Greater Dublin Drainage Project Addendum

Environmental Impact Assessment Report Addendum: Volume 3A Part B of 6

Appendix A13.4 Junction 10 Outputs

Uisce Éireann

October 2023

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 1 AM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:17:06

»2022 Base Year , AM
»Phase 5 2027 No construction , AM
»Phase 5 2027 With construction, AM

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Arm A	D1	0.2	4.38	0.16	A
Arm B		0.4	4.06	0.30	A
Arm C		0.3	2.13	0.21	A
Arm D		0.1	2.55	0.06	A
	Phase 5 2027 No construction				
Arm A	D2	0.3	4.86	0.21	A
Arm B		0.6	4.62	0.38	A
Arm C		0.4	2.31	0.27	A
Arm D		0.1	2.73	0.08	A
	Phase 5 2027 With construction				
Arm A	D3	0.3	5.17	0.22	A
Arm B		0.6	4.69	0.38	A
Arm C		0.4	2.31	0.27	A
Arm D		0.1	2.73	0.08	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junciton2
Location	Clonshagh
Site number	2
Date	05/07/2016
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	08:15	09:45	15	✓
D2	Phase 5 2027 No construction	AM	ONE HOUR	08:15	09:45	15	✓
D3	Phase 5 2027 With construction	AM	ONE HOUR	08:15	09:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.15	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.15	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Petrol Station		
B	Clonshaugh Rd (N)		
C	Clonshaugh Rd (S)		
D	Hotel Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	4.50	4.80	8.6	12.6	57.0	65.0		
B	4.00	5.80	10.4	11.2	57.0	49.0		
C	8.20	9.00	6.3	16.7	57.0	55.0		
D	7.10	7.60	9.8	16.1	57.0	77.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.449	1228
B	0.492	1400
C	0.673	2401
D	0.559	1882

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	142	100.000
B		ONE HOUR	✓	348	100.000
C		ONE HOUR	✓	416	100.000
D		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	19	116	7
	B	22	2	306	18
	C	114	177	5	120
	D	9	13	58	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	13	0
	B	0	100	1	0
	C	17	5	27	10
	D	14	14	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.16	4.38	0.2	A	130	195
B	0.30	4.06	0.4	A	319	479
C	0.21	2.13	0.3	A	381	572
D	0.06	2.55	0.1	A	73	110

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	107	27	191	1017	0.105	106	109	0.0	0.1	3.953	A
B	262	65	139	1304	0.201	261	158	0.0	0.3	3.447	A
C	313	78	37	2159	0.145	312	364	0.0	0.2	1.949	A
D	60	15	240	1562	0.039	60	109	0.0	0.0	2.397	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	128	32	229	1001	0.128	128	130	0.1	0.1	4.123	A
B	313	78	167	1289	0.243	313	190	0.3	0.3	3.685	A
C	374	93	44	2155	0.173	374	435	0.2	0.2	2.020	A
D	72	18	287	1536	0.047	72	130	0.0	0.0	2.459	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	156	39	280	978	0.160	156	160	0.1	0.2	4.377	A
B	383	96	204	1269	0.302	383	232	0.3	0.4	4.060	A
C	458	114	54	2149	0.213	457	533	0.2	0.3	2.128	A
D	88	22	352	1500	0.059	88	160	0.0	0.1	2.549	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	156	39	280	978	0.160	156	160	0.2	0.2	4.379	A
B	383	96	204	1269	0.302	383	232	0.4	0.4	4.064	A
C	458	114	54	2149	0.213	458	534	0.3	0.3	2.128	A
D	88	22	352	1500	0.059	88	160	0.1	0.1	2.549	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	128	32	229	1000	0.128	128	130	0.2	0.1	4.127	A
B	313	78	167	1289	0.243	313	190	0.4	0.3	3.689	A
C	374	93	44	2155	0.173	374	436	0.3	0.2	2.023	A
D	72	18	288	1535	0.047	72	130	0.1	0.0	2.459	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	107	27	192	1017	0.105	107	109	0.1	0.1	3.958	A
B	262	65	140	1304	0.201	262	159	0.3	0.3	3.458	A
C	313	78	37	2159	0.145	313	365	0.2	0.2	1.951	A
D	60	15	241	1561	0.039	60	109	0.0	0.0	2.399	A

Phase 5 2027 No construction , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.50	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.50	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Phase 5 2027 No construction	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	178	100.000
B		ONE HOUR	✓	427	100.000
C		ONE HOUR	✓	511	100.000
D		ONE HOUR	✓	100	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	24	145	9
	B	27	0	378	22
	C	142	220	0	149
	D	11	16	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	9	15	0
	B	0	100	1	0
	C	20	6	31	11
	D	16	17	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.21	4.86	0.3	A	163	245
B	0.38	4.62	0.6	A	392	588
C	0.27	2.31	0.4	A	469	703
D	0.08	2.73	0.1	A	92	138

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	134	34	232	984	0.136	133	135	0.0	0.2	4.232	A
B	321	80	170	1293	0.249	320	195	0.0	0.3	3.694	A
C	385	96	43	2130	0.181	384	447	0.0	0.2	2.060	A
D	75	19	292	1503	0.050	75	135	0.0	0.1	2.522	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	160	40	278	964	0.166	160	162	0.2	0.2	4.475	A
B	384	96	204	1275	0.301	383	234	0.3	0.4	4.037	A
C	459	115	52	2125	0.216	459	535	0.2	0.3	2.161	A
D	90	23	350	1471	0.061	90	162	0.1	0.1	2.606	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	196	49	340	937	0.209	196	198	0.2	0.3	4.853	A
B	470	118	250	1250	0.376	469	286	0.4	0.6	4.611	A
C	563	141	64	2118	0.266	562	655	0.3	0.4	2.314	A
D	110	28	428	1428	0.077	110	198	0.1	0.1	2.730	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	196	49	340	937	0.209	196	198	0.3	0.3	4.855	A
B	470	118	250	1249	0.376	470	287	0.6	0.6	4.619	A
C	563	141	64	2118	0.266	563	656	0.4	0.4	2.314	A
D	110	28	428	1428	0.077	110	198	0.1	0.1	2.731	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	160	40	278	964	0.166	160	162	0.3	0.2	4.480	A
B	384	96	204	1275	0.301	385	234	0.6	0.4	4.047	A
C	459	115	52	2125	0.216	460	537	0.4	0.3	2.164	A
D	90	23	350	1471	0.061	90	162	0.1	0.1	2.606	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	134	34	233	983	0.136	134	136	0.2	0.2	4.242	A
B	321	80	171	1293	0.249	322	196	0.4	0.3	3.710	A
C	385	96	44	2130	0.181	385	449	0.3	0.2	2.064	A
D	75	19	293	1502	0.050	76	136	0.1	0.1	2.523	A

Phase 5 2027 With construction, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.58	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.58	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Phase 5 2027 With construction	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	178	100.000
B		ONE HOUR	✓	433	100.000
C		ONE HOUR	✓	511	100.000
D		ONE HOUR	✓	100	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	24	145	9
	B	27	0	384	22
	C	142	220	0	149
	D	11	16	73	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	9	22	0
	B	0	100	1	0
	C	20	6	31	11
	D	16	17	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.22	5.17	0.3	A	163	245
B	0.38	4.69	0.6	A	397	596
C	0.27	2.31	0.4	A	469	703
D	0.08	2.73	0.1	A	92	138

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	134	34	232	936	0.143	133	135	0.0	0.2	4.478	A
B	326	81	170	1290	0.253	325	195	0.0	0.3	3.725	A
C	385	96	43	2130	0.181	384	451	0.0	0.2	2.060	A
D	75	19	292	1503	0.050	75	135	0.0	0.1	2.522	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	160	40	278	918	0.174	160	162	0.2	0.2	4.747	A
B	389	97	204	1270	0.306	389	234	0.3	0.4	4.082	A
C	459	115	52	2125	0.216	459	541	0.2	0.3	2.161	A
D	90	23	350	1471	0.061	90	162	0.1	0.1	2.606	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	196	49	340	893	0.220	196	198	0.2	0.3	5.163	A
B	477	119	250	1244	0.383	476	286	0.4	0.6	4.683	A
C	563	141	64	2118	0.266	562	662	0.3	0.4	2.314	A
D	110	28	428	1428	0.077	110	198	0.1	0.1	2.730	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	196	49	340	892	0.220	196	198	0.3	0.3	5.168	A
B	477	119	250	1244	0.383	477	287	0.6	0.6	4.692	A
C	563	141	64	2118	0.266	563	663	0.4	0.4	2.314	A
D	110	28	428	1428	0.077	110	198	0.1	0.1	2.731	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	160	40	278	918	0.174	160	162	0.3	0.2	4.753	A
B	389	97	204	1270	0.306	390	234	0.6	0.4	4.093	A
C	459	115	52	2125	0.216	460	542	0.4	0.3	2.164	A
D	90	23	350	1471	0.061	90	162	0.1	0.1	2.606	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	134	34	233	936	0.143	134	136	0.2	0.2	4.489	A
B	326	81	171	1289	0.253	326	196	0.4	0.3	3.742	A
C	385	96	44	2130	0.181	385	454	0.3	0.2	2.063	A
D	75	19	293	1502	0.050	76	136	0.1	0.1	2.525	A

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 1 PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:17:50

»2022 Base Year , PM
»Phase 5 2027 No construction, PM
»Phase 5 2027 With construction, PM

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Arm A	D1	0.3	5.26	0.24	A
Arm B		0.5	4.24	0.32	A
Arm C		0.5	2.31	0.32	A
Arm D		0.0	2.61	0.04	A
	Phase 5 2027 No construction				
Arm A	D2	0.4	5.66	0.28	A
Arm B		0.5	4.49	0.35	A
Arm C		0.5	2.38	0.34	A
Arm D		0.1	2.68	0.05	A
	Phase 5 2027 With construction				
Arm A	D3	0.4	5.66	0.28	A
Arm B		0.7	4.97	0.41	A
Arm C		0.5	2.38	0.34	A
Arm D		0.1	2.68	0.05	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junciton2
Location	Clonshagh
Site number	2
Date	05/07/2016
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	ONE HOUR	17:00	18:30	15	✓
D2	Phase 5 2027 No construction	PM	ONE HOUR	17:00	18:30	15	✓
D3	Phase 5 2027 With construction	PM	ONE HOUR	17:00	18:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.35	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Petrol Station		
B	Clonshaugh Rd (N)		
C	Clonshaugh Rd (S)		
D	Hotel Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	4.50	4.80	8.6	12.6	57.0	65.0		
B	4.00	5.80	10.4	11.2	57.0	49.0		
C	8.20	9.00	6.3	16.7	57.0	55.0		
D	7.10	7.60	9.8	16.1	57.0	77.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.449	1228
B	0.492	1400
C	0.673	2401
D	0.559	1882

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	201	100.000
B		ONE HOUR	✓	363	100.000
C		ONE HOUR	✓	657	100.000
D		ONE HOUR	✓	59	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	51	141	9
	B	29	0	320	14
	C	160	421	9	67
	D	11	5	43	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	13	0
	B	7	0	2	0
	C	8	1	33	3
	D	0	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.24	5.26	0.3	A	184	277
B	0.32	4.24	0.5	A	333	500
C	0.32	2.31	0.5	A	603	904
D	0.04	2.61	0.0	A	54	81

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	151	38	359	975	0.155	151	150	0.0	0.2	4.362	A
B	273	68	151	1287	0.212	272	358	0.0	0.3	3.544	A
C	495	124	39	2297	0.215	494	385	0.0	0.3	1.995	A
D	44	11	465	1568	0.028	44	68	0.0	0.0	2.363	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	181	45	430	946	0.191	180	180	0.2	0.2	4.704	A
B	326	82	181	1271	0.257	326	429	0.3	0.3	3.810	A
C	591	148	47	2291	0.258	590	461	0.3	0.3	2.116	A
D	53	13	556	1516	0.035	53	81	0.0	0.0	2.459	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	221	55	526	905	0.244	221	220	0.2	0.3	5.259	A
B	400	100	222	1249	0.320	399	525	0.3	0.5	4.232	A
C	723	181	57	2284	0.317	723	564	0.3	0.5	2.305	A
D	65	16	681	1446	0.045	65	99	0.0	0.0	2.606	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	221	55	526	905	0.245	221	220	0.3	0.3	5.264	A
B	400	100	222	1249	0.320	400	525	0.5	0.5	4.238	A
C	723	181	57	2284	0.317	723	565	0.5	0.5	2.305	A
D	65	16	682	1446	0.045	65	99	0.0	0.0	2.606	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	181	45	430	945	0.191	181	180	0.3	0.2	4.711	A
B	326	82	182	1271	0.257	327	429	0.5	0.3	3.814	A
C	591	148	47	2291	0.258	591	462	0.5	0.3	2.117	A
D	53	13	557	1516	0.035	53	81	0.0	0.0	2.462	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	151	38	360	975	0.155	152	151	0.2	0.2	4.374	A
B	273	68	152	1287	0.212	274	359	0.3	0.3	3.556	A
C	495	124	39	2297	0.215	495	387	0.3	0.3	1.999	A
D	44	11	466	1567	0.028	44	68	0.0	0.0	2.366	A

Phase 5 2027 No construction, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.54	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.54	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Phase 5 2027 No construction	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	219	100.000
B		ONE HOUR	✓	391	100.000
C		ONE HOUR	✓	701	100.000
D		ONE HOUR	✓	63	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	56	153	10
	B	31	0	345	15
	C	173	455	0	73
	D	12	5	46	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	16	0
	B	8	0	3	0
	C	9	1	37	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.28	5.66	0.4	A	201	301
B	0.35	4.49	0.5	A	359	538
C	0.34	2.38	0.5	A	643	965
D	0.05	2.68	0.1	A	58	87

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	165	41	380	949	0.174	164	162	0.0	0.2	4.580	A
B	294	74	157	1271	0.232	293	387	0.0	0.3	3.675	A
C	528	132	42	2296	0.230	527	408	0.0	0.3	2.034	A
D	47	12	495	1540	0.031	47	74	0.0	0.0	2.411	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	49	455	919	0.214	197	194	0.2	0.3	4.984	A
B	352	88	188	1255	0.280	351	464	0.3	0.4	3.982	A
C	630	158	50	2290	0.275	630	489	0.3	0.4	2.168	A
D	57	14	592	1486	0.038	57	88	0.0	0.0	2.518	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	241	60	557	877	0.275	241	238	0.3	0.4	5.654	A
B	431	108	230	1232	0.349	430	568	0.4	0.5	4.486	A
C	772	193	62	2283	0.338	771	598	0.4	0.5	2.382	A
D	69	17	725	1412	0.049	69	108	0.0	0.1	2.681	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	241	60	557	877	0.275	241	238	0.4	0.4	5.662	A
B	431	108	230	1232	0.349	430	568	0.5	0.5	4.492	A
C	772	193	62	2282	0.338	772	599	0.5	0.5	2.382	A
D	69	17	726	1411	0.049	69	108	0.1	0.1	2.681	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	49	455	918	0.214	197	194	0.4	0.3	4.994	A
B	352	88	188	1254	0.280	352	464	0.5	0.4	3.994	A
C	630	158	50	2290	0.275	631	490	0.5	0.4	2.171	A
D	57	14	593	1485	0.038	57	88	0.1	0.0	2.519	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	165	41	381	949	0.174	165	163	0.3	0.2	4.595	A
B	294	74	158	1271	0.232	295	389	0.4	0.3	3.688	A
C	528	132	42	2296	0.230	528	410	0.4	0.3	2.038	A
D	47	12	496	1539	0.031	47	74	0.0	0.0	2.414	A

Phase 5 2027 With construction, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.74	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.74	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Phase 5 2027 With construction	PM	ONE HOUR	17:00	18:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	219	100.000
B		ONE HOUR	✓	462	100.000
C		ONE HOUR	✓	701	100.000
D		ONE HOUR	✓	63	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	56	153	10
	B	31	0	416	15
	C	173	455	0	73
	D	12	5	46	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	16	0
	B	8	0	3	0
	C	9	1	37	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.28	5.66	0.4	A	201	301
B	0.41	4.97	0.7	A	424	636
C	0.34	2.38	0.5	A	643	965
D	0.05	2.68	0.1	A	58	87

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	165	41	380	949	0.174	164	162	0.0	0.2	4.580	A
B	348	87	157	1272	0.273	346	387	0.0	0.4	3.883	A
C	528	132	42	2296	0.230	527	461	0.0	0.3	2.034	A
D	47	12	495	1540	0.031	47	74	0.0	0.0	2.411	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	49	455	919	0.214	197	194	0.2	0.3	4.984	A
B	415	104	188	1255	0.331	415	464	0.4	0.5	4.283	A
C	630	158	50	2290	0.275	630	552	0.3	0.4	2.168	A
D	57	14	592	1486	0.038	57	88	0.0	0.0	2.518	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	241	60	557	877	0.275	241	238	0.3	0.4	5.654	A
B	509	127	230	1232	0.413	508	568	0.5	0.7	4.963	A
C	772	193	62	2283	0.338	771	676	0.4	0.5	2.382	A
D	69	17	725	1412	0.049	69	108	0.0	0.1	2.681	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	241	60	557	877	0.275	241	238	0.4	0.4	5.662	A
B	509	127	230	1232	0.413	509	568	0.7	0.7	4.974	A
C	772	193	62	2282	0.338	772	677	0.5	0.5	2.382	A
D	69	17	726	1411	0.049	69	108	0.1	0.1	2.681	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	197	49	455	918	0.214	197	194	0.4	0.3	4.994	A
B	415	104	188	1255	0.331	416	464	0.7	0.5	4.296	A
C	630	158	50	2290	0.275	631	554	0.5	0.4	2.169	A
D	57	14	593	1485	0.038	57	88	0.1	0.0	2.519	A

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	165	41	381	949	0.174	165	163	0.3	0.2	4.596	A
B	348	87	158	1271	0.274	348	389	0.5	0.4	3.903	A
C	528	132	42	2296	0.230	528	464	0.4	0.3	2.036	A
D	47	12	496	1539	0.031	47	74	0.0	0.0	2.412	A

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 2 AM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:21:59

»2022 Base Year , AM
»Phase 5 2027 No Construction, AM
»Phase 5 2027 With Construction, AM

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Arm A	D1	1.2	8.72	0.55	A
Arm B		14.7	30.50	0.95	D
Arm C		0.0	0.00	0.00	A
Arm D		93.1	119.74	1.07	F
	Phase 5 2027 No Construction				
Arm A	D2	2.2	12.95	0.69	B
Arm B		229.3	428.37	1.22	F
Arm C		0.0	0.00	0.00	A
Arm D		513.1	776.14	1.34	F
	Phase 5 2027 With Construction				
Arm A	D3	2.4	14.22	0.71	B
Arm B		236.4	445.98	1.23	F
Arm C		0.0	0.00	0.00	A
Arm D		609.3	941.70	1.39	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junciton2
Location	Clonshagh
Site number	2
Date	05/07/2016
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:15	08:45	15	✓
D2	Phase 5 2027 No Construction	AM	ONE HOUR	07:15	08:45	15	✓
D3	Phase 5 2027 With Construction	AM	ONE HOUR	07:15	08:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	73.74	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	73.74	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Clonshaugh Road		
B	R139 East		
C	Access Road		
D	R139 West		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	8.00	8.10	30.0	38.0	66.0	35.0		
B	5.30	8.80	16.4	23.0	66.0	33.0		
C	4.20	5.90	9.0	14.0	66.0	53.0		
D	6.70	9.20	18.0	65.0	66.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.651	2468
B	0.610	2227
C	0.456	1433
D	0.668	2570

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	456	100.000
B		ONE HOUR	✓	1683	100.000
C		ONE HOUR	✓	1	100.000
D		ONE HOUR	✓	2241	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	262	0	194
	B	130	16	0	1537
	C	0	0	0	1
	D	164	2074	0	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	6	0	9
	B	6	12	0	7
	C	0	0	0	0
	D	11	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.55	8.72	1.2	A	418	628
B	0.95	30.50	14.7	D	1544	2317
C	0.00	0.00	0.0	A	0	0
D	1.07	119.74	93.1	F	2056	3085

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	343	86	1566	1292	0.266	342	220	0.0	0.4	3.783	A
B	1267	317	148	1990	0.637	1260	1760	0.0	1.7	4.885	A
C	0	0	1408	745	0.000	0	0	0.0	0.0	0.000	A
D	1687	422	109	2343	0.720	1677	1299	0.0	2.5	5.328	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	410	102	1869	1097	0.374	409	263	0.4	0.6	5.223	A
B	1513	378	177	1972	0.767	1507	2101	1.7	3.2	7.642	A
C	0	0	1684	610	0.000	0	0	0.0	0.0	0.000	A
D	2015	504	131	2329	0.865	2001	1553	2.5	5.9	10.564	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	502	126	2132	928	0.541	500	307	0.6	1.2	8.361	A
B	1853	463	216	1948	0.951	1816	2416	3.2	12.6	22.584	C
C	0	0	2031	440	0.000	0	0	0.0	0.0	0.000	A
D	2467	617	157	2311	1.068	2282	1874	5.9	52.3	54.169	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	502	126	2153	914	0.549	502	311	1.2	1.2	8.720	A
B	1853	463	217	1948	0.951	1844	2438	12.6	14.7	30.502	D
C	0	0	2061	426	0.000	0	0	0.0	0.0	0.000	A
D	2467	617	160	2309	1.068	2304	1901	52.3	93.1	119.742	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	410	102	2148	918	0.446	411	289	1.2	0.8	7.128	A
B	1513	378	178	1971	0.767	1558	2381	14.7	3.4	9.610	A
C	0	0	1736	584	0.000	0	0	0.0	0.0	0.000	A
D	2015	504	135	2326	0.866	2301	1601	93.1	21.5	92.959	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	343	86	1646	1241	0.277	345	227	0.8	0.4	4.024	A
B	1267	317	149	1989	0.637	1274	1842	3.4	1.8	5.074	A
C	0	0	1423	738	0.000	0	0	0.0	0.0	0.000	A
D	1687	422	110	2342	0.720	1763	1312	21.5	2.6	7.033	A

Phase 5 2027 No Construction, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	561.56	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	561.56	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Phase 5 2027 No Construction	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	568	100.000
B		ONE HOUR	✓	2088	100.000
C		ONE HOUR	✓	1	100.000
D		ONE HOUR	✓	2783	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	326	0	242
	B	162	20	0	1906
	C	0	0	0	1
	D	205	2574	0	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	7	0	11
	B	7	14	0	9
	C	0	0	0	0
	D	13	7	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.69	12.95	2.2	B	521	782
B	1.22	428.37	229.3	F	1916	2874
C	0.00	0.00	0.0	A	0	0
D	1.34	776.14	513.1	F	2554	3831

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	428	107	1924	1036	0.413	425	272	0.0	0.7	5.861	A
B	1572	393	184	1931	0.814	1555	2165	0.0	4.1	9.216	A
C	0	0	1739	568	0.000	0	0	0.0	0.0	0.000	A
D	2095	524	136	2301	0.910	2061	1604	0.0	8.6	13.475	B

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	511	128	2118	912	0.560	508	308	0.7	1.2	8.875	A
B	1877	469	220	1909	0.983	1822	2407	4.1	18.0	30.268	D
C	0	0	2041	417	0.000	0	0	0.0	0.0	0.000	A
D	2502	625	159	2286	1.094	2268	1883	8.6	67.1	68.016	F

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	625	156	2132	903	0.693	622	314	1.2	2.2	12.635	B
B	2299	575	268	1879	1.224	1875	2486	18.0	123.9	143.124	F
C	0	0	2143	366	0.000	0	0	0.0	0.0	0.000	A
D	3064	766	163	2283	1.342	2282	1980	67.1	262.6	264.104	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	625	156	2132	903	0.693	625	314	2.2	2.2	12.948	B
B	2299	575	270	1878	1.224	1877	2488	123.9	229.3	341.541	F
C	0	0	2147	364	0.000	0	0	0.0	0.0	0.000	A
D	3064	766	164	2283	1.342	2283	1983	262.6	458.0	571.091	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	511	128	2131	903	0.565	514	315	2.2	1.3	9.331	A
B	1877	469	222	1907	0.984	1899	2423	229.3	223.8	428.367	F
C	0	0	2121	377	0.000	0	0	0.0	0.0	0.000	A
D	2502	625	166	2281	1.097	2281	1956	458.0	513.1	768.829	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	428	107	2126	907	0.472	429	317	1.3	0.9	7.569	A
B	1572	393	186	1930	0.815	1921	2370	223.8	136.5	338.479	F
C	0	0	2107	385	0.000	0	0	0.0	0.0	0.000	A
D	2095	524	167	2280	0.919	2276	1940	513.1	468.0	776.137	F

Phase 5 2027 With Construction, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	655.78	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	655.78	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Phase 5 2027 With Construction	AM	ONE HOUR	07:15	08:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	574	100.000
B		ONE HOUR	✓	2090	100.000
C		ONE HOUR	✓	1	100.000
D		ONE HOUR	✓	2879	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	326	0	248
	B	162	20	0	1908
	C	0	0	0	1
	D	205	2670	0	4

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	7	0	15
	B	7	14	0	9
	C	0	0	0	0
	D	13	7	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.71	14.22	2.4	B	527	790
B	1.23	445.98	236.4	F	1918	2877
C	0.00	0.00	0.0	A	0	0
D	1.39	941.70	609.3	F	2642	3963

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	432	108	1985	982	0.440	429	272	0.0	0.8	6.476	A
B	1573	393	188	1924	0.818	1557	2225	0.0	4.2	9.402	A
C	0	0	1745	561	0.000	0	0	0.0	0.0	0.000	A
D	2167	542	136	2302	0.942	2121	1609	0.0	11.7	16.914	C

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	516	129	2132	889	0.580	514	303	0.8	1.4	9.535	A
B	1879	470	225	1900	0.989	1819	2420	4.2	19.1	31.690	D
C	0	0	2044	412	0.000	0	0	0.0	0.0	0.000	A
D	2588	647	158	2286	1.132	2276	1886	11.7	89.7	87.504	F

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	632	158	2139	884	0.715	628	307	1.4	2.4	13.804	B
B	2301	575	274	1869	1.231	1866	2492	19.1	128.0	148.717	F
C	0	0	2140	363	0.000	0	0	0.0	0.0	0.000	A
D	3170	792	162	2284	1.388	2283	1978	89.7	311.3	319.781	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	632	158	2139	884	0.715	632	307	2.4	2.4	14.216	B
B	2301	575	276	1868	1.232	1867	2494	128.0	236.4	353.935	F
C	0	0	2143	361	0.000	0	0	0.0	0.0	0.000	A
D	3170	792	163	2284	1.388	2284	1981	311.3	532.8	668.161	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	516	129	2138	885	0.583	520	309	2.4	1.4	9.971	A
B	1879	470	228	1899	0.990	1891	2430	236.4	233.5	445.984	F
C	0	0	2119	375	0.000	0	0	0.0	0.0	0.000	A
D	2588	647	165	2282	1.134	2282	1954	532.8	609.3	903.463	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	432	108	2133	888	0.487	434	311	1.4	1.0	7.965	A
B	1573	393	191	1923	0.818	1914	2377	233.5	148.2	359.604	F
C	0	0	2105	382	0.000	0	0	0.0	0.0	0.000	A
D	2167	542	167	2281	0.950	2277	1938	609.3	581.9	941.701	F

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 2 PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:22:33

»2022 Base Year , PM
»Phase 5 2027 No Construction , PM
»Phase 5 2027 With Construction , PM

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Arm A	D1	0.9	6.41	0.46	A
Arm B		87.6	133.81	1.08	F
Arm C		0.0	0.00	0.00	A
Arm D		63.3	86.68	1.04	F
	Phase 5 2027 No Construction				
Arm A	D2	1.4	8.38	0.58	A
Arm B		467.2	827.27	1.38	F
Arm C		0.0	0.00	0.00	A
Arm D		418.0	635.79	1.29	F
	Phase 5 2027 With Construction				
Arm A	D3	2.0	10.87	0.67	B
Arm B		542.4	998.53	1.43	F
Arm C		0.0	0.00	0.00	A
Arm D		438.4	667.88	1.31	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junciton2
Location	Clonshagh
Site number	2
Date	05/07/2016
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓
D2	Phase 5 2027 No Construction	PM	ONE HOUR	16:00	17:30	15	✓
D3	Phase 5 2027 With Construction	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	98.77	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	98.77	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Clonshaugh Road		
B	R139 East		
C	Access Road		
D	R139 East		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	8.00	8.10	30.0	38.0	66.0	35.0		
B	5.30	8.80	16.4	23.0	66.0	33.0		
C	4.20	5.90	9.0	14.0	66.0	53.0		
D	6.70	9.20	18.0	65.0	66.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.651	2468
B	0.610	2227
C	0.456	1433
D	0.668	2570

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	439	100.000
B		ONE HOUR	✓	1898	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2171	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	218	0	221
	B	244	6	0	1648
	C	0	0	0	0
	D	287	1884	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	4	0	10
	B	2	0	0	7
	C	0	0	0	0
	D	5	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.46	6.41	0.9	A	403	604
B	1.08	133.81	87.6	F	1742	2612
C	0.00	0.00	0.0	A	0	0
D	1.04	86.68	63.3	F	1992	2988

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	331	83	1415	1411	0.234	329	397	0.0	0.3	3.326	A
B	1429	357	166	1990	0.718	1419	1579	0.0	2.5	6.204	A
C	0	0	1585	662	0.000	0	0	0.0	0.0	0.000	A
D	1634	409	187	2346	0.697	1625	1398	0.0	2.3	4.937	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	395	99	1690	1237	0.319	394	474	0.3	0.5	4.268	A
B	1706	427	198	1969	0.866	1693	1885	2.5	5.9	12.432	B
C	0	0	1891	513	0.000	0	0	0.0	0.0	0.000	A
D	1952	488	223	2322	0.840	1941	1668	2.3	5.0	9.186	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	483	121	1965	1062	0.455	482	545	0.5	0.8	6.187	A
B	2090	522	243	1941	1.076	1916	2205	5.9	49.3	60.876	F
C	0	0	2159	382	0.000	0	0	0.0	0.0	0.000	A
D	2390	598	252	2303	1.038	2258	1906	5.0	38.1	42.803	E

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	483	121	1993	1045	0.463	483	552	0.8	0.9	6.405	A
B	2090	522	243	1941	1.077	1937	2233	49.3	87.6	133.809	F
C	0	0	2180	372	0.000	0	0	0.0	0.0	0.000	A
D	2390	598	255	2301	1.039	2289	1925	38.1	63.3	86.681	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	395	99	1897	1106	0.357	396	538	0.9	0.6	5.081	A
B	1706	427	199	1969	0.867	1946	2094	87.6	27.5	109.498	F
C	0	0	2146	389	0.000	0	0	0.0	0.0	0.000	A
D	1952	488	256	2300	0.848	2179	1889	63.3	6.5	47.347	E

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	331	83	1438	1396	0.237	331	415	0.6	0.3	3.385	A
B	1429	357	167	1989	0.718	1529	1602	27.5	2.6	9.614	A
C	0	0	1695	608	0.000	0	0	0.0	0.0	0.000	A
D	1634	409	201	2338	0.700	1651	1494	6.5	2.4	5.374	A

Phase 5 2027 No Construction , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	655.36	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	655.36	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	Phase 5 2027 No Construction	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	543	100.000
B		ONE HOUR	✓	2359	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2687	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	269	0	274
	B	301	7	0	2051
	C	0	0	0	0
	D	357	2330	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	11
	B	2	0	0	8
	C	0	0	0	0
	D	6	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.58	8.38	1.4	A	498	747
B	1.38	827.27	467.2	F	2165	3247
C	0.00	0.00	0.0	A	0	0
D	1.29	635.79	418.0	F	2466	3698

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	409	102	1736	1186	0.345	407	488	0.0	0.5	4.610	A
B	1776	444	205	1948	0.912	1742	1938	0.0	8.5	15.575	C
C	0	0	1947	477	0.000	0	0	0.0	0.0	0.000	A
D	2023	506	227	2297	0.881	1996	1720	0.0	6.6	11.138	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	122	1958	1045	0.467	487	542	0.5	0.9	6.432	A
B	2121	530	246	1922	1.103	1906	2199	8.5	62.1	75.520	F
C	0	0	2152	376	0.000	0	0	0.0	0.0	0.000	A
D	2416	604	249	2283	1.058	2252	1903	6.6	47.6	51.790	F

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	598	149	1986	1027	0.582	596	544	0.9	1.4	8.302	A
B	2597	649	301	1887	1.376	1887	2281	62.1	239.6	292.484	F
C	0	0	2188	358	0.000	0	0	0.0	0.0	0.000	A
D	2958	740	246	2285	1.295	2284	1941	47.6	216.1	212.475	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	598	149	1987	1027	0.582	598	544	1.4	1.4	8.384	A
B	2597	649	302	1887	1.377	1887	2283	239.6	417.3	625.301	F
C	0	0	2188	358	0.000	0	0	0.0	0.0	0.000	A
D	2958	740	246	2285	1.295	2285	1942	216.1	384.5	476.425	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	122	1984	1029	0.475	490	548	1.4	0.9	6.705	A
B	2121	530	247	1921	1.104	1921	2227	417.3	467.2	826.401	F
C	0	0	2168	368	0.000	0	0	0.0	0.0	0.000	A
D	2416	604	251	2282	1.058	2282	1918	384.5	418.0	635.791	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	409	102	1978	1032	0.396	410	550	0.9	0.7	5.790	A
B	1776	444	207	1947	0.912	1943	2181	467.2	425.5	827.274	F
C	0	0	2149	378	0.000	0	0	0.0	0.0	0.000	A
D	2023	506	254	2280	0.887	2275	1896	418.0	355.0	611.797	F

Phase 5 2027 With Construction , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	734.05	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	734.05	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	Phase 5 2027 With Construction	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	615	100.000
B		ONE HOUR	✓	2384	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2695	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	269	0	346
	B	301	7	0	2076
	C	0	0	0	0
	D	357	2338	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	13
	B	2	0	0	8
	C	0	0	0	0
	D	6	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.67	10.87	2.0	B	564	847
B	1.43	998.53	542.4	F	2188	3281
C	0.00	0.00	0.0	A	0	0
D	1.31	667.88	438.4	F	2473	3709

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	463	116	1740	1157	0.400	460	486	0.0	0.7	5.149	A
B	1795	449	259	1911	0.939	1751	1942	0.0	11.0	19.063	C
C	0	0	2010	443	0.000	0	0	0.0	0.0	0.000	A
D	2029	507	226	2279	0.890	2000	1784	0.0	7.2	11.897	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	553	138	1951	1024	0.540	551	533	0.7	1.2	7.575	A
B	2143	536	310	1878	1.141	1869	2192	11.0	79.6	95.809	F
C	0	0	2179	359	0.000	0	0	0.0	0.0	0.000	A
D	2423	606	241	2269	1.068	2243	1937	7.2	52.2	56.073	F

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	677	169	1976	1008	0.672	674	532	1.2	2.0	10.660	B
B	2625	656	379	1834	1.432	1833	2271	79.6	277.5	355.049	F
C	0	0	2212	341	0.000	0	0	0.0	0.0	0.000	A
D	2967	742	237	2272	1.306	2272	1976	52.2	226.1	225.092	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	677	169	1977	1008	0.672	677	532	2.0	2.0	10.868	B
B	2625	656	381	1832	1.432	1832	2273	277.5	475.6	735.017	F
C	0	0	2213	341	0.000	0	0	0.0	0.0	0.000	A
D	2967	742	237	2272	1.306	2272	1976	226.1	399.8	499.085	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	553	138	1974	1010	0.548	556	537	2.0	1.2	7.986	A
B	2143	536	313	1876	1.142	1876	2217	475.6	542.4	978.127	F
C	0	0	2189	354	0.000	0	0	0.0	0.0	0.000	A
D	2423	606	242	2269	1.068	2269	1947	399.8	438.4	667.878	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	463	116	1967	1014	0.457	465	540	1.2	0.9	6.571	A
B	1795	449	261	1909	0.940	1906	2170	542.4	514.7	998.534	F
C	0	0	2167	366	0.000	0	0	0.0	0.0	0.000	A
D	2029	507	246	2266	0.895	2261	1921	438.4	380.3	651.833	F

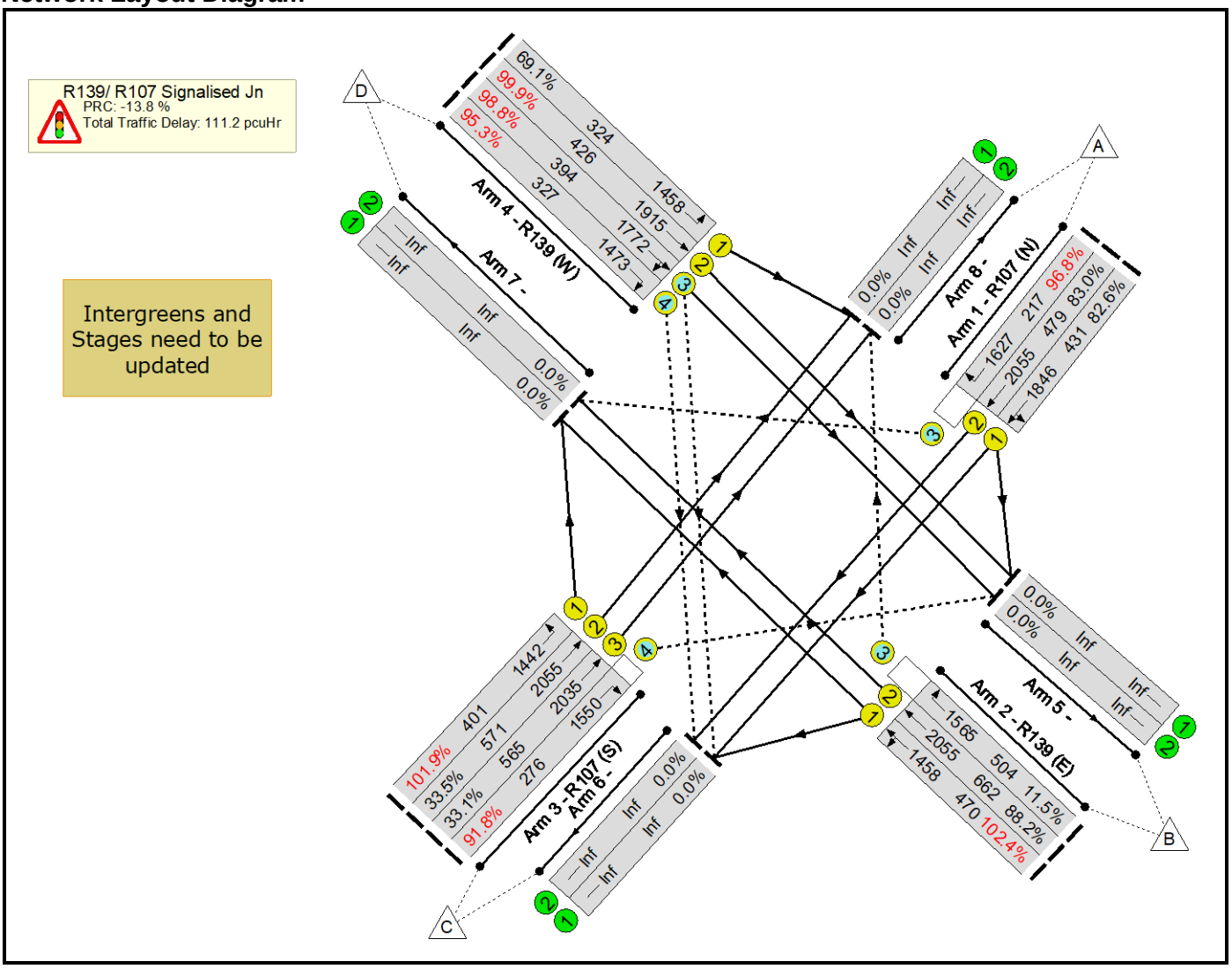
Basic Results Summary

User and Project Details

Project:	**Greater Dublin Drainage Project Addendum**
Title:	
Location:	
Client:	Irish Water
Site Ref(s):	R139 Road / R107 Malahide Road signalised crossroads
Additional detail:	
File name:	7556 Junction 5.lsg3x
Author:	Gabriela Iha
Company:	TOBIN
Address:	Fairgreen House, Fairgreen Rd, Galway

Scenario 1: 'Existing AM' (FG1: 'Existing AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**102.4%**	**0**	**985**	**33**	**111.2**	**-**	**-**
R139/ R107 Signalised Jn	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**102.4%**	**0**	**985**	**33**	**111.2**	**-**	**-**
1/1	R107 (N) Left Ahead	U	A		1	20	-	356	1846	431	82.6%	-	-	-	5.5	55.5	10.7
1/2	R107 (N) Ahead	U	B		1	20	-	398	2055	479	83.0%	-	-	-	5.9	53.7	11.7
1/3	R107 (N) Right	O	C		1	11	-	210	1627	217	96.8%	0	181	29	8.0	136.8	10.9
2/1	R139 (E) Left Ahead	U	D		1	28	-	481	1458	470	102.4%	-	-	-	18.6	138.8	26.4
2/2	R139 (E) Ahead	U	E		1	28	-	584	2055	662	88.2%	-	-	-	8.1	50.0	17.2
2/3	R139 (E) Right	O	F		1	28	-	58	1565	504	11.5%	0	57	1	0.4	25.5	1.1
3/1	R107 (S) Left	U	G		1	24	-	408	1442	401	101.9%	-	-	-	16.2	142.5	22.5
3/2	R107 (S) Ahead	U	H		1	24	-	191	2055	571	33.5%	-	-	-	1.6	30.6	4.0
3/3	R107 (S) Ahead	U	H		1	24	-	187	2035	565	33.1%	-	-	-	1.6	30.6	3.9
3/4	R107 (S) Right	O	I		1	15	-	253	1550	276	91.8%	0	250	3	6.7	94.9	10.3
4/1	R139 (W) Left	U	J		1	19	-	224	1458	324	69.1%	-	-	-	3.1	49.8	6.2
4/2	R139 (W) Ahead	U	K		1	19	-	425	1915	426	99.9%	-	-	-	14.3	121.1	20.7
4/3	R139 (W) Ahead Right	O	K		1	19	-	389	1772	394	98.8%	0	185	0	12.5	115.8	18.4
4/4	R139 (W) Right	O	L		1	19	-	312	1473	327	95.3%	0	312	0	8.8	101.4	13.4

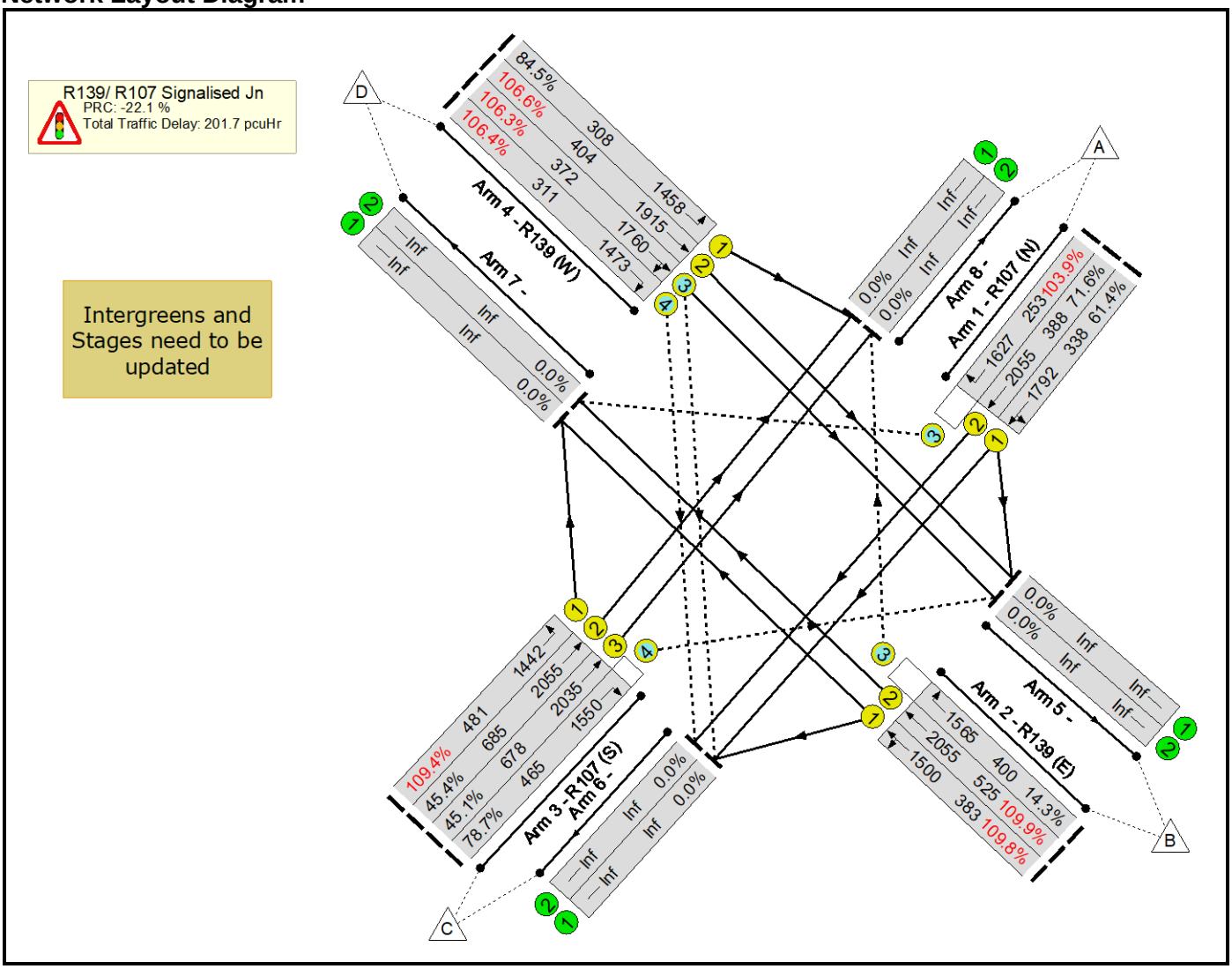
C1 PRC for Signalled Lanes (%): -13.8 Total Delay for Signalled Lanes (pcuHr): 111.22 Cycle Time (s): 90

PRC Over All Lanes (%): -13.8 Total Delay Over All Lanes(pcuHr): 111.22

Basic Results Summary

Scenario 2: 'Existing PM' (FG2: 'Existing PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**109.9%**	**0**	**1132**	**41**	**201.7**	**-**	**-**
R139/ R107 Signalised Jn	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**109.9%**	**0**	**1132**	**41**	**201.7**	**-**	**-**
1/1	R107 (N) Left Ahead	U	A		1	16	-	208	1792	338	61.4%	-	-	-	2.7	47.1	5.5
1/2	R107 (N) Ahead	U	B		1	16	-	278	2055	388	71.6%	-	-	-	3.9	50.2	7.7
1/3	R107 (N) Right	O	C		1	13	-	263	1627	253	103.9%	0	217	36	14.2	194.9	17.8
2/1	R139 (E) Left Ahead	U	D		1	22	-	421	1500	383	109.8%	-	-	-	28.5	243.3	34.8
2/2	R139 (E) Ahead	U	E		1	22	-	577	2055	525	109.9%	-	-	-	37.6	234.8	46.3
2/3	R139 (E) Right	O	F		1	22	-	57	1565	400	14.3%	0	56	1	0.5	31.2	1.2
3/1	R107 (S) Left	U	G		1	29	-	526	1442	481	109.4%	-	-	-	33.9	231.8	41.7
3/2	R107 (S) Ahead	U	H		1	29	-	311	2055	685	45.4%	-	-	-	2.5	28.4	6.5
3/3	R107 (S) Ahead	U	H		1	29	-	306	2035	678	45.1%	-	-	-	2.4	28.4	6.4
3/4	R107 (S) Right	O	I		1	26	-	366	1550	465	78.7%	0	362	4	4.7	46.4	10.1
4/1	R139 (W) Left	U	J		1	18	-	260	1458	308	84.5%	-	-	-	4.9	68.2	8.7
4/2	R139 (W) Ahead	U	K		1	18	-	431	1915	404	106.6%	-	-	-	24.3	202.8	30.5
4/3	R139 (W) Ahead Right	O	K		1	18	-	395	1760	372	106.3%	0	186	0	22.2	202.1	27.9
4/4	R139 (W) Right	O	L		1	18	-	331	1473	311	106.4%	0	311	0	19.4	211.1	24.2

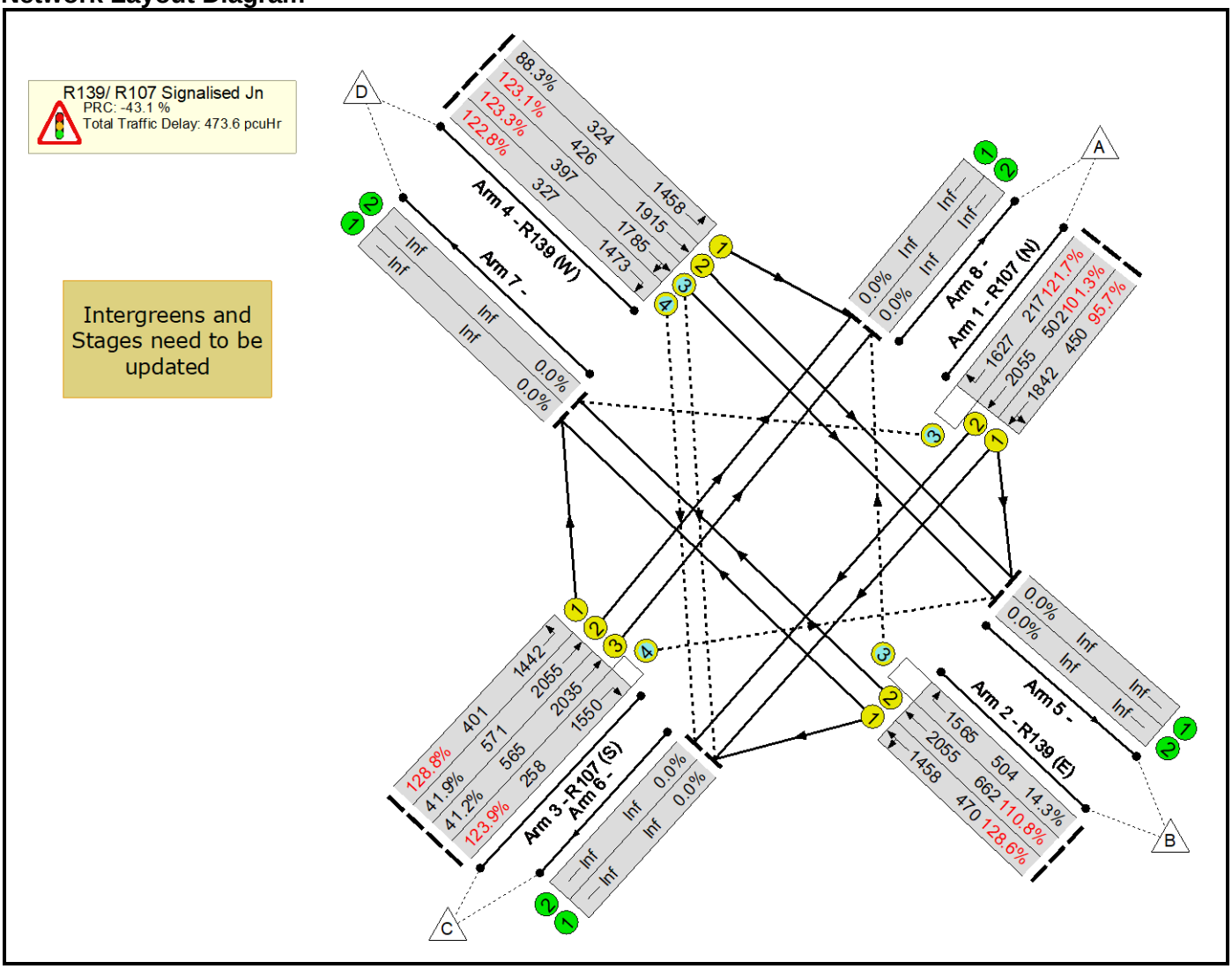
C1 PRC for Signalled Lanes (%): -22.1 Total Delay for Signalled Lanes (pcuHr): 201.69 Cycle Time (s): 90

PRC Over All Lanes (%): -22.1 Total Delay Over All Lanes(pcuHr): 201.69

Basic Results Summary

Scenario 3: '2027 AM No Construction' (FG3: '2027 AM No Construction', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**128.8%**	**0**	**997**	**55**	**473.6**	**-**	**-**
R139/ R107 Signalised Jn	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**128.8%**	**0**	**997**	**55**	**473.6**	**-**	**-**
1/1	R107 (N) Left Ahead	U	A		1	21	-	431	1842	450	95.7%	-	-	-	10.6	88.9	17.2
1/2	R107 (N) Ahead	U	B		1	21	-	509	2055	502	101.3%	-	-	-	18.2	128.8	26.0
1/3	R107 (N) Right	O	C		1	11	-	264	1627	217	121.7%	0	181	36	31.3	427.2	34.8
2/1	R139 (E) Left Ahead	U	D		1	28	-	604	1458	470	128.6%	-	-	-	80.4	479.0	89.4
2/2	R139 (E) Ahead	U	E		1	28	-	734	2055	662	110.8%	-	-	-	49.0	240.2	60.6
2/3	R139 (E) Right	O	F		1	28	-	72	1565	504	14.3%	0	70	2	0.5	25.8	1.3
3/1	R107 (S) Left	U	G		1	24	-	516	1442	401	128.8%	-	-	-	69.8	486.9	75.7
3/2	R107 (S) Ahead	U	H		1	24	-	239	2055	571	41.9%	-	-	-	2.1	32.0	5.2
3/3	R107 (S) Ahead	U	H		1	24	-	233	2035	565	41.2%	-	-	-	2.1	31.9	5.1
3/4	R107 (S) Right	O	I		1	14	-	320	1550	258	123.9%	0	241	17	39.3	442.1	42.8
4/1	R139 (W) Left	U	J		1	19	-	286	1458	324	88.3%	-	-	-	5.9	74.4	10.1
4/2	R139 (W) Ahead	U	K		1	19	-	524	1915	426	123.1%	-	-	-	60.7	417.0	67.3
4/3	R139 (W) Ahead Right	O	K		1	19	-	489	1785	397	123.3%	0	178	0	57.0	419.9	63.2
4/4	R139 (W) Right	O	L		1	19	-	402	1473	327	122.8%	0	327	0	46.7	418.0	51.8

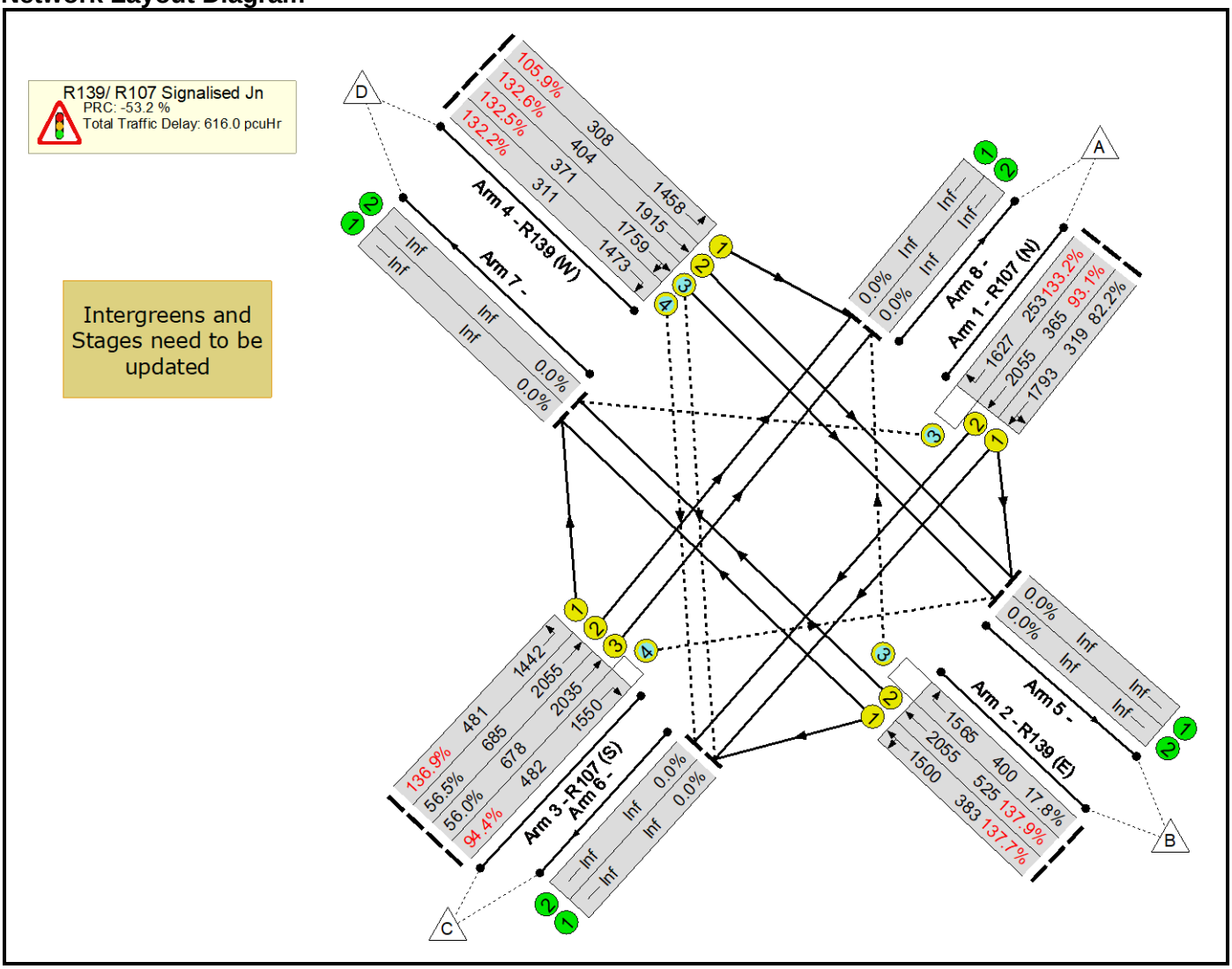
C1 PRC for Signalled Lanes (%): -43.1 Total Delay for Signalled Lanes (pcuHr): 473.61 Cycle Time (s): 90

PRC Over All Lanes (%): -43.1 Total Delay Over All Lanes(pcuHr): 473.61

Basic Results Summary

Scenario 4: '2027 PM No Construction' (FG4: '2027 PM No Construction', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**137.9%**	**0**	**1234**	**43**	**616.0**	**-**	**-**
R139/ R107 Signalised Jn	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**137.9%**	**0**	**1234**	**43**	**616.0**	**-**	**-**
1/1	R107 (N) Left Ahead	U	A		1	15	-	262	1793	319	82.2%	-	-	-	4.7	65.1	8.4
1/2	R107 (N) Ahead	U	B		1	15	-	340	2055	365	93.1%	-	-	-	8.3	87.8	13.2
1/3	R107 (N) Right	O	C		1	13	-	337	1627	253	133.2%	0	217	36	51.7	552.6	56.2
2/1	R139 (E) Left Ahead	U	D		1	22	-	528	1500	383	137.7%	-	-	-	85.5	582.7	92.8
2/2	R139 (E) Ahead	U	E		1	22	-	724	2055	525	137.9%	-	-	-	116.8	580.8	126.8
2/3	R139 (E) Right	O	F		1	22	-	71	1565	400	17.8%	0	69	2	0.6	31.6	1.5
3/1	R107 (S) Left	U	G		1	29	-	658	1442	481	136.9%	-	-	-	103.9	568.6	111.4
3/2	R107 (S) Ahead	U	H		1	29	-	387	2055	685	56.5%	-	-	-	3.3	30.7	8.5
3/3	R107 (S) Ahead	U	H		1	29	-	380	2035	678	56.0%	-	-	-	3.2	30.6	8.3
3/4	R107 (S) Right	O	I		1	27	-	455	1550	482	94.4%	0	450	5	9.7	76.5	16.8
4/1	R139 (W) Left	U	J		1	18	-	326	1458	308	105.9%	-	-	-	18.6	205.0	23.3
4/2	R139 (W) Ahead	U	K		1	18	-	536	1915	404	132.6%	-	-	-	78.1	524.5	84.5
4/3	R139 (W) Ahead Right	O	K		1	18	-	492	1759	371	132.5%	0	187	0	71.7	524.7	77.6
4/4	R139 (W) Right	O	L		1	18	-	411	1473	311	132.2%	0	311	0	59.8	524.0	64.8

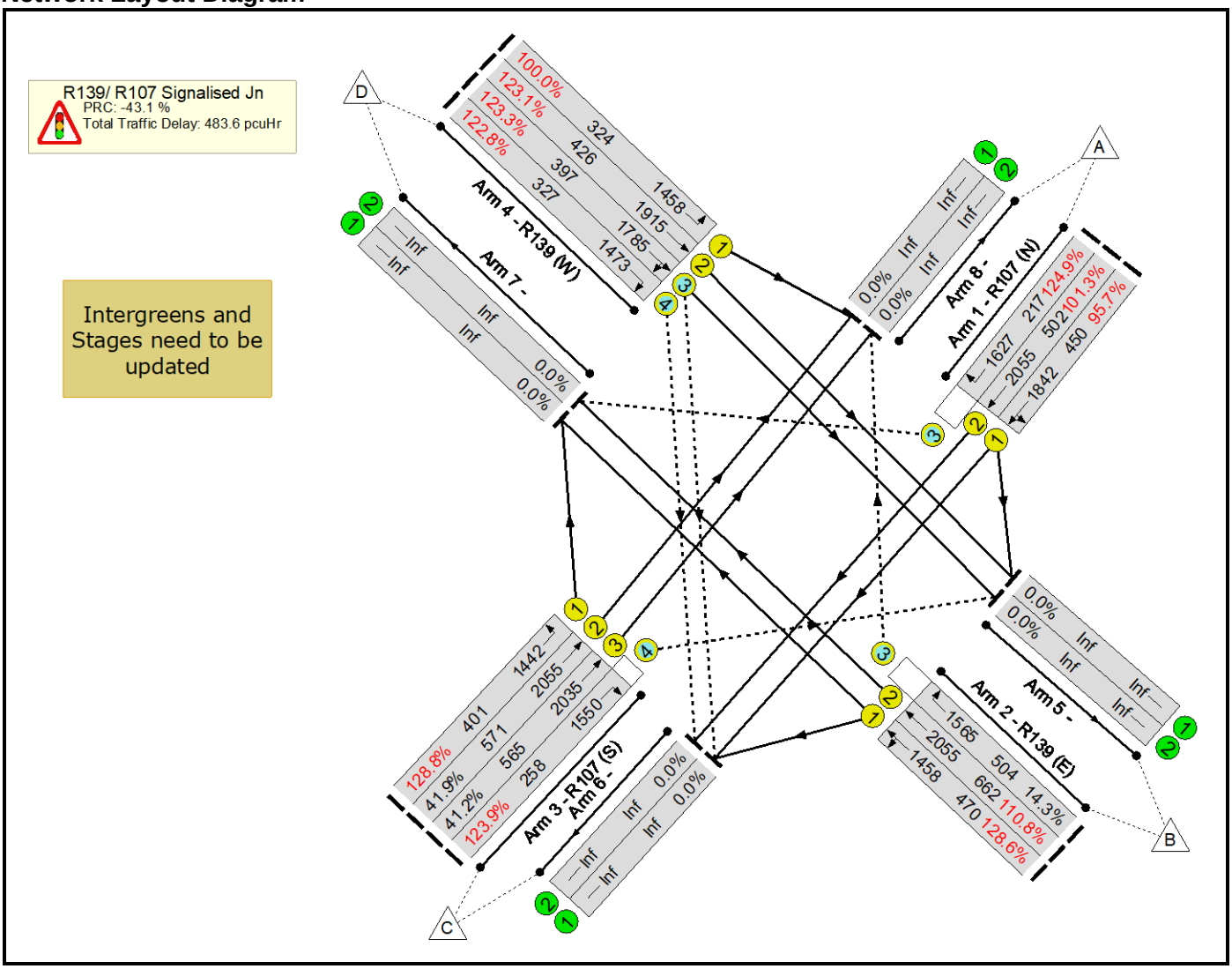
C1 PRC for Signalled Lanes (%): -53.2 Total Delay for Signalled Lanes (pcuHr): 615.97 Cycle Time (s): 90

PRC Over All Lanes (%): -53.2 Total Delay Over All Lanes(pcuHr): 615.97

Basic Results Summary

Scenario 5: '2027 AM with Construction (Phase 5)' (FG5: '2027 AM with Construction (Phase 5)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**128.8%**	**0**	**997**	**55**	**483.6**	**-**	**-**
R139/ R107 Signalised Jn	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**128.8%**	**0**	**997**	**55**	**483.6**	**-**	**-**
1/1	R107 (N) Left Ahead	U	A		1	21	-	431	1842	450	95.7%	-	-	-	10.6	88.9	17.2
1/2	R107 (N) Ahead	U	B		1	21	-	509	2055	502	101.3%	-	-	-	18.2	128.8	26.0
1/3	R107 (N) Right	O	C		1	11	-	271	1627	217	124.9%	0	181	36	35.0	465.4	38.6
2/1	R139 (E) Left Ahead	U	D		1	28	-	604	1458	470	128.6%	-	-	-	80.4	479.0	89.4
2/2	R139 (E) Ahead	U	E		1	28	-	734	2055	662	110.8%	-	-	-	49.0	240.2	60.6
2/3	R139 (E) Right	O	F		1	28	-	72	1565	504	14.3%	0	70	2	0.5	25.8	1.3
3/1	R107 (S) Left	U	G		1	24	-	516	1442	401	128.8%	-	-	-	69.8	486.9	75.7
3/2	R107 (S) Ahead	U	H		1	24	-	239	2055	571	41.9%	-	-	-	2.1	32.0	5.2
3/3	R107 (S) Ahead	U	H		1	24	-	233	2035	565	41.2%	-	-	-	2.1	31.9	5.1
3/4	R107 (S) Right	O	I		1	14	-	320	1550	258	123.9%	0	241	17	39.3	442.1	42.8
4/1	R139 (W) Left	U	J		1	19	-	324	1458	324	100.0%	-	-	-	12.2	135.0	17.0
4/2	R139 (W) Ahead	U	K		1	19	-	524	1915	426	123.1%	-	-	-	60.7	417.0	67.3
4/3	R139 (W) Ahead Right	O	K		1	19	-	489	1785	397	123.3%	0	178	0	57.0	419.9	63.2
4/4	R139 (W) Right	O	L		1	19	-	402	1473	327	122.8%	0	327	0	46.7	418.0	51.8

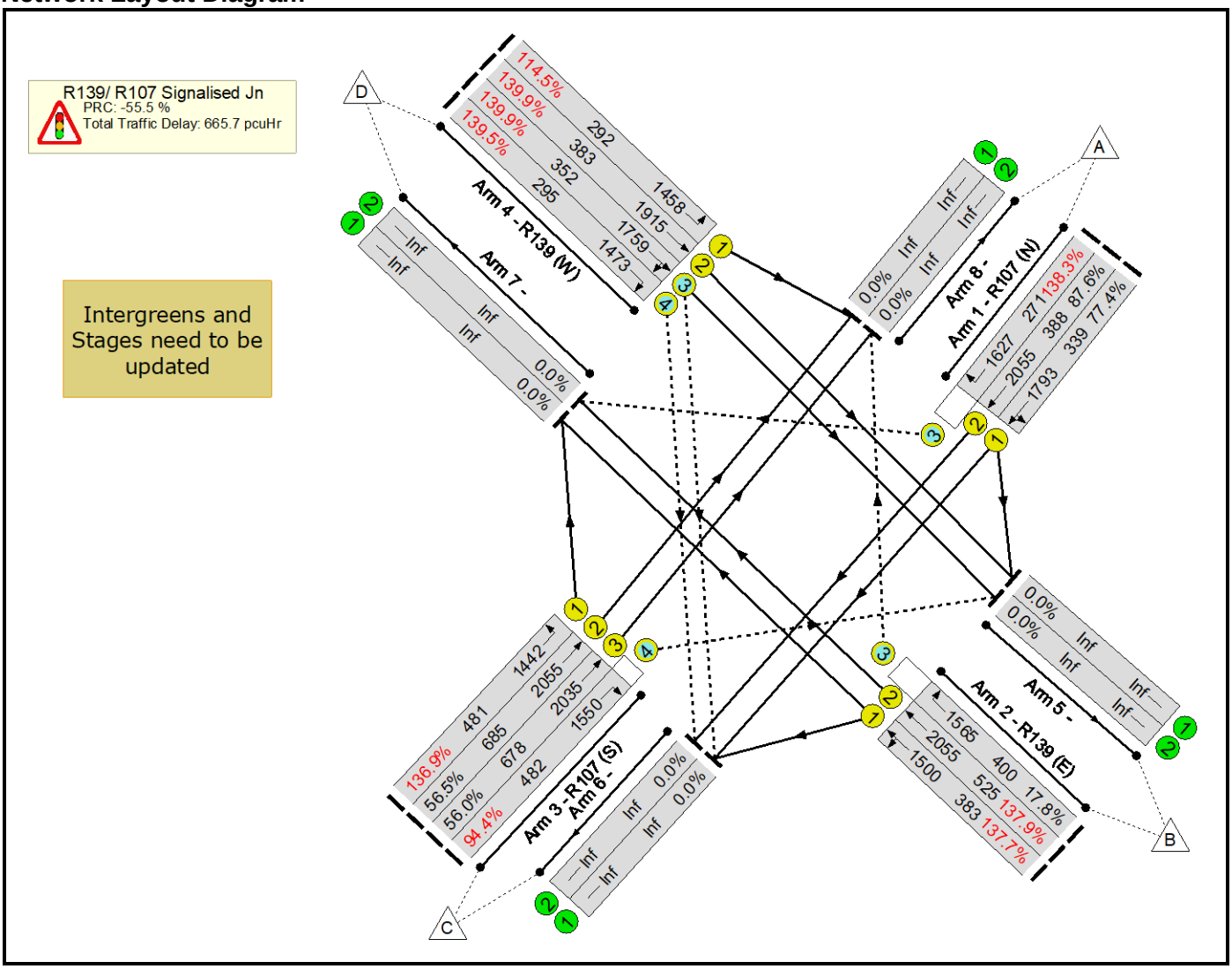
C1 PRC for Signalled Lanes (%): -43.1 Total Delay for Signalled Lanes (pcuHr): 483.56 Cycle Time (s): 90

PRC Over All Lanes (%): -43.1 Total Delay Over All Lanes(pcuHr): 483.56

Basic Results Summary

Scenario 6: '2027 PM with Construction (Phase 5)' (FG6: '2027 PM with Construction (Phase 5)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**139.9%**	**0**	**1226**	**43**	**665.7**	**-**	**-**
R139/ R107 Signalised Jn	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**139.9%**	**0**	**1226**	**43**	**665.7**	**-**	**-**
1/1	R107 (N) Left Ahead	U	A		1	16	-	262	1793	339	77.4%	-	-	-	4.2	57.2	7.8
1/2	R107 (N) Ahead	U	B		1	16	-	340	2055	388	87.6%	-	-	-	6.5	68.6	11.3
1/3	R107 (N) Right	O	C		1	14	-	375	1627	271	138.3%	0	235	36	62.9	603.9	67.9
2/1	R139 (E) Left Ahead	U	D		1	22	-	528	1500	383	137.7%	-	-	-	85.4	582.0	92.6
2/2	R139 (E) Ahead	U	E		1	22	-	724	2055	525	137.9%	-	-	-	116.7	580.0	126.6
2/3	R139 (E) Right	O	F		1	22	-	71	1565	400	17.8%	0	69	2	0.6	31.6	1.5
3/1	R107 (S) Left	U	G		1	29	-	658	1442	481	136.9%	-	-	-	103.9	568.6	111.4
3/2	R107 (S) Ahead	U	H		1	29	-	387	2055	685	56.5%	-	-	-	3.3	30.7	8.5
3/3	R107 (S) Ahead	U	H		1	29	-	380	2035	678	56.0%	-	-	-	3.2	30.6	8.3
3/4	R107 (S) Right	O	I		1	27	-	455	1550	482	94.4%	0	450	5	9.7	76.5	16.8
4/1	R139 (W) Left	U	J		1	17	-	334	1458	292	114.5%	-	-	-	29.5	318.4	34.0
4/2	R139 (W) Ahead	U	K		1	17	-	536	1915	383	139.9%	-	-	-	89.4	600.3	95.4
4/3	R139 (W) Ahead Right	O	K		1	17	-	492	1759	352	139.9%	0	177	0	82.0	600.4	87.6
4/4	R139 (W) Right	O	L		1	17	-	411	1473	295	139.5%	0	295	0	68.4	599.5	73.1

C1

PRC for Signalled Lanes (%): -55.5
PRC Over All Lanes (%): -55.5

Total Delay for Signalled Lanes (pcuHr): 665.70
Total Delay Over All Lanes(pcuHr): 665.70

Cycle Time (s): 90

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction 8 AM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:24:19

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	18.9	194.75	1.06	F
Stream C-AB		0.5	5.64	0.20	A
	2027 no Phase 5				
Stream B-AC	D2	98.7	1073.61	1.54	F
Stream C-AB		0.8	6.00	0.29	A
	2027 with Phase 5				
Stream B-AC	D3	107.2	1140.96	1.56	F
Stream C-AB		0.9	6.08	0.29	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	04/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2027 no Phase 5	AM	ONE HOUR	07:45	09:15	15
D3	2027 with Phase 5	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		53.17	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	53.17	F

Arms

Arms

Arm	Name	Description	Arm type
A	R106(S)		Major
B	R123		Minor
C	R106(N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.80			107.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.90	19	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	535	0.094	0.238	0.149	0.339
B-C	690	0.102	0.258	-	-
C-B	636	0.238	0.238	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	427	100.000
B		✓	315	100.000
C		✓	459	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	182	245
	B	282	0	33
	C	395	64	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	9
	B	11	0	17
	C	7	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	1.06	194.75	18.9	F
C-AB	0.20	5.64	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	237	380	0.624	231	1.5	23.271	C
C-AB	82	727	0.112	81	0.2	5.567	A
C-A	264			264			
A-B	137			137			
A-C	184			184			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	283	358	0.790	277	3.1	41.167	E
C-AB	109	755	0.144	109	0.3	5.570	A
C-A	304			304			
A-B	164			164			
A-C	220			220			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	347	328	1.058	310	12.3	114.498	F
C-AB	156	796	0.196	156	0.5	5.629	A
C-A	349			349			
A-B	200			200			
A-C	270			270			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	347	328	1.058	321	18.9	194.747	F
C-AB	157	796	0.197	157	0.5	5.644	A
C-A	349			349			
A-B	200			200			
A-C	270			270			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	283	358	0.791	337	5.5	138.166	F
C-AB	109	756	0.145	110	0.3	5.592	A
C-A	303			303			
A-B	164			164			
A-C	220			220			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	237	380	0.624	252	1.8	30.780	D
C-AB	82	728	0.113	82	0.2	5.591	A
C-A	264			264			
A-B	137			137			
A-C	184			184			

2027 no Phase 5, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		291.16	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	291.16	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 no Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	528	100.000
B		✓	390	100.000
C		✓	569	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	225	303
	B	349	0	41
	C	490	79	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	11
	B	13	0	20
	C	9	7	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	1.54	1073.61	98.7	F
C-AB	0.29	6.00	0.8	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	293	345	0.851	277	4.1	45.851	E
C-AB	116	755	0.154	115	0.3	5.620	A
C-A	312			312			
A-B	169			169			
A-C	228			228			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	350	318	1.104	305	15.3	143.110	F
C-AB	161	792	0.203	160	0.5	5.706	A
C-A	351			351			
A-B	202			202			
A-C	272			272			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	429	280	1.534	279	52.9	463.036	F
C-AB	242	845	0.287	241	0.8	5.972	A
C-A	384			384			
A-B	248			248			
A-C	334			334			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	429	280	1.535	279	90.3	880.471	F
C-AB	243	846	0.287	243	0.8	6.005	A
C-A	383			383			
A-B	248			248			
A-C	334			334			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	350	317	1.105	317	98.7	1073.610	F
C-AB	162	793	0.204	163	0.5	5.750	A
C-A	350			350			
A-B	202			202			
A-C	272			272			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	293	344	0.852	341	86.8	980.536	F
C-AB	117	756	0.155	118	0.3	5.662	A
C-A	311			311			
A-B	169			169			
A-C	228			228			

2027 with Phase 5, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		315.60	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	315.60	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 with Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	528	100.000
B		✓	402	100.000
C		✓	570	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	225	303
	B	349	0	53
	C	490	80	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	7	11
	B	13	0	17
	C	9	8	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	1.56	1140.96	107.2	F
C-AB	0.29	6.08	0.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	303	349	0.868	285	4.5	47.944	E
C-AB	118	752	0.157	117	0.3	5.669	A
C-A	311			311			
A-B	169			169			
A-C	228			228			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	361	321	1.125	311	17.1	153.901	F
C-AB	164	789	0.208	163	0.5	5.764	A
C-A	349			349			
A-B	202			202			
A-C	272			272			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	443	283	1.563	283	57.1	494.923	F
C-AB	247	843	0.293	246	0.8	6.050	A
C-A	381			381			
A-B	248			248			
A-C	334			334			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	443	283	1.564	283	97.0	931.872	F
C-AB	248	843	0.294	248	0.9	6.080	A
C-A	380			380			
A-B	248			248			
A-C	334			334			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	361	321	1.127	321	107.2	1140.964	F
C-AB	165	790	0.208	166	0.5	5.804	A
C-A	348			348			
A-B	202			202			
A-C	272			272			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	303	348	0.869	345	96.7	1064.815	F
C-AB	119	753	0.158	120	0.4	5.708	A
C-A	310			310			
A-B	169			169			
A-C	228			228			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction 8 PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:24:56

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	1.6	27.78	0.63	D
Stream C-AB		0.4	5.91	0.17	A
	2027 no Phase 5				
Stream B-AC	D2	6.6	96.62	0.91	F
Stream C-AB		0.7	6.24	0.24	A
	2027 with Phase 5				
Stream B-AC	D3	7.3	106.37	0.93	F
Stream C-AB		0.8	6.68	0.29	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	04/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	16:45	18:15	15
D2	2027 no Phase 5	PM	ONE HOUR	16:45	18:15	15
D3	2027 with Phase 5	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		4.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.95	A

Arms

Arms

Arm	Name	Description	Arm type
A	R106(S)		Major
B	R123		Minor
C	R106(N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.80			107.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.90	19	14

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	535	0.094	0.238	0.149	0.339
B-C	690	0.102	0.258	-	-
C-B	636	0.238	0.238	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	619	100.000
B		✓	195	100.000
C		✓	391	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	207	412
	B	150	0	45
	C	337	54	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	4
	B	4	0	0
	C	4	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.63	27.78	1.6	D
C-AB	0.17	5.91	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	147	409	0.359	145	0.5	13.521	B
C-AB	64	689	0.093	64	0.2	5.752	A
C-A	230			230			
A-B	156			156			
A-C	310			310			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	381	0.460	174	0.8	17.271	C
C-AB	85	706	0.121	85	0.2	5.800	A
C-A	266			266			
A-B	186			186			
A-C	370			370			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	215	344	0.625	212	1.5	26.726	D
C-AB	121	731	0.166	121	0.4	5.899	A
C-A	309			309			
A-B	228			228			
A-C	454			454			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	215	343	0.625	214	1.6	27.783	D
C-AB	122	732	0.166	122	0.4	5.914	A
C-A	309			309			
A-B	228			228			
A-C	454			454			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	175	381	0.460	178	0.9	17.965	C
C-AB	86	706	0.121	86	0.2	5.823	A
C-A	266			266			
A-B	186			186			
A-C	370			370			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	147	409	0.359	148	0.6	13.882	B
C-AB	65	690	0.094	65	0.2	5.774	A
C-A	230			230			
A-B	156			156			
A-C	310			310			

2027 no Phase 5, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		16.10	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	16.10	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 no Phase 5	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	767	100.000
B		✓	240	100.000
C		✓	483	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	257	510
	B	185	0	55
	C	416	67	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	4
	B	5	0	0
	C	5	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.91	96.62	6.6	F
C-AB	0.24	6.24	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	372	0.486	177	0.9	18.184	C
C-AB	90	708	0.128	89	0.3	5.820	A
C-A	273			273			
A-B	193			193			
A-C	384			384			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	216	338	0.639	213	1.6	28.187	D
C-AB	124	731	0.170	124	0.4	5.935	A
C-A	310			310			
A-B	231			231			
A-C	458			458			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	264	290	0.911	249	5.3	71.059	F
C-AB	185	765	0.242	184	0.7	6.207	A
C-A	347			347			
A-B	283			283			
A-C	562			562			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	264	290	0.911	259	6.6	96.617	F
C-AB	186	765	0.243	186	0.7	6.237	A
C-A	346			346			
A-B	283			283			
A-C	562			562			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	216	337	0.640	234	1.9	39.634	E
C-AB	125	731	0.170	126	0.4	5.978	A
C-A	310			310			
A-B	231			231			
A-C	458			458			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	371	0.487	185	1.0	19.643	C
C-AB	91	708	0.129	92	0.3	5.859	A
C-A	273			273			
A-B	193			193			
A-C	384			384			

2027 with Phase 5, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		17.77	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	17.77	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 with Phase 5	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	767	100.000
B		✓	241	100.000
C		✓	495	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	257	510
	B	185	0	56
	C	416	79	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	4
	B	5	0	1
	C	5	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.93	106.37	7.3	F
C-AB	0.29	6.68	0.8	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	369	0.492	178	0.9	18.522	C
C-AB	107	704	0.152	106	0.3	6.014	A
C-A	266			266			
A-B	193			193			
A-C	384			384			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	217	334	0.649	214	1.7	29.145	D
C-AB	147	727	0.202	146	0.5	6.204	A
C-A	298			298			
A-B	231			231			
A-C	458			458			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	265	286	0.929	249	5.8	76.285	F
C-AB	220	762	0.288	218	0.8	6.639	A
C-A	325			325			
A-B	283			283			
A-C	562			562			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	265	285	0.930	259	7.3	106.374	F
C-AB	220	763	0.289	220	0.8	6.676	A
C-A	325			325			
A-B	283			283			
A-C	562			562			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	217	334	0.649	238	2.0	43.576	E
C-AB	148	728	0.203	149	0.5	6.256	A
C-A	297			297			
A-B	231			231			
A-C	458			458			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	181	368	0.493	186	1.0	20.122	C
C-AB	108	705	0.153	109	0.3	6.062	A
C-A	265			265			
A-B	193			193			
A-C	384			384			

Junctions 10

PICADY 10 - Priority Intersection Module

Version: 10.0.3.1598

For sales and distribution information, program advice and maintenance, contact TRL Software:
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Filename: Import of Junction 9 AM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:25:39

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.1	12.71	0.12	B
Stream C-AB		0.4	5.35	0.16	A
	2027 Phase 5 No Construction				
Stream B-AC	D2	0.2	16.19	0.17	C
Stream C-AB		0.7	5.45	0.23	A
	2027 Phase 5 With Construction				
Stream B-AC	D3	0.2	16.47	0.17	C
Stream C-AB		0.9	5.81	0.28	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	04/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2027 Phase 5 No Construction	AM	ONE HOUR	07:45	09:15	15
D3	2027 Phase 5 With Construction	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.06	A

Arms

Arms

Arm	Name	Description	Arm type
A	R106(N)		Major
B	Golf Link Road		Minor
C	R106(S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.60			150.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.10	21	44

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	511	0.091	0.229	0.144	0.327
B-C	658	0.098	0.248	-	-
C-B	661	0.249	0.249	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	468	100.000
B		✓	34	100.000
C		✓	479	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	20	448
	B	13	0	21
	C	431	48	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	9	6
	B	41	0	10
	C	9	10	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.12	12.71	0.1	B
C-AB	0.16	5.35	0.4	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	373	0.069	25	0.1	10.338	B
C-AB	64	739	0.087	64	0.2	5.331	A
C-A	296			296			
A-B	15			15			
A-C	337			337			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	352	0.087	30	0.1	11.211	B
C-AB	87	770	0.113	87	0.2	5.278	A
C-A	343			343			
A-B	18			18			
A-C	403			403			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	321	0.117	37	0.1	12.694	B
C-AB	127	815	0.156	127	0.4	5.242	A
C-A	400			400			
A-B	22			22			
A-C	493			493			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	37	321	0.117	37	0.1	12.710	B
C-AB	128	815	0.157	128	0.4	5.248	A
C-A	400			400			
A-B	22			22			
A-C	493			493			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	351	0.087	31	0.1	11.229	B
C-AB	88	770	0.114	88	0.3	5.284	A
C-A	343			343			
A-B	18			18			
A-C	403			403			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	373	0.069	26	0.1	10.366	B
C-AB	65	739	0.088	65	0.2	5.345	A
C-A	296			296			
A-B	15			15			
A-C	337			337			

2027 Phase 5 No Construction, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.35	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 Phase 5 No Construction	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	580	100.000
B		✓	42	100.000
C		✓	592	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	25	555
	B	16	0	26
	C	533	59	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	10	7
	B	46	0	12
	C	11	12	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.17	16.19	0.2	C
C-AB	0.23	5.45	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	336	0.094	31	0.1	11.799	B
C-AB	93	767	0.121	92	0.3	5.334	A
C-A	353			353			
A-B	19			19			
A-C	418			418			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	308	0.122	38	0.1	13.288	B
C-AB	131	808	0.163	131	0.4	5.330	A
C-A	401			401			
A-B	22			22			
A-C	499			499			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	269	0.172	46	0.2	16.140	C
C-AB	203	867	0.234	202	0.7	5.430	A
C-A	449			449			
A-B	28			28			
A-C	611			611			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	269	0.172	46	0.2	16.187	C
C-AB	204	868	0.235	204	0.7	5.448	A
C-A	448			448			
A-B	28			28			
A-C	611			611			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	308	0.123	38	0.1	13.337	B
C-AB	132	809	0.163	133	0.4	5.348	A
C-A	400			400			
A-B	22			22			
A-C	499			499			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	336	0.094	32	0.1	11.850	B
C-AB	94	768	0.122	95	0.3	5.358	A
C-A	352			352			
A-B	19			19			
A-C	418			418			

2027 Phase 5 With Construction, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		1.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1.55	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 Phase 5 With Construction	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	581	100.000
B		✓	42	100.000
C		✓	605	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	25	556
	B	16	0	26
	C	533	72	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	10	7
	B	46	0	12
	C	11	11	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.17	16.47	0.2	C
C-AB	0.28	5.81	0.9	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	334	0.095	31	0.1	11.884	B
C-AB	113	770	0.147	112	0.3	5.469	A
C-A	342			342			
A-B	19			19			
A-C	419			419			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	306	0.124	38	0.1	13.427	B
C-AB	159	811	0.197	159	0.5	5.536	A
C-A	384			384			
A-B	22			22			
A-C	500			500			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	265	0.175	46	0.2	16.416	C
C-AB	246	869	0.283	245	0.9	5.786	A
C-A	420			420			
A-B	28			28			
A-C	612			612			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	46	265	0.175	46	0.2	16.473	C
C-AB	247	870	0.284	247	0.9	5.812	A
C-A	419			419			
A-B	28			28			
A-C	612			612			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	38	305	0.124	38	0.1	13.484	B
C-AB	160	812	0.197	162	0.5	5.567	A
C-A	384			384			
A-B	22			22			
A-C	500			500			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	333	0.095	32	0.1	11.938	B
C-AB	114	771	0.148	115	0.3	5.505	A
C-A	341			341			
A-B	19			19			
A-C	419			419			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction 9 PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:26:14

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.4	12.05	0.30	B
Stream C-AB		0.6	5.17	0.22	A
	2027 Phase 5 No construction				
Stream B-AC	D2	0.7	16.14	0.41	C
Stream C-AB		1.0	5.57	0.33	A
	2027 Phase 5 With construction				
Stream B-AC	D3	0.8	16.83	0.44	C
Stream C-AB		1.0	5.66	0.33	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	04/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	15:30	17:00	15
D2	2027 Phase 5 No construction	PM	ONE HOUR	15:30	17:00	15
D3	2027 Phase 5 With construction	PM	ONE HOUR	15:30	17:00	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.02	A

Arms

Arms

Arm	Name	Description	Arm type
A	R106(N)		Major
B	Golf Link Road		Minor
C	R106(S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.60			150.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.10	21	44

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	511	0.091	0.229	0.144	0.327
B-C	658	0.098	0.248	-	-
C-B	661	0.249	0.249	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	431	100.000
B		✓	114	100.000
C		✓	547	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	21	410
	B	35	0	79
	C	470	77	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	2
	B	0	0	4
	C	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.30	12.05	0.4	B
C-AB	0.22	5.17	0.6	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	480	0.179	85	0.2	9.098	A
C-AB	102	816	0.125	101	0.2	5.034	A
C-A	309			309			
A-B	16			16			
A-C	309			309			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	102	457	0.224	102	0.3	10.138	B
C-AB	138	851	0.162	138	0.4	5.052	A
C-A	354			354			
A-B	19			19			
A-C	369			369			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	126	424	0.296	125	0.4	12.007	B
C-AB	201	900	0.223	200	0.6	5.148	A
C-A	402			402			
A-B	23			23			
A-C	451			451			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	126	424	0.296	126	0.4	12.048	B
C-AB	201	900	0.223	201	0.6	5.166	A
C-A	401			401			
A-B	23			23			
A-C	451			451			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	102	457	0.224	103	0.3	10.188	B
C-AB	139	851	0.163	139	0.4	5.080	A
C-A	353			353			
A-B	19			19			
A-C	369			369			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	86	480	0.179	86	0.2	9.152	A
C-AB	103	817	0.126	103	0.3	5.059	A
C-A	309			309			
A-B	16			16			
A-C	309			309			

2027 Phase 5 No construction , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.67	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.67	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 Phase 5 No construction	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	533	100.000
B		✓	140	100.000
C		✓	677	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	26	507
	B	43	0	97
	C	582	95	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	4
	C	3	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.41	16.14	0.7	C
C-AB	0.33	5.57	1.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	451	0.234	104	0.3	10.355	B
C-AB	146	856	0.171	145	0.4	5.062	A
C-A	363			363			
A-B	20			20			
A-C	382			382			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	126	421	0.299	125	0.4	12.164	B
C-AB	205	901	0.228	204	0.6	5.176	A
C-A	404			404			
A-B	23			23			
A-C	456			456			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	154	377	0.409	153	0.7	15.983	C
C-AB	314	965	0.326	312	1.0	5.529	A
C-A	431			431			
A-B	29			29			
A-C	558			558			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	154	377	0.409	154	0.7	16.137	C
C-AB	315	966	0.326	315	1.0	5.565	A
C-A	430			430			
A-B	29			29			
A-C	558			558			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	126	421	0.299	127	0.4	12.298	B
C-AB	206	902	0.229	208	0.6	5.225	A
C-A	403			403			
A-B	23			23			
A-C	456			456			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	105	450	0.234	106	0.3	10.466	B
C-AB	148	857	0.172	148	0.4	5.105	A
C-A	362			362			
A-B	20			20			
A-C	382			382			

2027 Phase 5 With construction, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		2.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.92	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 Phase 5 With construction	PM	ONE HOUR	15:30	17:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	533	100.000
B		✓	153	100.000
C		✓	677	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	26	507
	B	43	0	110
	C	582	95	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	3
	B	0	0	5
	C	3	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.44	16.83	0.8	C
C-AB	0.33	5.66	1.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:30 - 15:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	115	454	0.254	114	0.3	10.542	B
C-AB	148	848	0.175	146	0.4	5.130	A
C-A	362			362			
A-B	20			20			
A-C	382			382			

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	138	425	0.324	137	0.5	12.478	B
C-AB	207	893	0.232	207	0.6	5.252	A
C-A	401			401			
A-B	23			23			
A-C	456			456			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	168	382	0.440	167	0.8	16.638	C
C-AB	318	959	0.332	317	1.0	5.625	A
C-A	427			427			
A-B	29			29			
A-C	558			558			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	168	382	0.441	168	0.8	16.827	C
C-AB	319	960	0.333	319	1.0	5.658	A
C-A	426			426			
A-B	29			29			
A-C	558			558			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	138	425	0.324	139	0.5	12.637	B
C-AB	209	895	0.233	210	0.6	5.294	A
C-A	400			400			
A-B	23			23			
A-C	456			456			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	115	454	0.254	116	0.3	10.670	B
C-AB	149	849	0.176	150	0.4	5.169	A
C-A	361			361			
A-B	20			20			
A-C	382			382			

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 10 AM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:26:57

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (min)	RFC	LOS
	2022 Base Year				
Arm A	D1	16.1	1.45	0.98	F
Arm B		33.9	2.44	1.10	F
Arm C		61.7	6.61	1.18	F
	2027 No Phase 5				
Arm A	D2	18.5	1.63	1.00	F
Arm B		37.9	2.70	1.11	F
Arm C		66.5	7.15	1.19	F
	2027 With Phase 5				
Arm A	D3	18.5	1.64	1.00	F
Arm B		39.6	2.81	1.11	F
Arm C		63.9	6.88	1.19	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junction 10 AM
Location	Dublin
Site number	
Date	06/07/2016
Version	
Status	On-going
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TRLLIMITED\mariarooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	min	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS 9	9.56						0.85	0.60	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	DIRECT	07:45	10:15	150	15	✓
D2	2027 No Phase 5	AM	DIRECT	07:45	10:15	150	15	✓
D3	2027 With Phase 5	AM	DIRECT	07:45	10:15	150	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout		A, B, C	3.28	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		3.28	F

Arms

Arms

Arm	Name	Description
A	R106 (S)	
B	Station Road	
C	R106 (N)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	3.00	3.00	4.00	9.8	17.90	14.30	0.0	
B	3.10	2.60	6.00	15.0	16.70	13.70	0.0	✓
C	3.80	3.80	4.70	10.0	14.50	10.30	2.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.636	894
B	0.552	1087
C	0.514	903

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	DIRECT	07:45	10:15	150	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	281	211
	B	195	0	82
	C	309	185	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	5	11
	B	6	0	6
	C	7	5	60

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.98	1.45	16.1	F	530	1325
B	1.10	2.44	33.9	F	662	1656
C	1.18	6.61	61.7	F	460	1151

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	131	750	0.498	370	576	0.0	1.0	0.156	A
B	512	128	159	934	0.549	508	342	0.0	1.2	0.139	A
C	353	88	357	666	0.530	349	309	0.0	1.1	0.187	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	479	120	142	743	0.644	476	666	1.0	1.7	0.222	B
B	613	153	204	908	0.675	609	413	1.2	2.0	0.199	B
C	380	95	429	629	0.603	378	384	1.1	1.5	0.237	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	170	726	0.754	543	798	1.7	2.8	0.320	C
B	740	185	233	891	0.831	731	480	2.0	4.3	0.356	C
C	460	115	515	586	0.786	453	449	1.5	3.3	0.431	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	209	701	0.875	603	895	2.8	5.5	0.553	D
B	784	196	259	876	0.895	775	554	4.3	6.7	0.537	D
C	671	168	545	570	1.177	559	488	3.3	31.3	2.162	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	203	705	0.981	664	935	5.5	12.2	1.030	F
B	943	236	285	861	1.096	846	583	6.7	31.1	1.587	F
C	640	160	595	544	1.176	543	535	31.3	55.6	5.042	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	694	173	203	705	0.984	678	933	12.2	16.1	1.447	F
B	855	214	291	857	0.997	844	590	31.1	33.9	2.438	F
C	567	142	594	545	1.041	543	541	55.6	61.7	6.610	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	613	153	208	702	0.872	643	905	16.1	8.6	1.094	F
B	674	168	276	866	0.778	793	575	33.9	4.1	1.189	F
C	496	124	558	563	0.881	554	510	61.7	47.2	5.801	F

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	218	696	0.788	566	770	8.6	4.1	0.510	D
B	566	142	243	885	0.640	576	542	4.1	1.8	0.199	B
C	402	101	405	642	0.627	583	413	47.2	1.9	2.046	F

09:45 - 10:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	96	122	756	0.509	397	548	4.1	1.1	0.173	B
B	487	122	170	927	0.526	490	348	1.8	1.1	0.138	A
C	321	80	345	673	0.477	325	315	1.9	0.9	0.175	B

10:00 - 10:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	356	89	117	758	0.469	356	511	1.1	0.9	0.150	A
B	447	112	153	937	0.477	448	321	1.1	0.9	0.123	A
C	313	78	315	688	0.454	313	285	0.9	0.8	0.160	A

2027 No Phase 5, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout		A, B, C	3.59	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		3.59	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2027 No Phase 5	AM	DIRECT	07:45	10:15	150	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	349	261
	B	242	0	101
	C	381	229	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	13
	B	7	0	7
	C	8	6	64

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.00	1.63	18.5	F	530	1325
B	1.11	2.70	37.9	F	662	1656
C	1.19	7.15	66.5	F	460	1151

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	131	739	0.506	370	576	0.0	1.0	0.161	A
B	512	128	158	924	0.555	508	343	0.0	1.2	0.143	A
C	353	88	358	658	0.537	349	308	0.0	1.1	0.192	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	479	120	142	732	0.654	476	666	1.0	1.8	0.231	B
B	613	153	203	897	0.683	609	414	1.2	2.1	0.206	B
C	380	95	430	621	0.611	378	383	1.1	1.5	0.245	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	170	715	0.765	542	798	1.8	3.0	0.338	C
B	740	185	232	881	0.841	730	480	2.1	4.6	0.376	C
C	460	115	515	577	0.797	453	447	1.5	3.4	0.455	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	207	692	0.887	602	890	3.0	6.0	0.593	E
B	784	196	258	866	0.906	774	551	4.6	7.3	0.579	D
C	671	168	546	562	1.194	552	485	3.4	33.2	2.300	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	202	696	0.994	661	927	6.0	13.6	1.127	F
B	943	236	283	851	1.108	838	580	7.3	33.5	1.705	F
C	640	160	591	538	1.188	537	530	33.2	58.9	5.382	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	694	173	202	696	0.997	674	926	13.6	18.5	1.632	F
B	855	214	288	848	1.009	838	587	33.5	37.9	2.703	F
C	567	142	591	538	1.053	537	535	58.9	66.5	7.152	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	613	153	203	694	0.882	647	907	18.5	9.8	1.297	F
B	674	168	277	854	0.789	807	574	37.9	4.7	1.498	F
C	496	124	569	550	0.903	542	514	66.5	55.1	6.578	F

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	230	678	0.809	568	790	9.8	4.8	0.609	E
B	566	142	243	874	0.648	578	555	4.7	1.9	0.209	B
C	402	101	408	633	0.636	613	413	55.1	2.4	2.840	F

09:45 - 10:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	96	123	744	0.517	399	550	4.8	1.1	0.181	B
B	487	122	171	916	0.532	490	351	1.9	1.2	0.142	A
C	321	80	346	664	0.483	327	315	2.4	1.0	0.181	B

10:00 - 10:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	356	89	117	748	0.476	356	511	1.1	0.9	0.154	A
B	447	112	153	927	0.482	448	321	1.2	0.9	0.125	A
C	313	78	316	680	0.460	313	284	1.0	0.9	0.164	A

2027 With Phase 5, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout		A, B, C	3.55	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		3.55	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2027 With Phase 5	AM	DIRECT	07:45	10:15	150	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	350	261
	B	242	0	102
	C	393	230	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	6	13
	B	7	0	8
	C	7	6	64

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	1.00	1.64	18.5	F	530	1325
B	1.11	2.81	39.6	F	662	1656
C	1.19	6.88	63.9	F	460	1151

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	130	740	0.505	370	576	0.0	1.0	0.161	A
B	512	128	159	920	0.557	507	340	0.0	1.2	0.144	A
C	353	88	357	661	0.535	349	310	0.0	1.1	0.190	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	479	120	141	733	0.653	476	666	1.0	1.8	0.230	B
B	613	153	205	894	0.685	609	412	1.2	2.1	0.208	B
C	380	95	429	624	0.609	378	385	1.1	1.5	0.242	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	168	716	0.765	542	798	1.8	3.0	0.337	C
B	740	185	233	877	0.844	730	477	2.1	4.7	0.383	C
C	460	115	514	580	0.793	453	450	1.5	3.4	0.446	D

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	206	692	0.887	602	892	3.0	6.0	0.593	E
B	784	196	259	862	0.910	773	549	4.7	7.5	0.596	E
C	671	168	544	565	1.188	554	488	3.4	32.5	2.246	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	201	695	0.994	661	927	6.0	13.6	1.130	F
B	943	236	284	847	1.113	835	577	7.5	34.5	1.754	F
C	640	160	587	542	1.180	541	532	32.5	57.2	5.212	F

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	694	173	201	695	0.998	674	927	13.6	18.5	1.637	F
B	855	214	290	844	1.013	835	585	34.5	39.6	2.812	F
C	567	142	587	542	1.046	540	538	57.2	63.9	6.876	F

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	613	153	201	695	0.882	648	912	18.5	9.7	1.297	F
B	674	168	279	850	0.792	812	570	39.6	5.0	1.630	F
C	496	124	571	551	0.901	542	520	63.9	52.4	6.293	F

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	224	681	0.805	568	786	9.7	4.7	0.595	E
B	566	142	245	870	0.651	579	547	5.0	1.9	0.214	B
C	402	100	407	635	0.633	603	417	52.4	2.2	2.567	F

09:45 - 10:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	96	121	745	0.516	399	550	4.7	1.1	0.180	B
B	487	122	172	913	0.534	490	348	1.9	1.2	0.143	A
C	321	80	345	667	0.481	326	317	2.2	0.9	0.178	B

10:00 - 10:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	356	89	116	748	0.476	356	512	1.1	0.9	0.154	A
B	447	112	153	923	0.484	448	319	1.2	1.0	0.126	A
C	313	78	315	683	0.458	313	286	0.9	0.9	0.163	A

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 10 PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:27:34

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (min)	RFC	LOS
	2022 Base Year				
Arm A	D1	10.8	1.00	0.94	F
Arm B		19.2	1.23	1.03	F
Arm C		36.8	3.74	1.10	F
	2027 No Phase 5				
Arm A	D2	11.1	1.03	0.95	F
Arm B		19.8	1.29	1.03	F
Arm C		38.2	3.92	1.11	F
	2027 With Phase 5				
Arm A	D3	11.8	1.09	0.95	F
Arm B		20.6	1.36	1.04	F
Arm C		37.9	3.89	1.10	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junction 10 AM
Location	Dublin
Site number	
Date	06/07/2016
Version	
Status	On-going
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TRLLIMITED\mariarooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	min	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
JUNCTIONS 9	9.56						0.85	0.60	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	DIRECT	17:15	19:45	150	15	✓
D2	2027 No Phase 5	PM	DIRECT	17:15	19:45	150	15	✓
D3	2027 With Phase 5	PM	DIRECT	17:15	19:45	150	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout		A, B, C	1.86	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		1.86	F

Arms

Arms

Arm	Name	Description
A	R106 (S)	
B	Station Road	
C	R106 (N)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	3.00	3.00	4.00	9.8	17.90	14.30	0.0	
B	3.10	2.60	6.00	15.0	16.70	13.70	0.0	✓
C	3.80	3.80	4.70	10.0	14.50	10.30	2.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.636	894
B	0.552	1087
C	0.514	903

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	DIRECT	17:15	19:45	150	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	1	267	199
	B	307	0	150
	C	237	137	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	4
	B	0	0	1
	C	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.94	1.00	10.8	F	530	1325
B	1.03	1.23	19.2	F	662	1656
C	1.10	3.74	36.8	F	460	1151

Main Results for each time segment

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	128	786	0.476	370	564	0.0	0.9	0.143	A
B	512	128	159	993	0.516	508	340	0.0	1.0	0.123	A
C	353	88	342	709	0.499	350	325	0.0	1.0	0.165	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	479	120	139	779	0.615	476	651	0.9	1.5	0.196	B
B	613	153	204	967	0.634	610	411	1.0	1.7	0.167	B
C	380	95	411	674	0.563	379	403	1.0	1.3	0.202	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	167	762	0.718	544	783	1.5	2.4	0.271	C
B	740	185	233	950	0.779	734	478	1.7	3.3	0.270	C
C	460	115	494	632	0.728	455	473	1.3	2.5	0.330	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	218	730	0.841	605	902	2.4	4.5	0.451	D
B	784	196	259	935	0.839	779	564	3.3	4.6	0.369	C
C	671	168	524	617	1.087	596	514	2.5	21.2	1.490	F

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	211	734	0.941	673	961	4.5	9.0	0.787	E
B	943	236	288	919	1.027	885	596	4.6	19.2	1.040	F
C	640	160	596	582	1.100	577	577	21.2	36.8	3.269	F

18:30 - 18:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	694	173	210	736	0.943	686	942	9.0	10.8	1.001	F
B	855	214	294	915	0.934	861	602	19.2	17.8	1.231	F
C	567	142	580	590	0.962	572	575	36.8	35.5	3.737	F

18:45 - 19:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	613	153	225	726	0.844	631	884	10.8	6.3	0.697	E
B	674	168	270	929	0.725	734	586	17.8	2.8	0.392	C
C	496	124	494	632	0.785	615	510	35.5	5.8	2.175	F

19:00 - 19:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	154	770	0.712	563	651	6.3	2.6	0.308	C
B	566	142	241	945	0.599	572	476	2.8	1.5	0.163	A
C	402	100	385	687	0.585	419	428	5.8	1.5	0.238	B

19:15 - 19:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	96	119	792	0.486	391	535	2.6	1.0	0.152	A
B	487	122	168	988	0.493	489	342	1.5	1.0	0.121	A
C	321	80	330	715	0.449	324	327	1.5	0.8	0.154	A

19:30 - 19:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	356	89	115	794	0.448	356	500	1.0	0.8	0.137	A
B	447	112	153	996	0.449	448	318	1.0	0.8	0.110	A
C	313	78	301	729	0.429	313	299	0.8	0.8	0.144	A

2027 No Phase 5, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout		A, B, C	1.94	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		1.94	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D2	2027 No Phase 5	PM	DIRECT	17:15	19:45	150	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	330	245
	B	381	0	185
	C	293	169	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	3	5
	B	0	0	2
	C	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.95	1.03	11.1	F	530	1325
B	1.03	1.29	19.8	F	662	1656
C	1.11	3.92	38.2	F	460	1151

Main Results for each time segment

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	128	783	0.478	370	564	0.0	0.9	0.144	A
B	512	128	158	989	0.518	508	340	0.0	1.1	0.124	A
C	353	88	342	704	0.502	349	324	0.0	1.0	0.167	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	479	120	139	776	0.617	476	651	0.9	1.6	0.198	B
B	613	153	203	963	0.636	610	412	1.1	1.7	0.169	B
C	380	95	411	670	0.567	379	402	1.0	1.3	0.205	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	167	759	0.721	544	783	1.6	2.4	0.274	C
B	740	185	232	947	0.782	734	479	1.7	3.3	0.274	C
C	460	115	494	629	0.732	455	472	1.3	2.5	0.336	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	217	728	0.843	605	900	2.4	4.6	0.458	D
B	784	196	258	931	0.842	779	564	3.3	4.7	0.377	C
C	671	168	524	614	1.093	593	512	2.5	21.9	1.534	F

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	210	732	0.944	673	959	4.6	9.2	0.803	E
B	943	236	287	915	1.031	883	596	4.7	19.8	1.068	F
C	640	160	594	579	1.105	575	575	21.9	38.2	3.386	F

18:30 - 18:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	694	173	208	733	0.946	686	939	9.2	11.1	1.028	F
B	855	214	292	912	0.938	859	602	19.8	18.8	1.289	F
C	567	142	578	587	0.967	569	573	38.2	37.7	3.917	F

18:45 - 19:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	613	153	224	724	0.846	631	884	11.1	6.4	0.718	E
B	674	168	269	925	0.728	737	586	18.8	2.9	0.416	C
C	496	124	496	627	0.791	611	510	37.7	8.9	2.419	F

19:00 - 19:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	158	764	0.718	563	659	6.4	2.7	0.318	C
B	566	142	240	942	0.601	572	481	2.9	1.5	0.164	A
C	402	101	385	683	0.589	432	427	8.9	1.5	0.265	C

19:15 - 19:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	96	118	788	0.488	392	535	2.7	1.0	0.154	A
B	487	122	167	984	0.495	489	343	1.5	1.0	0.122	A
C	321	80	329	711	0.452	324	327	1.5	0.8	0.156	A

19:30 - 19:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	356	89	114	791	0.450	356	500	1.0	0.8	0.138	A
B	447	112	152	992	0.450	448	319	1.0	0.8	0.110	A
C	313	78	301	725	0.431	313	298	0.8	0.8	0.146	A

2027 With Phase 5, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout		A, B, C	1.98	F

Junction Network

Driving side	Lighting	Road surface	In London	Network delay (min)	Network LOS
Left	Normal/unknown	Normal/unknown		1.98	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time period length (min)	Time segment length (min)	Run automatically
D3	2027 With Phase 5	PM	DIRECT	17:15	19:45	150	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Scaling Factor (%)
A		DIRECT		100.000
B		DIRECT		100.000
C		DIRECT		100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	330	257
	B	381	0	185
	C	293	170	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	4	5
	B	0	0	2
	C	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.95	1.09	11.8	F	530	1325
B	1.04	1.36	20.6	F	662	1656
C	1.10	3.89	37.9	F	460	1151

Main Results for each time segment

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	374	93	128	778	0.481	370	563	0.0	0.9	0.146	A
B	512	128	162	987	0.519	508	336	0.0	1.1	0.124	A
C	353	88	342	704	0.502	349	328	0.0	1.0	0.167	B

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	479	120	139	771	0.621	476	650	0.9	1.6	0.201	B
B	613	153	208	960	0.638	610	407	1.1	1.7	0.170	B
C	380	95	411	670	0.567	379	408	1.0	1.3	0.205	B

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	547	137	167	754	0.726	544	782	1.6	2.5	0.280	C
B	740	185	238	943	0.785	734	473	1.7	3.4	0.278	C
C	460	115	494	629	0.732	455	478	1.3	2.5	0.336	C

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	614	153	218	723	0.849	605	900	2.5	4.7	0.472	D
B	784	196	265	927	0.846	778	558	3.4	4.8	0.385	C
C	671	168	524	614	1.093	593	519	2.5	21.9	1.533	F

18:15 - 18:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	691	173	211	727	0.950	671	957	4.7	9.7	0.837	F
B	943	236	294	911	1.036	880	589	4.8	20.6	1.101	F
C	640	160	592	580	1.103	575	582	21.9	37.9	3.368	F

18:30 - 18:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	694	173	209	729	0.952	685	938	9.7	11.8	1.087	F
B	855	214	300	907	0.942	858	594	20.6	19.9	1.360	F
C	567	142	577	587	0.966	569	580	37.9	37.3	3.887	F

18:45 - 19:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	613	153	224	720	0.851	633	885	11.8	6.8	0.767	E
B	674	168	277	920	0.732	742	580	19.9	2.9	0.446	D
C	496	124	499	626	0.792	610	519	37.3	8.9	2.409	F

19:00 - 19:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	548	137	159	759	0.722	564	658	6.8	2.8	0.329	C
B	566	142	247	938	0.604	572	476	2.9	1.6	0.166	A
C	402	101	385	683	0.589	432	434	8.9	1.5	0.266	C

19:15 - 19:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	385	96	119	784	0.491	392	534	2.8	1.0	0.156	A
B	487	122	172	981	0.497	489	339	1.6	1.0	0.123	A
C	321	80	329	711	0.452	324	331	1.5	0.8	0.156	A

19:30 - 19:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	Unsignalised level of service
A	356	89	115	786	0.453	356	499	1.0	0.8	0.140	A
B	447	112	156	990	0.451	448	315	1.0	0.8	0.111	A
C	313	78	301	725	0.431	313	302	0.8	0.8	0.146	A

Basic Results Summary

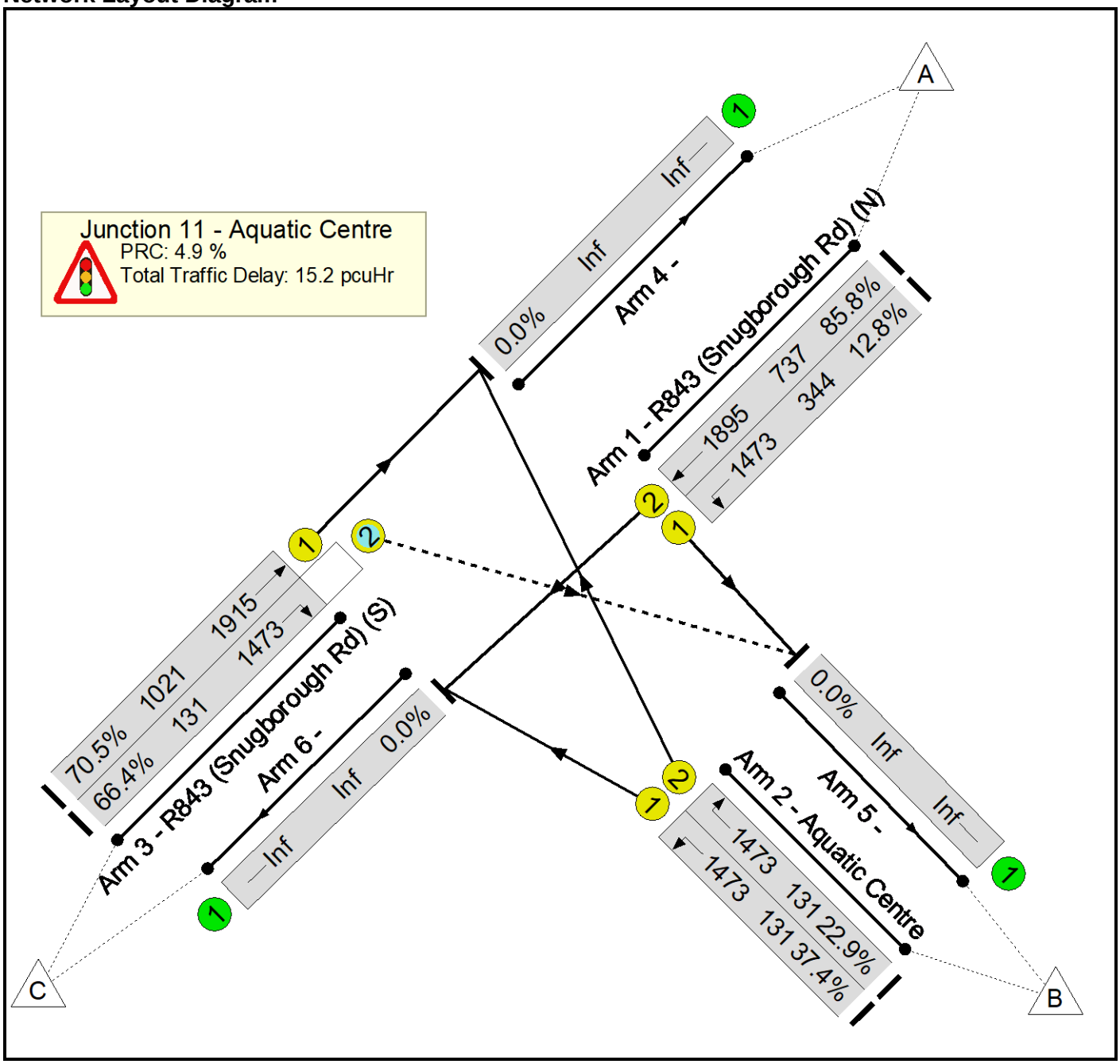
User and Project Details

Project:	**Greater Dublin Drainage Project Addendum**
Title:	
Location:	
Client:	Irish Water
Site Ref(s):	R843 Snugborough Road / National Aquatic Centre (NAC) signalised priority junction
Additional detail:	
File name:	7556 Junction 11.lsg3x
Author:	Gabriela Iha
Company:	TOBIN
Address:	Block 10-4, Blanchardstown Corporate Park, Dublin 15

Basic Results Summary

Scenario 1: 'Existing AM' (FG1: 'Existing AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

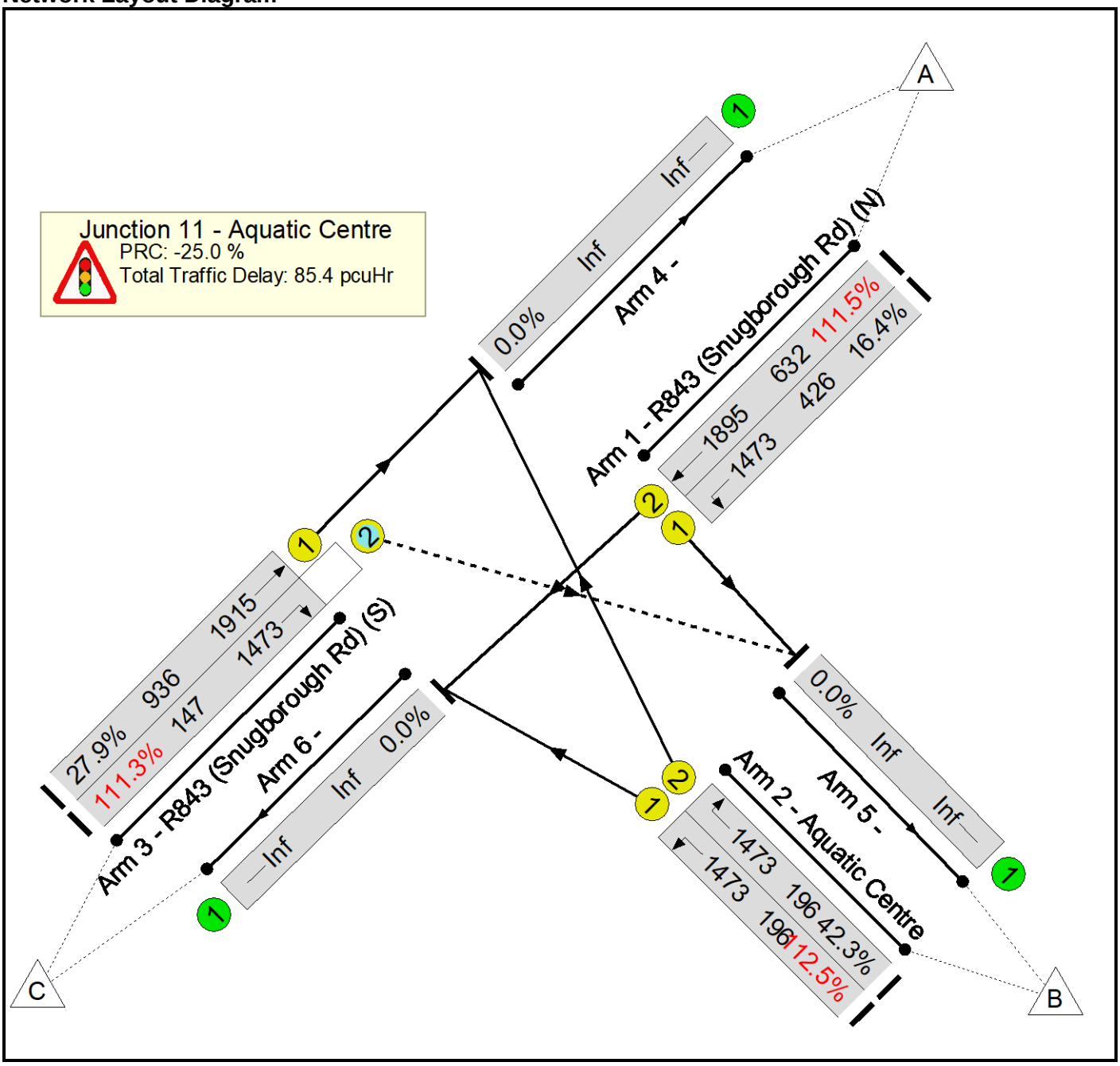
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**	**0**	**85**	**2**	**15.2**	**-**	**-**	**Network**
Junction 11 - Aquatic Centre	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**85.8%**	**0**	**85**	**2**	**15.2**	**-**	**-**	**Junction 11 - Aquatic Centre**
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	20	-	44	1473	344	12.8%	-	-	-	0.4	33.3	0.9	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	34	-	632	1895	737	85.8%	-	-	-	7.3	41.5	17.3	1/2
2/1	Aquatic Centre Left	U	E		1	7	-	49	1473	131	37.4%	-	-	-	0.8	60.5	1.4	2/1
2/2	Aquatic Centre Right	U	E		1	7	-	30	1473	131	22.9%	-	-	-	0.5	56.0	0.8	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	47	-	720	1915	1021	70.5%	-	-	-	4.3	21.6	14.6	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	7	-	87	1473	131	66.4%	0	85	2	1.9	79.0	3.1	3/2

C1 PRC for Signalled Lanes (%): 4.9 Total Delay for Signalled Lanes (pcuHr): 15.21 Cycle Time (s): 90

PRC Over All Lanes (%): 4.9 Total Delay Over All Lanes(pcuHr): 15.21

Basic Results Summary
Scenario 2: 'Existing PM' (FG2: 'Existing PM', Plan 1: 'Network Control Plan 1')
Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**112.5%**	**0**	**115**	**33**	**85.4**	**-**	**-**	**Network**
Junction 11 - Aquatic Centre	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**112.5%**	**0**	**115**	**33**	**85.4**	**-**	**-**	**Junction 11 - Aquatic Centre**
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	25	-	70	1473	426	16.4%	-	-	-	0.6	29.0	1.4	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	29	-	704	1895	632	111.5%	-	-	-	49.3	252.3	59.9	1/2
2/1	Aquatic Centre Left	U	E		1	11	-	221	1473	196	112.5%	-	-	-	18.9	308.3	21.9	2/1
2/2	Aquatic Centre Right	U	E		1	11	-	83	1473	196	42.3%	-	-	-	1.2	51.6	2.3	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	43	-	261	1915	936	27.9%	-	-	-	1.2	16.3	4.0	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	8	-	164	1473	147	111.3%	0	115	33	14.2	312.5	16.3	3/2

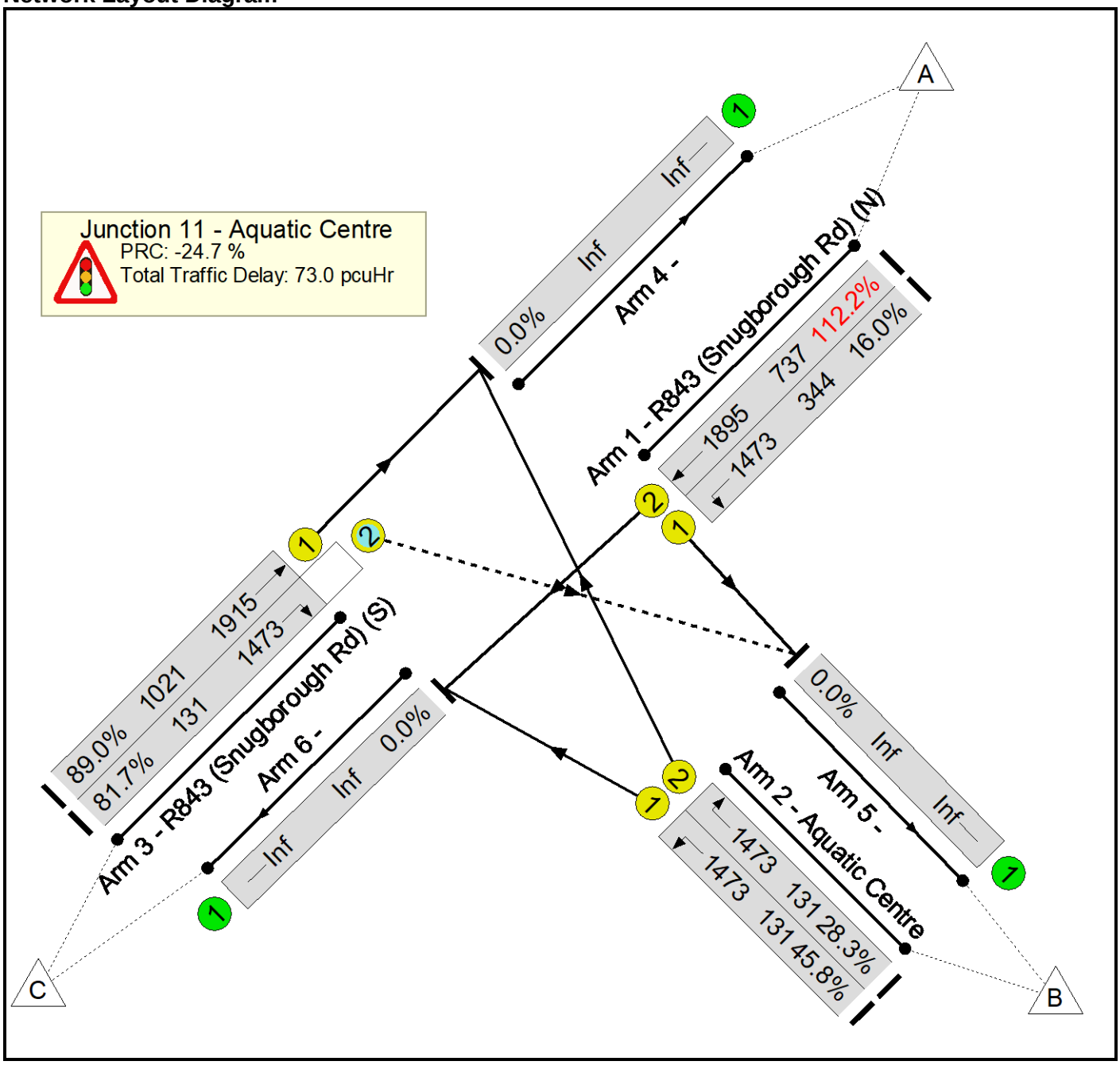
C1 PRC for Signalled Lanes (%): -25.0 Total Delay for Signalled Lanes (pcuHr): 85.44 Cycle Time (s): 90

PRC Over All Lanes (%): -25.0 Total Delay Over All Lanes(pcuHr): 85.44

Basic Results Summary

Scenario 3: '2027 AM No Construction' (FG3: '2027 AM No Construction', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**112.2%**	**0**	**98**	**9**	**73.0**	**-**	**-**	**Network**
Junction 11 - Aquatic Centre	**-**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**112.2%**	**0**	**98**	**9**	**73.0**	**-**	**-**	**Junction 11 - Aquatic Centre**
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	20	-	55	1473	344	16.0%	-	-	-	0.5	33.7	1.2	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	34	-	827	1895	737	112.2%	-	-	-	59.2	257.6	72.2	1/2
2/1	Aquatic Centre Left	U	E		1	7	-	60	1473	131	45.8%	-	-	-	1.1	64.1	1.8	2/1
2/2	Aquatic Centre Right	U	E		1	7	-	37	1473	131	28.3%	-	-	-	0.6	57.4	1.1	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	47	-	909	1915	1021	89.0%	-	-	-	8.5	33.7	23.7	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	7	-	107	1473	131	81.7%	0	98	9	3.1	105.1	4.5	3/2

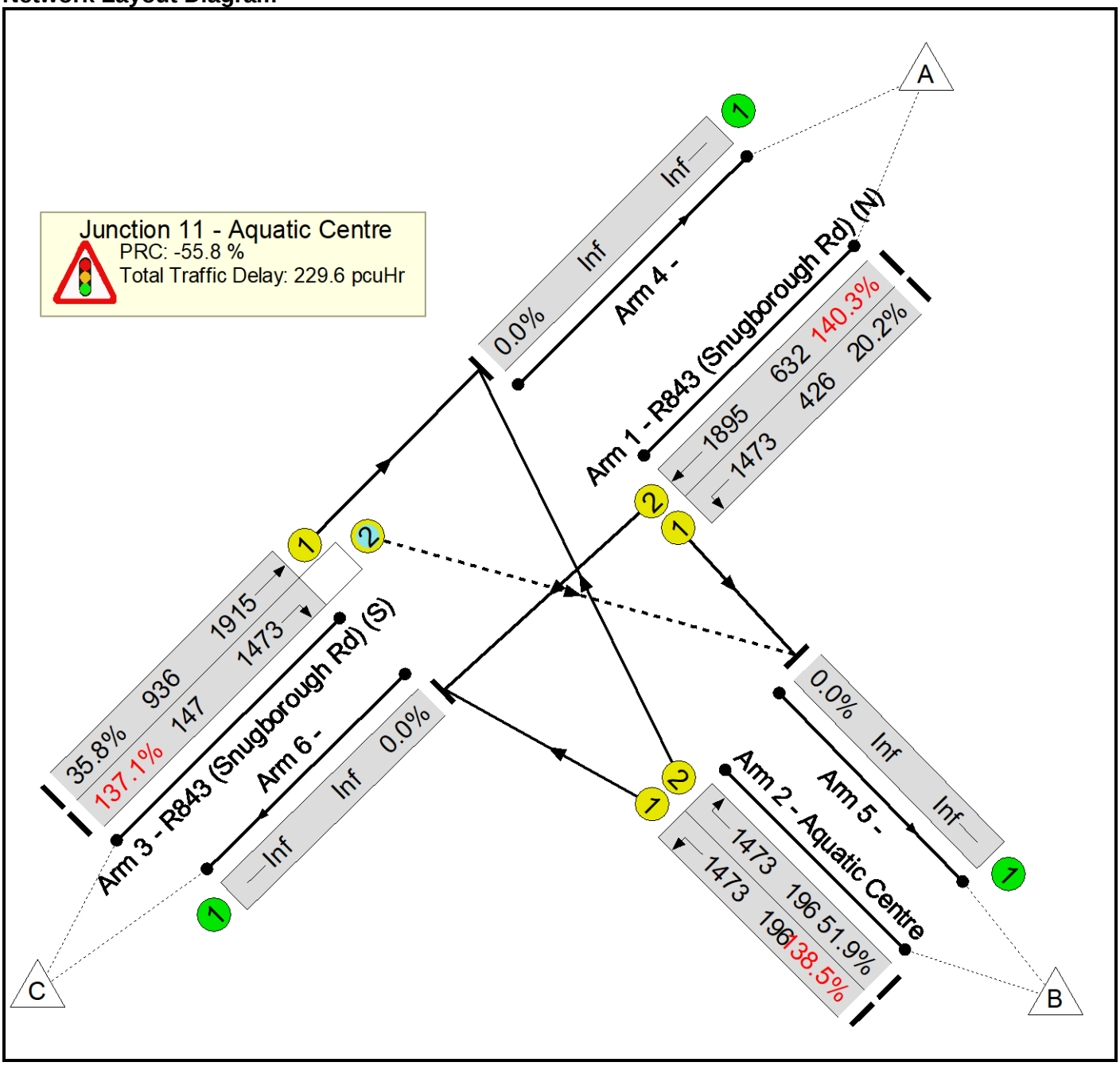
C1 PRC for Signalled Lanes (%): -24.7 Total Delay for Signalled Lanes (pcuHr): 72.97 Cycle Time (s): 90

PRC Over All Lanes (%): -24.7 Total Delay Over All Lanes(pcuHr): 72.97

Basic Results Summary

Scenario 4: '2027 PM No Construction' (FG4: '2027 PM No Construction', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	**140.3%**	**0**	**115**	**33**	**229.6**	-	-	**Network**
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	**140.3%**	**0**	**115**	**33**	**229.6**	-	-	**Junction 11 - Aquatic Centre**
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	25	-	86	1473	426	20.2%	-	-	-	0.7	29.5	1.7	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	29	-	886	1895	632	140.3%	-	-	-	146.7	596.0	157.4	1/2
2/1	Aquatic Centre Left	U	E		1	11	-	272	1473	196	138.5%	-	-	-	45.8	606.0	49.3	2/1
2/2	Aquatic Centre Right	U	E		1	11	-	102	1473	196	51.9%	-	-	-	1.6	55.2	2.9	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	43	-	335	1915	936	35.8%	-	-	-	1.6	17.2	5.4	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	8	-	202	1473	147	137.1%	0	115	33	33.2	592.2	35.5	3/2

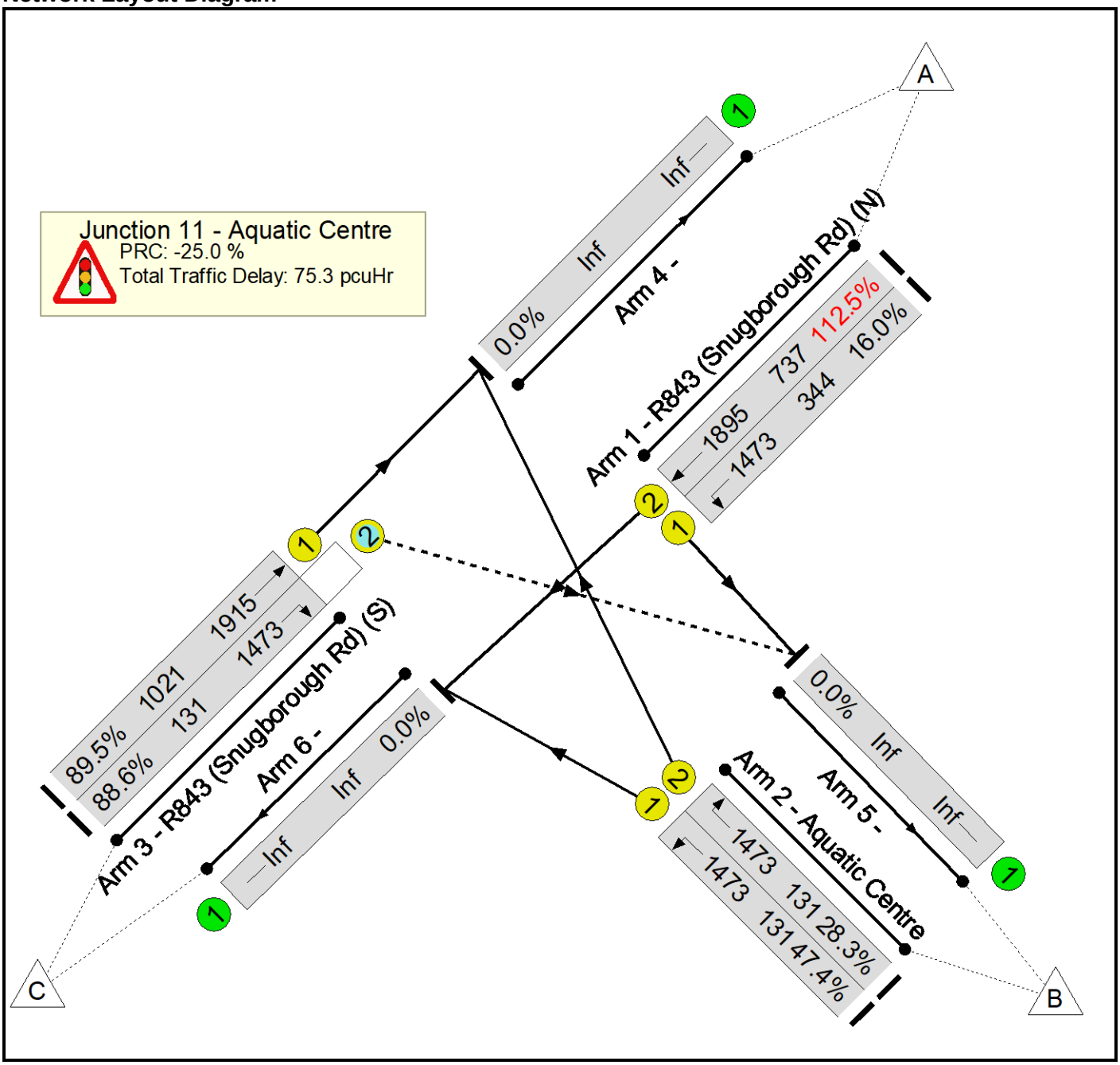
C1 PRC for Signalled Lanes (%): -55.8 Total Delay for Signalled Lanes (pcuHr): 229.57 Cycle Time (s): 90

PRC Over All Lanes (%): -55.8 Total Delay Over All Lanes(pcuHr): 229.57

Basic Results Summary

Scenario 5: '2027 AM with Construction (Phase 5)' (FG5: '2027 AM with Construction (Phase 5)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	**112.5%**	**0**	**98**	**18**	**75.3**	-	-	**Network**
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	**112.5%**	**0**	**98**	**18**	**75.3**	-	-	**Junction 11 - Aquatic Centre**
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	20	-	55	1473	344	16.0%	-	-	-	0.5	33.7	1.2	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	34	-	829	1895	737	112.5%	-	-	-	60.2	261.4	73.2	1/2
2/1	Aquatic Centre Left	U	E		1	7	-	62	1473	131	47.4%	-	-	-	1.1	64.8	1.9	2/1
2/2	Aquatic Centre Right	U	E		1	7	-	37	1473	131	28.3%	-	-	-	0.6	57.4	1.1	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	47	-	914	1915	1021	89.5%	-	-	-	8.7	34.4	24.3	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	7	-	116	1473	131	88.6%	0	98	18	4.1	128.0	5.7	3/2

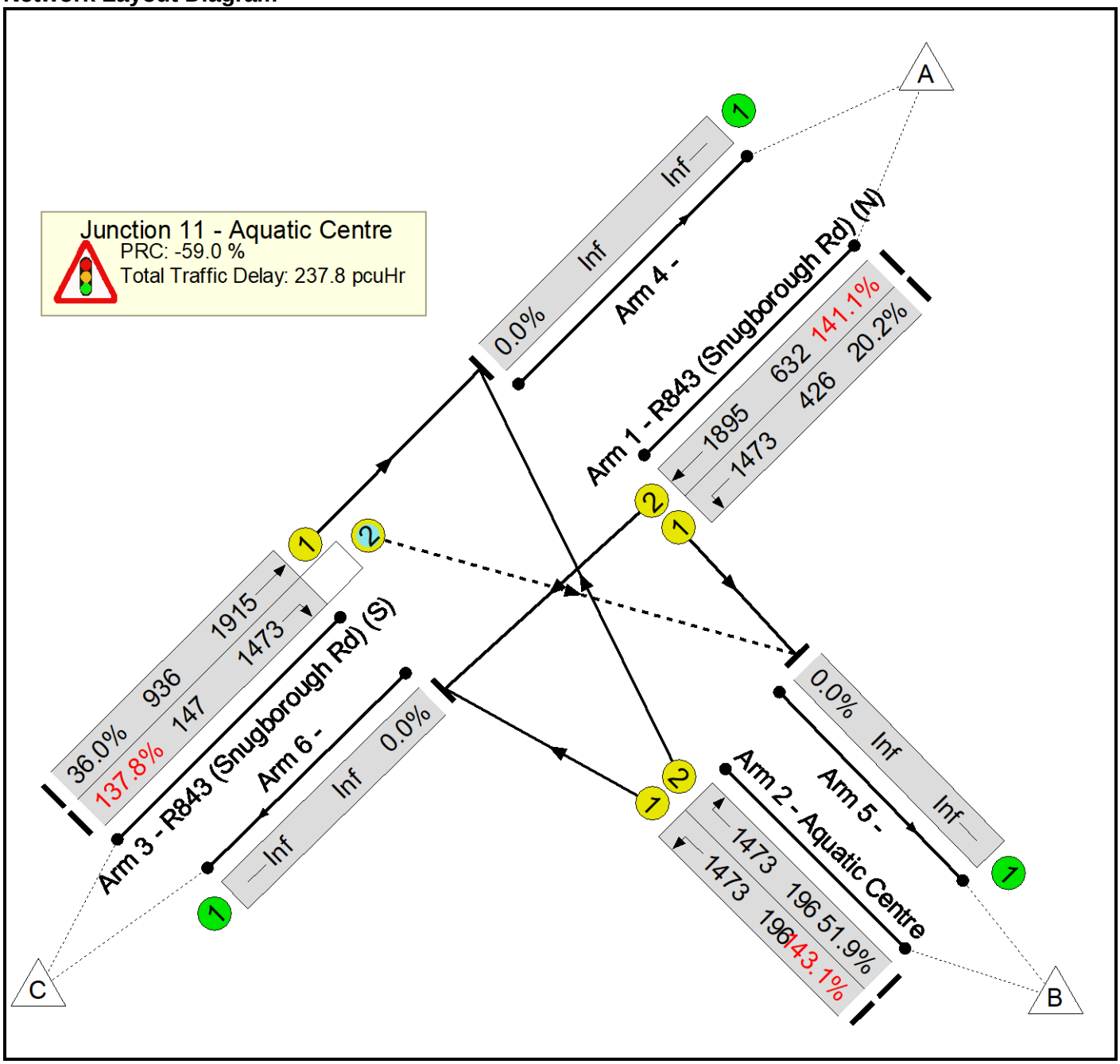
C1 PRC for Signalled Lanes (%): -25.0 Total Delay for Signalled Lanes (pcuHr): 75.27 Cycle Time (s): 90

PRC Over All Lanes (%): -25.0 Total Delay Over All Lanes(pcuHr): 75.27

Basic Results Summary

Scenario 6: '2027 PM with Construction (Phase 5)' (FG6: '2027 PM with Construction (Phase 5)', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Item
Network	-	-	-		-	-	-	-	-	-	**143.1%**	**0**	**115**	**33**	**237.8**	-	-	**Network**
Junction 11 - Aquatic Centre	-	-	-		-	-	-	-	-	-	**143.1%**	**0**	**115**	**33**	**237.8**	-	-	**Junction 11 - Aquatic Centre**
1/1	R843 (Snugborough Rd) (N) Left	U	D		1	25	-	86	1473	426	20.2%	-	-	-	0.7	29.5	1.7	1/1
1/2	R843 (Snugborough Rd) (N) Ahead	U	A		1	29	-	891	1895	632	141.1%	-	-	-	149.4	603.7	160.1	1/2
2/1	Aquatic Centre Left	U	E		1	11	-	281	1473	196	143.1%	-	-	-	50.7	649.9	54.3	2/1
2/2	Aquatic Centre Right	U	E		1	11	-	102	1473	196	51.9%	-	-	-	1.6	55.2	2.9	2/2
3/1	R843 (Snugborough Rd) (S) Ahead	U	B		1	43	-	337	1915	936	36.0%	-	-	-	1.6	17.3	5.4	3/1
3/2	R843 (Snugborough Rd) (S) Right	O	C		1	8	-	203	1473	147	137.8%	0	115	33	33.8	598.6	36.0	3/2

C1 PRC for Signalled Lanes (%): -59.0 Total Delay for Signalled Lanes (pcuHr): 237.78 Cycle Time (s): 90

PRC Over All Lanes (%): -59.0 Total Delay Over All Lanes(pcuHr): 237.78

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction 12 AM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:28:12

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-C	D1	0.0	0.00	0.00	A
Stream B-A		0.0	0.00	0.00	A
Stream C-AB		0.0	4.41	0.01	A
	2027 No Phase 5				
Stream B-C	D2	0.0	0.00	0.00	A
Stream B-A		0.0	0.00	0.00	A
Stream C-AB		0.0	4.21	0.01	A
	2027 With Phase 5				
Stream B-C	D3	0.0	0.00	0.00	A
Stream B-A		0.0	0.00	0.00	A
Stream C-AB		0.0	4.21	0.01	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15
D3	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.01	A

Arms

Arms

Arm	Name	Description	Arm type
A	Snugborough Road (N)		Major
B	Existing Gateway		Minor
C	Snugborough Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.20			170.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	8.50	4.00	3.00	3.00	3.00		1.00	22	37

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	526	0.066	0.166	0.105	0.237
B-C	728	0.077	0.194	-	-
C-B	672	0.179	0.179	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	551	100.000
B		✓	3	100.000
C		✓	682	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	539
	B	3	0	0
	C	681	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	35
	B	0	0	0
	C	53	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	4.41	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	621	0.000	0	0.0	0.000	A
B-A	0	352	0.000	0	0.0	0.000	A
C-AB	2	836	0.002	2	0.0	4.316	A
C-A	511			511			
A-B	9			9			
A-C	406			406			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	601	0.000	0	0.0	0.000	A
B-A	0	318	0.000	0	0.0	0.000	A
C-AB	3	877	0.003	3	0.0	4.063	A
C-A	610			610			
A-B	11			11			
A-C	485			485			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	572	0.000	0	0.0	0.000	A
B-A	0	271	0.000	0	0.0	0.000	A
C-AB	5	941	0.006	5	0.0	3.797	A
C-A	745			745			
A-B	13			13			
A-C	593			593			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	572	0.000	0	0.0	0.000	A
B-A	0	271	0.000	0	0.0	0.000	A
C-AB	5	941	0.006	5	0.0	3.850	A
C-A	745			745			
A-B	13			13			
A-C	593			593			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	601	0.000	0	0.0	0.000	A
B-A	0	318	0.000	0	0.0	0.000	A
C-AB	3	877	0.003	3	0.0	4.221	A
C-A	610			610			
A-B	11			11			
A-C	485			485			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	621	0.000	0	0.0	0.000	A
B-A	0	352	0.000	0	0.0	0.000	A
C-AB	2	835	0.002	2	0.0	4.408	A
C-A	511			511			
A-B	9			9			
A-C	406			406			

2027 No Phase 5 , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	700	100.000
B		✓	4	100.000
C		✓	850	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	15	685
	B	4	0	0
	C	849	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	39
	B	0	0	0
	C	58	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	4.21	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	588	0.000	0	0.0	0.000	A
B-A	0	300	0.000	0	0.0	0.000	A
C-AB	3	877	0.003	3	0.0	4.116	A
C-A	637			637			
A-B	11			11			
A-C	516			516			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	561	0.000	0	0.0	0.000	A
B-A	0	256	0.000	0	0.0	0.000	A
C-AB	5	934	0.005	5	0.0	3.826	A
C-A	759			759			
A-B	13			13			
A-C	616			616			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	524	0.000	0	0.0	0.000	A
B-A	0	196	0.000	0	0.0	0.000	A
C-AB	13	1021	0.013	13	0.0	3.533	A
C-A	923			923			
A-B	17			17			
A-C	754			754			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	524	0.000	0	0.0	0.000	A
B-A	0	196	0.000	0	0.0	0.000	A
C-AB	13	1021	0.013	13	0.0	3.570	A
C-A	923			923			
A-B	17			17			
A-C	754			754			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	561	0.000	0	0.0	0.000	A
B-A	0	256	0.000	0	0.0	0.000	A
C-AB	5	933	0.005	5	0.0	3.986	A
C-A	759			759			
A-B	13			13			
A-C	616			616			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	588	0.000	0	0.0	0.000	A
B-A	0	300	0.000	0	0.0	0.000	A
C-AB	3	877	0.003	3	0.0	4.214	A
C-A	637			637			
A-B	11			11			
A-C	516			516			

2027 With Phase 5 , AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	702	100.000
B		✓	4	100.000
C		✓	855	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	15	687
	B	4	0	0
	C	854	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	39
	B	0	0	0
	C	58	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.00	0.00	0.0	A
C-AB	0.01	4.21	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	588	0.000	0	0.0	0.000	A
B-A	0	299	0.000	0	0.0	0.000	A
C-AB	3	879	0.003	3	0.0	4.108	A
C-A	641			641			
A-B	11			11			
A-C	517			517			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	561	0.000	0	0.0	0.000	A
B-A	0	255	0.000	0	0.0	0.000	A
C-AB	5	936	0.005	5	0.0	3.817	A
C-A	764			764			
A-B	13			13			
A-C	618			618			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	523	0.000	0	0.0	0.000	A
B-A	0	194	0.000	0	0.0	0.000	A
C-AB	13	1024	0.013	13	0.0	3.524	A
C-A	928			928			
A-B	17			17			
A-C	756			756			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	523	0.000	0	0.0	0.000	A
B-A	0	194	0.000	0	0.0	0.000	A
C-AB	13	1024	0.013	13	0.0	3.563	A
C-A	928			928			
A-B	17			17			
A-C	756			756			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	561	0.000	0	0.0	0.000	A
B-A	0	255	0.000	0	0.0	0.000	A
C-AB	5	935	0.005	5	0.0	3.977	A
C-A	764			764			
A-B	13			13			
A-C	618			618			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	588	0.000	0	0.0	0.000	A
B-A	0	299	0.000	0	0.0	0.000	A
C-AB	3	878	0.003	3	0.0	4.207	A
C-A	641			641			
A-B	11			11			
A-C	517			517			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction 12 PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:28:48

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-C	D1	0.0	0.00	0.00	A
Stream B-A		0.0	11.39	0.02	B
Stream C-AB		0.0	0.00	0.00	A
	2027 No Phase 5				
Stream B-C	D2	0.0	0.00	0.00	A
Stream B-A		0.0	14.13	0.04	B
Stream C-AB		0.0	0.00	0.00	A
	2027 With Phase 5				
Stream B-C	D3	0.0	0.00	0.00	A
Stream B-A		0.0	14.25	0.04	B
Stream C-AB		0.0	0.00	0.00	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15
D2	2027 No Phase 5	PM	ONE HOUR	15:45	17:15	15
D3	2027 With Phase 5	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.06	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.06	A

Arms

Arms

Arm	Name	Description	Arm type
A	Snugborough Road (N)		Major
B	Existing Gateway		Minor
C	Snugborough Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	13.20			170.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	8.50	4.00	3.00	3.00	3.00		1.00	22	37

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	533	0.067	0.169	0.106	0.241
B-C	680	0.072	0.181	-	-
C-B	672	0.179	0.179	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	746	100.000
B		✓	7	100.000
C		✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	4	742
	B	7	0	0
	C	342	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	27	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.02	11.39	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	561	0.000	0	0.0	0.000	A
B-A	5	390	0.014	5	0.0	9.356	A
C-AB	0	491	0.000	0	0.0	0.000	A
C-A	257			257			
A-B	3			3			
A-C	559			559			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	538	0.000	0	0.0	0.000	A
B-A	6	362	0.017	6	0.0	10.115	B
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	307			307			
A-B	4			4			
A-C	667			667			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	506	0.000	0	0.0	0.000	A
B-A	8	324	0.024	8	0.0	11.390	B
C-AB	0	444	0.000	0	0.0	0.000	A
C-A	377			377			
A-B	4			4			
A-C	817			817			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	506	0.000	0	0.0	0.000	A
B-A	8	324	0.024	8	0.0	11.390	B
C-AB	0	444	0.000	0	0.0	0.000	A
C-A	377			377			
A-B	4			4			
A-C	817			817			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	538	0.000	0	0.0	0.000	A
B-A	6	362	0.017	6	0.0	10.119	B
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	307			307			
A-B	4			4			
A-C	667			667			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	561	0.000	0	0.0	0.000	A
B-A	5	390	0.014	5	0.0	9.360	A
C-AB	0	491	0.000	0	0.0	0.000	A
C-A	257			257			
A-B	3			3			
A-C	559			559			

2027 No Phase 5 , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 No Phase 5	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	929	100.000
B		✓	9	100.000
C		✓	430	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	5	924
	B	9	0	0
	C	430	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	18
	B	0	0	0
	C	31	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.04	14.13	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	528	0.000	0	0.0	0.000	A
B-A	7	350	0.019	7	0.0	10.498	B
C-AB	0	454	0.000	0	0.0	0.000	A
C-A	324			324			
A-B	4			4			
A-C	696			696			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	499	0.000	0	0.0	0.000	A
B-A	8	314	0.026	8	0.0	11.771	B
C-AB	0	430	0.000	0	0.0	0.000	A
C-A	387			387			
A-B	4			4			
A-C	831			831			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	458	0.000	0	0.0	0.000	A
B-A	10	265	0.037	10	0.0	14.130	B
C-AB	0	395	0.000	0	0.0	0.000	A
C-A	473			473			
A-B	6			6			
A-C	1017			1017			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	458	0.000	0	0.0	0.000	A
B-A	10	265	0.037	10	0.0	14.132	B
C-AB	0	395	0.000	0	0.0	0.000	A
C-A	473			473			
A-B	6			6			
A-C	1017			1017			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	499	0.000	0	0.0	0.000	A
B-A	8	314	0.026	8	0.0	11.777	B
C-AB	0	430	0.000	0	0.0	0.000	A
C-A	387			387			
A-B	4			4			
A-C	831			831			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	528	0.000	0	0.0	0.000	A
B-A	7	350	0.019	7	0.0	10.506	B
C-AB	0	454	0.000	0	0.0	0.000	A
C-A	324			324			
A-B	4			4			
A-C	696			696			

2027 With Phase 5 , PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm visibility to right	Arm B - Minor arm geometry	Visibility to right expected to have two components if the arm has two lanes, or two lanes in a flared section.

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 With Phase 5	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	935	100.000
B		✓	9	100.000
C		✓	432	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	5	930
	B	9	0	0
	C	432	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	18
	B	0	0	0
	C	32	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-C	0.00	0.00	0.0	A
B-A	0.04	14.25	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	527	0.000	0	0.0	0.000	A
B-A	7	348	0.019	7	0.0	10.543	B
C-AB	0	452	0.000	0	0.0	0.000	A
C-A	325			325			
A-B	4			4			
A-C	700			700			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	498	0.000	0	0.0	0.000	A
B-A	8	312	0.026	8	0.0	11.838	B
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	388			388			
A-B	4			4			
A-C	836			836			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	456	0.000	0	0.0	0.000	A
B-A	10	263	0.038	10	0.0	14.244	B
C-AB	0	392	0.000	0	0.0	0.000	A
C-A	476			476			
A-B	6			6			
A-C	1024			1024			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	456	0.000	0	0.0	0.000	A
B-A	10	263	0.038	10	0.0	14.251	B
C-AB	0	392	0.000	0	0.0	0.000	A
C-A	476			476			
A-B	6			6			
A-C	1024			1024			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	498	0.000	0	0.0	0.000	A
B-A	8	312	0.026	8	0.0	11.842	B
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	388			388			
A-B	4			4			
A-C	836			836			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-C	0	527	0.000	0	0.0	0.000	A
B-A	7	348	0.019	7	0.0	10.551	B
C-AB	0	452	0.000	0	0.0	0.000	A
C-A	325			325			
A-B	4			4			
A-C	700			700			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction A AM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:30:04

»2022 Base Year , AM
»2027 No Phase 5 , AM
»2027 With Phase 5 , AM

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2027 No Phase 5				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2027 With Phase 5				
Stream B-AC	D3	0.0	13.89	0.02	B
Stream C-AB		0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15
D3	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Clonshaugh Rd (N)		Major
B	WWTP		Minor
C	Clonshaugh Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			80.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	110	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	549	0.100	0.253	0.159	0.361
B-C	668	0.102	0.259	-	-
C-B	620	0.240	0.240	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	332	100.000
B		✓	0	100.000
C		✓	184	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	332
	B	0	0	0
	C	184	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	514	0.000	0	0.0	0.000	A
C-AB	0	514	0.000	0	0.0	0.000	A
C-A	139			139			
A-B	0			0			
A-C	250			250			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	496	0.000	0	0.0	0.000	A
C-AB	0	502	0.000	0	0.0	0.000	A
C-A	165			165			
A-B	0			0			
A-C	298			298			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	472	0.000	0	0.0	0.000	A
C-AB	0	485	0.000	0	0.0	0.000	A
C-A	203			203			
A-B	0			0			
A-C	366			366			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	472	0.000	0	0.0	0.000	A
C-AB	0	485	0.000	0	0.0	0.000	A
C-A	203			203			
A-B	0			0			
A-C	366			366			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	496	0.000	0	0.0	0.000	A
C-AB	0	502	0.000	0	0.0	0.000	A
C-A	165			165			
A-B	0			0			
A-C	298			298			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	514	0.000	0	0.0	0.000	A
C-AB	0	514	0.000	0	0.0	0.000	A
C-A	139			139			
A-B	0			0			
A-C	250			250			

2027 No Phase 5 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	416	100.000
B		✓	0	100.000
C		✓	232	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	416
	B	0	0	0
	C	232	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	18	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	489	0.000	0	0.0	0.000	A
C-AB	0	490	0.000	0	0.0	0.000	A
C-A	175			175			
A-B	0			0			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	466	0.000	0	0.0	0.000	A
C-AB	0	474	0.000	0	0.0	0.000	A
C-A	209			209			
A-B	0			0			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	435	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	255			255			
A-B	0			0			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	435	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	255			255			
A-B	0			0			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	466	0.000	0	0.0	0.000	A
C-AB	0	474	0.000	0	0.0	0.000	A
C-A	209			209			
A-B	0			0			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	489	0.000	0	0.0	0.000	A
C-AB	0	490	0.000	0	0.0	0.000	A
C-A	175			175			
A-B	0			0			
A-C	313			313			

2027 With Phase 5 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.22	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.22	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	416	100.000
B		✓	6	100.000
C		✓	232	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	416
	B	0	0	6
	C	232	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	100
	C	18	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.02	13.89	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	287	0.016	4	0.0	12.720	B
C-AB	0	490	0.000	0	0.0	0.000	A
C-A	175			175			
A-B	0			0			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	278	0.019	5	0.0	13.188	B
C-AB	0	474	0.000	0	0.0	0.000	A
C-A	209			209			
A-B	0			0			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	266	0.025	7	0.0	13.886	B
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	255			255			
A-B	0			0			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	266	0.025	7	0.0	13.886	B
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	255			255			
A-B	0			0			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	278	0.019	5	0.0	13.192	B
C-AB	0	474	0.000	0	0.0	0.000	A
C-A	209			209			
A-B	0			0			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	287	0.016	5	0.0	12.729	B
C-AB	0	490	0.000	0	0.0	0.000	A
C-A	175			175			
A-B	0			0			
A-C	313			313			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction A PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:30:42

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2027 No Phase 5				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2027 With Phase 5				
Stream B-AC	D3	0.2	9.40	0.17	A
Stream C-AB		0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15
D2	2027 No Phase 5	PM	ONE HOUR	15:45	17:15	15
D3	2027 With Phase 5	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Clonshaugh Rd (N)		Major
B	WWTP		Minor
C	Clonshaugh Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			80.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	110	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	549	0.100	0.253	0.159	0.361
B-C	668	0.102	0.259	-	-
C-B	620	0.240	0.240	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1373	100.000
B		✓	0	100.000
C		✓	1415	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1373
	B	0	0	0
	C	1415	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	27	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	61	0.000	0	0.0	0.000	A
C-AB	0	295	0.000	0	0.0	0.000	A
C-A	1065			1065			
A-B	0			0			
A-C	1034			1034			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	246	0.000	0	0.0	0.000	A
C-A	1272			1272			
A-B	0			0			
A-C	1234			1234			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	178	0.000	0	0.0	0.000	A
C-A	1558			1558			
A-B	0			0			
A-C	1512			1512			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	178	0.000	0	0.0	0.000	A
C-A	1558			1558			
A-B	0			0			
A-C	1512			1512			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	246	0.000	0	0.0	0.000	A
C-A	1272			1272			
A-B	0			0			
A-C	1234			1234			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	61	0.000	0	0.0	0.000	A
C-AB	0	295	0.000	0	0.0	0.000	A
C-A	1065			1065			
A-B	0			0			
A-C	1034			1034			

2027 No Phase 5 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 No Phase 5	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	382	100.000
B		✓	0	100.000
C		✓	563	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	382
	B	0	0	0
	C	563	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	18
	B	0	0	0
	C	31	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	455	0.000	0	0.0	0.000	A
C-AB	0	466	0.000	0	0.0	0.000	A
C-A	424			424			
A-B	0			0			
A-C	288			288			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	425	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	506			506			
A-B	0			0			
A-C	343			343			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	381	0.000	0	0.0	0.000	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	620			620			
A-B	0			0			
A-C	421			421			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	381	0.000	0	0.0	0.000	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	620			620			
A-B	0			0			
A-C	421			421			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	425	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	506			506			
A-B	0			0			
A-C	343			343			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	455	0.000	0	0.0	0.000	A
C-AB	0	466	0.000	0	0.0	0.000	A
C-A	424			424			
A-B	0			0			
A-C	288			288			

2027 With Phase 5 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.61	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.61	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 With Phase 5	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	382	100.000
B		✓	71	100.000
C		✓	563	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	382
	B	0	0	71
	C	563	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	18
	B	0	0	17
	C	31	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.17	9.40	0.2	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	53	496	0.108	53	0.1	8.120	A
C-AB	0	466	0.000	0	0.0	0.000	A
C-A	424			424			
A-B	0			0			
A-C	288			288			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	64	481	0.133	64	0.2	8.617	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	506			506			
A-B	0			0			
A-C	343			343			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	78	461	0.170	78	0.2	9.390	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	620			620			
A-B	0			0			
A-C	421			421			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	78	461	0.170	78	0.2	9.399	A
C-AB	0	434	0.000	0	0.0	0.000	A
C-A	620			620			
A-B	0			0			
A-C	421			421			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	64	481	0.133	64	0.2	8.631	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	506			506			
A-B	0			0			
A-C	343			343			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	53	496	0.108	54	0.1	8.143	A
C-AB	0	466	0.000	0	0.0	0.000	A
C-A	424			424			
A-B	0			0			
A-C	288			288			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction B AM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:31:15

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2027 No Phase 5				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2027 With Phase 5				
Stream B-AC	D3	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15
D3	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R139 (W)		Major
B	WWTP		Minor
C	R139 (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	12.00			200.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	697	0.094	0.237	0.149	0.339
B-C	781	0.089	0.224	-	-
C-B	690	0.198	0.198	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1137	100.000
B		✓	0	100.000
C		✓	1285	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1137
	B	0	0	0
	C	1285	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	14	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	397	0.000	0	0.0	0.000	A
C-AB	0	468	0.000	0	0.0	0.000	A
C-A	967			967			
A-B	0			0			
A-C	856			856			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	319	0.000	0	0.0	0.000	A
C-AB	0	433	0.000	0	0.0	0.000	A
C-A	1155			1155			
A-B	0			0			
A-C	1022			1022			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	196	0.000	0	0.0	0.000	A
C-AB	0	386	0.000	0	0.0	0.000	A
C-A	1415			1415			
A-B	0			0			
A-C	1252			1252			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	196	0.000	0	0.0	0.000	A
C-AB	0	386	0.000	0	0.0	0.000	A
C-A	1415			1415			
A-B	0			0			
A-C	1252			1252			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	319	0.000	0	0.0	0.000	A
C-AB	0	433	0.000	0	0.0	0.000	A
C-A	1155			1155			
A-B	0			0			
A-C	1022			1022			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	397	0.000	0	0.0	0.000	A
C-AB	0	468	0.000	0	0.0	0.000	A
C-A	967			967			
A-B	0			0			
A-C	856			856			

2027 No Phase 5 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 No Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1432	100.000
B		✓	0	100.000
C		✓	1603	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1432
	B	0	0	0
	C	1603	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	14
	B	0	0	0
	C	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	283	0.000	0	0.0	0.000	A
C-AB	0	414	0.000	0	0.0	0.000	A
C-A	1207			1207			
A-B	0			0			
A-C	1078			1078			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	163	0.000	0	0.0	0.000	A
C-AB	0	370	0.000	0	0.0	0.000	A
C-A	1441			1441			
A-B	0			0			
A-C	1287			1287			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	310	0.000	0	0.0	0.000	A
C-A	1765			1765			
A-B	0			0			
A-C	1577			1577			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	310	0.000	0	0.0	0.000	A
C-A	1765			1765			
A-B	0			0			
A-C	1577			1577			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	163	0.000	0	0.0	0.000	A
C-AB	0	370	0.000	0	0.0	0.000	A
C-A	1441			1441			
A-B	0			0			
A-C	1287			1287			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	283	0.000	0	0.0	0.000	A
C-AB	0	414	0.000	0	0.0	0.000	A
C-A	1207			1207			
A-B	0			0			
A-C	1078			1078			

2027 With Phase 5 , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 With Phase 5	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1528	100.000
B		✓	0	100.000
C		✓	1605	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	71	1457
	B	0	0	0
	C	1605	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	17	14
	B	0	0	0
	C	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	270	0.000	0	0.0	0.000	A
C-AB	0	399	0.000	0	0.0	0.000	A
C-A	1208			1208			
A-B	53			53			
A-C	1097			1097			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	144	0.000	0	0.0	0.000	A
C-AB	0	352	0.000	0	0.0	0.000	A
C-A	1443			1443			
A-B	64			64			
A-C	1310			1310			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	288	0.000	0	0.0	0.000	A
C-A	1767			1767			
A-B	78			78			
A-C	1604			1604			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	288	0.000	0	0.0	0.000	A
C-A	1767			1767			
A-B	78			78			
A-C	1604			1604			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	144	0.000	0	0.0	0.000	A
C-AB	0	352	0.000	0	0.0	0.000	A
C-A	1443			1443			
A-B	64			64			
A-C	1310			1310			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	270	0.000	0	0.0	0.000	A
C-AB	0	399	0.000	0	0.0	0.000	A
C-A	1208			1208			
A-B	53			53			
A-C	1097			1097			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction B PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Construction
Report generation date: 09/03/2023 12:31:51

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2027 No Phase 5				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2027 With Phase 5				
Stream B-AC	D3	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	16:45	18:15	15
D2	2027 No Phase 5	PM	ONE HOUR	16:45	18:15	15
D3	2027 With Phase 5	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R139 (W)		Major
B	WWTP		Minor
C	R139 (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	12.00			200.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	697	0.094	0.237	0.149	0.339
B-C	781	0.089	0.224	-	-
C-B	690	0.198	0.198	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1355	100.000
B		✓	0	100.000
C		✓	1787	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1355
	B	0	0	0
	C	1787	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	20	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	274	0.000	0	0.0	0.000	A
C-AB	0	422	0.000	0	0.0	0.000	A
C-A	1345			1345			
A-B	0			0			
A-C	1020			1020			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	146	0.000	0	0.0	0.000	A
C-AB	0	382	0.000	0	0.0	0.000	A
C-A	1606			1606			
A-B	0			0			
A-C	1218			1218			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1968			1968			
A-B	0			0			
A-C	1492			1492			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1968			1968			
A-B	0			0			
A-C	1492			1492			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	146	0.000	0	0.0	0.000	A
C-AB	0	382	0.000	0	0.0	0.000	A
C-A	1606			1606			
A-B	0			0			
A-C	1218			1218			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	274	0.000	0	0.0	0.000	A
C-AB	0	422	0.000	0	0.0	0.000	A
C-A	1345			1345			
A-B	0			0			
A-C	1020			1020			

2027 No Phase 5 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2027 No Phase 5	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1700	100.000
B		✓	0	100.000
C		✓	2271	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1700
	B	0	0	0
	C	2271	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	14
	B	0	0	0
	C	23	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	69	0.000	0	0.0	0.000	A
C-AB	0	360	0.000	0	0.0	0.000	A
C-A	1710			1710			
A-B	0			0			
A-C	1280			1280			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	310	0.000	0	0.0	0.000	A
C-A	2042			2042			
A-B	0			0			
A-C	1528			1528			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	241	0.000	0	0.0	0.000	A
C-A	2500			2500			
A-B	0			0			
A-C	1872			1872			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	241	0.000	0	0.0	0.000	A
C-A	2500			2500			
A-B	0			0			
A-C	1872			1872			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	310	0.000	0	0.0	0.000	A
C-A	2042			2042			
A-B	0			0			
A-C	1528			1528			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	69	0.000	0	0.0	0.000	A
C-AB	0	360	0.000	0	0.0	0.000	A
C-A	1710			1710			
A-B	0			0			
A-C	1280			1280			

2027 With Phase 5 , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2027 With Phase 5	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1708	100.000
B		✓	0	100.000
C		✓	2296	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	6	1702
	B	0	0	0
	C	2296	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	100	14
	B	0	0	0
	C	23	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	61	0.000	0	0.0	0.000	A
C-AB	0	358	0.000	0	0.0	0.000	A
C-A	1729			1729			
A-B	5			5			
A-C	1281			1281			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	308	0.000	0	0.0	0.000	A
C-A	2064			2064			
A-B	5			5			
A-C	1530			1530			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	238	0.000	0	0.0	0.000	A
C-A	2528			2528			
A-B	7			7			
A-C	1874			1874			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	238	0.000	0	0.0	0.000	A
C-A	2528			2528			
A-B	7			7			
A-C	1874			1874			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	308	0.000	0	0.0	0.000	A
C-A	2064			2064			
A-B	5			5			
A-C	1530			1530			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	61	0.000	0	0.0	0.000	A
C-AB	0	358	0.000	0	0.0	0.000	A
C-A	1729			1729			
A-B	5			5			
A-C	1281			1281			

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 1 AM.j10
Path: \\fserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
Report generation date: 18/10/2023 11:17:47

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base Year					
Arm A	D1	0.2	4.40	0.17	A
Arm B		0.4	4.10	0.31	A
Arm C		0.2	2.07	0.19	A
Arm D		0.1	2.57	0.06	A
2029 No Development					
Arm A	D2	0.3	4.68	0.20	A
Arm B		0.5	4.46	0.36	A
Arm C		0.3	2.17	0.22	A
Arm D		0.1	2.68	0.07	A
2029 With Development					
Arm A	D3	0.3	4.68	0.20	A
Arm B		0.6	4.56	0.36	A
Arm C		0.3	2.17	0.22	A
Arm D		0.1	2.68	0.07	A
2034 No Development					
Arm A	D4	0.3	4.87	0.22	A
Arm B		0.6	4.65	0.38	A
Arm C		0.3	2.22	0.23	A
Arm D		0.1	2.73	0.08	A
2034 With Development					
Arm A	D5	0.3	4.87	0.22	A
Arm B		0.6	4.77	0.39	A
Arm C		0.3	2.22	0.23	A
Arm D		0.1	2.73	0.08	A
2044 No Development					
Arm A	D6	0.3	5.25	0.25	A
Arm B		0.7	5.09	0.42	A
Arm C		0.4	2.35	0.26	A
Arm D		0.1	2.87	0.09	A
2044 With Development					
Arm A	D7	0.3	5.25	0.25	A
Arm B		0.8	5.22	0.43	A
Arm C		0.4	2.35	0.26	A
Arm D		0.1	2.87	0.09	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junciton2
Location	Clonshagh
Site number	2
Date	05/07/2016
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	08:15	09:45	15	✓
D2	2029 No Development	AM	ONE HOUR	08:15	09:45	15	✓
D3	2029 With Development	AM	ONE HOUR	08:15	09:45	15	✓
D4	2034 No Development	AM	ONE HOUR	08:15	09:45	15	✓
D5	2034 With Development	AM	ONE HOUR	08:15	09:45	15	✓
D6	2044 No Development	AM	ONE HOUR	08:15	09:45	15	✓
D7	2044 With Development	AM	ONE HOUR	08:15	09:45	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.21	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.21	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Petrol Station		
B	Clonshaugh Rd (N)		
C	Clonshaugh Rd (S)		
D	Hotel Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	4.50	4.80	8.6	12.6	57.0	65.0		
B	4.00	5.80	10.4	11.2	57.0	49.0		
C	8.20	9.00	6.3	16.7	57.0	55.0		
D	7.10	7.60	9.8	16.1	57.0	77.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.449	1228
B	0.492	1400
C	0.673	2401
D	0.559	1882

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	153	100.000
B		ONE HOUR	✓	355	100.000
C		ONE HOUR	✓	367	100.000
D		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	30	120	2
	B	17	2	326	10
	C	145	159	6	57
	D	11	14	55	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	13	0
	B	0	100	1	0
	C	17	5	27	10
	D	14	14	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.17	4.40	0.2	A	140	211
B	0.31	4.10	0.4	A	326	489
C	0.19	2.07	0.2	A	337	505
D	0.06	2.57	0.1	A	73	110

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	115	29	177	1022	0.113	115	131	0.0	0.1	3.966	A
B	267	67	138	1304	0.205	266	154	0.0	0.3	3.465	A
C	276	69	24	2150	0.129	276	380	0.0	0.1	1.921	A
D	60	15	248	1554	0.039	60	52	0.0	0.0	2.409	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	34	212	1007	0.137	137	156	0.1	0.2	4.140	A
B	319	80	165	1289	0.248	319	184	0.3	0.3	3.709	A
C	330	82	29	2147	0.154	330	455	0.1	0.2	1.981	A
D	72	18	297	1527	0.047	72	62	0.0	0.0	2.474	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	260	986	0.171	168	191	0.2	0.2	4.400	A
B	391	98	202	1269	0.308	390	226	0.3	0.4	4.094	A
C	404	101	35	2143	0.189	404	558	0.2	0.2	2.070	A
D	88	22	363	1490	0.059	88	76	0.0	0.1	2.568	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	260	986	0.171	168	192	0.2	0.2	4.402	A
B	391	98	203	1269	0.308	391	226	0.4	0.4	4.098	A
C	404	101	35	2143	0.189	404	558	0.2	0.2	2.070	A
D	88	22	363	1489	0.059	88	76	0.1	0.1	2.568	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	34	212	1007	0.137	138	157	0.2	0.2	4.142	A
B	319	80	166	1289	0.248	320	184	0.4	0.3	3.716	A
C	330	82	29	2147	0.154	330	456	0.2	0.2	1.981	A
D	72	18	297	1527	0.047	72	62	0.1	0.0	2.474	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	115	29	178	1022	0.113	115	131	0.2	0.1	3.971	A
B	267	67	139	1304	0.205	268	154	0.3	0.3	3.473	A
C	276	69	24	2150	0.129	276	382	0.2	0.1	1.921	A
D	60	15	249	1553	0.039	60	52	0.0	0.0	2.412	A

2029 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.43	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.43	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2029 No Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	176	100.000
B		ONE HOUR	✓	404	100.000
C		ONE HOUR	✓	422	100.000
D		ONE HOUR	✓	92	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	34	139	2
	B	19	2	372	11
	C	168	182	6	66
	D	13	16	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	14	0
	B	0	100	1	0
	C	18	6	29	10
	D	15	15	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.20	4.68	0.3	A	162	242
B	0.36	4.46	0.5	A	371	556
C	0.22	2.17	0.3	A	387	581
D	0.07	2.68	0.1	A	84	127

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	133	33	202	1003	0.132	132	151	0.0	0.2	4.130	A
B	304	76	158	1293	0.235	303	176	0.0	0.3	3.629	A
C	318	79	26	2132	0.149	317	435	0.0	0.2	1.983	A
D	69	17	284	1519	0.046	69	59	0.0	0.0	2.483	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	158	40	242	986	0.160	158	181	0.2	0.2	4.349	A
B	363	91	190	1276	0.285	363	210	0.3	0.4	3.938	A
C	379	95	31	2129	0.178	379	521	0.2	0.2	2.057	A
D	83	21	340	1488	0.056	83	71	0.0	0.1	2.561	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	194	48	296	962	0.201	194	221	0.2	0.3	4.682	A
B	445	111	232	1253	0.355	444	257	0.4	0.5	4.449	A
C	465	116	38	2124	0.219	464	638	0.2	0.3	2.168	A
D	101	25	416	1445	0.070	101	87	0.1	0.1	2.678	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	194	48	296	962	0.201	194	221	0.3	0.3	4.684	A
B	445	111	232	1253	0.355	445	258	0.5	0.5	4.455	A
C	465	116	39	2124	0.219	465	639	0.3	0.3	2.168	A
D	101	25	416	1445	0.070	101	87	0.1	0.1	2.678	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	158	40	242	986	0.161	158	181	0.3	0.2	4.354	A
B	363	91	190	1276	0.285	364	211	0.5	0.4	3.950	A
C	379	95	32	2129	0.178	380	522	0.3	0.2	2.058	A
D	83	21	340	1487	0.056	83	71	0.1	0.1	2.564	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	133	33	203	1003	0.132	133	151	0.2	0.2	4.139	A
B	304	76	159	1293	0.235	305	176	0.4	0.3	3.642	A
C	318	79	26	2132	0.149	318	437	0.2	0.2	1.985	A
D	69	17	285	1518	0.046	69	60	0.1	0.0	2.486	A

2029 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.47	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 With Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	176	100.000
B		ONE HOUR	✓	411	100.000
C		ONE HOUR	✓	422	100.000
D		ONE HOUR	✓	92	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	34	139	2
	B	19	2	379	11
	C	168	182	6	66
	D	13	16	63	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	14	0
	B	0	100	2	0
	C	18	6	29	10
	D	15	15	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.20	4.68	0.3	A	162	242
B	0.36	4.56	0.6	A	377	566
C	0.22	2.17	0.3	A	387	581
D	0.07	2.68	0.1	A	84	127

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	133	33	202	1003	0.132	132	151	0.0	0.2	4.130	A
B	309	77	158	1282	0.241	308	176	0.0	0.3	3.692	A
C	318	79	26	2132	0.149	317	440	0.0	0.2	1.983	A
D	69	17	284	1519	0.046	69	59	0.0	0.0	2.483	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	158	40	242	986	0.160	158	181	0.2	0.2	4.349	A
B	369	92	190	1265	0.292	369	210	0.3	0.4	4.017	A
C	379	95	31	2129	0.178	379	527	0.2	0.2	2.057	A
D	83	21	340	1488	0.056	83	71	0.0	0.1	2.561	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	194	48	296	962	0.201	194	221	0.2	0.3	4.682	A
B	453	113	232	1242	0.364	452	257	0.4	0.6	4.554	A
C	465	116	38	2124	0.219	464	645	0.2	0.3	2.168	A
D	101	25	416	1445	0.070	101	87	0.1	0.1	2.678	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	194	48	296	962	0.201	194	221	0.3	0.3	4.684	A
B	453	113	232	1241	0.365	453	258	0.6	0.6	4.562	A
C	465	116	39	2124	0.219	465	646	0.3	0.3	2.168	A
D	101	25	416	1445	0.070	101	87	0.1	0.1	2.678	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	158	40	242	986	0.161	158	181	0.3	0.2	4.354	A
B	369	92	190	1265	0.292	370	211	0.6	0.4	4.028	A
C	379	95	32	2129	0.178	380	529	0.3	0.2	2.058	A
D	83	21	340	1487	0.056	83	71	0.1	0.1	2.562	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	133	33	203	1003	0.132	133	151	0.2	0.2	4.137	A
B	309	77	159	1281	0.241	310	176	0.4	0.3	3.705	A
C	318	79	26	2132	0.149	318	442	0.2	0.2	1.984	A
D	69	17	285	1518	0.046	69	60	0.1	0.0	2.486	A

2034 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.55	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.55	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2034 No Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	187	100.000
B		ONE HOUR	✓	427	100.000
C		ONE HOUR	✓	448	100.000
D		ONE HOUR	✓	98	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	36	148	2
	B	20	2	393	12
	C	178	193	7	70
	D	14	17	67	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	9	15	0
	B	0	100	1	0
	C	19	6	30	11
	D	15	16	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.22	4.87	0.3	A	172	257
B	0.38	4.65	0.6	A	392	588
C	0.23	2.22	0.3	A	411	617
D	0.08	2.73	0.1	A	90	135

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	141	35	215	989	0.142	140	160	0.0	0.2	4.243	A
B	321	80	169	1287	0.250	320	186	0.0	0.3	3.717	A
C	337	84	28	2120	0.159	337	461	0.0	0.2	2.017	A
D	74	18	301	1506	0.049	74	63	0.0	0.1	2.513	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	257	970	0.173	168	191	0.2	0.2	4.484	A
B	384	96	202	1269	0.303	383	223	0.3	0.4	4.064	A
C	403	101	33	2116	0.190	403	552	0.2	0.2	2.100	A
D	88	22	360	1473	0.060	88	75	0.1	0.1	2.599	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	206	51	315	946	0.218	206	234	0.2	0.3	4.864	A
B	470	118	247	1244	0.378	469	273	0.4	0.6	4.645	A
C	493	123	41	2112	0.234	493	676	0.2	0.3	2.223	A
D	108	27	441	1428	0.076	108	92	0.1	0.1	2.726	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	206	51	315	946	0.218	206	235	0.3	0.3	4.886	A
B	470	118	248	1244	0.378	470	273	0.6	0.6	4.653	A
C	493	123	41	2112	0.234	493	677	0.3	0.3	2.223	A
D	108	27	442	1428	0.076	108	92	0.1	0.1	2.727	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	257	970	0.173	168	192	0.3	0.2	4.490	A
B	384	96	203	1269	0.303	385	223	0.6	0.4	4.074	A
C	403	101	33	2116	0.190	403	554	0.3	0.2	2.101	A
D	88	22	361	1473	0.060	88	76	0.1	0.1	2.601	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	141	35	215	988	0.142	141	160	0.2	0.2	4.250	A
B	321	80	170	1287	0.250	322	187	0.4	0.3	3.731	A
C	337	84	28	2120	0.159	337	464	0.2	0.2	2.019	A
D	74	18	302	1505	0.049	74	63	0.1	0.1	2.514	A

2034 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.60	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.60	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2034 With Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	187	100.000
B		ONE HOUR	✓	434	100.000
C		ONE HOUR	✓	448	100.000
D		ONE HOUR	✓	98	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	36	148	2
	B	20	2	400	12
	C	178	193	7	70
	D	14	17	67	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	9	15	0
	B	0	100	2	0
	C	19	6	30	11
	D	15	16	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.22	4.87	0.3	A	172	257
B	0.39	4.77	0.6	A	398	597
C	0.23	2.22	0.3	A	411	617
D	0.08	2.73	0.1	A	90	135

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	141	35	215	989	0.142	140	160	0.0	0.2	4.243	A
B	327	82	169	1276	0.256	325	186	0.0	0.3	3.783	A
C	337	84	28	2120	0.159	337	466	0.0	0.2	2.017	A
D	74	18	301	1506	0.049	74	63	0.0	0.1	2.513	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	257	970	0.173	168	191	0.2	0.2	4.484	A
B	390	98	202	1258	0.310	390	223	0.3	0.4	4.146	A
C	403	101	33	2116	0.190	403	559	0.2	0.2	2.100	A
D	88	22	360	1473	0.060	88	75	0.1	0.1	2.599	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	206	51	315	946	0.218	206	234	0.2	0.3	4.864	A
B	478	119	247	1233	0.388	477	273	0.4	0.6	4.761	A
C	493	123	41	2112	0.234	493	684	0.2	0.3	2.223	A
D	108	27	441	1428	0.076	108	92	0.1	0.1	2.726	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	206	51	315	946	0.218	206	235	0.3	0.3	4.866	A
B	478	119	248	1232	0.388	478	273	0.6	0.6	4.769	A
C	493	123	41	2112	0.234	493	685	0.3	0.3	2.223	A
D	108	27	442	1428	0.076	108	92	0.1	0.1	2.727	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	257	970	0.173	168	192	0.3	0.2	4.490	A
B	390	98	203	1257	0.310	391	223	0.6	0.5	4.158	A
C	403	101	33	2116	0.190	403	560	0.3	0.2	2.101	A
D	88	22	361	1473	0.060	88	76	0.1	0.1	2.601	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	141	35	215	988	0.142	141	160	0.2	0.2	4.250	A
B	327	82	170	1275	0.256	327	187	0.5	0.3	3.800	A
C	337	84	28	2120	0.159	337	469	0.2	0.2	2.019	A
D	74	18	302	1505	0.049	74	63	0.1	0.1	2.516	A

2044 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2044 No Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	209	100.000
B		ONE HOUR	✓	468	100.000
C		ONE HOUR	✓	496	100.000
D		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	40	165	3
	B	22	3	430	13
	C	199	212	8	77
	D	15	19	74	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	10	17	0
	B	0	100	1	0
	C	21	7	33	12
	D	17	18	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.25	5.25	0.3	A	192	288
B	0.42	5.09	0.7	A	429	644
C	0.26	2.35	0.4	A	455	683
D	0.09	2.87	0.1	A	99	149

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	237	963	0.163	157	178	0.0	0.2	4.462	A
B	352	88	188	1273	0.277	351	206	0.0	0.4	3.899	A
C	373	93	31	2090	0.179	373	507	0.0	0.2	2.095	A
D	81	20	334	1459	0.056	81	70	0.0	0.1	2.612	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	47	284	943	0.199	188	213	0.2	0.2	4.767	A
B	421	105	225	1252	0.336	420	246	0.4	0.5	4.326	A
C	446	111	38	2086	0.214	446	608	0.2	0.3	2.195	A
D	97	24	400	1422	0.068	97	84	0.1	0.1	2.715	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	230	58	348	915	0.251	230	261	0.2	0.3	5.249	A
B	515	129	276	1223	0.421	514	301	0.5	0.7	5.072	A
C	546	137	46	2080	0.263	546	744	0.3	0.4	2.346	A
D	119	30	490	1372	0.087	119	102	0.1	0.1	2.871	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	230	58	348	915	0.251	230	261	0.3	0.3	5.254	A
B	515	129	276	1223	0.421	515	302	0.7	0.7	5.085	A
C	546	137	46	2080	0.263	546	745	0.4	0.4	2.346	A
D	119	30	490	1372	0.087	119	102	0.1	0.1	2.871	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	47	284	943	0.199	188	213	0.3	0.3	4.774	A
B	421	105	226	1251	0.336	422	247	0.7	0.5	4.342	A
C	446	111	38	2085	0.214	446	610	0.4	0.3	2.196	A
D	97	24	400	1422	0.068	97	84	0.1	0.1	2.718	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	238	962	0.163	158	179	0.3	0.2	4.473	A
B	352	88	189	1272	0.277	353	206	0.5	0.4	3.918	A
C	373	93	32	2089	0.179	374	510	0.3	0.2	2.098	A
D	81	20	335	1458	0.056	81	70	0.1	0.1	2.614	A

2044 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.88	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.88	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2044 With Development	AM	ONE HOUR	08:15	09:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	209	100.000
B		ONE HOUR	✓	475	100.000
C		ONE HOUR	✓	496	100.000
D		ONE HOUR	✓	108	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	40	165	3
	B	22	3	437	13
	C	199	212	8	77
	D	15	19	74	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	10	17	0
	B	0	100	2	0
	C	21	7	33	12
	D	17	18	13	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.25	5.25	0.3	A	192	288
B	0.43	5.22	0.8	A	436	654
C	0.26	2.35	0.4	A	455	683
D	0.09	2.87	0.1	A	99	149

Main Results for each time segment

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	237	963	0.163	157	178	0.0	0.2	4.462	A
B	358	89	188	1261	0.284	356	206	0.0	0.4	3.970	A
C	373	93	31	2090	0.179	373	513	0.0	0.2	2.095	A
D	81	20	334	1459	0.056	81	70	0.0	0.1	2.612	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	47	284	943	0.199	188	213	0.2	0.2	4.767	A
B	427	107	225	1241	0.344	427	246	0.4	0.5	4.419	A
C	446	111	38	2086	0.214	446	614	0.2	0.3	2.195	A
D	97	24	400	1422	0.068	97	84	0.1	0.1	2.715	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	230	58	348	915	0.251	230	261	0.2	0.3	5.249	A
B	523	131	276	1212	0.431	522	301	0.5	0.8	5.209	A
C	546	137	46	2080	0.263	546	752	0.3	0.4	2.346	A
D	119	30	490	1372	0.087	119	102	0.1	0.1	2.871	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	230	58	348	915	0.251	230	261	0.3	0.3	5.254	A
B	523	131	276	1212	0.431	523	302	0.8	0.8	5.223	A
C	546	137	46	2080	0.263	546	753	0.4	0.4	2.346	A
D	119	30	490	1372	0.087	119	102	0.1	0.1	2.871	A

09:15 - 09:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	188	47	284	943	0.199	188	213	0.3	0.3	4.776	A
B	427	107	226	1240	0.344	428	247	0.8	0.5	4.438	A
C	446	111	38	2085	0.214	446	616	0.4	0.3	2.196	A
D	97	24	400	1422	0.068	97	84	0.1	0.1	2.716	A

09:30 - 09:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	238	962	0.163	158	179	0.3	0.2	4.473	A
B	358	89	189	1261	0.284	358	206	0.5	0.4	3.992	A
C	373	93	32	2089	0.179	374	516	0.3	0.2	2.098	A
D	81	20	335	1458	0.056	81	70	0.1	0.1	2.614	A

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 1 PM.j10
Path: \\fserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
Report generation date: 18/10/2023 11:25:49

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Arm A	D1	0.2	4.65	0.18	A
Arm B		0.3	3.75	0.25	A
Arm C		0.3	2.05	0.24	A
Arm D		0.1	2.45	0.05	A
	2029 No Development				
Arm A	D2	0.3	5.06	0.21	A
Arm B		0.4	4.05	0.29	A
Arm C		0.4	2.15	0.27	A
Arm D		0.1	2.54	0.06	A
	2029 With Development				
Arm A	D3	0.3	5.06	0.21	A
Arm B		0.4	4.19	0.31	A
Arm C		0.4	2.15	0.27	A
Arm D		0.1	2.54	0.06	A
	2034 No Development				
Arm A	D4	0.3	5.23	0.23	A
Arm B		0.4	4.18	0.30	A
Arm C		0.4	2.21	0.29	A
Arm D		0.1	2.60	0.06	A
	2034 With Development				
Arm A	D5	0.3	5.23	0.23	A
Arm B		0.5	4.38	0.33	A
Arm C		0.4	2.21	0.29	A
Arm D		0.1	2.60	0.06	A
	2044 No Development				
Arm A	D6	0.4	5.67	0.26	A
Arm B		0.5	4.45	0.34	A
Arm C		0.5	2.31	0.32	A
Arm D		0.1	2.69	0.07	A
	2044 With Development				
Arm A	D7	0.4	5.67	0.26	A
Arm B		0.6	4.68	0.37	A
Arm C		0.5	2.31	0.32	A
Arm D		0.1	2.69	0.07	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junciton2
Location	Clonshagh
Site number	2
Date	05/07/2016
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓
D2	2029 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D3	2029 With Development	PM	ONE HOUR	16:00	17:30	15	✓
D4	2034 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D5	2034 With Development	PM	ONE HOUR	16:00	17:30	15	✓
D6	2044 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D7	2044 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	2.97	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	2.97	A

Arms

Arms

Arm	Name	Description	No give-way line
A	Petrol Station		
B	Clonshaugh Rd (N)		
C	Clonshaugh Rd (S)		
D	Hotel Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	4.50	4.80	8.6	12.6	57.0	65.0		
B	4.00	5.80	10.4	11.2	57.0	49.0		
C	8.20	9.00	6.3	16.7	57.0	55.0		
D	7.10	7.60	9.8	16.1	57.0	77.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.449	1228
B	0.492	1400
C	0.673	2401
D	0.559	1882

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	153	100.000
B		ONE HOUR	✓	283	100.000
C		ONE HOUR	✓	501	100.000
D		ONE HOUR	✓	67	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	43	108	1
	B	22	0	254	7
	C	108	330	5	58
	D	5	12	49	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	13	0
	B	7	0	2	0
	C	7	1	33	3
	D	0	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.18	4.65	0.2	A	140	211
B	0.25	3.75	0.3	A	260	390
C	0.24	2.05	0.3	A	460	690
D	0.05	2.45	0.1	A	61	92

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	115	29	298	1000	0.115	115	102	0.0	0.1	4.064	A
B	213	53	124	1302	0.164	212	289	0.0	0.2	3.302	A
C	377	94	24	2318	0.163	376	312	0.0	0.2	1.853	A
D	50	13	350	1633	0.031	50	50	0.0	0.0	2.274	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	34	357	976	0.141	137	122	0.1	0.2	4.294	A
B	254	64	148	1289	0.197	254	346	0.2	0.2	3.478	A
C	450	113	29	2315	0.195	450	374	0.2	0.2	1.930	A
D	60	15	419	1595	0.038	60	60	0.0	0.0	2.345	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	437	942	0.179	168	150	0.2	0.2	4.650	A
B	312	78	181	1271	0.245	311	424	0.2	0.3	3.750	A
C	552	138	35	2310	0.239	551	458	0.2	0.3	2.046	A
D	74	18	513	1542	0.048	74	74	0.0	0.1	2.451	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	168	42	437	942	0.179	168	150	0.2	0.2	4.652	A
B	312	78	182	1271	0.245	312	424	0.3	0.3	3.750	A
C	552	138	35	2310	0.239	552	458	0.3	0.3	2.046	A
D	74	18	513	1542	0.048	74	74	0.1	0.1	2.451	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	138	34	357	976	0.141	138	122	0.2	0.2	4.299	A
B	254	64	149	1289	0.197	255	346	0.3	0.2	3.483	A
C	450	113	29	2315	0.195	451	374	0.3	0.2	1.931	A
D	60	15	419	1594	0.038	60	60	0.1	0.0	2.348	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	115	29	299	1000	0.115	115	102	0.2	0.1	4.071	A
B	213	53	124	1302	0.164	213	290	0.2	0.2	3.309	A
C	377	94	24	2318	0.163	377	313	0.2	0.2	1.854	A
D	50	13	351	1633	0.031	50	50	0.0	0.0	2.276	A

2029 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.18	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.18	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2029 No Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	175	100.000
B		ONE HOUR	✓	324	100.000
C		ONE HOUR	✓	572	100.000
D		ONE HOUR	✓	77	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	49	124	1
	B	25	0	291	8
	C	124	377	5	66
	D	6	14	56	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	15	0
	B	8	0	3	0
	C	8	1	35	4
	D	0	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.21	5.06	0.3	A	161	241
B	0.29	4.05	0.4	A	297	446
C	0.27	2.15	0.4	A	525	787
D	0.06	2.54	0.1	A	71	106

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	340	970	0.136	131	117	0.0	0.2	4.290	A
B	244	61	141	1280	0.191	243	330	0.0	0.2	3.468	A
C	431	108	27	2309	0.187	430	357	0.0	0.2	1.915	A
D	58	14	400	1605	0.036	58	57	0.0	0.0	2.326	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	407	942	0.167	157	140	0.2	0.2	4.584	A
B	291	73	169	1265	0.230	291	395	0.2	0.3	3.696	A
C	514	129	32	2305	0.223	514	428	0.2	0.3	2.010	A
D	69	17	478	1561	0.044	69	68	0.0	0.0	2.412	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	193	48	498	905	0.213	192	172	0.2	0.3	5.051	A
B	357	89	207	1245	0.287	356	484	0.3	0.4	4.050	A
C	630	157	40	2300	0.274	629	523	0.3	0.4	2.155	A
D	85	21	585	1501	0.056	85	84	0.0	0.1	2.541	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	193	48	499	904	0.213	193	172	0.3	0.3	5.057	A
B	357	89	207	1245	0.287	357	484	0.4	0.4	4.054	A
C	630	157	40	2300	0.274	630	524	0.4	0.4	2.155	A
D	85	21	586	1501	0.056	85	84	0.1	0.1	2.542	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	408	942	0.167	158	140	0.3	0.2	4.590	A
B	291	73	169	1265	0.230	292	396	0.4	0.3	3.700	A
C	514	129	32	2305	0.223	515	429	0.4	0.3	2.010	A
D	69	17	479	1561	0.044	69	68	0.1	0.0	2.413	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	341	969	0.136	132	118	0.2	0.2	4.300	A
B	244	61	142	1279	0.191	244	331	0.3	0.2	3.477	A
C	431	108	27	2309	0.187	431	359	0.3	0.2	1.919	A
D	58	14	401	1604	0.036	58	57	0.0	0.0	2.329	A

2029 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.24	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.24	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	175	100.000
B		ONE HOUR	✓	351	100.000
C		ONE HOUR	✓	572	100.000
D		ONE HOUR	✓	77	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	49	124	1
	B	25	0	318	8
	C	124	377	5	66
	D	6	14	56	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	15	0
	B	8	0	3	0
	C	8	1	35	4
	D	0	0	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.21	5.06	0.3	A	161	241
B	0.31	4.19	0.4	A	322	483
C	0.27	2.15	0.4	A	525	787
D	0.06	2.54	0.1	A	71	106

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	340	970	0.136	131	117	0.0	0.2	4.290	A
B	264	66	141	1280	0.206	263	330	0.0	0.3	3.537	A
C	431	108	27	2309	0.187	430	377	0.0	0.2	1.915	A
D	58	14	400	1605	0.036	58	57	0.0	0.0	2.326	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	407	942	0.167	157	140	0.2	0.2	4.584	A
B	316	79	169	1265	0.249	315	395	0.3	0.3	3.789	A
C	514	129	32	2305	0.223	514	452	0.2	0.3	2.010	A
D	69	17	478	1561	0.044	69	68	0.0	0.0	2.412	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	193	48	498	905	0.213	192	172	0.2	0.3	5.051	A
B	386	97	207	1245	0.310	386	484	0.3	0.4	4.189	A
C	630	157	40	2300	0.274	629	553	0.3	0.4	2.155	A
D	85	21	585	1501	0.056	85	84	0.0	0.1	2.541	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	193	48	499	904	0.213	193	172	0.3	0.3	5.057	A
B	386	97	207	1245	0.310	386	484	0.4	0.4	4.193	A
C	630	157	40	2300	0.274	630	554	0.4	0.4	2.155	A
D	85	21	586	1501	0.056	85	84	0.1	0.1	2.542	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	157	39	408	942	0.167	158	140	0.3	0.2	4.592	A
B	316	79	169	1265	0.249	316	396	0.4	0.3	3.794	A
C	514	129	32	2305	0.223	515	453	0.4	0.3	2.010	A
D	69	17	479	1561	0.044	69	68	0.1	0.0	2.415	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	132	33	341	969	0.136	132	118	0.2	0.2	4.300	A
B	264	66	142	1280	0.206	265	331	0.3	0.3	3.546	A
C	431	108	27	2309	0.187	431	379	0.3	0.2	1.919	A
D	58	14	401	1604	0.036	58	57	0.0	0.0	2.327	A

2034 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.27	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.27	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2034 No Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	185	100.000
B		ONE HOUR	✓	341	100.000
C		ONE HOUR	✓	605	100.000
D		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	51	132	1
	B	26	0	307	8
	C	132	397	6	70
	D	6	14	59	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	15	0
	B	8	0	3	0
	C	9	1	37	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.23	5.23	0.3	A	170	255
B	0.30	4.18	0.4	A	313	469
C	0.29	2.21	0.4	A	555	833
D	0.06	2.60	0.1	A	73	110

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	139	35	358	961	0.145	139	124	0.0	0.2	4.371	A
B	257	64	150	1275	0.201	256	347	0.0	0.3	3.529	A
C	455	114	28	2302	0.198	454	378	0.0	0.2	1.948	A
D	60	15	422	1580	0.038	60	60	0.0	0.0	2.368	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	166	42	429	932	0.178	166	148	0.2	0.2	4.697	A
B	307	77	180	1259	0.244	306	415	0.3	0.3	3.779	A
C	544	136	33	2298	0.237	544	453	0.2	0.3	2.052	A
D	72	18	505	1534	0.047	72	72	0.0	0.0	2.462	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	204	51	525	893	0.228	203	182	0.2	0.3	5.221	A
B	375	94	220	1237	0.303	375	508	0.3	0.4	4.173	A
C	666	167	41	2293	0.291	666	554	0.3	0.4	2.212	A
D	88	22	618	1470	0.060	88	88	0.0	0.1	2.604	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	204	51	525	892	0.228	204	182	0.3	0.3	5.226	A
B	375	94	220	1237	0.303	375	509	0.4	0.4	4.177	A
C	666	167	41	2293	0.291	666	555	0.4	0.4	2.212	A
D	88	22	619	1470	0.060	88	88	0.1	0.1	2.604	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	166	42	429	932	0.178	167	148	0.3	0.2	4.704	A
B	307	77	180	1259	0.244	307	416	0.4	0.3	3.783	A
C	544	136	33	2298	0.237	544	454	0.4	0.3	2.053	A
D	72	18	506	1533	0.047	72	72	0.1	0.0	2.463	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	139	35	359	961	0.145	139	124	0.2	0.2	4.382	A
B	257	64	151	1274	0.201	257	348	0.3	0.3	3.541	A
C	455	114	28	2302	0.198	456	380	0.3	0.2	1.951	A
D	60	15	423	1579	0.038	60	60	0.0	0.0	2.389	A

2034 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.35	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2034 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	185	100.000
B		ONE HOUR	✓	368	100.000
C		ONE HOUR	✓	605	100.000
D		ONE HOUR	✓	80	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	51	132	1
	B	26	0	334	8
	C	132	397	6	70
	D	6	14	59	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	15	0
	B	8	0	4	0
	C	9	1	36	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.23	5.23	0.3	A	170	255
B	0.33	4.38	0.5	A	338	507
C	0.29	2.21	0.4	A	555	833
D	0.06	2.60	0.1	A	73	110

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	139	35	358	961	0.145	139	124	0.0	0.2	4.371	A
B	277	69	150	1264	0.219	276	347	0.0	0.3	3.641	A
C	455	114	28	2302	0.198	454	398	0.0	0.2	1.947	A
D	60	15	422	1580	0.038	60	60	0.0	0.0	2.368	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	166	42	429	932	0.178	166	148	0.2	0.2	4.696	A
B	331	83	180	1248	0.265	331	415	0.3	0.4	3.922	A
C	544	136	33	2298	0.237	544	477	0.2	0.3	2.051	A
D	72	18	505	1534	0.047	72	72	0.0	0.0	2.462	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	204	51	525	893	0.228	203	182	0.2	0.3	5.220	A
B	405	101	220	1227	0.330	405	508	0.4	0.5	4.376	A
C	666	167	41	2293	0.291	666	584	0.3	0.4	2.212	A
D	88	22	618	1470	0.060	88	88	0.0	0.1	2.604	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	204	51	525	892	0.228	204	182	0.3	0.3	5.225	A
B	405	101	220	1227	0.330	405	509	0.5	0.5	4.382	A
C	666	167	41	2293	0.291	666	585	0.4	0.4	2.212	A
D	88	22	619	1470	0.060	88	88	0.1	0.1	2.604	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	166	42	429	932	0.178	167	148	0.3	0.2	4.703	A
B	331	83	180	1248	0.265	331	416	0.5	0.4	3.929	A
C	544	136	33	2298	0.237	544	478	0.4	0.3	2.052	A
D	72	18	506	1533	0.047	72	72	0.1	0.0	2.463	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	139	35	359	961	0.145	139	124	0.2	0.2	4.384	A
B	277	69	151	1263	0.219	277	348	0.4	0.3	3.650	A
C	455	114	28	2302	0.198	456	400	0.3	0.2	1.950	A
D	60	15	423	1579	0.038	60	60	0.0	0.0	2.371	A

2044 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.48	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2044 No Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	205	100.000
B		ONE HOUR	✓	375	100.000
C		ONE HOUR	✓	663	100.000
D		ONE HOUR	✓	89	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	56	147	1
	B	29	0	337	9
	C	145	435	6	77
	D	7	16	65	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	17	0
	B	9	0	3	0
	C	10	1	40	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.26	5.67	0.4	A	188	282
B	0.34	4.45	0.5	A	344	516
C	0.32	2.31	0.5	A	608	913
D	0.07	2.69	0.1	A	82	123

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	154	39	393	935	0.165	154	137	0.0	0.2	4.604	A
B	282	71	166	1264	0.223	281	381	0.0	0.3	3.659	A
C	499	125	31	2295	0.218	498	416	0.0	0.3	2.003	A
D	67	17	463	1557	0.043	67	66	0.0	0.0	2.415	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	46	470	903	0.204	184	164	0.2	0.3	5.005	A
B	337	84	198	1246	0.270	337	456	0.3	0.4	3.957	A
C	596	149	37	2290	0.260	596	498	0.3	0.4	2.124	A
D	80	20	553	1506	0.053	80	79	0.0	0.1	2.523	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	226	56	575	860	0.262	225	200	0.3	0.4	5.667	A
B	413	103	243	1222	0.338	412	558	0.4	0.5	4.441	A
C	730	182	45	2285	0.320	730	610	0.4	0.5	2.315	A
D	98	24	678	1436	0.068	98	97	0.1	0.1	2.689	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	226	56	576	860	0.262	226	200	0.4	0.4	5.675	A
B	413	103	243	1222	0.338	413	558	0.5	0.5	4.448	A
C	730	182	45	2285	0.320	730	611	0.5	0.5	2.315	A
D	98	24	678	1436	0.068	98	97	0.1	0.1	2.689	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	46	471	903	0.204	185	164	0.4	0.3	5.016	A
B	337	84	199	1246	0.271	338	456	0.5	0.4	3.966	A
C	596	149	37	2290	0.260	596	500	0.5	0.4	2.127	A
D	80	20	554	1506	0.053	80	79	0.1	0.1	2.526	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	154	39	394	934	0.165	155	137	0.3	0.2	4.620	A
B	282	71	167	1264	0.223	283	382	0.4	0.3	3.672	A
C	499	125	31	2294	0.218	499	418	0.4	0.3	2.005	A
D	67	17	464	1556	0.043	67	66	0.1	0.0	2.419	A

2044 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	3.57	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.57	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2044 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	205	100.000
B		ONE HOUR	✓	402	100.000
C		ONE HOUR	✓	663	100.000
D		ONE HOUR	✓	89	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	1	56	147	1
	B	29	0	364	9
	C	145	435	6	77
	D	7	16	65	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	0	17	0
	B	9	0	4	0
	C	10	1	40	4
	D	0	0	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.26	5.67	0.4	A	188	282
B	0.37	4.68	0.6	A	369	553
C	0.32	2.31	0.5	A	608	913
D	0.07	2.69	0.1	A	82	123

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	154	39	393	935	0.165	154	137	0.0	0.2	4.604	A
B	303	76	166	1254	0.241	301	381	0.0	0.3	3.775	A
C	499	125	31	2295	0.218	498	436	0.0	0.3	2.003	A
D	67	17	463	1557	0.043	67	66	0.0	0.0	2.415	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	46	470	903	0.204	184	164	0.2	0.3	5.005	A
B	361	90	198	1236	0.292	361	456	0.3	0.4	4.112	A
C	596	149	37	2290	0.260	596	523	0.3	0.4	2.124	A
D	80	20	553	1506	0.053	80	79	0.0	0.1	2.523	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	226	56	575	860	0.262	225	200	0.3	0.4	5.667	A
B	443	111	243	1212	0.365	442	558	0.4	0.6	4.671	A
C	730	182	45	2285	0.320	730	640	0.4	0.5	2.315	A
D	98	24	678	1436	0.068	98	97	0.1	0.1	2.689	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	226	56	576	860	0.262	226	200	0.4	0.4	5.675	A
B	443	111	243	1212	0.365	443	558	0.6	0.6	4.679	A
C	730	182	45	2285	0.320	730	641	0.5	0.5	2.315	A
D	98	24	678	1436	0.068	98	97	0.1	0.1	2.689	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	184	46	471	903	0.204	185	164	0.4	0.3	5.014	A
B	361	90	199	1236	0.292	362	456	0.6	0.4	4.124	A
C	596	149	37	2290	0.260	596	524	0.5	0.4	2.127	A
D	80	20	554	1506	0.053	80	79	0.1	0.1	2.524	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	154	39	394	934	0.165	155	137	0.3	0.2	4.618	A
B	303	76	167	1253	0.242	303	382	0.4	0.3	3.789	A
C	499	125	31	2294	0.218	499	439	0.4	0.3	2.007	A
D	67	17	464	1556	0.043	67	66	0.1	0.0	2.419	A

Junctions 10

ARCADY 10 - Roundabout Module

Filename: Import of Junction 2 AM.j10
Path: \\fserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
Report generation date: 18/10/2023 11:41:19

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Arm A	D1	1.3	9.44	0.57	A
Arm B		251.7	465.33	1.24	F
Arm C		0.0	0.00	0.00	A
Arm D		69.9	93.26	1.04	F
	2029 No Development				
Arm A	D2	1.9	12.15	0.66	B
Arm B		607.5	1117.30	1.46	F
Arm C		0.0	0.00	0.00	A
Arm D		252.6	385.60	1.20	F
	2029 With Development				
Arm A	D3	2.0	12.71	0.68	B
Arm B		613.6	1132.38	1.46	F
Arm C		0.0	0.00	0.00	A
Arm D		269.7	416.56	1.21	F
	2034 No Development				
Arm A	D4	2.3	13.93	0.71	B
Arm B		788.9	1462.61	1.55	F
Arm C		0.0	0.00	0.00	A
Arm D		373.1	563.96	1.27	F
	2034 With Development				
Arm A	D5	2.5	14.91	0.72	B
Arm B		798.8	1484.20	1.56	F
Arm C		0.0	0.00	0.00	A
Arm D		398.3	598.32	1.28	F
	2044 No Development				
Arm A	D6	3.6	19.64	0.79	C
Arm B		1212.4	2237.40	1.75	F
Arm C		0.0	0.00	0.00	A
Arm D		669.7	1034.47	1.41	F
	2044 With Development				
Arm A	D7	3.9	21.07	0.80	C
Arm B		1220.8	2257.82	1.76	F
Arm C		0.0	0.00	0.00	A
Arm D		697.7	1082.10	1.42	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junciton2
Location	Clonshagh
Site number	2
Date	05/07/2016
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:30	09:00	15	✓
D2	2029 No Development	AM	ONE HOUR	07:30	09:00	15	✓
D3	2029 With Development	AM	ONE HOUR	07:30	09:00	15	✓
D4	2034 No Development	AM	ONE HOUR	07:30	09:00	15	✓
D5	2034 With Development	AM	ONE HOUR	07:30	09:00	15	✓
D6	2044 No Development	AM	ONE HOUR	07:30	09:00	15	✓
D7	2044 With Development	AM	ONE HOUR	07:30	09:00	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	252.21	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	252.21	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Clonshaugh Road		
B	R139 East		
C	Access Road		
D	R139 West		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	8.00	8.10	30.0	38.0	66.0	35.0		
B	5.30	8.80	16.4	23.0	66.0	33.0		
C	4.20	5.90	9.0	14.0	66.0	53.0		
D	6.70	9.20	18.0	65.0	66.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.651	2468
B	0.610	2227
C	0.456	1433
D	0.668	2570

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	460	100.000
B		ONE HOUR	✓	2163	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2208	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	228	0	232
	B	133	19	0	2011
	C	0	0	0	0
	D	135	2071	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	6	0	9
	B	6	12	0	7
	C	0	0	0	0
	D	11	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.57	9.44	1.3	A	422	633
B	1.24	465.33	251.7	F	1985	2977
C	0.00	0.00	0.0	A	0	0
D	1.04	93.26	69.9	F	2026	3039

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	346	87	1566	1290	0.269	345	200	0.0	0.4	3.806	A
B	1628	407	175	1973	0.825	1611	1735	0.0	4.4	9.521	A
C	0	0	1786	560	0.000	0	0	0.0	0.0	0.000	A
D	1662	416	113	2342	0.710	1653	1673	0.0	2.4	5.154	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	414	103	1869	1095	0.378	413	236	0.4	0.6	5.267	A
B	1945	486	210	1951	0.996	1877	2072	4.4	21.2	33.361	D
C	0	0	2087	413	0.000	0	0	0.0	0.0	0.000	A
D	1985	496	132	2329	0.852	1973	1955	2.4	5.4	9.789	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	506	127	2164	906	0.559	504	258	0.6	1.2	8.905	A
B	2382	595	256	1923	1.239	1920	2411	21.2	136.6	154.491	F
C	0	0	2176	369	0.000	0	0	0.0	0.0	0.000	A
D	2431	608	135	2327	1.045	2287	2041	5.4	41.5	45.305	E

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	506	127	2193	887	0.571	506	260	1.2	1.3	9.439	A
B	2382	595	257	1922	1.239	1922	2441	136.6	251.6	366.197	F
C	0	0	2179	367	0.000	0	0	0.0	0.0	0.000	A
D	2431	608	135	2327	1.045	2317	2044	41.5	69.9	93.257	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	414	103	2117	936	0.442	416	256	1.3	0.8	6.947	A
B	1945	486	212	1950	0.997	1944	2321	251.6	251.7	465.331	F
C	0	0	2156	379	0.000	0	0	0.0	0.0	0.000	A
D	1985	496	137	2326	0.853	2236	2019	69.9	7.0	56.143	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	346	87	1595	1271	0.272	348	223	0.8	0.4	3.908	A
B	1628	407	177	1972	0.826	1964	1766	251.7	167.8	385.078	F
C	0	0	2141	387	0.000	0	0	0.0	0.0	0.000	A
D	1662	416	138	2325	0.715	1680	2003	7.0	2.6	5.733	A

2029 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	679.77	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	679.77	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2029 No Development	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	529	100.000
B		ONE HOUR	✓	2487	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2536	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	262	0	267
	B	153	22	0	2312
	C	0	0	0	0
	D	156	2378	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	6	0	10
	B	7	13	0	8
	C	0	0	0	0
	D	12	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.66	12.15	1.9	B	485	728
B	1.46	1117.30	607.5	F	2282	3423
C	0.00	0.00	0.0	A	0	0
D	1.20	385.60	252.6	F	2327	3491

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	398	100	1792	1139	0.350	396	228	0.0	0.5	4.831	A
B	1872	468	201	1937	0.966	1814	1986	0.0	14.7	23.041	C
C	0	0	2015	439	0.000	0	0	0.0	0.0	0.000	A
D	1909	477	128	2330	0.819	1892	1887	0.0	4.3	7.933	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	476	119	2102	941	0.506	474	254	0.5	1.0	7.678	A
B	2236	559	241	1913	1.169	1907	2335	14.7	96.9	113.208	F
C	0	0	2148	373	0.000	0	0	0.0	0.0	0.000	A
D	2280	570	134	2325	0.980	2222	2014	4.3	18.8	26.093	D

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	582	146	2197	880	0.662	579	259	1.0	1.9	11.806	B
B	2738	685	294	1880	1.457	1880	2481	96.9	311.5	395.136	F
C	0	0	2174	360	0.000	0	0	0.0	0.0	0.000	A
D	2792	698	132	2327	1.200	2323	2041	18.8	136.1	126.123	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	582	146	2200	878	0.663	582	259	1.9	1.9	12.150	B
B	2738	685	296	1879	1.457	1879	2486	311.5	526.3	798.982	F
C	0	0	2175	359	0.000	0	0	0.0	0.0	0.000	A
D	2792	698	132	2327	1.200	2326	2042	136.1	252.6	304.487	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	476	119	2191	884	0.538	479	260	1.9	1.2	8.940	A
B	2236	559	243	1911	1.170	1911	2426	526.3	607.5	1068.224	F
C	0	0	2155	370	0.000	0	0	0.0	0.0	0.000	A
D	2280	570	134	2325	0.980	2316	2020	252.6	243.5	385.602	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	398	100	2189	885	0.450	400	261	1.2	0.8	7.441	A
B	1872	468	204	1936	0.967	1933	2386	607.5	592.3	1117.298	F
C	0	0	2136	379	0.000	0	0	0.0	0.0	0.000	A
D	1909	477	136	2324	0.821	2315	2000	243.5	142.1	300.644	F

2029 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	698.10	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	698.10	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029 With Development	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	536	100.000
B		ONE HOUR	✓	2487	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2563	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	262	0	274
	B	153	22	0	2312
	C	0	0	0	0
	D	156	2405	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	6	0	11
	B	7	13	0	8
	C	0	0	0	0
	D	12	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.68	12.71	2.0	B	492	738
B	1.46	1132.38	613.6	F	2282	3423
C	0.00	0.00	0.0	A	0	0
D	1.21	416.56	269.7	F	2352	3528

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	404	101	1811	1121	0.360	401	228	0.0	0.6	4.986	A
B	1872	468	207	1933	0.969	1812	2006	0.0	15.0	23.462	C
C	0	0	2019	436	0.000	0	0	0.0	0.0	0.000	A
D	1930	482	128	2330	0.828	1911	1891	0.0	4.6	8.269	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	482	120	2117	926	0.520	480	253	0.6	1.1	8.026	A
B	2236	559	247	1908	1.172	1902	2350	15.0	98.5	115.303	F
C	0	0	2149	371	0.000	0	0	0.0	0.0	0.000	A
D	2304	576	134	2326	0.991	2237	2015	4.6	21.4	28.688	D

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	590	148	2199	874	0.675	586	257	1.1	2.0	12.341	B
B	2738	685	302	1874	1.462	1873	2484	98.5	314.7	401.056	F
C	0	0	2175	358	0.000	0	0	0.0	0.0	0.000	A
D	2822	705	132	2327	1.213	2324	2043	21.4	145.9	135.505	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	590	148	2202	873	0.676	590	257	2.0	2.0	12.715	B
B	2738	685	303	1872	1.462	1872	2488	314.7	531.2	809.036	F
C	0	0	2176	357	0.000	0	0	0.0	0.0	0.000	A
D	2822	705	132	2327	1.213	2327	2044	145.9	269.7	325.140	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	482	120	2193	878	0.549	485	258	2.0	1.2	9.227	A
B	2236	559	250	1906	1.173	1906	2428	531.2	613.6	1081.326	F
C	0	0	2156	368	0.000	0	0	0.0	0.0	0.000	A
D	2304	576	134	2326	0.991	2317	2022	269.7	266.4	416.558	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	404	101	2192	879	0.459	405	260	1.2	0.9	7.624	A
B	1872	468	209	1932	0.969	1928	2388	613.6	599.6	1132.378	F
C	0	0	2137	378	0.000	0	0	0.0	0.0	0.000	A
D	1930	482	136	2325	0.830	2316	2002	266.4	169.9	339.778	F

2034 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	916.14	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	916.14	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2034 No Development	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	560	100.000
B		ONE HOUR	✓	2632	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2681	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	277	0	283
	B	161	24	0	2447
	C	0	0	0	0
	D	165	2514	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	7	0	10
	B	7	13	0	8
	C	0	0	0	0
	D	13	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.71	13.93	2.3	B	514	771
B	1.55	1462.61	788.9	F	2415	3623
C	0.00	0.00	0.0	A	0	0
D	1.27	563.96	373.1	F	2460	3690

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	422	105	1889	1072	0.393	419	237	0.0	0.6	5.491	A
B	1982	495	213	1930	1.027	1866	2094	0.0	29.0	36.746	E
C	0	0	2079	407	0.000	0	0	0.0	0.0	0.000	A
D	2018	505	131	2326	0.868	1994	1948	0.0	6.0	10.211	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	503	126	2158	901	0.559	501	257	0.6	1.2	8.953	A
B	2366	592	255	1904	1.243	1902	2404	29.0	144.9	171.461	F
C	0	0	2157	368	0.000	0	0	0.0	0.0	0.000	A
D	2410	603	134	2324	1.037	2281	2023	6.0	38.3	43.481	E

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	617	154	2199	875	0.705	612	257	1.2	2.3	13.458	B
B	2898	724	311	1869	1.550	1869	2500	144.9	402.1	530.488	F
C	0	0	2180	356	0.000	0	0	0.0	0.0	0.000	A
D	2952	738	131	2326	1.269	2325	2049	38.3	195.1	185.654	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	617	154	2200	874	0.705	616	257	2.3	2.3	13.929	B
B	2898	724	313	1868	1.551	1868	2503	402.1	659.6	1014.798	F
C	0	0	2181	356	0.000	0	0	0.0	0.0	0.000	A
D	2952	738	131	2326	1.269	2326	2050	195.1	351.6	426.252	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	503	126	2198	875	0.575	507	259	2.3	1.4	9.884	A
B	2366	592	258	1902	1.244	1902	2447	659.6	775.6	1354.310	F
C	0	0	2160	367	0.000	0	0	0.0	0.0	0.000	A
D	2410	603	134	2324	1.037	2324	2027	351.6	373.1	563.957	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	422	105	2192	879	0.480	423	261	1.4	0.9	7.930	A
B	1982	495	216	1929	1.027	1928	2400	775.6	788.9	1462.606	F
C	0	0	2144	375	0.000	0	0	0.0	0.0	0.000	A
D	2018	505	136	2323	0.869	2317	2009	373.1	298.5	521.994	F

2034 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	938.01	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	938.01	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2034 With Development	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	567	100.000
B		ONE HOUR	✓	2632	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2708	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	277	0	290
	B	161	24	0	2447
	C	0	0	0	0
	D	165	2541	0	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	7	0	12
	B	7	13	0	8
	C	0	0	0	0
	D	13	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.72	14.91	2.5	B	520	780
B	1.56	1484.20	798.8	F	2415	3623
C	0.00	0.00	0.0	A	0	0
D	1.28	598.32	398.3	F	2485	3727

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	427	107	1907	1050	0.406	424	237	0.0	0.7	5.727	A
B	1982	495	218	1924	1.030	1862	2113	0.0	29.9	37.639	E
C	0	0	2080	404	0.000	0	0	0.0	0.0	0.000	A
D	2039	510	131	2326	0.876	2013	1950	0.0	6.4	10.739	B

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	510	127	2166	887	0.574	507	255	0.7	1.3	9.407	A
B	2366	592	261	1897	1.247	1896	2412	29.9	147.5	175.332	F
C	0	0	2157	366	0.000	0	0	0.0	0.0	0.000	A
D	2434	609	133	2325	1.047	2288	2023	6.4	43.1	47.404	E

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	624	156	2201	865	0.721	620	256	1.3	2.5	14.392	B
B	2898	724	319	1861	1.557	1861	2502	147.5	406.7	539.770	F
C	0	0	2180	354	0.000	0	0	0.0	0.0	0.000	A
D	2982	745	131	2326	1.282	2325	2049	43.1	207.1	198.386	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	624	156	2202	865	0.722	624	256	2.5	2.5	14.909	B
B	2898	724	321	1860	1.558	1860	2505	406.7	666.3	1029.546	F
C	0	0	2180	353	0.000	0	0	0.0	0.0	0.000	A
D	2982	745	131	2327	1.282	2326	2050	207.1	370.9	450.323	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	510	127	2200	866	0.589	514	258	2.5	1.5	10.355	B
B	2366	592	265	1895	1.248	1895	2450	666.3	784.1	1373.156	F
C	0	0	2160	365	0.000	0	0	0.0	0.0	0.000	A
D	2434	609	133	2325	1.047	2325	2027	370.9	398.3	598.318	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	427	107	2194	869	0.491	429	259	1.5	1.0	8.207	A
B	1982	495	221	1923	1.031	1923	2402	784.1	798.8	1484.204	F
C	0	0	2144	373	0.000	0	0	0.0	0.0	0.000	A
D	2039	510	135	2324	0.877	2318	2009	398.3	328.6	564.787	F

2044 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1478.45	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1478.45	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2044 No Development	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	619	100.000
B		ONE HOUR	✓	2906	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2957	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	306	0	313
	B	178	26	0	2702
	C	0	0	0	0
	D	184	2770	0	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	0	12
	B	8	15	0	9
	C	0	0	0	0
	D	14	7	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.79	19.64	3.6	C	568	852
B	1.75	2237.40	1212.4	F	2667	4000
C	0.00	0.00	0.0	A	0	0
D	1.41	1034.47	669.7	F	2713	4070

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	466	117	2046	946	0.492	462	249	0.0	1.0	7.377	A
B	2188	547	236	1896	1.154	1872	2272	0.0	79.0	81.873	F
C	0	0	2108	382	0.000	0	0	0.0	0.0	0.000	A
D	2226	557	131	2303	0.966	2164	1976	0.0	15.5	20.608	C

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	556	139	2171	868	0.641	553	257	1.0	1.7	11.344	B
B	2612	653	282	1867	1.399	1866	2442	79.0	265.5	338.770	F
C	0	0	2149	361	0.000	0	0	0.0	0.0	0.000	A
D	2658	665	131	2304	1.154	2297	2018	15.5	105.9	101.993	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	682	170	2178	863	0.790	675	255	1.7	3.4	18.470	C
B	3200	800	344	1828	1.750	1828	2509	265.5	608.3	863.145	F
C	0	0	2172	349	0.000	0	0	0.0	0.0	0.000	A
D	3256	814	128	2305	1.412	2305	2043	105.9	343.5	354.344	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	682	170	2178	863	0.790	681	255	3.4	3.6	19.637	C
B	3200	800	347	1826	1.752	1826	2513	608.3	951.6	1539.991	F
C	0	0	2173	348	0.000	0	0	0.0	0.0	0.000	A
D	3256	814	128	2306	1.412	2306	2045	343.5	581.0	724.580	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	556	139	2177	864	0.644	563	257	3.6	1.9	12.247	B
B	2612	653	287	1864	1.402	1864	2453	951.6	1138.8	2003.770	F
C	0	0	2151	360	0.000	0	0	0.0	0.0	0.000	A
D	2658	665	131	2304	1.154	2304	2020	581.0	669.7	979.538	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	466	117	2173	866	0.538	469	259	1.9	1.2	9.118	A
B	2188	547	239	1894	1.155	1894	2402	1138.8	1212.4	2237.402	F
C	0	0	2133	370	0.000	0	0	0.0	0.0	0.000	A
D	2226	557	133	2302	0.967	2299	2000	669.7	651.5	1034.472	F

2044 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1505.25	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1505.25	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2044 With Development	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	626	100.000
B		ONE HOUR	✓	2906	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2984	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	306	0	320
	B	178	26	0	2702
	C	0	0	0	0
	D	184	2797	0	3

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	8	0	13
	B	8	15	0	9
	C	0	0	0	0
	D	14	7	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.80	21.07	3.9	C	574	862
B	1.76	2257.82	1220.8	F	2667	4000
C	0.00	0.00	0.0	A	0	0
D	1.42	1082.10	697.7	F	2738	4107

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	471	118	2060	933	0.505	467	249	0.0	1.0	7.664	A
B	2188	547	241	1891	1.157	1868	2286	0.0	80.0	83.023	F
C	0	0	2109	380	0.000	0	0	0.0	0.0	0.000	A
D	2247	562	131	2304	0.975	2177	1978	0.0	17.3	22.149	C

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	563	141	2173	862	0.653	560	256	1.0	1.8	11.782	B
B	2612	653	288	1861	1.404	1861	2444	80.0	267.9	343.194	F
C	0	0	2149	359	0.000	0	0	0.0	0.0	0.000	A
D	2683	671	131	2304	1.164	2298	2019	17.3	113.3	108.908	F

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	689	172	2180	858	0.804	682	254	1.8	3.7	19.635	C
B	3200	800	351	1822	1.756	1822	2511	267.9	612.3	872.607	F
C	0	0	2173	347	0.000	0	0	0.0	0.0	0.000	A
D	3285	821	128	2306	1.425	2306	2045	113.3	358.3	371.525	F

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	689	172	2180	858	0.804	689	254	3.7	3.9	21.070	C
B	3200	800	354	1820	1.758	1820	2514	612.3	957.3	1555.361	F
C	0	0	2174	346	0.000	0	0	0.0	0.0	0.000	A
D	3285	821	128	2306	1.425	2306	2046	358.3	603.1	753.210	F

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	563	141	2179	858	0.656	570	256	3.9	2.0	12.810	B
B	2612	653	294	1858	1.406	1858	2455	957.3	1146.0	2021.615	F
C	0	0	2152	358	0.000	0	0	0.0	0.0	0.000	A
D	2683	671	130	2304	1.164	2304	2021	603.1	697.7	1018.571	F

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	471	118	2174	861	0.547	474	257	2.0	1.2	9.377	A
B	2188	547	245	1889	1.158	1889	2404	1146.0	1220.8	2257.818	F
C	0	0	2134	368	0.000	0	0	0.0	0.0	0.000	A
D	2247	562	133	2303	0.976	2299	2001	697.7	684.5	1082.101	F

Junctions 10

ARCADY 10 - Roundabout Module

For sales and distribution information, program advice and maintenance, contact TRL Software:
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com

Filename: Import of Junction 2 PM.j10
Path: \\fserver4-dub\gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
Report generation date: 09/03/2023 12:36:14

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Arm A	D1	0.8	6.84	0.46	A
Arm B		408.3	707.58	1.33	F
Arm C		0.0	0.00	0.00	A
Arm D		67.1	90.81	1.04	F
	2028 No Development				
Arm A	D2	1.1	7.80	0.52	A
Arm B		736.3	1329.04	1.51	F
Arm C		0.0	0.00	0.00	A
Arm D		223.7	339.73	1.18	F
	2028 With Development				
Arm A	D3	1.2	8.48	0.56	A
Arm B		761.1	1380.82	1.53	F
Arm C		0.0	0.00	0.00	A
Arm D		231.0	353.35	1.19	F
	2033 No Development				
Arm A	D4	1.3	8.66	0.57	A
Arm B		995.3	1771.24	1.62	F
Arm C		0.0	0.00	0.00	A
Arm D		352.8	543.75	1.26	F
	2033 With Development				
Arm A	D5	1.5	9.39	0.60	A
Arm B		1019.9	1825.55	1.64	F
Arm C		0.0	0.00	0.00	A
Arm D		364.4	559.84	1.27	F
	2043 No Development				
Arm A	D6	1.7	10.14	0.63	B
Arm B		1433.3	2549.40	1.82	F
Arm C		0.0	0.00	0.00	A
Arm D		626.6	977.40	1.40	F
	2043 With Development				
Arm A	D7	1.9	11.31	0.66	B
Arm B		1460.4	2616.29	1.84	F
Arm C		0.0	0.00	0.00	A
Arm D		639.3	999.70	1.40	F

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Junciton2
Location	Clonshagh
Site number	2
Date	05/07/2016
Version	
Status	
Identifier	
Client	Irish Water
Jobnumber	7556
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Show lane queues in feet / metres	Show all PICADY stream intercepts	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)	Use iterations with HCM roundabouts	Max number of iterations for roundabouts
5.75						0.85	36.00	20.00		500

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓
D2	2028 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D3	2028 With Development	PM	ONE HOUR	16:00	17:30	15	✓
D4	2033 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D5	2033 With Development	PM	ONE HOUR	16:00	17:30	15	✓
D6	2043 No Development	PM	ONE HOUR	16:00	17:30	15	✓
D7	2043 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	380.99	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	380.99	F

Arms

Arms

Arm	Name	Description	No give-way line
A	Clonshaugh Road		
B	R139 East		
C	Access Road		
D	R139 East		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
A	8.00	8.10	30.0	38.0	66.0	35.0		
B	5.30	8.80	16.4	23.0	66.0	33.0		
C	4.20	5.90	9.0	14.0	66.0	53.0		
D	6.70	9.20	18.0	65.0	66.0	38.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.651	2468
B	0.610	2227
C	0.456	1433
D	0.668	2570

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base Year	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	409	100.000
B		ONE HOUR	✓	2370	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2185	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	225	0	184
	B	272	25	0	2073
	C	0	0	0	0
	D	201	1979	0	5

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	4	0	10
	B	2	0	0	7
	C	0	0	0	0
	D	5	4	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.46	6.84	0.8	A	375	563
B	1.33	707.58	408.3	F	2175	3262
C	0.00	0.00	0.0	A	0	0
D	1.04	90.81	67.1	F	2005	3007

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	308	77	1504	1359	0.227	307	352	0.0	0.3	3.418	A
B	1784	446	142	2005	0.890	1756	1669	0.0	7.1	13.252	B
C	0	0	1898	510	0.000	0	0	0.0	0.0	0.000	A
D	1645	411	220	2325	0.707	1635	1678	0.0	2.4	5.149	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	368	92	1794	1175	0.313	367	405	0.3	0.5	4.451	A
B	2131	533	170	1987	1.072	1963	1991	7.1	49.0	60.559	F
C	0	0	2132	396	0.000	0	0	0.0	0.0	0.000	A
D	1964	491	246	2309	0.851	1952	1886	2.4	5.3	9.795	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	450	113	2079	994	0.453	449	434	0.5	0.8	6.586	A
B	2609	652	207	1964	1.329	1963	2321	49.0	210.6	243.121	F
C	0	0	2170	377	0.000	0	0	0.0	0.0	0.000	A
D	2406	601	246	2308	1.042	2267	1924	5.3	40.1	44.568	E

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	450	113	2107	976	0.461	450	437	0.8	0.8	6.844	A
B	2609	652	208	1963	1.329	1963	2350	210.6	372.2	535.415	F
C	0	0	2171	377	0.000	0	0	0.0	0.0	0.000	A
D	2406	601	246	2308	1.042	2298	1925	40.1	67.1	90.813	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	368	92	2023	1029	0.357	369	431	0.8	0.6	5.462	A
B	2131	533	171	1987	1.073	1986	2221	372.2	408.3	707.583	F
C	0	0	2157	384	0.000	0	0	0.0	0.0	0.000	A
D	1964	491	249	2307	0.852	2205	1908	67.1	6.8	52.795	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	308	77	1530	1342	0.229	309	382	0.6	0.3	3.489	A
B	1784	446	143	2004	0.890	1999	1697	408.3	354.5	686.920	F
C	0	0	2142	392	0.000	0	0	0.0	0.0	0.000	A
D	1645	411	251	2306	0.714	1662	1892	6.8	2.5	5.741	A

2028 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	787.38	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	787.38	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2028 No Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	460	100.000
B		ONE HOUR	✓	2668	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2456	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	252	0	208
	B	305	28	0	2335
	C	0	0	0	0
	D	226	2225	0	5

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	4	0	10
	B	2	0	0	7
	C	0	0	0	0
	D	5	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.52	7.80	1.1	A	422	633
B	1.51	1329.04	736.3	F	2448	3672
C	0.00	0.00	0.0	A	0	0
D	1.18	339.73	223.7	F	2254	3380

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	346	87	1684	1234	0.281	345	387	0.0	0.4	4.042	A
B	2009	502	160	1994	1.008	1913	1870	0.0	23.8	31.230	D
C	0	0	2073	425	0.000	0	0	0.0	0.0	0.000	A
D	1849	462	239	2293	0.806	1833	1834	0.0	4.0	7.581	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	414	103	1984	1042	0.397	412	424	0.4	0.7	5.708	A
B	2398	600	191	1974	1.215	1971	2206	23.8	130.7	147.996	F
C	0	0	2162	381	0.000	0	0	0.0	0.0	0.000	A
D	2208	552	246	2289	0.965	2162	1916	4.0	15.4	22.894	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	506	127	2095	971	0.522	505	433	0.7	1.1	7.695	A
B	2937	734	233	1947	1.508	1947	2367	130.7	378.2	473.965	F
C	0	0	2180	372	0.000	0	0	0.0	0.0	0.000	A
D	2704	676	243	2290	1.181	2285	1937	15.4	120.1	113.249	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	506	127	2100	968	0.523	506	433	1.1	1.1	7.797	A
B	2937	734	234	1947	1.509	1947	2372	378.2	625.8	924.224	F
C	0	0	2181	372	0.000	0	0	0.0	0.0	0.000	A
D	2704	676	243	2291	1.181	2290	1938	120.1	223.7	274.296	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	414	103	2089	975	0.424	415	435	1.1	0.7	6.448	A
B	2398	600	192	1973	1.216	1973	2312	625.8	732.2	1238.079	F
C	0	0	2165	380	0.000	0	0	0.0	0.0	0.000	A
D	2208	552	246	2288	0.965	2278	1919	223.7	206.1	339.734	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	348	87	2087	976	0.355	347	437	0.7	0.6	5.731	A
B	2009	502	162	1992	1.008	1992	2273	732.2	736.3	1329.039	F
C	0	0	2154	386	0.000	0	0	0.0	0.0	0.000	A
D	1849	462	249	2287	0.809	2276	1905	206.1	99.4	242.758	F

2028 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	812.77	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	812.77	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	487	100.000
B		ONE HOUR	✓	2668	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2468	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	252	0	235
	B	305	28	0	2335
	C	0	0	0	0
	D	226	2237	0	5

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	4	0	11
	B	2	0	0	7
	C	0	0	0	0
	D	5	5	0	35

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.56	8.48	1.2	A	447	670
B	1.53	1380.82	761.1	F	2448	3672
C	0.00	0.00	0.0	A	0	0
D	1.19	353.35	231.0	F	2265	3397

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	367	92	1693	1220	0.300	365	386	0.0	0.4	4.200	A
B	2009	502	180	1979	1.015	1905	1878	0.0	25.8	33.204	D
C	0	0	2085	417	0.000	0	0	0.0	0.0	0.000	A
D	1858	465	238	2292	0.811	1842	1847	0.0	4.1	7.730	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	438	109	1992	1030	0.425	437	422	0.4	0.7	6.055	A
B	2398	600	215	1957	1.226	1954	2213	25.8	136.9	156.747	F
C	0	0	2169	376	0.000	0	0	0.0	0.0	0.000	A
D	2219	555	244	2288	0.970	2170	1925	4.1	16.3	23.906	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	536	134	2097	963	0.557	534	429	0.7	1.2	8.357	A
B	2937	734	262	1926	1.525	1926	2368	136.9	389.7	495.617	F
C	0	0	2189	365	0.000	0	0	0.0	0.0	0.000	A
D	2717	679	240	2291	1.186	2286	1948	16.3	124.2	117.057	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	536	134	2101	960	0.558	536	430	1.2	1.2	8.482	A
B	2937	734	263	1926	1.525	1926	2373	389.7	642.6	959.219	F
C	0	0	2189	365	0.000	0	0	0.0	0.0	0.000	A
D	2717	679	240	2291	1.186	2290	1949	124.2	231.0	283.169	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	438	109	2090	967	0.453	439	432	1.2	0.8	6.847	A
B	2398	600	217	1955	1.227	1955	2313	642.6	753.3	1283.073	F
C	0	0	2172	374	0.000	0	0	0.0	0.0	0.000	A
D	2219	555	244	2288	0.970	2278	1928	231.0	216.1	353.350	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	367	92	2088	968	0.379	368	434	0.8	0.6	6.003	A
B	2009	502	182	1978	1.016	1977	2274	753.3	761.1	1380.823	F
C	0	0	2159	381	0.000	0	0	0.0	0.0	0.000	A
D	1858	465	247	2287	0.813	2276	1913	216.1	111.6	260.148	F

2033 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1088.01	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1088.01	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2033 No Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	493	100.000
B		ONE HOUR	✓	2853	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2625	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	270	0	223
	B	326	30	0	2497
	C	0	0	0	0
	D	242	2377	0	6

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	11
	B	2	0	0	7
	C	0	0	0	0
	D	5	5	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.57	8.66	1.3	A	452	679
B	1.62	1771.24	995.3	F	2618	3927
C	0.00	0.00	0.0	A	0	0
D	1.26	543.75	352.8	F	2409	3613

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	371	93	1794	1153	0.322	369	402	0.0	0.5	4.580	A
B	2148	537	171	1985	1.082	1946	1991	0.0	50.4	53.905	F
C	0	0	2118	402	0.000	0	0	0.0	0.0	0.000	A
D	1976	494	243	2291	0.863	1953	1875	0.0	5.8	10.067	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	443	111	2056	987	0.449	442	431	0.5	0.8	6.589	A
B	2565	641	205	1964	1.306	1963	2293	50.4	200.8	236.208	F
C	0	0	2168	377	0.000	0	0	0.0	0.0	0.000	A
D	2360	590	245	2289	1.031	2242	1923	5.8	35.3	41.569	E

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	543	136	2099	959	0.566	541	432	0.8	1.3	8.566	A
B	3141	785	250	1935	1.623	1935	2390	200.8	502.3	657.081	F
C	0	0	2185	368	0.000	0	0	0.0	0.0	0.000	A
D	2890	723	241	2291	1.261	2290	1944	35.3	185.3	178.564	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	543	136	2100	959	0.566	543	432	1.3	1.3	8.656	A
B	3141	785	251	1935	1.624	1935	2392	502.3	803.9	1217.701	F
C	0	0	2185	368	0.000	0	0	0.0	0.0	0.000	A
D	2890	723	241	2292	1.261	2291	1944	185.3	335.0	412.137	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	443	111	2098	960	0.462	445	435	1.3	0.9	7.015	A
B	2565	641	206	1963	1.307	1963	2337	803.9	954.3	1607.072	F
C	0	0	2169	377	0.000	0	0	0.0	0.0	0.000	A
D	2360	590	245	2289	1.031	2289	1924	335.0	352.8	543.747	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	371	93	2092	964	0.385	372	437	0.9	0.6	6.092	A
B	2148	537	174	1984	1.083	1984	2290	954.3	995.3	1771.240	F
C	0	0	2157	383	0.000	0	0	0.0	0.0	0.000	A
D	1976	494	248	2288	0.864	2281	1910	352.8	276.6	497.001	F

2033 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1114.62	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1114.62	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2033 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	520	100.000
B		ONE HOUR	✓	2853	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2637	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	270	0	250
	B	326	30	0	2497
	C	0	0	0	0
	D	242	2389	0	6

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	11
	B	2	0	0	7
	C	0	0	0	0
	D	5	5	0	36

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.60	9.39	1.5	A	477	716
B	1.64	1825.55	1019.9	F	2618	3927
C	0.00	0.00	0.0	A	0	0
D	1.27	559.84	364.4	F	2420	3630

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	391	98	1802	1145	0.342	389	401	0.0	0.5	4.750	A
B	2148	537	192	1971	1.090	1935	1999	0.0	53.2	56.690	F
C	0	0	2127	397	0.000	0	0	0.0	0.0	0.000	A
D	1985	496	241	2290	0.867	1961	1885	0.0	6.0	10.318	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	467	117	2059	982	0.476	466	428	0.5	0.9	6.955	A
B	2565	641	229	1947	1.317	1947	2296	53.2	207.7	247.315	F
C	0	0	2176	372	0.000	0	0	0.0	0.0	0.000	A
D	2371	593	243	2289	1.036	2245	1933	6.0	37.4	43.373	E

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	573	143	2100	956	0.599	570	429	0.9	1.5	9.275	A
B	3141	785	279	1915	1.640	1915	2391	207.7	514.2	681.561	F
C	0	0	2195	362	0.000	0	0	0.0	0.0	0.000	A
D	2903	726	239	2291	1.267	2290	1956	37.4	190.8	184.398	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	573	143	2101	955	0.599	572	429	1.5	1.5	9.395	A
B	3141	785	280	1915	1.640	1915	2393	514.2	820.8	1257.454	F
C	0	0	2195	362	0.000	0	0	0.0	0.0	0.000	A
D	2903	726	239	2291	1.267	2291	1956	190.8	343.8	423.298	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	467	117	2099	957	0.489	469	432	1.5	1.0	7.415	A
B	2565	641	231	1946	1.318	1946	2337	820.8	975.4	1654.381	F
C	0	0	2177	371	0.000	0	0	0.0	0.0	0.000	A
D	2371	593	243	2289	1.036	2288	1934	343.8	364.4	559.840	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	391	98	2092	961	0.407	393	434	1.0	0.7	6.345	A
B	2148	537	194	1970	1.090	1970	2291	975.4	1019.9	1825.552	F
C	0	0	2164	379	0.000	0	0	0.0	0.0	0.000	A
D	1985	496	246	2287	0.868	2281	1918	364.4	290.5	517.181	F

2043 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1651.83	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1651.83	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2043 No Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	543	100.000
B		ONE HOUR	✓	3139	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2882	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	296	0	247
	B	356	33	0	2750
	C	0	0	0	0
	D	265	2611	0	6

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	12
	B	3	0	0	8
	C	0	0	0	0
	D	6	6	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.63	10.14	1.7	B	498	747
B	1.82	2549.40	1433.3	F	2880	4321
C	0.00	0.00	0.0	A	0	0
D	1.40	977.40	626.6	F	2645	3967

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	409	102	1941	1044	0.392	406	414	0.0	0.6	5.625	A
B	2363	591	189	1955	1.209	1936	2158	0.0	106.7	104.122	F
C	0	0	2126	388	0.000	0	0	0.0	0.0	0.000	A
D	2170	542	240	2269	0.956	2115	1886	0.0	13.7	19.127	C

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	122	2074	959	0.509	487	427	0.6	1.0	7.601	A
B	2822	705	226	1931	1.461	1931	2335	106.7	329.4	412.796	F
C	0	0	2157	372	0.000	0	0	0.0	0.0	0.000	A
D	2591	648	239	2270	1.141	2262	1918	13.7	96.0	94.460	F

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	598	149	2083	953	0.627	595	424	1.0	1.6	10.000	B
B	3456	864	276	1900	1.819	1900	2403	329.4	718.6	994.911	F
C	0	0	2175	362	0.000	0	0	0.0	0.0	0.000	A
D	3173	793	235	2272	1.396	2272	1940	96.0	321.2	334.156	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	598	149	2083	953	0.628	598	424	1.6	1.7	10.135	B
B	3456	864	277	1899	1.820	1899	2405	718.6	1107.8	1733.612	F
C	0	0	2176	362	0.000	0	0	0.0	0.0	0.000	A
D	3173	793	235	2272	1.396	2272	1940	321.2	546.4	690.184	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	488	122	2082	954	0.512	491	428	1.7	1.1	7.808	A
B	2822	705	228	1930	1.462	1930	2344	1107.8	1330.8	2260.247	F
C	0	0	2158	372	0.000	0	0	0.0	0.0	0.000	A
D	2591	648	239	2270	1.141	2270	1919	546.4	626.6	932.906	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	409	102	2077	957	0.427	410	430	1.1	0.8	6.597	A
B	2363	591	191	1953	1.210	1953	2296	1330.8	1433.3	2549.399	F
C	0	0	2145	379	0.000	0	0	0.0	0.0	0.000	A
D	2170	542	242	2268	0.957	2265	1902	626.6	602.9	977.397	F

2043 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	1684.45	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	1684.45	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2043 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	570	100.000
B		ONE HOUR	✓	3139	100.000
C		ONE HOUR	✓	0	100.000
D		ONE HOUR	✓	2894	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0	296	0	274
	B	356	33	0	2750
	C	0	0	0	0
	D	265	2623	0	6

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	0	5	0	13
	B	3	0	0	8
	C	0	0	0	0
	D	6	6	0	40

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.66	11.31	1.9	B	523	785
B	1.84	2616.29	1460.4	F	2880	4321
C	0.00	0.00	0.0	A	0	0
D	1.40	999.70	639.3	F	2656	3983

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	429	107	1947	1032	0.416	426	412	0.0	0.7	5.914	A
B	2363	591	209	1940	1.218	1922	2164	0.0	110.3	108.144	F
C	0	0	2131	383	0.000	0	0	0.0	0.0	0.000	A
D	2179	545	238	2269	0.960	2121	1893	0.0	14.4	19.792	C

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	512	128	2075	951	0.539	511	424	0.7	1.1	8.138	A
B	2822	705	250	1913	1.475	1913	2335	110.3	337.4	427.895	F
C	0	0	2163	367	0.000	0	0	0.0	0.0	0.000	A
D	2602	650	237	2270	1.146	2262	1926	14.4	99.3	97.529	F

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	628	157	2084	946	0.664	625	421	1.1	1.9	11.108	B
B	3456	864	305	1878	1.840	1878	2403	337.4	731.9	1026.487	F
C	0	0	2183	356	0.000	0	0	0.0	0.0	0.000	A
D	3186	797	233	2272	1.402	2272	1950	99.3	327.9	341.980	F

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	628	157	2084	945	0.664	627	421	1.9	1.9	11.310	B
B	3456	864	306	1877	1.841	1877	2405	731.9	1126.6	1784.439	F
C	0	0	2184	355	0.000	0	0	0.0	0.0	0.000	A
D	3186	797	233	2272	1.402	2272	1951	327.9	556.3	703.337	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	512	128	2082	947	0.541	515	425	1.9	1.2	8.401	A
B	2822	705	252	1912	1.476	1912	2345	1126.6	1354.1	2318.454	F
C	0	0	2184	366	0.000	0	0	0.0	0.0	0.000	A
D	2602	650	237	2270	1.146	2270	1927	556.3	639.3	951.047	F

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	429	107	2077	950	0.452	431	427	1.2	0.8	6.952	A
B	2383	591	212	1938	1.219	1938	2296	1354.1	1460.4	2616.294	F
C	0	0	2150	374	0.000	0	0	0.0	0.0	0.000	A
D	2179	545	240	2268	0.961	2264	1910	639.3	618.0	999.697	F

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction A AM.j10
Path: \\fserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
Report generation date: 18/10/2023 12:01:20

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2029 No Development				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2029 With Development				
Stream B-AC	D3	0.0	10.21	0.02	B
Stream C-AB		0.0	0.00	0.00	A
	2034 No Development				
Stream B-AC	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2034 With Development				
Stream B-AC	D5	0.0	10.40	0.02	B
Stream C-AB		0.0	0.00	0.00	A
	2044 No Development				
Stream B-AC	D6	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2044 With Development				
Stream B-AC	D7	0.0	10.81	0.02	B
Stream C-AB		0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2029 No Development	AM	ONE HOUR	07:45	09:15	15
D3	2029 With Development	AM	ONE HOUR	07:45	09:15	15
D4	2034 No Development	AM	ONE HOUR	07:45	09:15	15
D5	2034 With Development	AM	ONE HOUR	07:45	09:15	15
D6	2044 No Development	AM	ONE HOUR	07:45	09:15	15
D7	2044 With Development	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Clonshaugh Rd (N)		Major
B	WWTP		Minor
C	Clonshaugh Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			80.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	110	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	549	0.100	0.253	0.159	0.361
B-C	668	0.102	0.259	-	-
C-B	620	0.240	0.240	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	360	100.000
B		✓	0	100.000
C		✓	186	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	360
	B	0	0	0
	C	186	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	507	0.000	0	0.0	0.000	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	140			140			
A-B	0			0			
A-C	271			271			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	489	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	167			167			
A-B	0			0			
A-C	324			324			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	463	0.000	0	0.0	0.000	A
C-AB	0	477	0.000	0	0.0	0.000	A
C-A	205			205			
A-B	0			0			
A-C	396			396			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	463	0.000	0	0.0	0.000	A
C-AB	0	477	0.000	0	0.0	0.000	A
C-A	205			205			
A-B	0			0			
A-C	396			396			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	489	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	167			167			
A-B	0			0			
A-C	324			324			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	507	0.000	0	0.0	0.000	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	140			140			
A-B	0			0			
A-C	271			271			

2029 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2029 No Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	416	100.000
B		✓	0	100.000
C		✓	215	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	416
	B	0	0	0
	C	215	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	14
	B	0	0	0
	C	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	491	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	162			162			
A-B	0			0			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	469	0.000	0	0.0	0.000	A
C-AB	0	479	0.000	0	0.0	0.000	A
C-A	193			193			
A-B	0			0			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	439	0.000	0	0.0	0.000	A
C-AB	0	458	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	439	0.000	0	0.0	0.000	A
C-AB	0	458	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	469	0.000	0	0.0	0.000	A
C-AB	0	479	0.000	0	0.0	0.000	A
C-A	193			193			
A-B	0			0			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	491	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	162			162			
A-B	0			0			
A-C	313			313			

2029 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.14	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.14	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2029 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	416	100.000
B		✓	7	100.000
C		✓	215	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	416
	B	0	0	7
	C	215	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	14
	B	0	0	48
	C	16	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.02	10.21	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	389	0.013	5	0.0	9.376	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	162			162			
A-B	0			0			
A-C	313			313			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	377	0.016	6	0.0	9.710	A
C-AB	0	479	0.000	0	0.0	0.000	A
C-A	193			193			
A-B	0			0			
A-C	374			374			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	360	0.021	7	0.0	10.209	B
C-AB	0	458	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	458			458			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	360	0.021	7	0.0	10.209	B
C-AB	0	458	0.000	0	0.0	0.000	A
C-A	237			237			
A-B	0			0			
A-C	458			458			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	377	0.016	6	0.0	9.713	A
C-AB	0	479	0.000	0	0.0	0.000	A
C-A	193			193			
A-B	0			0			
A-C	374			374			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	389	0.013	5	0.0	9.379	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	162			162			
A-B	0			0			
A-C	313			313			

2034 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2034 No Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	442	100.000
B		✓	0	100.000
C		✓	229	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	442
	B	0	0	0
	C	229	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	17	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	483	0.000	0	0.0	0.000	A
C-AB	0	487	0.000	0	0.0	0.000	A
C-A	172			172			
A-B	0			0			
A-C	333			333			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	460	0.000	0	0.0	0.000	A
C-AB	0	470	0.000	0	0.0	0.000	A
C-A	206			206			
A-B	0			0			
A-C	397			397			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	427	0.000	0	0.0	0.000	A
C-AB	0	448	0.000	0	0.0	0.000	A
C-A	252			252			
A-B	0			0			
A-C	487			487			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	427	0.000	0	0.0	0.000	A
C-AB	0	448	0.000	0	0.0	0.000	A
C-A	252			252			
A-B	0			0			
A-C	487			487			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	460	0.000	0	0.0	0.000	A
C-AB	0	470	0.000	0	0.0	0.000	A
C-A	206			206			
A-B	0			0			
A-C	397			397			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	483	0.000	0	0.0	0.000	A
C-AB	0	487	0.000	0	0.0	0.000	A
C-A	172			172			
A-B	0			0			
A-C	333			333			

2034 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.13	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.13	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2034 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	442	100.000
B		✓	7	100.000
C		✓	229	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	442
	B	0	0	7
	C	229	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	48
	C	17	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.02	10.40	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	384	0.013	5	0.0	9.487	A
C-AB	0	487	0.000	0	0.0	0.000	A
C-A	172			172			
A-B	0			0			
A-C	333			333			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	371	0.016	6	0.0	9.852	A
C-AB	0	470	0.000	0	0.0	0.000	A
C-A	206			206			
A-B	0			0			
A-C	397			397			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	353	0.021	7	0.0	10.402	B
C-AB	0	448	0.000	0	0.0	0.000	A
C-A	252			252			
A-B	0			0			
A-C	487			487			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	353	0.021	7	0.0	10.402	B
C-AB	0	448	0.000	0	0.0	0.000	A
C-A	252			252			
A-B	0			0			
A-C	487			487			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	371	0.016	6	0.0	9.855	A
C-AB	0	470	0.000	0	0.0	0.000	A
C-A	206			206			
A-B	0			0			
A-C	397			397			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	384	0.013	5	0.0	9.490	A
C-AB	0	487	0.000	0	0.0	0.000	A
C-A	172			172			
A-B	0			0			
A-C	333			333			

2044 No Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2044 No Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	492	100.000
B		✓	0	100.000
C		✓	255	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	492
	B	0	0	0
	C	255	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	0
	C	19	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	467	0.000	0	0.0	0.000	A
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	192			192			
A-B	0			0			
A-C	370			370			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	440	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	229			229			
A-B	0			0			
A-C	442			442			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	403	0.000	0	0.0	0.000	A
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	281			281			
A-B	0			0			
A-C	542			542			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	403	0.000	0	0.0	0.000	A
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	281			281			
A-B	0			0			
A-C	542			542			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	440	0.000	0	0.0	0.000	A
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	229			229			
A-B	0			0			
A-C	442			442			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	467	0.000	0	0.0	0.000	A
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	192			192			
A-B	0			0			
A-C	370			370			

2044 With Development , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.12	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2044 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	492	100.000
B		✓	7	100.000
C		✓	255	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	492
	B	0	0	7
	C	255	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	48
	C	19	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.02	10.81	0.0	B
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	376	0.014	5	0.0	9.714	A
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	192			192			
A-B	0			0			
A-C	370			370			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	361	0.017	6	0.0	10.146	B
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	229			229			
A-B	0			0			
A-C	442			442			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	341	0.022	7	0.0	10.807	B
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	281			281			
A-B	0			0			
A-C	542			542			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	7	341	0.022	7	0.0	10.807	B
C-AB	0	427	0.000	0	0.0	0.000	A
C-A	281			281			
A-B	0			0			
A-C	542			542			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	6	361	0.017	6	0.0	10.149	B
C-AB	0	453	0.000	0	0.0	0.000	A
C-A	229			229			
A-B	0			0			
A-C	442			442			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	5	376	0.014	5	0.0	9.717	A
C-AB	0	471	0.000	0	0.0	0.000	A
C-A	192			192			
A-B	0			0			
A-C	370			370			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction A PM.j10
Path: \\fserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
Report generation date: 18/10/2023 12:13:08

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2029 No Development				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2029 With Development				
Stream B-AC	D3	0.1	7.99	0.06	A
Stream C-AB		0.0	0.00	0.00	A
	2034 No Development				
Stream B-AC	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2034 With Development				
Stream B-AC	D5	0.1	8.09	0.06	A
Stream C-AB		0.0	0.00	0.00	A
	2044 No Development				
Stream B-AC	D6	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2044 With Development				
Stream B-AC	D7	0.1	8.37	0.06	A
Stream C-AB		0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15
D2	2029 No Development	PM	ONE HOUR	15:45	17:15	15
D3	2029 With Development	PM	ONE HOUR	15:45	17:15	15
D4	2034 No Development	PM	ONE HOUR	15:45	17:15	15
D5	2034 With Development	PM	ONE HOUR	15:45	17:15	15
D6	2044 No Development	PM	ONE HOUR	15:45	17:15	15
D7	2044 With Development	PM	ONE HOUR	15:45	17:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	Clonshaugh Rd (N)		Major
B	WWTP		Minor
C	Clonshaugh Rd (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.00			80.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	110	70

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	549	0.100	0.253	0.159	0.361
B-C	668	0.102	0.259	-	-
C-B	620	0.240	0.240	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	287	100.000
B		✓	0	100.000
C		✓	329	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	287
	B	0	0	0
	C	329	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	16
	B	0	0	0
	C	8	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	511	0.000	0	0.0	0.000	A
C-AB	0	539	0.000	0	0.0	0.000	A
C-A	248			248			
A-B	0			0			
A-C	216			216			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	492	0.000	0	0.0	0.000	A
C-AB	0	527	0.000	0	0.0	0.000	A
C-A	296			296			
A-B	0			0			
A-C	258			258			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	467	0.000	0	0.0	0.000	A
C-AB	0	512	0.000	0	0.0	0.000	A
C-A	362			362			
A-B	0			0			
A-C	316			316			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	467	0.000	0	0.0	0.000	A
C-AB	0	512	0.000	0	0.0	0.000	A
C-A	362			362			
A-B	0			0			
A-C	316			316			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	492	0.000	0	0.0	0.000	A
C-AB	0	527	0.000	0	0.0	0.000	A
C-A	296			296			
A-B	0			0			
A-C	258			258			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	511	0.000	0	0.0	0.000	A
C-AB	0	539	0.000	0	0.0	0.000	A
C-A	248			248			
A-B	0			0			
A-C	216			216			

2029 No Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2029 No Development	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	332	100.000
B		✓	0	100.000
C		✓	378	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	332
	B	0	0	0
	C	378	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	0
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	495	0.000	0	0.0	0.000	A
C-AB	0	526	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	250			250			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	474	0.000	0	0.0	0.000	A
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	340			340			
A-B	0			0			
A-C	298			298			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	444	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	416			416			
A-B	0			0			
A-C	366			366			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	444	0.000	0	0.0	0.000	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	416			416			
A-B	0			0			
A-C	366			366			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	474	0.000	0	0.0	0.000	A
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	340			340			
A-B	0			0			
A-C	298			298			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	495	0.000	0	0.0	0.000	A
C-AB	0	526	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	250			250			

2029 With Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.30	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.30	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2029 With Development	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	332	100.000
B		✓	27	100.000
C		✓	378	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	332
	B	0	0	27
	C	378	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	16
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.06	7.99	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	511	0.040	20	0.0	7.338	A
C-AB	0	526	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	250			250			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	498	0.049	24	0.1	7.599	A
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	340			340			
A-B	0			0			
A-C	298			298			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	480	0.062	30	0.1	7.985	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	416			416			
A-B	0			0			
A-C	366			366			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	480	0.062	30	0.1	7.987	A
C-AB	0	495	0.000	0	0.0	0.000	A
C-A	416			416			
A-B	0			0			
A-C	366			366			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	498	0.049	24	0.1	7.603	A
C-AB	0	513	0.000	0	0.0	0.000	A
C-A	340			340			
A-B	0			0			
A-C	298			298			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	511	0.040	20	0.0	7.342	A
C-AB	0	526	0.000	0	0.0	0.000	A
C-A	285			285			
A-B	0			0			
A-C	250			250			

2034 No Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2034 No Development	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	353	100.000
B		✓	0	100.000
C		✓	400	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	353
	B	0	0	0
	C	400	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	0
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	488	0.000	0	0.0	0.000	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	301			301			
A-B	0			0			
A-C	266			266			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	466	0.000	0	0.0	0.000	A
C-AB	0	508	0.000	0	0.0	0.000	A
C-A	360			360			
A-B	0			0			
A-C	317			317			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	433	0.000	0	0.0	0.000	A
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	440			440			
A-B	0			0			
A-C	389			389			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	433	0.000	0	0.0	0.000	A
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	440			440			
A-B	0			0			
A-C	389			389			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	466	0.000	0	0.0	0.000	A
C-AB	0	508	0.000	0	0.0	0.000	A
C-A	360			360			
A-B	0			0			
A-C	317			317			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	488	0.000	0	0.0	0.000	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	301			301			
A-B	0			0			
A-C	266			266			

2034 With Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.29	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.29	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2034 With Development	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	353	100.000
B		✓	27	100.000
C		✓	400	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	353
	B	0	0	27
	C	400	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	17
	B	0	0	16
	C	9	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.06	8.09	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	506	0.040	20	0.0	7.401	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	301			301			
A-B	0			0			
A-C	266			266			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	493	0.049	24	0.1	7.678	A
C-AB	0	508	0.000	0	0.0	0.000	A
C-A	360			360			
A-B	0			0			
A-C	317			317			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	474	0.063	30	0.1	8.093	A
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	440			440			
A-B	0			0			
A-C	389			389			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	474	0.063	30	0.1	8.095	A
C-AB	0	489	0.000	0	0.0	0.000	A
C-A	440			440			
A-B	0			0			
A-C	389			389			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	493	0.049	24	0.1	7.683	A
C-AB	0	508	0.000	0	0.0	0.000	A
C-A	360			360			
A-B	0			0			
A-C	317			317			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	506	0.040	20	0.0	7.405	A
C-AB	0	522	0.000	0	0.0	0.000	A
C-A	301			301			
A-B	0			0			
A-C	266			266			

2044 No Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2044 No Development	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	394	100.000
B		✓	0	100.000
C		✓	443	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	394
	B	0	0	0
	C	443	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	20
	B	0	0	0
	C	10	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	472	0.000	0	0.0	0.000	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	334			334			
A-B	0			0			
A-C	297			297			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	446	0.000	0	0.0	0.000	A
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	398			398			
A-B	0			0			
A-C	354			354			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	409	0.000	0	0.0	0.000	A
C-AB	0	472	0.000	0	0.0	0.000	A
C-A	488			488			
A-B	0			0			
A-C	434			434			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	409	0.000	0	0.0	0.000	A
C-AB	0	472	0.000	0	0.0	0.000	A
C-A	488			488			
A-B	0			0			
A-C	434			434			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	446	0.000	0	0.0	0.000	A
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	398			398			
A-B	0			0			
A-C	354			354			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	472	0.000	0	0.0	0.000	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	334			334			
A-B	0			0			
A-C	297			297			

2044 With Development , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.26	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.26	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2044 With Development	PM	ONE HOUR	15:45	17:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	394	100.000
B		✓	27	100.000
C		✓	443	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	394
	B	0	0	27
	C	443	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	20
	B	0	0	16
	C	10	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.06	8.37	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	496	0.041	20	0.0	7.557	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	334			334			
A-B	0			0			
A-C	297			297			

16:00 - 16:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	481	0.050	24	0.1	7.881	A
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	398			398			
A-B	0			0			
A-C	354			354			

16:15 - 16:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	460	0.065	30	0.1	8.370	A
C-AB	0	472	0.000	0	0.0	0.000	A
C-A	488			488			
A-B	0			0			
A-C	434			434			

16:30 - 16:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	30	460	0.065	30	0.1	8.371	A
C-AB	0	472	0.000	0	0.0	0.000	A
C-A	488			488			
A-B	0			0			
A-C	434			434			

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	481	0.050	24	0.1	7.883	A
C-AB	0	493	0.000	0	0.0	0.000	A
C-A	398			398			
A-B	0			0			
A-C	354			354			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	496	0.041	20	0.0	7.564	A
C-AB	0	509	0.000	0	0.0	0.000	A
C-A	334			334			
A-B	0			0			
A-C	297			297			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction B AM.j10
Path: \\fserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
Report generation date: 18/10/2023 12:16:20

Summary of junction performance

	AM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2029 No Development				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2029 With Development				
Stream B-AC	D3	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2034 No Development				
Stream B-AC	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2034 Wth Development				
Stream B-AC	D5	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2044 No Development				
Stream B-AC	D6	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2044 With Development				
Stream B-AC	D7	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15
D2	2029 No Development	AM	ONE HOUR	07:45	09:15	15
D3	2029 With Development	AM	ONE HOUR	07:45	09:15	15
D4	2034 No Development	AM	ONE HOUR	07:45	09:15	15
D5	2034 Wth Development	AM	ONE HOUR	07:45	09:15	15
D6	2044 No Development	AM	ONE HOUR	07:45	09:15	15
D7	2044 With Development	AM	ONE HOUR	07:45	09:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R139 (W)		Major
B	WWTP		Minor
C	R139 (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	12.00			200.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	697	0.094	0.237	0.149	0.339
B-C	781	0.089	0.224	-	-
C-B	690	0.198	0.198	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1289	100.000
B		✓	0	100.000
C		✓	1778	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1289
	B	0	0	0
	C	1778	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	14	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	304	0.000	0	0.0	0.000	A
C-AB	0	444	0.000	0	0.0	0.000	A
C-A	1339			1339			
A-B	0			0			
A-C	970			970			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	190	0.000	0	0.0	0.000	A
C-AB	0	405	0.000	0	0.0	0.000	A
C-A	1598			1598			
A-B	0			0			
A-C	1159			1159			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	351	0.000	0	0.0	0.000	A
C-A	1958			1958			
A-B	0			0			
A-C	1419			1419			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	351	0.000	0	0.0	0.000	A
C-A	1958			1958			
A-B	0			0			
A-C	1419			1419			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	190	0.000	0	0.0	0.000	A
C-AB	0	405	0.000	0	0.0	0.000	A
C-A	1598			1598			
A-B	0			0			
A-C	1159			1159			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	304	0.000	0	0.0	0.000	A
C-AB	0	444	0.000	0	0.0	0.000	A
C-A	1339			1339			
A-B	0			0			
A-C	970			970			

2029 No Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2029 No Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1489	100.000
B		✓	0	100.000
C		✓	2057	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1489
	B	0	0	0
	C	2057	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	207	0.000	0	0.0	0.000	A
C-AB	0	409	0.000	0	0.0	0.000	A
C-A	1549			1549			
A-B	0			0			
A-C	1121			1121			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	40	0.000	0	0.0	0.000	A
C-AB	0	364	0.000	0	0.0	0.000	A
C-A	1849			1849			
A-B	0			0			
A-C	1339			1339			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	301	0.000	0	0.0	0.000	A
C-A	2265			2265			
A-B	0			0			
A-C	1639			1639			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	301	0.000	0	0.0	0.000	A
C-A	2265			2265			
A-B	0			0			
A-C	1639			1639			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	40	0.000	0	0.0	0.000	A
C-AB	0	364	0.000	0	0.0	0.000	A
C-A	1849			1849			
A-B	0			0			
A-C	1339			1339			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	207	0.000	0	0.0	0.000	A
C-AB	0	409	0.000	0	0.0	0.000	A
C-A	1549			1549			
A-B	0			0			
A-C	1121			1121			

2029 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2029 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1516	100.000
B		✓	0	100.000
C		✓	2057	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	27	1489
	B	0	0	0
	C	2057	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	21	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	204	0.000	0	0.0	0.000	A
C-AB	0	404	0.000	0	0.0	0.000	A
C-A	1549			1549			
A-B	20			20			
A-C	1121			1121			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	35	0.000	0	0.0	0.000	A
C-AB	0	358	0.000	0	0.0	0.000	A
C-A	1849			1849			
A-B	24			24			
A-C	1339			1339			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	295	0.000	0	0.0	0.000	A
C-A	2265			2265			
A-B	30			30			
A-C	1639			1639			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	295	0.000	0	0.0	0.000	A
C-A	2265			2265			
A-B	30			30			
A-C	1639			1639			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	35	0.000	0	0.0	0.000	A
C-AB	0	358	0.000	0	0.0	0.000	A
C-A	1849			1849			
A-B	24			24			
A-C	1339			1339			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	204	0.000	0	0.0	0.000	A
C-AB	0	404	0.000	0	0.0	0.000	A
C-A	1549			1549			
A-B	20			20			
A-C	1121			1121			

2034 No Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2034 No Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1580	100.000
B		✓	0	100.000
C		✓	2185	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1580
	B	0	0	0
	C	2185	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	160	0.000	0	0.0	0.000	A
C-AB	0	395	0.000	0	0.0	0.000	A
C-A	1645			1645			
A-B	0			0			
A-C	1190			1190			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	347	0.000	0	0.0	0.000	A
C-A	1964			1964			
A-B	0			0			
A-C	1420			1420			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	281	0.000	0	0.0	0.000	A
C-A	2406			2406			
A-B	0			0			
A-C	1740			1740			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	281	0.000	0	0.0	0.000	A
C-A	2406			2406			
A-B	0			0			
A-C	1740			1740			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	347	0.000	0	0.0	0.000	A
C-A	1964			1964			
A-B	0			0			
A-C	1420			1420			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	160	0.000	0	0.0	0.000	A
C-AB	0	395	0.000	0	0.0	0.000	A
C-A	1645			1645			
A-B	0			0			
A-C	1190			1190			

2034 Wth Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2034 Wth Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1607	100.000
B		✓	0	100.000
C		✓	2185	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	27	1580
	B	0	0	0
	C	2185	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	21	13
	B	0	0	0
	C	15	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	157	0.000	0	0.0	0.000	A
C-AB	0	390	0.000	0	0.0	0.000	A
C-A	1645			1645			
A-B	20			20			
A-C	1190			1190			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	341	0.000	0	0.0	0.000	A
C-A	1964			1964			
A-B	24			24			
A-C	1420			1420			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	274	0.000	0	0.0	0.000	A
C-A	2406			2406			
A-B	30			30			
A-C	1740			1740			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	274	0.000	0	0.0	0.000	A
C-A	2406			2406			
A-B	30			30			
A-C	1740			1740			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	341	0.000	0	0.0	0.000	A
C-A	1964			1964			
A-B	24			24			
A-C	1420			1420			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	157	0.000	0	0.0	0.000	A
C-AB	0	390	0.000	0	0.0	0.000	A
C-A	1645			1645			
A-B	20			20			
A-C	1190			1190			

2044 No Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2044 No Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1755	100.000
B		✓	0	100.000
C		✓	2432	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1755
	B	0	0	0
	C	2432	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	17	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	33	0.000	0	0.0	0.000	A
C-AB	0	359	0.000	0	0.0	0.000	A
C-A	1831			1831			
A-B	0			0			
A-C	1321			1321			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	305	0.000	0	0.0	0.000	A
C-A	2186			2186			
A-B	0			0			
A-C	1578			1578			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	231	0.000	0	0.0	0.000	A
C-A	2678			2678			
A-B	0			0			
A-C	1932			1932			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	231	0.000	0	0.0	0.000	A
C-A	2678			2678			
A-B	0			0			
A-C	1932			1932			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	305	0.000	0	0.0	0.000	A
C-A	2186			2186			
A-B	0			0			
A-C	1578			1578			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	33	0.000	0	0.0	0.000	A
C-AB	0	359	0.000	0	0.0	0.000	A
C-A	1831			1831			
A-B	0			0			
A-C	1321			1321			

2044 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2044 With Development	AM	ONE HOUR	07:45	09:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1782	100.000
B		✓	0	100.000
C		✓	2432	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	27	1755
	B	0	0	0
	C	2432	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	21	15
	B	0	0	0
	C	17	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	29	0.000	0	0.0	0.000	A
C-AB	0	355	0.000	0	0.0	0.000	A
C-A	1831			1831			
A-B	20			20			
A-C	1321			1321			

08:00 - 08:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	300	0.000	0	0.0	0.000	A
C-A	2186			2186			
A-B	24			24			
A-C	1578			1578			

08:15 - 08:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	225	0.000	0	0.0	0.000	A
C-A	2678			2678			
A-B	30			30			
A-C	1932			1932			

08:30 - 08:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	225	0.000	0	0.0	0.000	A
C-A	2678			2678			
A-B	30			30			
A-C	1932			1932			

08:45 - 09:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	300	0.000	0	0.0	0.000	A
C-A	2186			2186			
A-B	24			24			
A-C	1578			1578			

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	29	0.000	0	0.0	0.000	A
C-AB	0	355	0.000	0	0.0	0.000	A
C-A	1831			1831			
A-B	20			20			
A-C	1321			1321			

Junctions 10

PICADY 10 - Priority Intersection Module

Filename: Import of Junction B PM.j10
Path: \\fserver5-dub\Gdrdp\3-0 Documents\3-03 Draft Documents\3-03-10 EIAR Addendum\Chapter 13 Traffic Chapter\Traffic Calculations\Operation
Report generation date: 18/10/2023 12:19:14

Summary of junction performance

	PM				
	Set ID	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base Year				
Stream B-AC	D1	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2029 No Development				
Stream B-AC	D2	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2029 With Development				
Stream B-AC	D3	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2034 No Development				
Stream B-AC	D4	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2034 Wth Development				
Stream B-AC	D5	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2044 No Development				
Stream B-AC	D6	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A
	2044 With Development				
Stream B-AC	D7	0.0	0.00	0.00	A
Stream C-AB		0.0	0.00	0.00	A

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/08/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	TOBIN\Maria Rooney
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	Veh	Veh	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	16:45	18:15	15
D2	2029 No Development	PM	ONE HOUR	16:45	18:15	15
D3	2029 With Development	PM	ONE HOUR	16:45	18:15	15
D4	2034 No Development	PM	ONE HOUR	16:45	18:15	15
D5	2034 Wth Development	PM	ONE HOUR	16:45	18:15	15
D6	2044 No Development	PM	ONE HOUR	16:45	18:15	15
D7	2044 With Development	PM	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2022 Base Year , PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Arms

Arms

Arm	Name	Description	Arm type
A	R139 (W)		Major
B	WWTP		Minor
C	R139 (E)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right-turn storage	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	12.00			200.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	3.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	697	0.094	0.237	0.149	0.339
B-C	781	0.089	0.224	-	-
C-B	690	0.198	0.198	-	-

The slopes and intercepts shown above include custom intercept adjustments only.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2022 Base Year	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1355	100.000
B		✓	0	100.000
C		✓	1787	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1355
	B	0	0	0
	C	1787	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	20	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	274	0.000	0	0.0	0.000	A
C-AB	0	422	0.000	0	0.0	0.000	A
C-A	1345			1345			
A-B	0			0			
A-C	1020			1020			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	146	0.000	0	0.0	0.000	A
C-AB	0	382	0.000	0	0.0	0.000	A
C-A	1606			1606			
A-B	0			0			
A-C	1218			1218			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1968			1968			
A-B	0			0			
A-C	1492			1492			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	327	0.000	0	0.0	0.000	A
C-A	1968			1968			
A-B	0			0			
A-C	1492			1492			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	146	0.000	0	0.0	0.000	A
C-AB	0	382	0.000	0	0.0	0.000	A
C-A	1606			1606			
A-B	0			0			
A-C	1218			1218			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	274	0.000	0	0.0	0.000	A
C-AB	0	422	0.000	0	0.0	0.000	A
C-A	1345			1345			
A-B	0			0			
A-C	1020			1020			

2029 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2029 No Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1565	100.000
B		✓	0	100.000
C		✓	2081	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1565
	B	0	0	0
	C	2081	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	12
	B	0	0	0
	C	21	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	168	0.000	0	0.0	0.000	A
C-AB	0	388	0.000	0	0.0	0.000	A
C-A	1567			1567			
A-B	0			0			
A-C	1178			1178			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	343	0.000	0	0.0	0.000	A
C-A	1871			1871			
A-B	0			0			
A-C	1407			1407			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	279	0.000	0	0.0	0.000	A
C-A	2291			2291			
A-B	0			0			
A-C	1723			1723			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	279	0.000	0	0.0	0.000	A
C-A	2291			2291			
A-B	0			0			
A-C	1723			1723			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	343	0.000	0	0.0	0.000	A
C-A	1871			1871			
A-B	0			0			
A-C	1407			1407			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	168	0.000	0	0.0	0.000	A
C-AB	0	388	0.000	0	0.0	0.000	A
C-A	1567			1567			
A-B	0			0			
A-C	1178			1178			

2029 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2029 With Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1577	100.000
B		✓	0	100.000
C		✓	2081	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	1565
	B	0	0	0
	C	2081	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	32	12
	B	0	0	0
	C	21	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	166	0.000	0	0.0	0.000	A
C-AB	0	386	0.000	0	0.0	0.000	A
C-A	1567			1567			
A-B	9			9			
A-C	1178			1178			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	340	0.000	0	0.0	0.000	A
C-A	1871			1871			
A-B	11			11			
A-C	1407			1407			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	276	0.000	0	0.0	0.000	A
C-A	2291			2291			
A-B	13			13			
A-C	1723			1723			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	276	0.000	0	0.0	0.000	A
C-A	2291			2291			
A-B	13			13			
A-C	1723			1723			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	340	0.000	0	0.0	0.000	A
C-A	1871			1871			
A-B	11			11			
A-C	1407			1407			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	166	0.000	0	0.0	0.000	A
C-AB	0	386	0.000	0	0.0	0.000	A
C-A	1567			1567			
A-B	9			9			
A-C	1178			1178			

2034 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2034 No Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1660	100.000
B		✓	0	100.000
C		✓	2217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1660
	B	0	0	0
	C	2217	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	13
	B	0	0	0
	C	22	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	104	0.000	0	0.0	0.000	A
C-AB	0	370	0.000	0	0.0	0.000	A
C-A	1669			1669			
A-B	0			0			
A-C	1250			1250			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	321	0.000	0	0.0	0.000	A
C-A	1993			1993			
A-B	0			0			
A-C	1492			1492			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	254	0.000	0	0.0	0.000	A
C-A	2441			2441			
A-B	0			0			
A-C	1828			1828			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	254	0.000	0	0.0	0.000	A
C-A	2441			2441			
A-B	0			0			
A-C	1828			1828			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	321	0.000	0	0.0	0.000	A
C-A	1993			1993			
A-B	0			0			
A-C	1492			1492			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	104	0.000	0	0.0	0.000	A
C-AB	0	370	0.000	0	0.0	0.000	A
C-A	1669			1669			
A-B	0			0			
A-C	1250			1250			

2034 Wth Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2034 Wth Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1672	100.000
B		✓	0	100.000
C		✓	2217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	1660
	B	0	0	0
	C	2217	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	32	13
	B	0	0	0
	C	22	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	102	0.000	0	0.0	0.000	A
C-AB	0	368	0.000	0	0.0	0.000	A
C-A	1669			1669			
A-B	9			9			
A-C	1250			1250			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	319	0.000	0	0.0	0.000	A
C-A	1993			1993			
A-B	11			11			
A-C	1492			1492			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	251	0.000	0	0.0	0.000	A
C-A	2441			2441			
A-B	13			13			
A-C	1828			1828			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	251	0.000	0	0.0	0.000	A
C-A	2441			2441			
A-B	13			13			
A-C	1828			1828			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	319	0.000	0	0.0	0.000	A
C-A	1993			1993			
A-B	11			11			
A-C	1492			1492			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	102	0.000	0	0.0	0.000	A
C-AB	0	368	0.000	0	0.0	0.000	A
C-A	1669			1669			
A-B	9			9			
A-C	1250			1250			

2044 No Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2044 No Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1843	100.000
B		✓	0	100.000
C		✓	2488	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	0	1843
	B	0	0	0
	C	2488	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	15
	B	0	0	0
	C	24	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	335	0.000	0	0.0	0.000	A
C-A	1873			1873			
A-B	0			0			
A-C	1388			1388			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	280	0.000	0	0.0	0.000	A
C-A	2237			2237			
A-B	0			0			
A-C	1657			1657			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	204	0.000	0	0.0	0.000	A
C-A	2739			2739			
A-B	0			0			
A-C	2029			2029			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	204	0.000	0	0.0	0.000	A
C-A	2739			2739			
A-B	0			0			
A-C	2029			2029			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	280	0.000	0	0.0	0.000	A
C-A	2237			2237			
A-B	0			0			
A-C	1657			1657			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	335	0.000	0	0.0	0.000	A
C-A	1873			1873			
A-B	0			0			
A-C	1388			1388			

2044 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Arm A Direction	Arm B Direction	Arm C Direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way	Two-way	Two-way		0.00	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	0.00	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2044 With Development	PM	ONE HOUR	16:45	18:15	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	1855	100.000
B		✓	0	100.000
C		✓	2488	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0	12	1843
	B	0	0	0
	C	2488	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	32	15
	B	0	0	0
	C	24	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS
B-AC	0.00	0.00	0.0	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	332	0.000	0	0.0	0.000	A
C-A	1873			1873			
A-B	9			9			
A-C	1388			1388			

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	277	0.000	0	0.0	0.000	A
C-A	2237			2237			
A-B	11			11			
A-C	1657			1657			

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	201	0.000	0	0.0	0.000	A
C-A	2739			2739			
A-B	13			13			
A-C	2029			2029			

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	201	0.000	0	0.0	0.000	A
C-A	2739			2739			
A-B	13			13			
A-C	2029			2029			

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	277	0.000	0	0.0	0.000	A
C-A	2237			2237			
A-B	11			11			
A-C	1657			1657			

18:00 - 18:15

Stream	Total Demand (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	0	0	0.000	0	0.0	0.000	A
C-AB	0	332	0.000	0	0.0	0.000	A
C-A	1873			1873			
A-B	9			9			
A-C	1388			1388			