242	1800	1800	1800	13.1
8/1		U	-			96	1800	1800	1800	5.3

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	317	317	77	0	0	0.5	0.7	8.2	2.6	2.8
2/1	29	29	15	0	0	0.2	0.2	27.9	0.4	0.5
3/1	137	137	1	0	0	0.2	0.2	6.2	0.9	0.9
4/1	172	172	11	0	0	1.1	1.8	37.0	2.6	3.3
5/1	294	294				0.0	0.1	1.2	0.0	0.1
6/1	22	22				0.0	0.0	1.0	0.0	0.0
7/1	236	236				0.0	0.1	1.1	0.0	0.1
8/1	96	96				0.0	0.0	1.1	0.0	0.0

PRC for Signalled Links (%): 57.0 Total Delay for Signalled Links (pcuHr): 2.95
PRC Over All Links (%): 57.0 Total Delay Over All Links(pcuHr): 3.16 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	35
B	Caravan Park Right Left Ahead	Traffic	1	9
C	B4265 Ahead Right Left	Traffic	1	37
D	Fonmon Road Left Ahead Right	Traffic	1	9

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 7: '2008 AM With Dev'
Total Network delay: 3.16 pcuHr
Worst PRC: 56.98 % (On Link 4/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 8: 2008 PM With Dev						
		Destination				
Origin		A	B	C	D	Tot.
	A	0	30	140	136	306
	B	22	0	6	6	34
	C	178	4	0	15	197
	D	71	6	5	0	82
	Tot.	271	40	151	157	619

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 8: '2008 PM With Dev'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	35	306	1800	1800	1080	28.3
2/1	Caravan Park Right Left Ahead	O	B	1	9	34	1800	1800	300	11.3
3/1	B4265 Ahead Right Left	O	C	1	37	197	1800	1800	1140	17.3
4/1	Fonmon Road Left Ahead Right	O	D	1	9	82	1800	1800	300	27.3
5/1		U	-			271	1800	1800	1800	15.0
6/1		U	-			40	1800	1800	1800	2.2
7/1		U	-			151	1800	1800	1800	8.4
8/1		U	-			157	1800	1800	1800	8.7

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	306	306	136	0	0	0.5	0.7	8.1	2.4	2.6
2/1	34	34	21	0	0	0.2	0.3	28.0	0.5	0.5
3/1	197	197	4	0	0	0.2	0.4	6.5	1.3	1.4
4/1	82	82	5	0	0	0.5	0.7	30.1	1.2	1.4
5/1	270	270				0.0	0.1	1.2	0.0	0.1
6/1	40	40				0.0	0.0	1.0	0.0	0.0
7/1	151	151				0.0	0.0	1.1	0.0	0.0
8/1	157	157				0.0	0.0	1.1	0.0	0.0

PRC for Signalled Links (%): 217.6 Total Delay for Signalled Links (pcuHr): 1.99
PRC Over All Links (%): 217.6 Total Delay Over All Links(pcuHr): 2.19 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	35
B	Caravan Park Right Left Ahead	Traffic	1	9
C	B4265 Ahead Right Left	Traffic	1	37
D	Fonmon Road Left Ahead Right	Traffic	1	9

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 8: '2008 PM With Dev'
Total Network delay: 2.19 pcuHr
Worst PRC: 217.65 % (On Link 1/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 9: 2018 AM With Dev						
		Destination				
Origin		A	B	C	D	Tot.
	A	0	21	273	88	382
	B	18	0	4	11	33
	C	204	1	0	10	215
	D	176	4	20	0	200
	Tot.	398	26	297	109	830

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 9: '2018 AM With Dev'

Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	29	382	1800	1800	900	42.4
2/1	Caravan Park Right Left Ahead	O	B	1	15	33	1800	1800	480	6.9
3/1	B4265 Ahead Right Left	O	C	1	31	215	1800	1800	960	22.4
4/1	Fonmon Road Left Ahead Right	O	D	1	15	200	1800	1800	480	41.7
5/1		U	-			398	1800	1800	1800	22.1
6/1		U	-			26	1800	1800	1800	1.4
7/1		U	-			297	1800	1800	1800	16.5
8/1		U	-			109	1800	1800	1800	6.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	382	382	88	0	0	1.0	1.4	13.0	4.0	4.4
2/1	33	33	17	0	0	0.2	0.2	20.6	0.4	0.4
3/1	215	215	1	0	0	0.4	0.6	9.8	1.9	2.0
4/1	200	200	19	0	0	1.0	1.4	24.6	2.7	3.1
5/1	397	397				0.0	0.1	1.3	0.0	0.1
6/1	26	26				0.0	0.0	1.0	0.0	0.0
7/1	296	296				0.0	0.1	1.2	0.0	0.1
8/1	109	109				0.0	0.0	1.1	0.0	0.0

PRC for Signalled Links (%): 112.0 Total Delay for Signalled Links (pcuHr): 3.52
PRC Over All Links (%): 112.0 Total Delay Over All Links(pcuHr): 3.80 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	29
B	Caravan Park Right Left Ahead	Traffic	1	15
C	B4265 Ahead Right Left	Traffic	1	31
D	Fonmon Road Left Ahead Right	Traffic	1	15

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 9: '2018 AM With Dev'
Total Network delay: 3.80 pcuHr
Worst PRC: 112.04 % (On Link 1/1)

Fontygary Signals - Land to the North of the Raliway Line, Rhoose, Vale of Glamorgan

Traffic Flow Matrix - Desired Flow

Flow Group 10: 2018 PM With Dev						
		Destination				
Origin		A	B	C	D	Tot.
	A	0	34	214	157	405
	B	26	0	7	7	40
	C	251	5	0	17	273
	D	82	7	6	0	95
	Tot.	359	46	227	181	813

Link Results

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 10: '2018 PM With Dev'										
Link Num	Link Desc	Link Type	Full Phase	Num Greens	Total Green (s)	Demand Flow (pcu)	Max Sat Flow (pcu/Hr)	Ave Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
1/1	Fontygary Road Left Ahead Right	O	A	1	36	405	1800	1800	1110	36.5
2/1	Caravan Park Right Left Ahead	O	B	1	8	40	1800	1800	270	14.8
3/1	B4265 Ahead Right Left	O	C	1	38	273	1800	1800	1170	23.3
4/1	Fonmon Road Left Ahead Right	O	D	1	8	95	1800	1800	270	35.2
5/1		U	-			359	1800	1800	1800	19.9
6/1		U	-			46	1800	1800	1800	2.6
7/1		U	-			227	1800	1800	1800	12.5
8/1		U	-			181	1800	1800	1800	10.1

Link Num	Entering (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Max. Back of Uniform Queue (pcu)	Mean Max Queue (pcu)
1/1	405	405	157	0	0	0.6	0.9	8.2	3.3	3.5
2/1	40	40	25	0	0	0.2	0.3	30.1	0.6	0.7
3/1	273	273	5	0	0	0.3	0.5	6.4	1.8	2.0
4/1	95	95	4	0	0	0.6	0.9	33.2	1.4	1.7
5/1	358	358				0.0	0.1	1.2	0.0	0.1
6/1	46	46				0.0	0.0	1.0	0.0	0.0
7/1	225	225				0.0	0.1	1.1	0.0	0.1
8/1	181	181				0.0	0.1	1.1	0.0	0.1

PRC for Signalled Links (%): 146.7 Total Delay for Signalled Links (pcuHr): 2.62

PRC Over All Links (%): 146.7 Total Delay Over All Links(pcuHr): 2.88 Cycle Time (s): 60

Phase Results

Phase Name	Description	Phase type	Num Runs	Total green
A	Fontygary Road Left Ahead Right	Traffic	1	36
B	Caravan Park Right Left Ahead	Traffic	1	8
C	B4265 Ahead Right Left	Traffic	1	38
D	Fonmon Road Left Ahead Right	Traffic	1	8

Network Summary table

Signal Plan 1: 'Signal Plan No. 1' (60s) Flow Group 10: '2018 PM With Dev'
Total Network delay: 2.88 pcuHr
Worst PRC: 146.67 % (On Link 1/1)

Appendix F

CAPITA SYMONDS

successful people, projects and performance

Various locations, Rhoose & Font-y-Gary (5 year accident data)

Area L/A Number Severity Day Date Time Link/Node Grid Ref. Street

-- 746 0010435 Slight WED 23/02/2000 1500 307000/166500/

PORTHKERRY ROAD, RHOOSE AT JUNCTION WITH MURLANDE WAY 1st Rd: U 2nd Rd: U

Speed C'way Jct Det'l/Ctrl Light Weather Rdsurf PedXHuman PedXPhy Spec'l Hazard

30mph Single2L T/Stag Give . Rain Wet . .

Veh+Art Man'vre VehLocRD+RS Jctn Skd Hit LeftRd Dvr Cas/ Veh Class/Sex/Age Sev/Pass Loc Ped'n Dir Mov Sch P School

1 Car Ahed W E OnMainOn Main Mid Krb OF Tree M17- 1V 1 Pa F17. Pd

FRONT SEAT PASSENGER OF VEH 1 GRABBED WHEEL, CAUSING VEH TO HIT NS CURB, THEN HIT A TREE AND SPIN AROUND AND LAND IN A DRIVEWAY.

User Information: C/Factors: 09A 23B 00 00

-- 746 0035132 Slight MON 23/04/2001 1750 307100/166570/

PORTHKERRY ROAD, RHOOSE, APPROX 100 YDS EAST ROUNABOUT JW RHOOSE POINT 1st Rd: U 2nd Rd: U

Speed C'way Jct Det'l/Ctrl Light Weather Rdsurf PedXHuman PedXPhy Spec'l Hazard

30mph Single2L T/Stag Give . . Dry . .

Veh+Art Man'vre VehLocRD+RS Jctn Skd Hit LeftRd Dvr Cas/ Veh Class/Sex/Age Sev/Pass Loc Ped'n Dir Mov Sch P School

1 Car Ahed W E OnMainOn MinorApp F42- 1V 2 Dr F33. Pd

2 Car Ahed E W OnMainOn MinorApp F33-

DRIVER OF V1 TOOK EYES OFF ROAD AND VEERED INTO THE ONCOMING TRAFFIC AND COLLIDED WITH V2.

User Information: C/Factors: 09B 14B 00 00

-- 746 0044216 Serious SUN 23/09/2001 1100 305190/166180/

Fontygary Road jcn. Fontygary Caravan Park, Rhoose 1st Rd: U 2nd Rd: U

Speed C'way Jct Det'l/Ctrl Light Weather Rdsurf PedXHuman PedXPhy Spec'l Hazard

30mph Single2L T/Stag Give . . Dry . .

Veh+Art Man'vre VehLocRD+RS Jctn Skd Hit LeftRd Dvr Cas/ Veh Class/Sex/Age Sev/Pass Loc Ped'n Dir Mov Sch P School

1 Car Wait W S OnMainLeaving App F57- 1V 2 Dr M64X Pd

2 P/C Ahed E W OnMainLeaving App M64

V1 TURNED RIGHT INTO PATH OF V2 COLLISION OCCURRED

User Information: C/Factors: 12B 27B 00 00

-- 746 0058154 Slight SAT 04/05/2002 2030 304600/167020/

FONTYGARY ROAD, RHOOSE, APPROX 20 YDS EAST JW FONMON ROAD. 1st Rd: U 2nd Rd: U

Speed C'way Jct Det'l/Ctrl Light Weather Rdsurf PedXHuman PedXPhy Spec'l Hazard

30mph Single2L T/Stag Give . . Dry . .

Veh+Art Man'vre VehLocRD+RS Jctn Skd Hit LeftRd Dvr Cas/ Veh Class/Sex/Age Sev/Pass Loc Ped'n Dir Mov Sch P School

1 Car U-t E W OnMainOn MinorApp M26- 1V 1 Dr M26. Pd

2 Car Cl-R E W OnMainOn MinorApp S M18- 2V 1 Pa F17. R Pd

V1 ATTEMPTING TO MAKE A U TURN AND WAS STRUCK BY V2.

User Information: C/Factors: 12B 00 00 00

-- 746 0103723 Slight TUE 24/02/2004 2000 306820/166600/

PORTHKERRY ROAD, RHOOSE 1st Rd: U 2nd Rd:

Speed	C'way	Jct	Det'l/Ctrl	Light	Weather	Rdsurf	PedXHuman	PedXPhy	Spec'l Hazard
30mph	Single2L	NotJCT		Dark+L	.	Dry			

Veh+Art	Man'vre	VehLocRD+RS	Jctn	Skd	Hit	LeftRd	Dvr	Cas/ Veh	Class/Sex/Age Sev/Pass	Loc	Ped'n Dir	Mov	Sch P	School
1 Car	U-t W E	OnMainOn	Main				M72.	1V 1	Dr M72.		Pd			
2 OMV	Ahed S N	OnMainOn	Main				M33.							

V1 MISJUDGED SPEED OF V2(AMBULANCE) AND COLLISION OCCURRED.

User Information: C/Factors: 08C 00 00 00

-- 746 0110754 Slight FRI 11/06/2004 1757 305170/166170/

FONTYGARY ROAD, RHOOSE, JW TURNING INTO FONTYGARY CARAVAN PARK. 1st Rd: U 2nd Rd: U

Speed	C'way	Jct	Det'l/Ctrl	Light	Weather	Rdsurf	PedXHuman	PedXPhy	Spec'l Hazard
30mph	Single2L	X-Rds	ATS	.	.	Dry			

Veh+Art	Man'vre	VehLocRD+RS	Jctn	Skd	Hit	LeftRd	Dvr	Cas/ Veh	Class/Sex/Age Sev/Pass	Loc	Ped'n Dir	Mov	Sch P	School
1 Car	Ahed W E	OnMainOn	Main	App			M72.	1V 2	Dr F30.		Pd			
2 Car	Wt-R W E	OnMainOn	Main	Mid			F30-							

V1COLLIDED INTO BACK OF V2 WHILST BOTH AT TRAFFIC LIGHTS.

User Information: C/Factors: 27B 12B 00 00

-- 746 99E01700 Serious SAT 24/07/1999 1242 000000 307100/167300/

PORTHKERRY ROAD 1st Rd: U 2nd Rd: U

Speed	C'way	Jct	Det'l/Ctrl	Light	Weather	Rdsurf	PedXHuman	PedXPhy	Spec'l Hazard
30mph	Roundabt	R'dabt	Unct	.	.	Dry			

Veh+Art	Man'vre	VehLocRD+RS	Jctn	Skd	Hit	LeftRd	Dvr	Cas/ Veh	Class/Sex/Age Sev/Pass	Loc	Ped'n Dir	Mov	Sch P	School
1 Car	R-t W NE	OnMain	Entering	Mid			M70-	1V 2	Pa F28X		Pd			
2 MC>	Ahed W NE	OnMainOn	Main	Mid			M31-							

RHOOSE

User Information: U C/Factors: 01 39
