Appendix F – Traffic Flow Spreadsheets

Index	SIPM Junction	Name	Origin	Destination	AM				PM				AM	PM		
					Car	LGV	HGV	Total	Car	LGV	HGV	Total	PSVs	PSVs		
83	5	Bixley Road - Felixstowe Road	Bixley Road	Bucklesham Road	40	0	0	40	47	5	0	53	41	53		
84	5	Bixley Road - Felixstowe Road	Bixley Road	Felixstowe Road S	683	90	14	787	592	39	14	645	800	659		
85	5	Bixley Road - Felixstowe Road	Bixley Road	Felixstowe Road W	298	26	6	329	343	34	5	381	335	386		
87	5	Bixley Road - Felixstowe Road	Bucklesham Road	Felixstowe Road S	24	2	3	28	29	4	1	34	31	34		
88	5	Bixley Road - Felixstowe Road	Bucklesham Road	Felixstowe Road W	60	13	0	73	75	13	0	89	73	89		
89	5	Bixley Road - Felixstowe Road	Bucklesham Road	Bixley Road	45	2	1	48	64	11	0	75	49	75	3015	3012
91	5	Bixley Road - Felixstowe Road	Felixstowe Road S	Felixstowe Road W	184	35	3	222	276	43	3	321	225	324		
92	5	Bixley Road - Felixstowe Road	Felixstowe Road S	Bixley Road	531	64	20	615	616	59	15	690	634	706		
93	5	Bixley Road - Felixstowe Road	Felixstowe Road S	Bucklesham Road	24	4	3	31	11	1	1	12	35	13		
95	5	Bixley Road - Felixstowe Road	Felixstowe Road W	Bixley Road	321	36	11	369	322	37	4	362	379	366		
96	5	Bixley Road - Felixstowe Road	Felixstowe Road W	Bucklesham Road	28	17	0	44	28	1	0	29	44	29		
97	5	Bixley Road - Felixstowe Road	Felixstowe Road W	Felixstowe Road S	298	48	11	357	240	32	4	275	368	279		
99	6	Heath Road - Bixley Road	Heath Road	Foxhall Road E	90	12	4	106	114	8	1	123	110	124		
100	6	Heath Road - Bixley Road	Heath Road	Bixley Road	569	70	12	651	562	43	9	614	663	623		
101	6	Heath Road - Bixley Road	Heath Road	Foxhall Road W	89	1	7	97	63	7	6	76	104	82		
102	6	Heath Road - Bixley Road	Heath Road	U-turns	0	0	0	0	0	0	0	0	0	0		
103	6	Heath Road - Bixley Road	Foxhall Road E	Bixley Road	91	5	6	101	97	2	5	104	107	109		
104	6	Heath Road - Bixley Road	Foxhall Road E	Foxhall Road W	175	21	4	199	206	26	3	235	203	238		
105	6	Heath Road - Bixley Road	Foxhall Road E	Heath Road	127	10	2	139	122	13	0	135	140	135		
106	6	Heath Road - Bixley Road	Foxhall Road E	U-turns	0	0	0	0	0	0	0	0	0	0		
107	6	Heath Road - Bixley Road	Bixley Road	Foxhall Road W	88	17	12	117	103	15	3	121	129	124		
108	6	Heath Road - Bixley Road	Bixley Road	Heath Road	560	78	12	650	559	54	6	619	662	626		
109	6	Heath Road - Bixley Road	Bixley Road	Foxhall Road E	116	3	2	121	158	9	0	168	123	168		
110	6	Heath Road - Bixley Road	Bixley Road	U-turns	0	0	0	0	0	0	0	0	0	0		
111	6	Heath Road - Bixley Road	Foxhall Road W	Heath Road	91	8	3	103	86	5	4	95	106	99		
112	6	Heath Road - Bixley Road	Foxhall Road W	Foxhall Road E	156	25	5	185	200	18	0	218	190	218		
113	6	Heath Road - Bixley Road	Foxhall Road W	Bixley Road	119	7	1	128	159	8	0	167	129	167		
114	6	Heath Road - Bixley Road	Foxhall Road W	U-turns	0	0	0	0	0	0	0	0	0	0	2665	2712
115	7	Woodbridge Road - Heath Road	Woodbridge Road E	Heath Road	217	24	4	245	162	11	2	175	249	177		
116	7	Woodbridge Road - Heath Road	Woodbridge Road E	Woodbridge Road W	637	42	18	696	592	67	13	673	714	686		
117	7	Woodbridge Road - Heath Road	Woodbridge Road E	U-turns	0	0	0	0	0	0	0	0	0	0		
118	7	Woodbridge Road - Heath Road	Heath Road	Woodbridge Road W	494	68	8	570	653	50	5	708	578	713		
119	7	Woodbridge Road - Heath Road	Heath Road	Woodbridge Road E	143	31	6	179	243	18	0	261	185	261		
120	7	Woodbridge Road - Heath Road	Heath Road	U-turns	0	0	0	0	0	0	0	0	0	0		
121	7	Woodbridge Road - Heath Road	Woodbridge Road W	Woodbridge Road E	488	94	20	602	699	49	15	763	622	778		
122	7	Woodbridge Road - Heath Road	Woodbridge Road W	Heath Road	673	53	13	739	526	45	9	579	752	588		
123	7	Woodbridge Road - Heath Road	Woodbridge Road W	U-turns	117	3	0	120	72	14	0	86	120	86	3221	3288
124	8	Woodbridge Road - Colchester Road	Woodbridge Road E	Hospital Entrance	161	8	0	169	58	4	0	62	169	62		
125	8	Woodbridge Road - Colchester Road	Woodbridge Road E	Woodbridge Road W	470	30	12	511	502	39	11	552	523	563		
126	8	Woodbridge Road - Colchester Road	Woodbridge Road E	Colchester Road	617	75	14	706	756	88	7	851	720	858		
128	8	Woodbridge Road - Colchester Road	Hospital Entrance	Woodbridge Road W	12	1	0	13	24	1	0	25	13	25		
129	8	Woodbridge Road - Colchester Road	Hospital Entrance	Colchester Road	9	1	0	10	22	1	0	23	10	23		
130	8	Woodbridge Road - Colchester Road	Hospital Entrance	Woodbridge Road E	26	3	0	29	58	2	0	60	29	60		
132	8	Woodbridge Road - Colchester Road	Woodbridge Road W	Colchester Road	65	14	1	81	91	1	1	92	82	93		
133	8	Woodbridge Road - Colchester Road	Woodbridge Road W	Woodbridge Road E	513	62	20	594	450	37	20	506	614	526		
136	8	Woodbridge Road - Colchester Road	Colchester Road	Woodbridge Road E	739	86	13	838	783	69	4	856	851	860	3012	3071
792	5	Bixley Road - Felixstowe Road	Bixley Road		1020	116	20	1156	981	78	19	1078	1176	1097		
793	5	Bixley Road - Felixstowe Road	Bucklesham Road		128	16	4	148	168	28	1	197	152	197		
794	5	Bixley Road - Felixstowe Road	Felixstowe Road S		740	103	26	869	902	103	19	1024	894	1043		
795	5	Bixley Road - Felixstowe Road	Felixstowe Road W		646	101	22	769	589	70	8	667	792	675		
796	6	Heath Road - Bixley Road	Heath Road		749	83	23	854	739	58	16	813	877	829		
797	6	Heath Road - Bixley Road	Foxhall Road E		393	36	11	439	426	41	8	474	450	482		
798	6	Heath Road - Bixley Road	Bixley Road		763	99	25	888	821	78	9	908	913	917		
799	6	Heath Road - Bixley Road	Foxhall Road W		366	41	9	416	445	31	4	480	425	484		
800	7	Woodbridge Road - Heath Road	Woodbridge Road E		854	65	22	942	755	78	15	848	964	863		
801	7	Woodbridge Road - Heath Road	Heath Road		637	99	14	749	895	68	5	969	763	974		
802	7	Woodbridge Road - Heath Road	Woodbridge Road W		1278	151	33	1461	1297	108	24	1428	1494	1452		
803	8	Woodbridge Road - Colchester Road	Woodbridge Road E		1247	112	26	1386	1316	131	18	1465	1412	1484		
806	8	Woodbridge Road - Colchester Road	Colchester Road		739	86	13	838	783	69	4	856	851	860		
985	5	Bixley Road - Felixstowe Road		Bixley Road	897	102	32	1031	1001	107	19	1127	1063	1146		
986	5	Bixley Road - Felixstowe Road		Bucklesham Road	91	21	4	116	86	7	1	94	120	95		
988	5	Bixley Road - Felixstowe Road		Felixstowe Road W	542	73	9	623	693	90	7	790	632	798		
989	6	Heath Road - Bixley Road		Heath Road	778	97	17	891	768	72	10	850	908	860		
990	6	Heath Road - Bixley Road		Foxhall Road E	360	41	11	412	472	35	1	508	422	509		
991	6	Heath Road - Bixley Road		Bixley Road	780	82	19	880	817	53	14	884	899	898		
992	6	Heath Road - Bixley Road		Foxhall Road W	353	39	22	414	373	48	12	432	436	444		
993	7	Woodbridge Road - Heath Road		Woodbridge Road E	631	125	26	782	942	67	15	1024	807	1039		
994	7	Woodbridge Road - Heath Road		Heath Road	890	77	17	984	688	55	11	754	1001	765		
998	8	Woodbridge Road - Colchester Road		Woodbridge Road W	482	31	12	525	526	40	11	577	537	588		
999	8	Woodbridge Road - Colchester Road		Colchester Road	692	90	16	798	870	90	8	968	813	975		

Index	SIPM Junction	Name	Origin	Destination	AM				PM				AM	PM		
					Car	LGV	HGV	Total	Car	LGV	HGV	Total	PSVs	PSVs		
83	5	Bixley Road - Felixstowe Road	Bixley Road	Bucklesham Road	39	0	0	40	50	5	0	55	40	56		
84	5	Bixley Road - Felixstowe Road	Bixley Road	Felixstowe Road S	701	94	12	808	638	40	13	691	820	704		
85	5	Bixley Road - Felixstowe Road	Bixley Road	Felixstowe Road W	275	21	5	301	374	38	4	416	306	420		
87	5	Bixley Road - Felixstowe Road	Bucklesham Road	Felixstowe Road S	26	2	3	31	29	4	1	33	33	34		
88	5	Bixley Road - Felixstowe Road	Bucklesham Road	Felixstowe Road W	64	14	0	78	72	13	0	85	78	85		
89	5	Bixley Road - Felixstowe Road	Bucklesham Road	Bixley Road	48	2	1	51	61	10	0	72	52	72		
91	5	Bixley Road - Felixstowe Road	Felixstowe Road S	Felixstowe Road W	188	34	3	225	267	40	2	310	229	312	2986	3140
92	5	Bixley Road - Felixstowe Road	Felixstowe Road S	Bixley Road	543	65	19	627	601	54	16	671	646	687		
93	5	Bixley Road - Felixstowe Road	Felixstowe Road S	Bucklesham Road	24	4	4	32	11	1	1	12	36	13		
95	5	Bixley Road - Felixstowe Road	Felixstowe Road W	Bixley Road	304	34	8	346	343	38	3	384	354	387		
96	5	Bixley Road - Felixstowe Road	Felixstowe Road W	Bucklesham Road	27	17	0	44	29	1	0	30	44	30		
97	5	Bixley Road - Felixstowe Road	Felixstowe Road W	Felixstowe Road S	283	44	11	338	295	36	4	336	349	340		
99	6	Heath Road - Bixley Road	Heath Road	Foxhall Road E	91	12	4	107	114	8	1	124	111	125		
100	6	Heath Road - Bixley Road	Heath Road	Bixley Road	574	71	10	655	573	43	7	624	664	631		
101	6	Heath Road - Bixley Road	Heath Road	Foxhall Road W	90	0	7	98	66	7	6	80	105	86		
102	6	Heath Road - Bixley Road	Heath Road	U-turns	0	0	0	0	0	0	0	0	0	0		
103	6	Heath Road - Bixley Road	Foxhall Road E	Bixley Road	99	5	5	110	106	2	5	113	115	118		
104	6	Heath Road - Bixley Road	Foxhall Road E	Foxhall Road W	191	21	4	216	229	32	3	263	220	267		
105	6	Heath Road - Bixley Road	Foxhall Road E	Heath Road	139	11	2	151	125	12	0	136	153	136		
106	6	Heath Road - Bixley Road	Foxhall Road E	U-turns	0	0	0	0	0	0	0	0	0	0		
107	6	Heath Road - Bixley Road	Bixley Road	Foxhall Road W	88	18	11	116	104	15	3	122	127	125	2705	2776
108	6	Heath Road - Bixley Road	Bixley Road	Heath Road	554	75	11	640	554	49	6	609	651	615		
109	6	Heath Road - Bixley Road	Bixley Road	Foxhall Road E	112	4	1	117	160	9	0	169	119	169		
110	6	Heath Road - Bixley Road	Bixley Road	U-turns	0	0	0	0	0	0	0	0	0	0		
111	6	Heath Road - Bixley Road	Foxhall Road W	Heath Road	92	9	3	104	93	4	4	101	107	105		
112	6	Heath Road - Bixley Road	Foxhall Road W	Foxhall Road E	162	27	5	193	212	18	0	230	198	230		
113	6	Heath Road - Bixley Road	Foxhall Road W	Bixley Road	124	8	1	134	162	9	0	171	135	171		
114	6	Heath Road - Bixley Road	Foxhall Road W	U-turns	0	0	0	0	0	0	0	0	0	0		
115	7	Woodbridge Road - Heath Road	Woodbridge Road E	Heath Road	238	27	5	269	178	12	2	192	274	194		
116	7	Woodbridge Road - Heath Road	Woodbridge Road E	Woodbridge Road W	694	45	19	757	646	74	13	734	776	747		
117	7	Woodbridge Road - Heath Road	Woodbridge Road E	U-turns	0	0	0	0	0	0	0	0	0	0		
118	7	Woodbridge Road - Heath Road	Heath Road	Woodbridge Road W	511	68	9	588	650	44	4	698	597	702		
119	7	Woodbridge Road - Heath Road	Heath Road	Woodbridge Road E	147	33	4	183	250	16	0	266	188	266		
120	7	Woodbridge Road - Heath Road	Heath Road	U-turns	0	0	0	0	0	0	0	0	0	0		
121	7	Woodbridge Road - Heath Road	Woodbridge Road W	Woodbridge Road E	528	102	21	651	753	53	13	819	672	832		
122	7	Woodbridge Road - Heath Road	Woodbridge Road W	Heath Road	723	58	13	794	550	45	8	604	807	612	3443	3446
123	7	Woodbridge Road - Heath Road	Woodbridge Road W	U-turns	126	3	0	129	79	14	0	93	129	93		
124	8	Woodbridge Road - Colchester Road	Woodbridge Road E	Hospital Entrance	170	9	0	179	64	5	0	69	179	69		
125	8	Woodbridge Road - Colchester Road	Woodbridge Road E	Woodbridge Road W	501	29	12	542	526	35	10	571	554	582		
126	8	Woodbridge Road - Colchester Road	Woodbridge Road E	Colchester Road	660	78	15	754	786	92	7	885	769	892		
128	8	Woodbridge Road - Colchester Road	Hospital Entrance	Woodbridge Road W	14	1	0	15	27	1	0	28	15	28		
129	8	Woodbridge Road - Colchester Road	Hospital Entrance	Colchester Road	10	1	0	12	24	1	0	25	12	25		
130	8	Woodbridge Road - Colchester Road	Hospital Entrance	Woodbridge Road E	27	3	0	30	66	1	0	67	30	67		
132	8	Woodbridge Road - Colchester Road	Woodbridge Road W	Colchester Road	72	15	1	88	97	1	1	98	89	99		
133	8	Woodbridge Road - Colchester Road	Woodbridge Road W	Woodbridge Road E	552	68	21	640	460	36	17	514	661	531	3228	3232
136	8	Woodbridge Road - Colchester Road	Colchester Road	Woodbridge Road E	799	93	13	906	857	74	5	935	919	940		
792	5	Bixley Road - Felixstowe Road	Bixley Road		1016	115	18	1149	1061	82	18	1161	1166	1179		
793	5	Bixley Road - Felixstowe Road	Bucklesham Road		139	17	3	159	162	27	1	189	163	190		
794	5	Bixley Road - Felixstowe Road	Felixstowe Road S		754	103	26	884	879	96	19	994	910	1013		
795	5	Bixley Road - Felixstowe Road	Felixstowe Road W		614	95	19	728	667	75	7	750	746	757		
796	6	Heath Road - Bixley Road	Heath Road		755	84	21	859	754	59	14	827	880	842		
797	6	Heath Road - Bixley Road	Foxhall Road E		429	37	11	477	460	45	8	513	488	521		
798	6	Heath Road - Bixley Road	Bixley Road		755	96	23	874	818	73	9	899	897	908		
799	6	Heath Road - Bixley Road	Foxhall Road W		378	44	9	431	467	31	4	501	440	506		
800	7	Woodbridge Road - Heath Road	Woodbridge Road E		931	72	23	1026	824	86	16	926	1050	942		
801	7	Woodbridge Road - Heath Road	Heath Road		658	101	13	771	900	60	4	964	784	968		
802	7	Woodbridge Road - Heath Road	Woodbridge Road W		1377	163	34	1575	1382	112	21	1515	1609	1537		
803	8	Woodbridge Road - Colchester Road	Woodbridge Road E		1331	116	27	1474	1376	132	17	1525	1502	1542		
806	8	Woodbridge Road - Colchester Road	Colchester Road		799	93	13	906	857	74	5	935	919	940		
985	5	Bixley Road - Felixstowe Road		Bixley Road	893	101	28	1022	1006	103	19	1128	1050	1147		
986	5	Bixley Road - Felixstowe Road		Bucklesham Road	90	21	4	115	90	7	1	98	119	99		
988	5	Bixley Road - Felixstowe Road		Felixstowe Road W	527	69	8	605	713	90	7	810	613	817		
989	6	Heath Road - Bixley Road		Heath Road	785	96	16	896	771	65	10	846	912	856		
990	6	Heath Road - Bixley Road		Foxhall Road E	365	43	10	417	487	35	1	523	427	524		
991	6	Heath Road - Bixley Road		Bixley Road	797	84	16	898	842	54	12	908	914	920		
992	6	Heath Road - Bixley Road		Foxhall Road W	369	39	22	430	399	54	12	465	452	477		
993	7	Woodbridge Road - Heath Road		Woodbridge Road E	674	134	25	834	1003	69	13	1085	859	1098		
994	7	Woodbridge Road - Heath Road		Heath Road	961	85	18	1063	728	57	11	796	1081	807		
998	8	Woodbridge Road - Colchester Road		Woodbridge Road W	515	30	12	557	553	36	10	600	569	610		
999	8	Woodbridge Road - Colchester Road		Colchester Road	743	94	16	854	907	94	8	1008	870	1016		

Queue Lengths (Vehicles)

2015

Time	Site 5 - Bixley Road	Site 5 - Bucklesham Road	Site 5 - Felixstowe Road S	Site 5 - Felixstowe Road W	Site 6 - Heath Road	Site 6 - Foxhall Road E	Site 6 - Bixley Road	Site 6 - Foxhall Road W	Site 7 - Woodbridge Road E	Site 7 - Heath Road	Site 7 - Woodbridge Road W	Site 8 - Woodbridge Road E	Site 8 - Hospital	Site 8 - Woodbridge Road W	Site 8 - Colchester Road
08:00:00	15	4	7	11	18	12	14	30	6	7	8	0	0	8	16
08:05:00	14	5	7	9	19	11	13	29	7	9	9	0	0	7	9
08:10:00	14	6	7	9	19	17	13	29	6	9	7	0	0	5	5
08:15:00	13	5	7	10	17	16	13	29	5	8	8	0	0	7	7
08:20:00	13	5	10	9	17	10	15	23	6	7	8	0	0	5	9
08:25:00	14	5	7	9	20	7	12	23	6	8	8	0	0	8	8
08:30:00	13	5	6	10	20	7	13	24	6	7	10	0	0	9	11
08:35:00	15	6	7	12	21	4	13	27	7	9	10	0	0	8	10
08:40:00	14	6	6	11	24	8	12	30	7	8	9	0	0	8	8
08:45:00	14	7	7	13	21	5	13	34	6	9	8	0	0	7	9
08:50:00	16	7	7	15	21	4	13	36	5	7	8	0	0	8	9
08:55:00	17	6	7	14	18	6	12	38	5	6	8	0	0	7	8
17:00:00	4	3	21	9	14	6	10	29	3	14	13	0	0	13	5
17:05:00	5	4	26	8	13	6	11	31	4	16	10	0	0	16	5
17:10:00	5	3	30	7	15	13	11	31	4	18	10	0	0	14	4
17:15:00	6	4	32	8	16	10	11	34	4	18	12	0	0	19	5
17:20:00	5	5	34	8	16	8	12	32	4	17	13	0	0	17	6
17:25:00	5	5	36	11	17	7	12	32	4	16	12	0	0	11	6
17:30:00	5	6	32	9	17	8	12	31	4	16	13	0	0	12	6
17:35:00	6	5	38	9	21	10	11	28	4	18	11	0	0	12	6
17:40:00	5	6	37	8	22	16	10	26	4	19	13	0	0	13	6
17:45:00	6	5	41	9	22	15	10	26	4	19	13	0	0	15	5
17:50:00	9	5	37	9	22	8	10	24	3	13	10	0	0	11	4
17:55:00	13	4	40	15	21	5	10	23	3	11	9	0	0	9	4
Ave AM	**14**	**6**	**7**	**11**	**20**	**9**	**13**	**29**	**6**	**8**	**8**	**0**	**0**	**7**	**9**
Ave PM	**6**	**5**	**34**	**9**	**18**	**9**	**11**	**29**	**4**	**16**	**12**	**0**	**0**	**14**	**5**

	9			**8**	**6**
	7		**0**	**8**	
		0			
	5			**12**	**4**
	14		**0**	**16**	
		0			

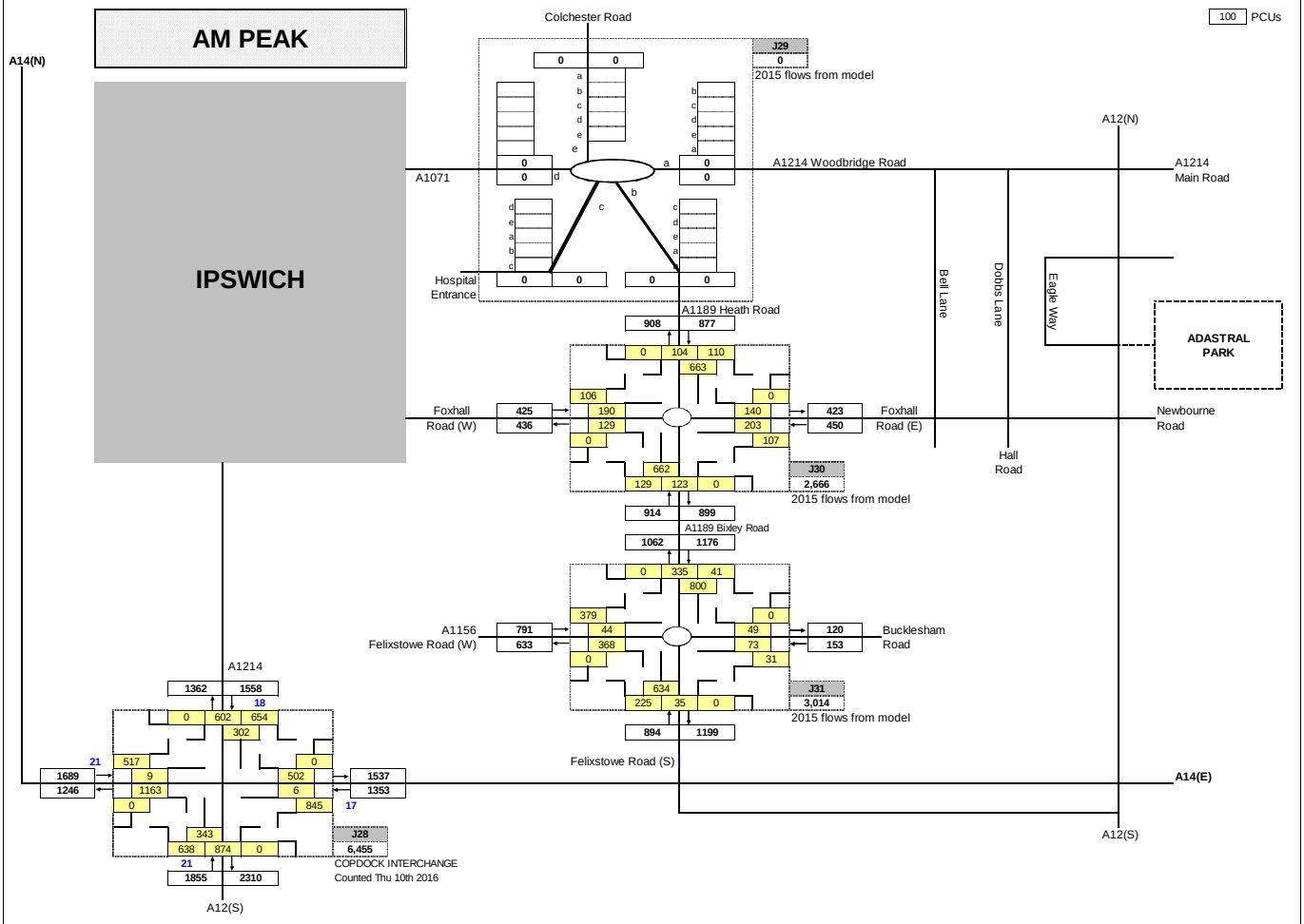
Site 5 - Bixley Road jw Felixstowe Road

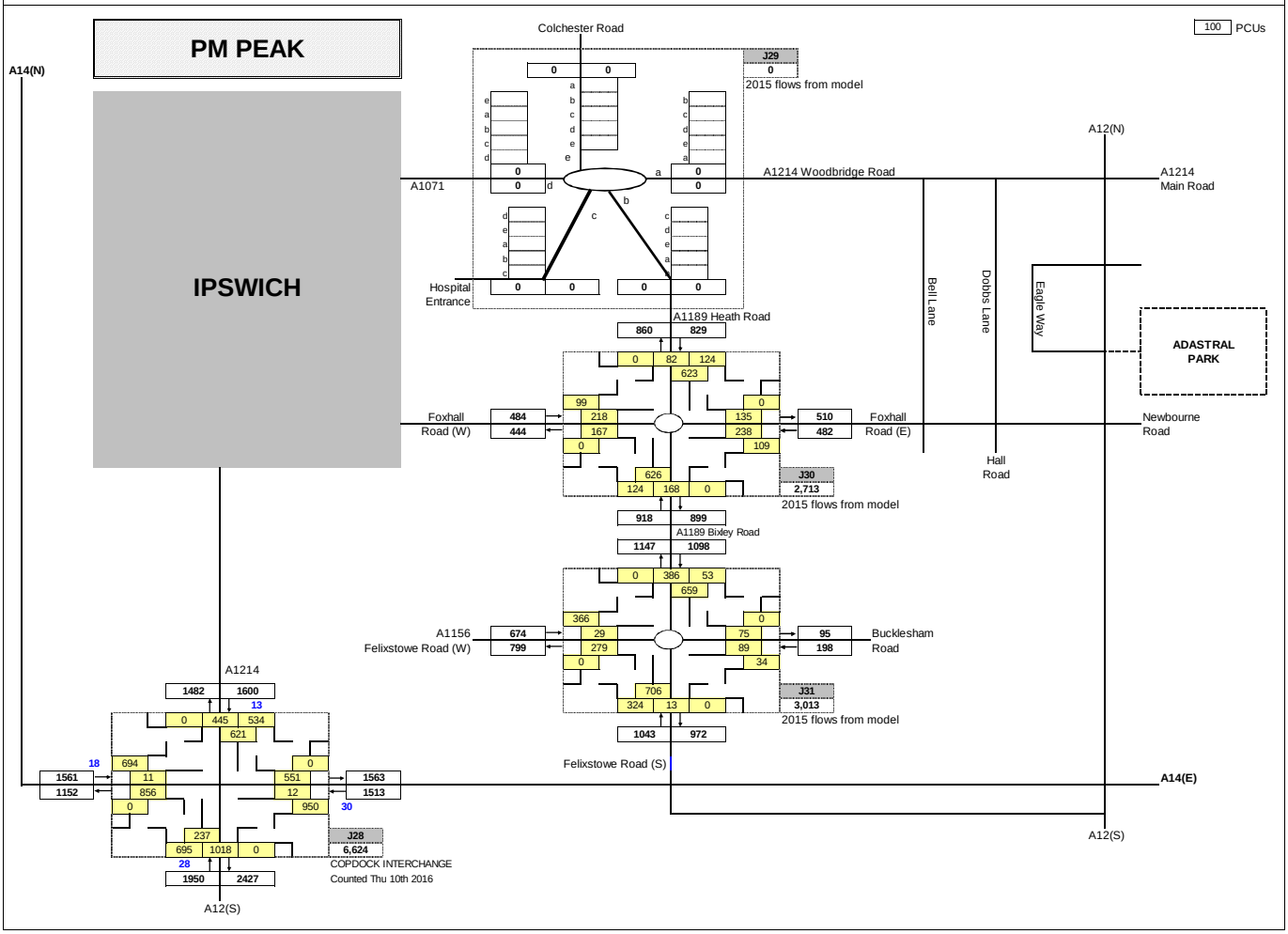
		PARAMICS	JUNCTIONS9			
		2015	2015	2027	2027+Dev	2027+Dev +Impr
AM	Bixley Road	14	12	**26**	35	**25**
	Buckingham Road €	6	2	4	4	5
	Felixstowe Road (S)	7	7	12	18	14
	Felixstowe Road (W)	11	10	12	14	17
PM	Bixley Road	6	4	9	13	8
	Buckingham Road €	5	3	10	14	11
	Felixstowe Road (S)	34	20	**56**	58	**28**
	Felixstowe Road (W)	9	5	17	21	21

Site 6 - Bixley Road jw Heath Road

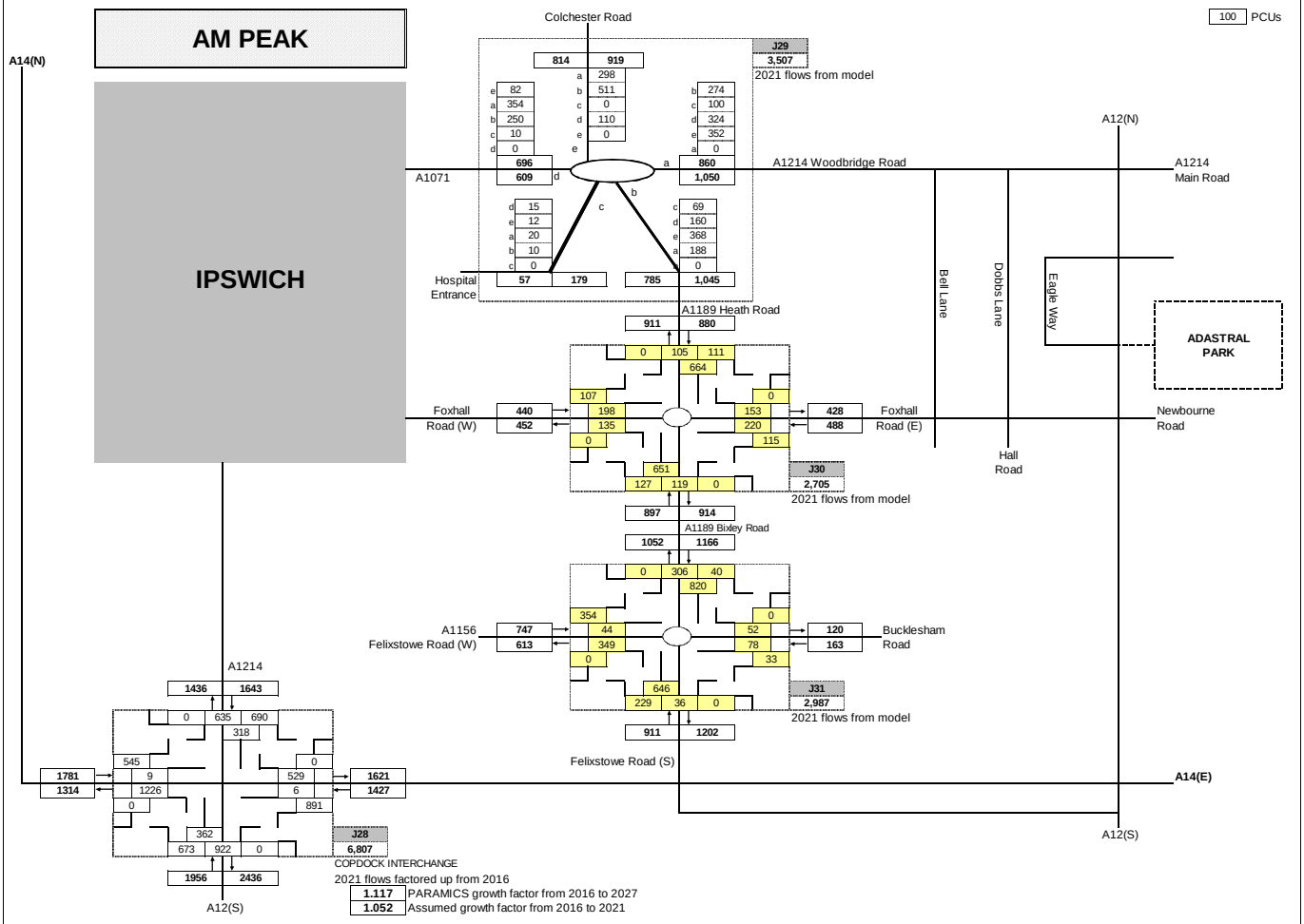
		PARAMICS	JUNCTIONS9			
		2015	2015	2027	2027+Dev	2027+Dev +Impr
AM	Heath Road	20	8	**20**	31	**14**
	Foxhall Road (E)	9	5	10	64	13
	Bixley Road	13	6	10	14	17
	Foxhall Road (W)	29	4	7	18	6
PM	Heath Road	18	8	**21**	28	**17**
	Foxhall Road (E)	9	6	16	54	12
	Bixley Road	11	6	11	15	17
	Foxhall Road (W)	29	8	**29**	108	**29**

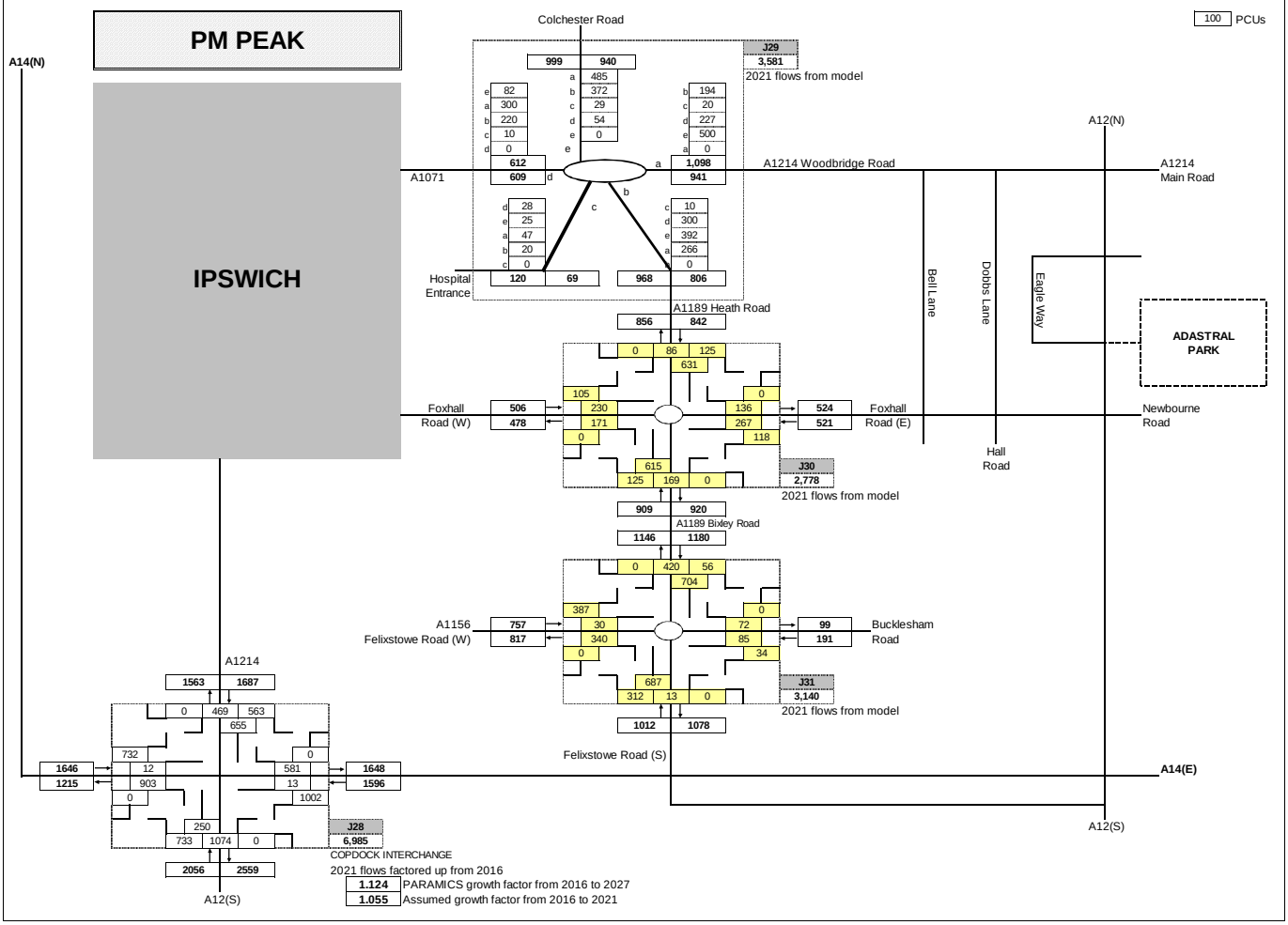
Client:	**CEG**	Prepared by: S.M.T.	Brookbanks Consulting
Job:	**10391 ADASTRAL PARK**	15/06/2017	
Title:	**2015/16 Traffic flows [PCUs]**	**Figure 1**	



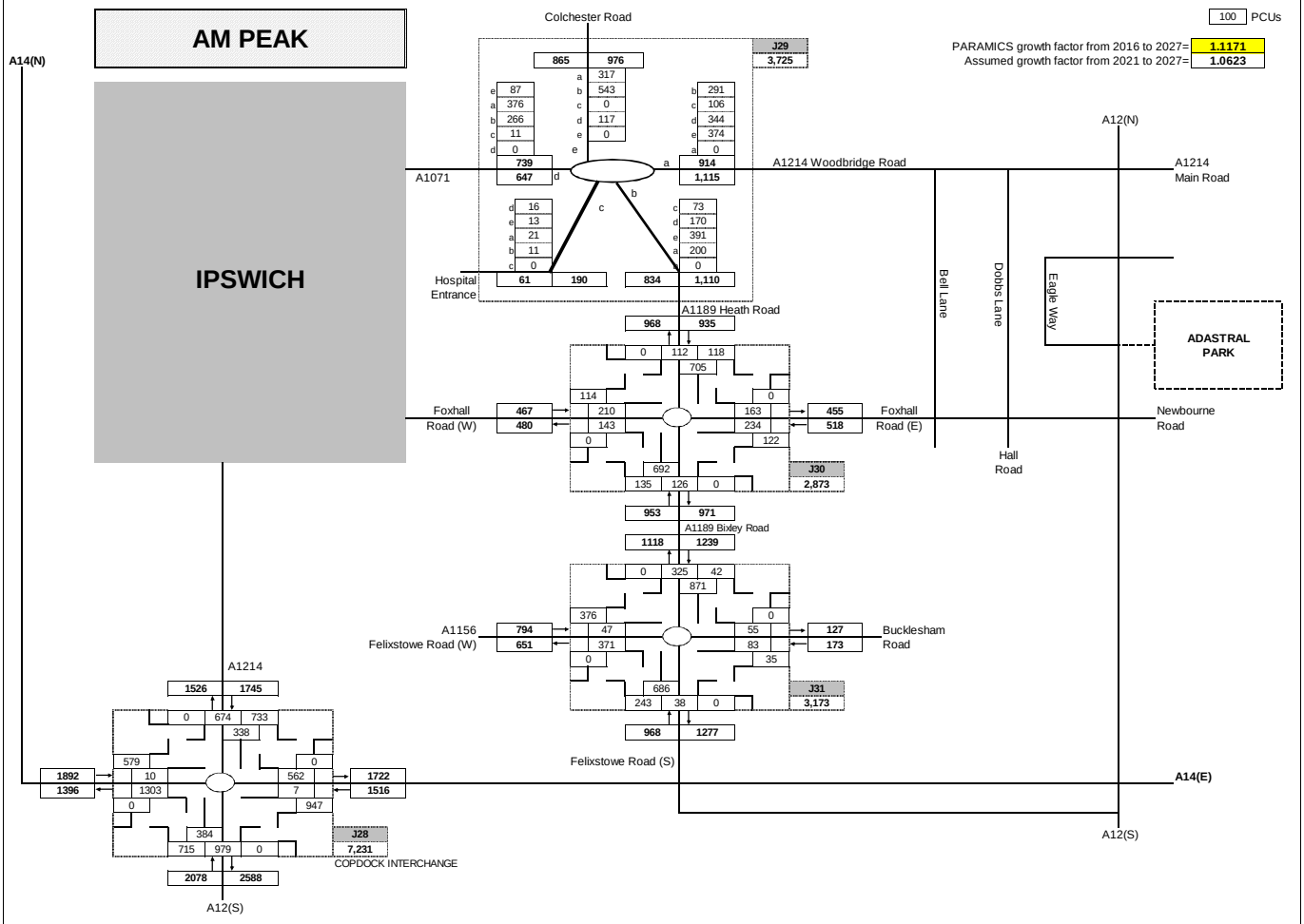


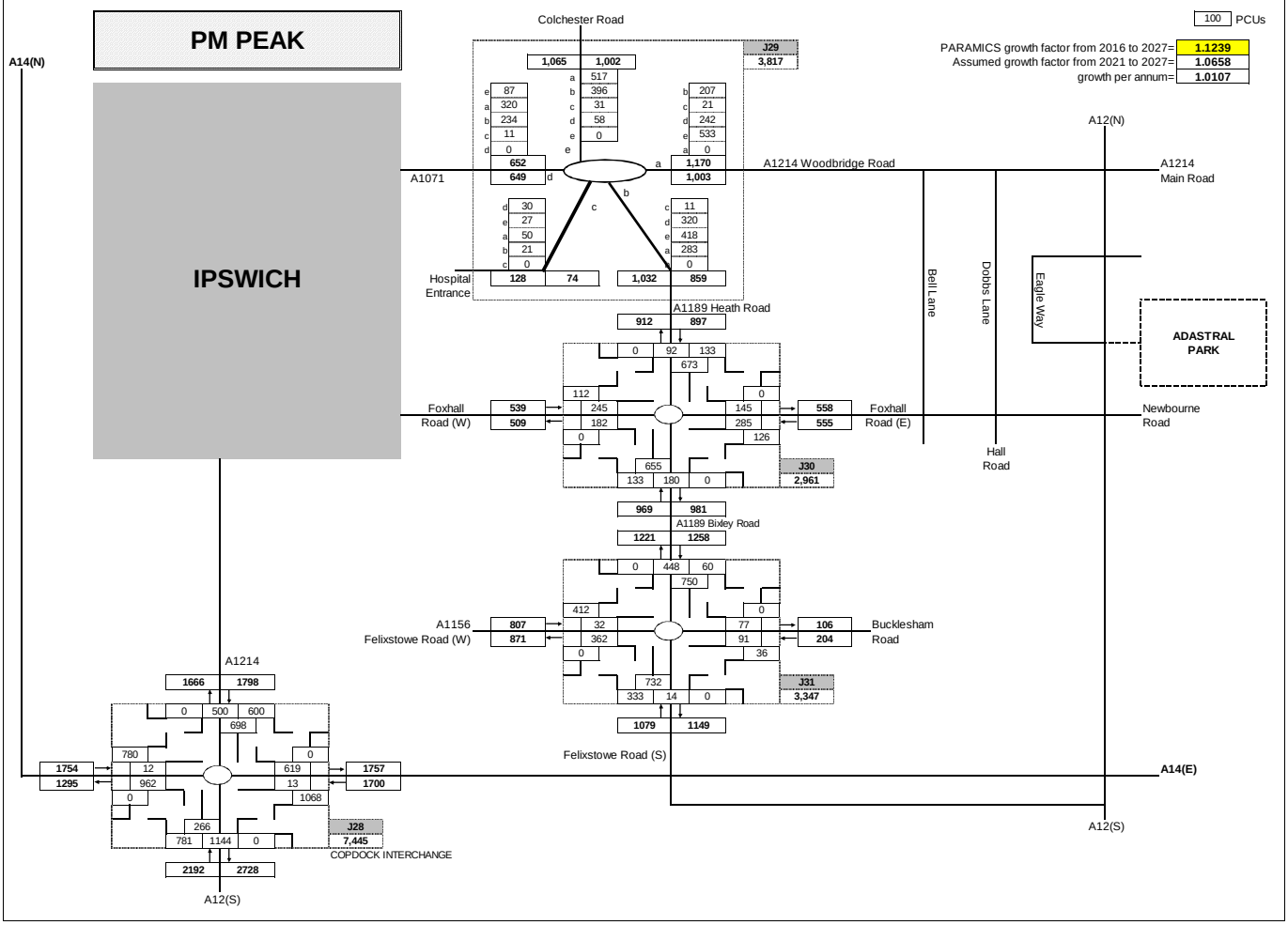
Client:	**CEG**	Prepared by: S.M.T.	Brookbanks Consulting
Job:	**10391 ADASTRAL PARK**	15/06/2017	
Title:	**2021 Traffic flows [PCUs]**	**Figure 2**	



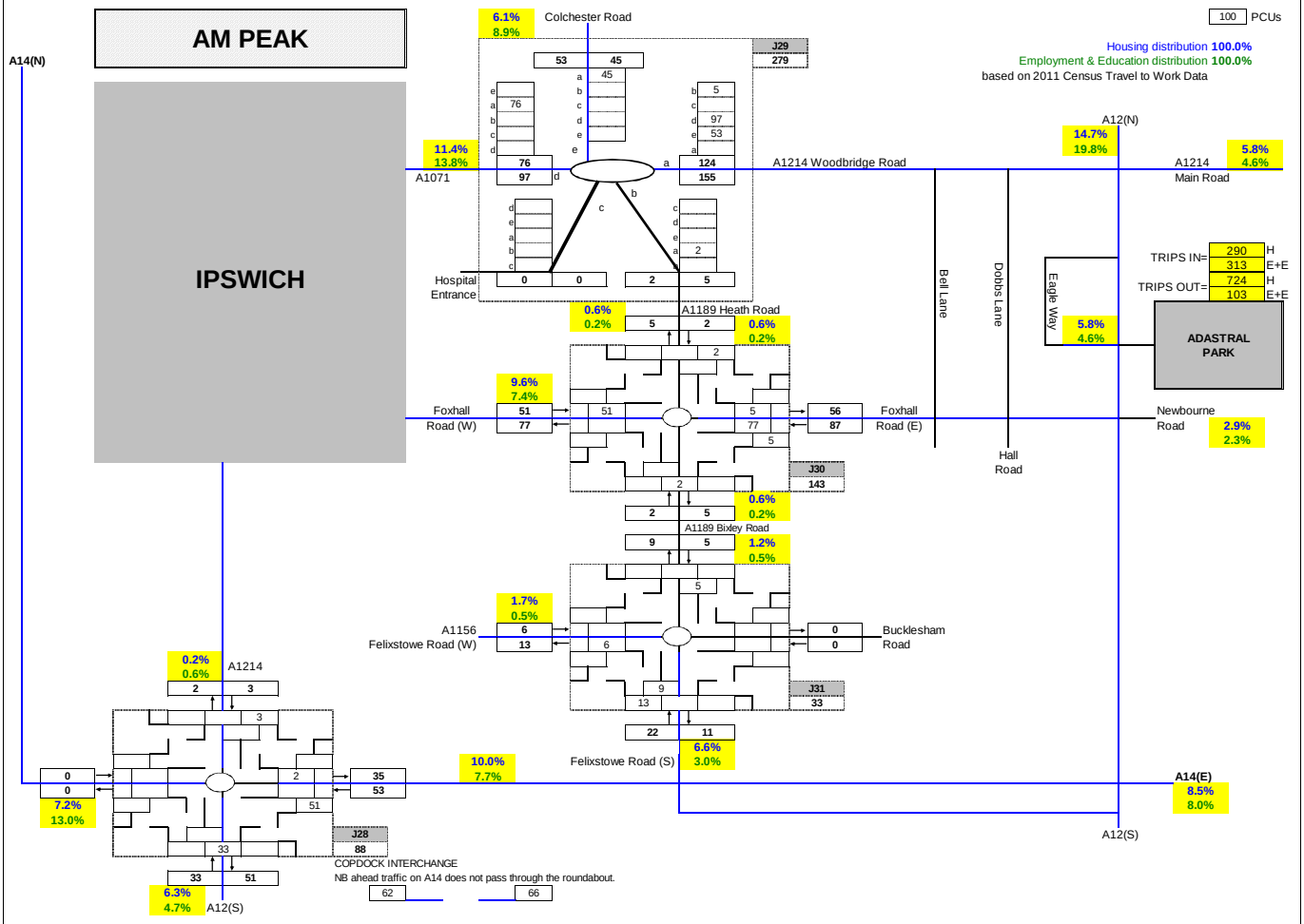


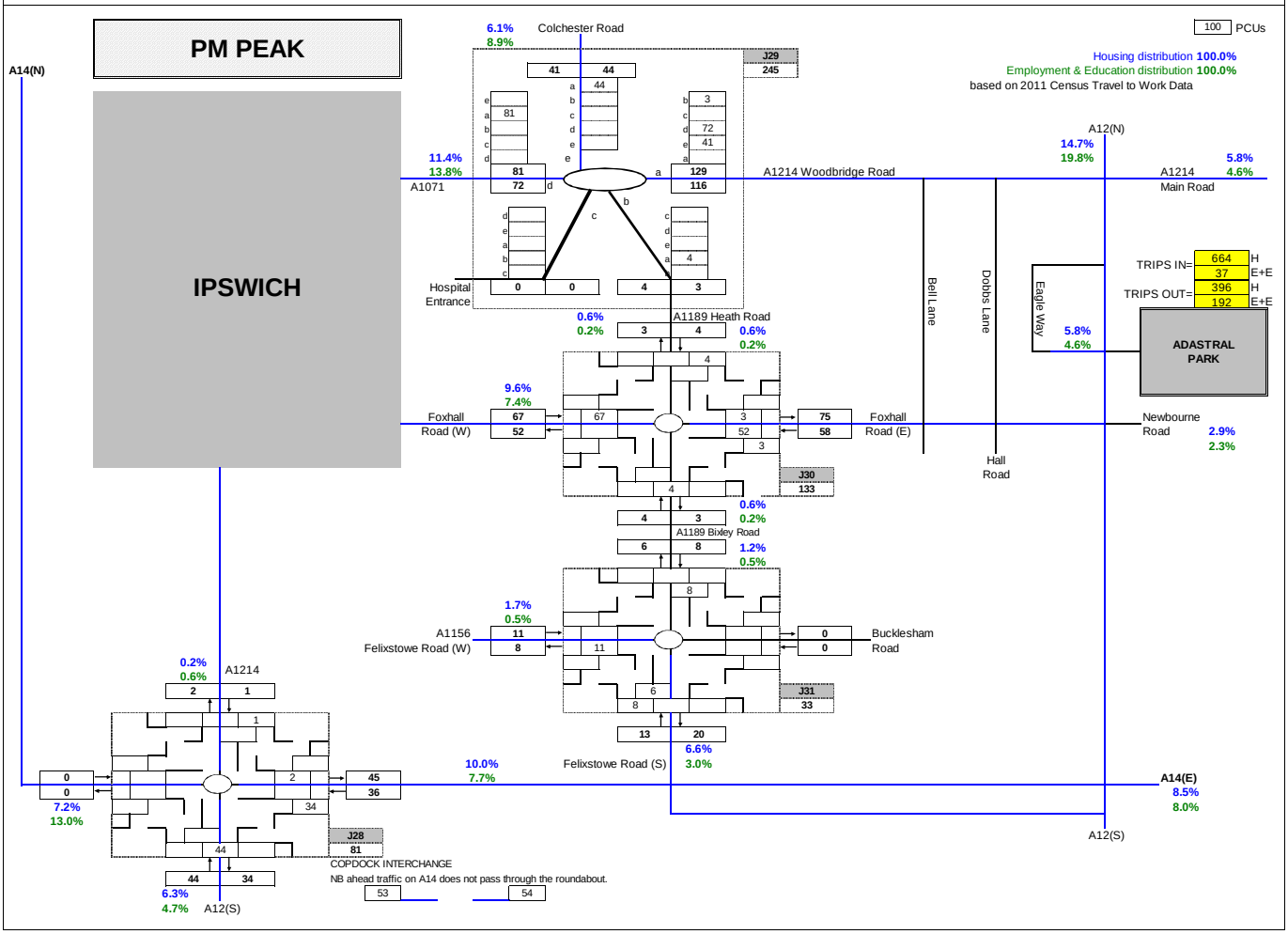
Client:	**CEG**	Prepared by: S.M.T.	Brookbanks Consulting
Job:	**10391 ADASTRAL PARK**	15/06/2017	
Title:	**2027 Forecast Traffic Flows [PCUs]**	**Figure 3**	



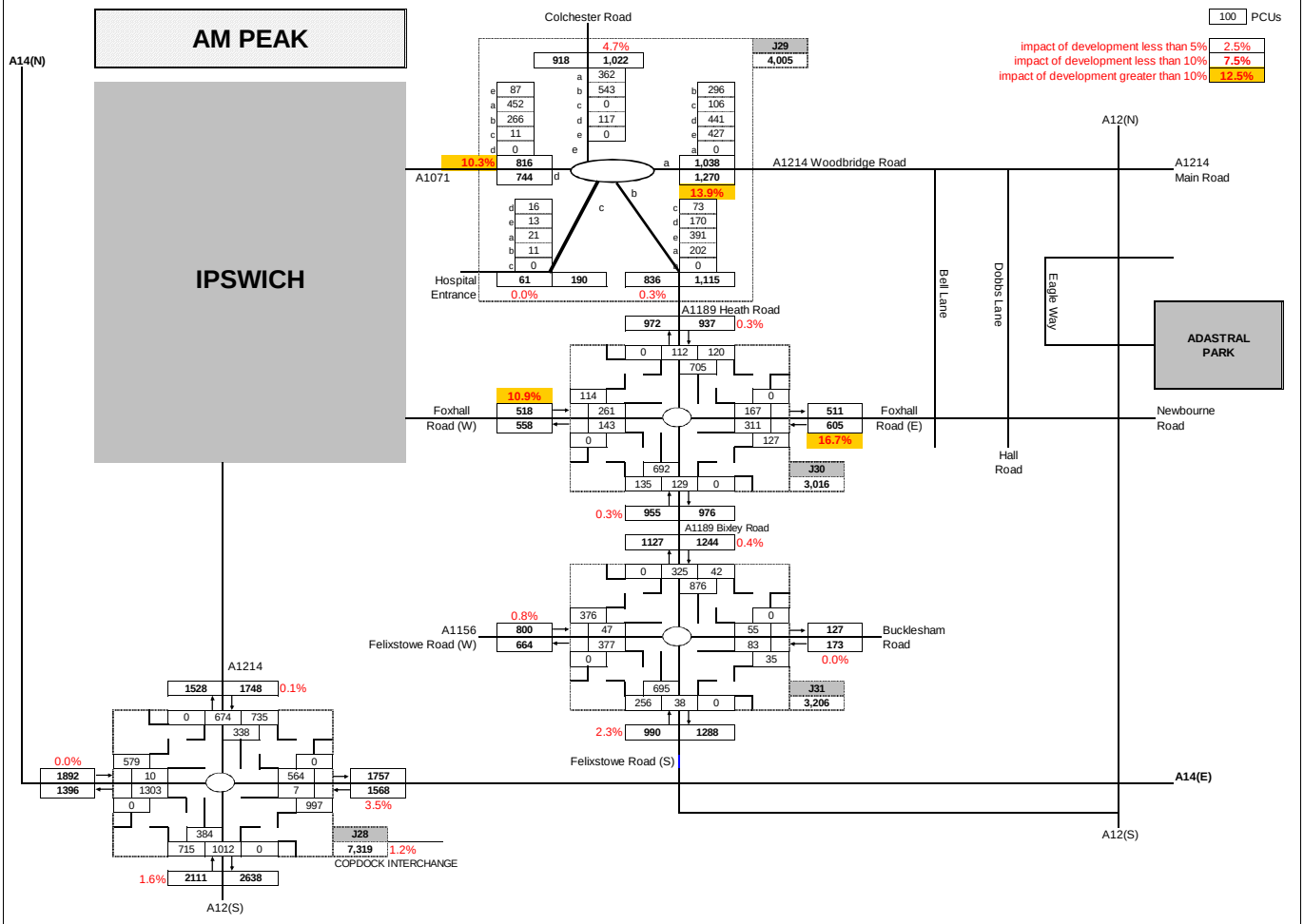


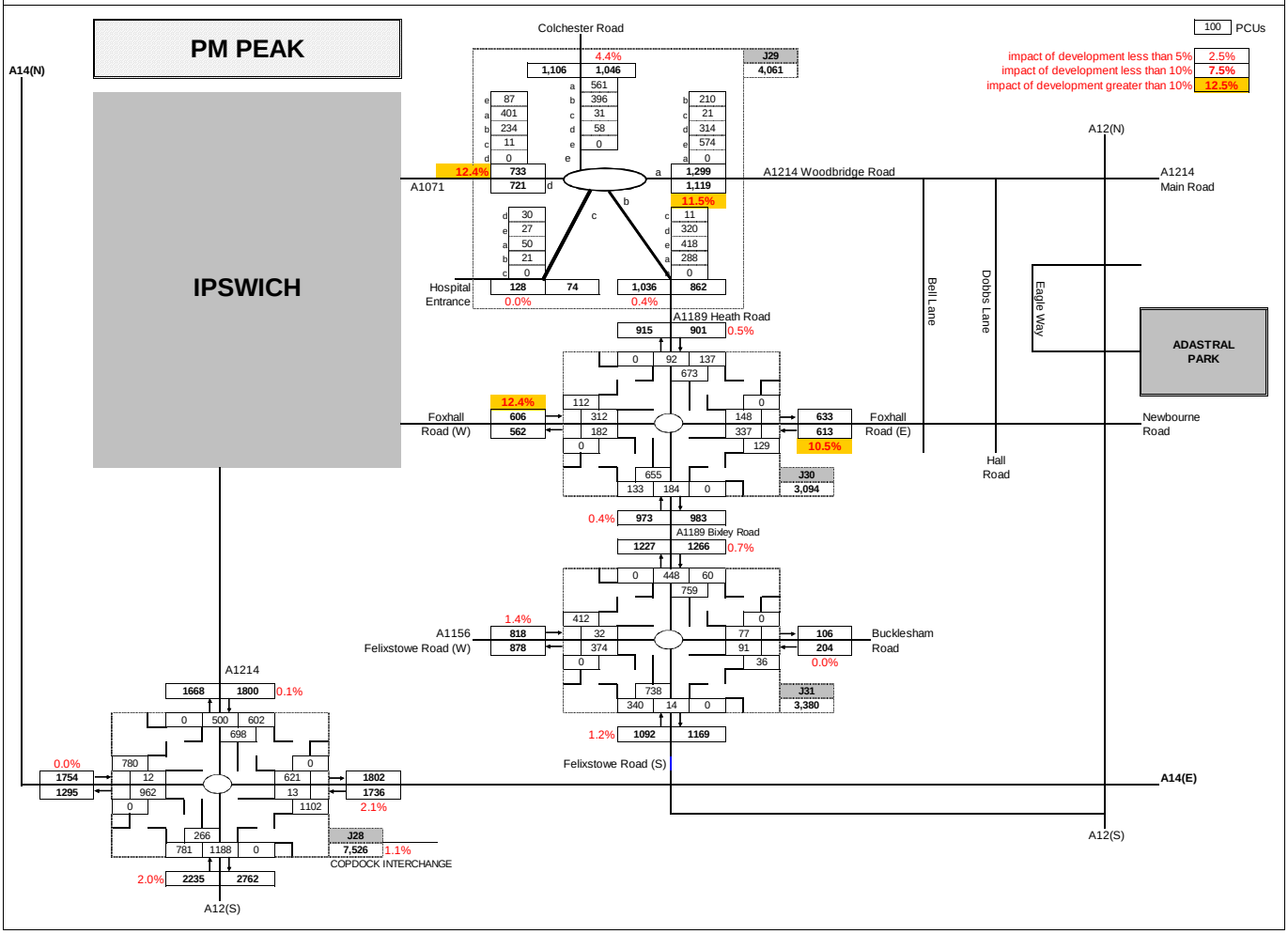
Client:	**CEG**	Prepared by: S.M.T.	Brookbanks Consulting
Job:	**10391 ADASTRAL PARK**	15/06/2017	
Title:	**Forecast Development Traffic Flows [PCUs]**	**Figure 4**	





Client:	**CEG**	Prepared by: S.M.T.	Brookbanks Consulting
Job:	**10391 ADASTRAL PARK**	15/06/2017	
Title:	**2027 Forecast Traffic Flows with Development [PCUs]**	**Figure 5**	





Arcady Spreadsheet - Woodbridge Road Eastbound

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	6.4	(2.2 - 12m)
Entry width (m)	e	7.2	(3 - 16m)
Effective length over which the flare is developed	l'	6	Any but Trl only up to 30
Entry radius (m)	r	100	(>= 3m)
Inscribed circle diameter (m)	D	45	(> = 13m)
Entry conflict angle (m)	Phi	15	(0 - 80)

tD	1.4087872	0	49.670
k	1.09117	38.357	0
S	0.2133333		
X2	6.9607477		
Qc	49.670		

		Veh/min	Veh/hr
INTERCEPT	38.36 (Veh / Min)		
	2301 (Veh / Hr)		
SLOPE	0.772	Enter circul	59.81 → 0
		Entry Capa	-7.83 → 2301

Arcady Spreadsheet - Woodbridge Road Eastbound Improved

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	6.4	(2.2 - 12m)
Entry width (m)	e	8.2	(3 - 16m)
Effective length over which the flare is developed	l'	7	Trl only up to
Entry radius (m)	r	100	(>= 3m)
Inscribed circle diameter (m)	D	45	(> = 13m)
Entry conflict angle (m)	Phi	15	(0 - 80)

tD	1.408787	0	50.899
k	1.09117	40.708	0
S	0.411429		
X2	7.387461		
Qc	50.899		

		Veh/min	Veh/hr
INTERCEPT	40.71 (Veh / Min)		
	2442 (Veh / Hr)		
SLOPE	0.800	Enter circulating	59.81 → 0
		Entry Capacity =	-7.12 → 2442

Arcady Spreadsheet - Woodbridge Road East (offside)

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	3.6	(2.2 - 12m)
Entry width (m)	e	3.6	(3 - 16m)
Effective length over which the flare is developed	l'	0.1	Any but Trl only up to 30
Entry radius (m)	r	50	(>= 3m)
Inscribed circle diameter (m)	D	40	(> = 13m)
Entry conflict angle (m)	Phi	15	(0 - 80)

tD	1.4403985	0	34.943
k	1.08139	19.660	0
S	0		
X2	3.6		
Qc	34.943		

		Veh/min	Veh/hr
INTERCEPT	19.66 (Veh / Min)		
	1180 (Veh / Hr)		
SLOPE	0.563	Enter circul	59.81 → 0
		Entry Capa	-13.99 → 1180

Arcady Spreadsheet - Woodbridge Road East (nearside+centre)

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	4	(2.2 - 12m)
Entry width (m)	e	7.7	(3 - 16m)
Effective length over which the flare is developed	l'	5	Trl only up to
Entry radius (m)	r	50	(>= 3m)
Inscribed circle diameter (m)	D	40	(> = 13m)
Entry conflict angle (m)	Phi	15	(0 - 80)

tD	1.440399	0	42.145
k	1.08139	27.843	0
S	1.184		
X2	5.098575		
Qc	42.145		

		Veh/min	Veh/hr
INTERCEPT	27.84 (Veh / Min)		
	1671 (Veh / Hr)		
SLOPE	0.661	Enter circulating	59.81 → 0
		Entry Capacity =	-11.67 → 1671

Arcady Spreadsheet - Heath Road

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	5.8	(2.2 - 12m)
Entry width (m)	e	8.2	(3 - 16m)
Effective length over which the flare is developed	l'	5	Any but Trl only up to 30
Entry radius (m)	r	50	(>= 3m)
Inscribed circle diameter (m)	D	45	(> = 13m)
Entry conflict angle (m)	Phi	20	(0 - 80)

tD	1.4087872	0	49.019
k	1.06404	36.251	0
S	0.768		
X2	6.7463722		
Qc	49.019		

		Veh/min	Veh/hr
INTERCEPT	36.25 (Veh / Min)		
	2175 (Veh / Hr)		
SLOPE	0.740	Enter circul	59.81 → 0
		Entry Capa	-7.98 → 2175

Arcady Spreadsheet - Heath Road Improved

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	5.8	(2.2 - 12m)
Entry width (m)	e	9.2	(3 - 16m)
Effective length over which the flare is developed	l'	6	Trl only up to
Entry radius (m)	r	50	(>= 3m)
Inscribed circle diameter (m)	D	45	(> = 13m)
Entry conflict angle (m)	Phi	20	(0 - 80)

tD	1.408787	0	49.812
k	1.06404	37.660	0
S	0.906667		
X2	7.008531		
Qc	49.812		

		Veh/min	Veh/hr
INTERCEPT	37.66 (Veh / Min)		
	2260 (Veh / Hr)		
SLOPE	0.756	Enter circulating	59.81 → 0
		Entry Capacity =	-7.56 → 2260

Arcady Spreadsheet - Colchester Road

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	7.1	(2.2 - 12m)
Entry width (m)	e	7.1	(3 - 16m)
Effective length over which the flare is developed	l'	0.1	Any but Trl only up to 30
Entry radius (m)	r	20	(>= 3m)
Inscribed circle diameter (m)	D	57	(> = 13m)
Entry conflict angle (m)	Phi	60	(0 - 80)

tD	1.2872213	0	54.810
k	0.8959	32.122	0
S	0		
X2	7.1		
Qc	54.810		

		Veh/min	Veh/hr
INTERCEPT	32.12 (Veh / Min)		
	1927 (Veh / Hr)		
SLOPE	0.586	Enter circul	59.81 → 0
		Entry Capa	-2.93 → 1927

Arcady Spreadsheet - Woodbridge Road West

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	3.2	(2.2 - 12m)
Entry width (m)	e	7.8	(3 - 16m)
Effective length over which the flare is developed	l'	12	Any but Trl only up to 30
Entry radius (m)	r	10	(>= 3m)
Inscribed circle diameter (m)	D	54	(> = 13m)
Entry conflict angle (m)	Phi	42	(0 - 80)

tD	1.3228282	0	46.624
k	0.90946	24.185	0
S	0.6133333		
X2	5.2658683		
Qc	46.624		

		Veh/min	Veh/hr
INTERCEPT	24.18 (Veh / Min)		
	1451 (Veh / Hr)		
SLOPE	0.519	Enter circul	59.81 → 0
		Entry Capa	-6.84 → 1451

Arcady Spreadsheet - Hospital

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	3.3	(2.2 - 12m)
Entry width (m)	e	4.6	(3 - 16m)
Effective length over which the flare is developed	l'	4	Any but Trl only up to 30
Entry radius (m)	r	10	(>= 3m)
Inscribed circle diameter (m)	D	57	(> = 13m)
Entry conflict angle (m)	Phi	50	(0 - 80)

tD	1.2872213	0	41.151
k	0.8817	17.531	0
S	0.52		
X2	3.9372549		
Qc	41.151		

		Veh/min	Veh/hr
INTERCEPT	17.53 (Veh / Min)		
	1052 (Veh / Hr)		
SLOPE	0.426	Enter circul	59.81 → 0
		Entry Capa	-7.95 → 1052

Arcady Spreadsheet - Circulating

Enter

Geometric Parameters		Values	Acceptable Ranges
Approach road half width (m)	v	6.05	(2.2 - 12m)
Entry width (m)	e	6.05	(3 - 16m)
Effective length over which the flare is developed	l'	0.1	Any but Trl only up to 30
Entry radius (m)	r	30	(>= 3m)
Inscribed circle diameter (m)	D	57	(> = 13m)
Entry conflict angle (m)	Phi	40	(0 - 80)

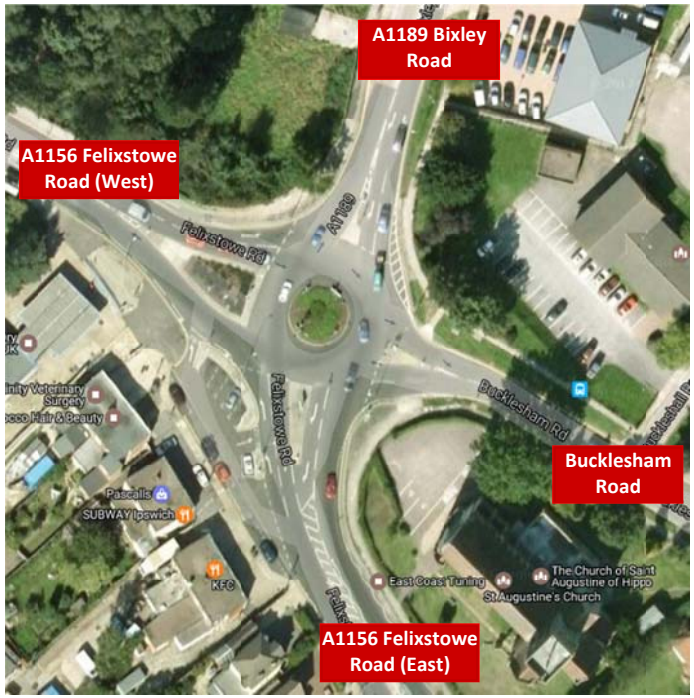
tD	1.2872213	0	51.143
k	0.9816	29.990	0
S	0		
X2	6.05		
Qc	51.143		

		Veh/min	Veh/hr
INTERCEPT	29.99 (Veh / Min)		
	1799 (Veh / Hr)		
SLOPE	0.586	Enter circul	59.81 → 0
		Entry Capa	-5.08 → 1799

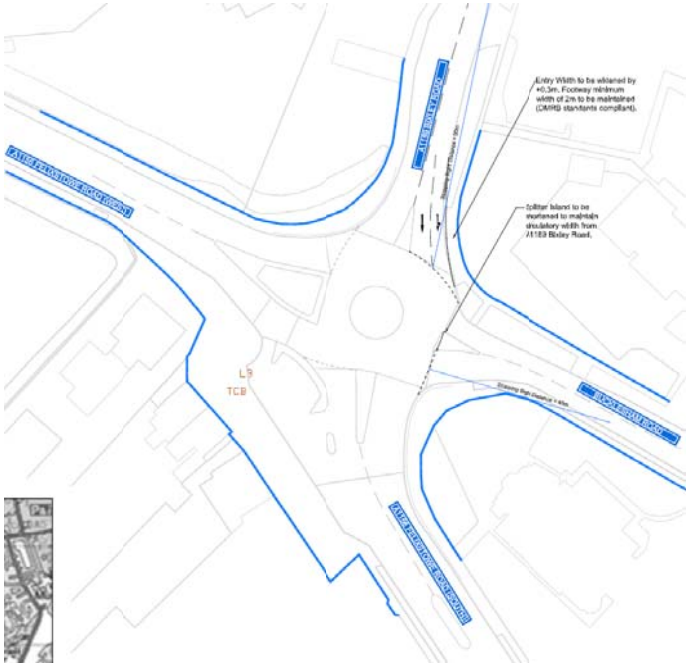
Appendix G – Junction Assessment Results

A1189 Bixley Road / A1156 Felixstowe Road Roundabout

Existing Layout



Improved Layout – Localised widening



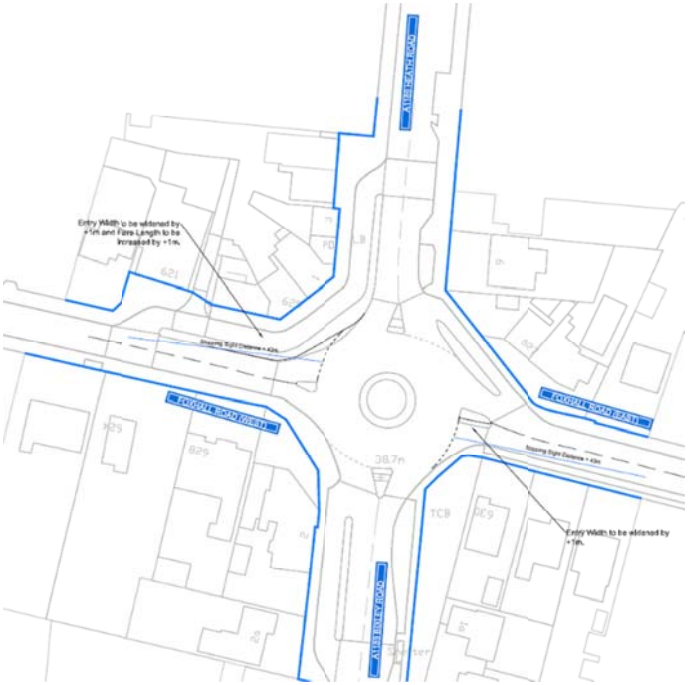
Junction Results

Traffic Scenario	AM Peak		PM Peak		Traffic Scenario	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue		RFC	Queue	RFC	Queue
Base year	**0.895**	**12**	**0.932**	**20**	*Future with development*	**0.947**	**25**	**0.962**	**28**
Future year	**0.988**	**26**	**0.994**	**56**					
Future with development	**0.978**	**35**	**0.984**	**58**					

A1189 Heath Road / Foxhall Road Roundabout

Existing Layout

Improved Layout – Localised widening



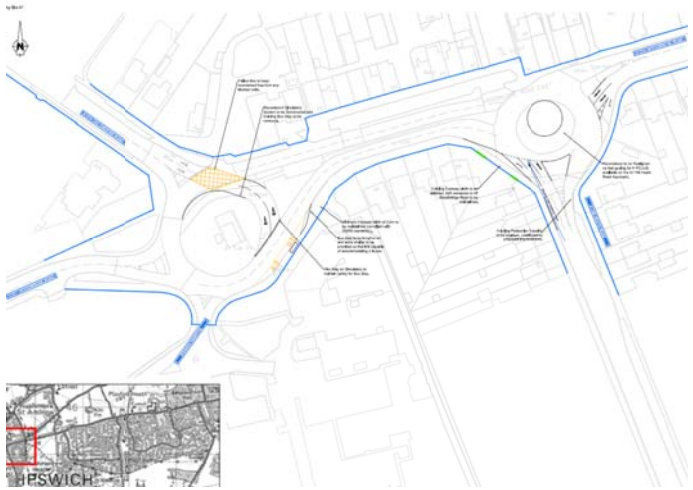
Junction Results

Traffic Scenario	AM Peak		PM Peak		Traffic Scenario	AM Peak		PM Peak	
	RFC	Queue	RFC	Queue		RFC	Queue	RFC	Queue
Base year	**0.895**	**8**	**0.896**	**8**	*Future with development*	**0.955**	**17**	**1.001**	**29**
Future year	**0.964**	**20**	**1.007**	**29**					
Future with development	**1.072**	**64**	**1.137**	**108**					

A1214 / A1189 Gyratory Junction

Existing Layout

Improved Layout – Localised widening

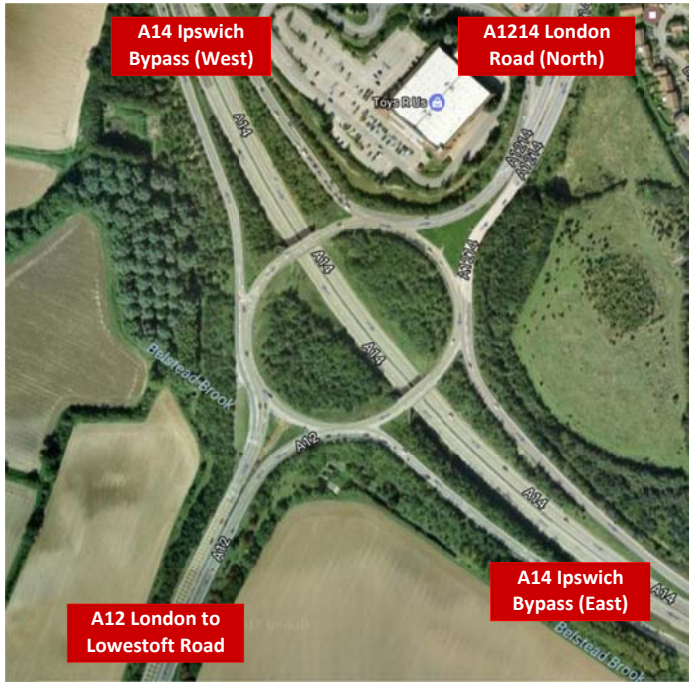


Junction Results

Traffic Scenario	AM Peak		PM Peak		Traffic Scenario	AM Peak		PM Peak	
	Degree of Saturation	Mean Max Queue	Degree of Saturation	Mean Max Queue		Degree of Saturation	Mean Max Queue	Degree of Saturation	Mean Max Queue
Base year	**73.3%**	**16**	**85.0%**	**32**	*Future with development*	**89.4%**	**31**	**93.6%**	**44**
Future year	**90.2%**	**31**	**98.4%**	**50**					
Future with development	**107.7%**	**119**	**127.7%**	**167**					

A14 / A12 Copdock Interchange

Existing Layout



Improved Layout – Localised widening

Not Applicable

Junction Results

Traffic Scenario	AM Peak		PM Peak		Traffic Scenario	AM Peak		PM Peak	
	Degree of Saturation	Mean Max Queue	Degree of Saturation	Mean Max Queue		Degree of Saturation	Mean Max Queue	Degree of Saturation	Mean Max Queue
Base year	**81.1%**	**17**	**84.1%**	**17**	*Future with development*	**N/A**	**N/A**	**N/A**	**N/A**
Future year	**92.0%**	**23**	**93.6%**	**24**					
Future with development	**92.5%**	**25**	**94.8%**	**24**					

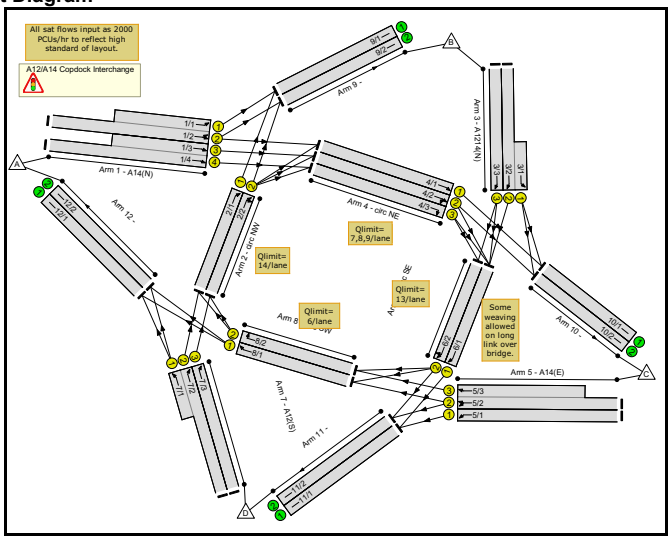
Appendix H– Junction Assessment Outputs

Full Input Data And Results

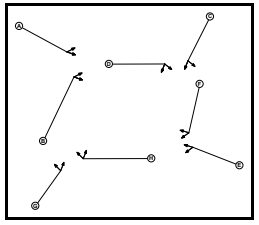
User and Project Details

Project:	**Adastral Park**
Title:	**Copdock Interchange - Existing Layout**
Location:	Ipswich
File name:	10391 J28-Copdock A12 jw A14 Rev1.lsg3x
Author:	SMT
Company:	Brookbanks Ltd
Address:	Birmingham
Notes:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	4		7	7
D	Traffic	4		7	7
E	Traffic	2		7	7
F	Traffic	2		7	7
G	Traffic	3		7	7
H	Traffic	3		7	7

Phase Intergreens Matrix

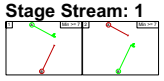
		Starting Phase							
		A	B	C	D	E	F	G	H
Terminating Phase	A		7	-	-	-	-	-	-
	B	5		-	-	-	-	-	-
	C	-	-		7	-	-	-	-
	D	-	-	5		-	-	-	-
	E	-	-	-	-		7	-	-
	F	-	-	-	-	5		-	-
	G	-	-	-	-	-	-		7
	H	-	-	-	-	-	-	5	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	E
2	2	F
3	1	G
3	2	H
4	1	C
4	2	D

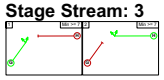
Stage Diagram

Stage Stream: 1

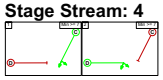


Stage Stream: 2

Stage Stream: 3



Stage Stream: 4



Give-Way Lane Input Data

Junction: A12/A14 Copdock Interchange
There are no Opposed Lanes in this Junction

Lane Input Data

Junction: A12/A14 Copdock Interchange

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A14(N))	U	A	2	3	12.0	User	2000	-	-	-	-	-
1/2 (A14(N))	U	A	2	3	60.0	User	2000	-	-	-	-	-
1/3 (A14(N))	U	A	2	3	12.0	User	2000	-	-	-	-	-
1/4 (A14(N))	U	A	2	3	60.0	User	2000	-	-	-	-	-
2/1 (circ NW)	U	B	2	3	33.0	User	2000	-	-	-	-	-
2/2 (circ NW)	U	B	2	3	33.0	User	2000	-	-	-	-	-
3/1 (A1214(N))	U	C	2	3	6.0	User	2000	-	-	-	-	-
3/2 (A1214(N))	U	C	2	3	60.0	User	2000	-	-	-	-	-
3/3 (A1214(N))	U	C	2	3	60.0	User	2000	-	-	-	-	-
4/1 (circ NE)	U	D	2	3	20.0	User	2000	-	-	-	-	-
4/2 (circ NE)	U	D	2	3	20.0	User	2000	-	-	-	-	-
4/3 (circ NE)	U	D	2	3	60.0	User	2000	-	-	-	-	-
5/1 (A14(E))	U	E	2	3	60.0	User	2000	-	-	-	-	-
5/2 (A14(E))	U	E	2	3	60.0	User	2000	-	-	-	-	-

5/3 (A14(E))	U	E	2	3	20.0	User	2000	-	-	-	-	-
6/1 (circ SE)	U	F	2	3	26.0	User	2000	-	-	-	-	-
6/2 (circ SE)	U	F	2	3	26.0	User	2000	-	-	-	-	-
7/1 (A12(S))	U	G	2	3	6.0	User	2000	-	-	-	-	-
7/2 (A12(S))	U	G	2	3	60.0	User	2000	-	-	-	-	-
7/3 (A12(S))	U	G	2	3	60.0	User	2000	-	-	-	-	-
8/1 (circ SW)	U	H	2	3	16.0	User	2000	-	-	-	-	-
8/2 (circ SW)	U	H	2	3	16.0	User	2000	-	-	-	-	-

Full Input Data And Results

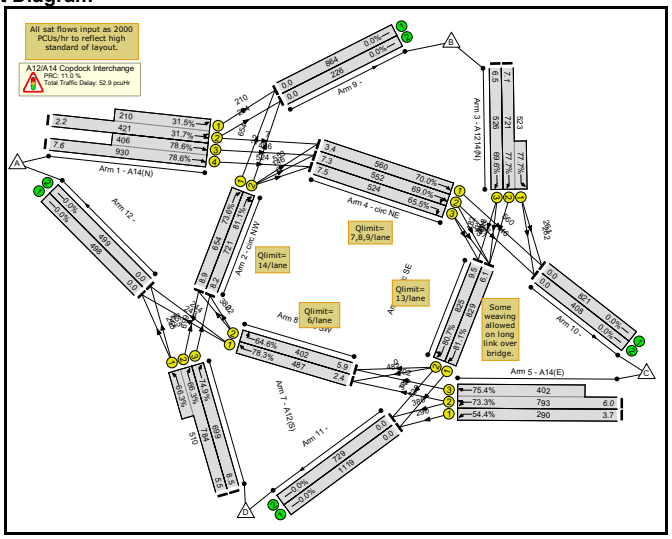
Scenario 1: '80% of 2016 AM' (FG9: '80% of 2016 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	414	7	930	1351
	B	482	0	523	242	1247
	C	5	402	0	676	1083
	D	510	274	699	0	1483
	Tot.	997	1090	1229	1848	5164

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Copdock Interchange - Existing Layout	-	-	-	-	-	-	**81.1%**	**52.9**	-	-	-
A12/A14 Copdock Interchange	-	-	-	-	-	-	**81.1%**	**52.9**	-	-	-
1/2+1/1	A14(N) Ahead Ahead2	A	14	421	2000:2000	667+667	31.7 : 31.5%	1.5	13.2	2.2	0.00
1/4+1/3	A14(N) Ahead	A	14	930	2000:2000	667+517	78.6 : 78.6%	5.2	20.1	7.6	0.00
2/1	circ NW Ahead	B	19	654	2000	889	73.6%	3.6	19.6	8.9	0.00
2/2	circ NW Right Ahead	B	19	721	2000	889	81.1%	2.7	13.6	8.2	0.00
3/2+3/1	A1214(N) Ahead Left	C	16	721	2000:2000	255+673	77.7 : 77.7%	4.0	19.8	7.1	0.00
3/3	A1214(N) Ahead	C	16	526	2000	756	69.6%	2.9	19.6	6.5	0.00
4/1	circ NE Ahead	D	17	560	2000	800	70.0%	2.4	15.4	3.4	0.00
4/2	circ NE Right Ahead	D	17	552	2000	800	69.0%	3.1	20.4	7.3	0.00
4/3	circ NE Right	D	17	524	2000	800	65.5%	3.0	20.9	7.5	0.00
5/1	A14(E) Ahead	E	11	290	2000	533	54.4%	1.7	21.5	3.7	0.00
5/2+5/3	A14(E) Ahead Ahead2	E	11	793	2000:2000	533+533	73.3 : 75.4%	4.8	21.6	6.0	0.00
6/1	circ SE Ahead	F	22	829	2000	1022	81.1%	3.2	14.0	6.1	0.00
6/2	circ SE Right Ahead	F	22	825	2000	1022	80.7%	3.9	16.9	9.5	0.00
7/2+7/1	A12(S) Ahead Ahead2	G	20	784	2000:2000	413+769	66.3 : 66.3%	2.8	12.7	5.5	0.00
7/3	A12(S) Ahead	G	20	699	2000	933	74.9%	3.4	17.4	8.5	0.00
8/1	circ SW Ahead	H	13	487	2000	622	78.3%	2.0	14.9	2.4	0.00
8/2	circ SW Right	H	13	402	2000	622	64.6%	2.8	24.9	5.9	0.00
9/1		-	-	864	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
9/2		-	-	226	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
10/1		-	-	821	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

10/2	-	-	408	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	C1	Stream: 1 PRC for Signalled Lanes (%):	11.0	Total Delay for Signalled Lanes (pcuHr):	13.03	Cycle Time (s):	45							
	C1	Stream: 2 PRC for Signalled Lanes (%):	11.0	Total Delay for Signalled Lanes (pcuHr):	13.58	Cycle Time (s):	45							
	C1	Stream: 3 PRC for Signalled Lanes (%):	15.0	Total Delay for Signalled Lanes (pcuHr):	10.93	Cycle Time (s):	45							
	C1	Stream: 4 PRC for Signalled Lanes (%):	15.9	Total Delay for Signalled Lanes (pcuHr):	15.38	Cycle Time (s):	45							
		PRC Over All Lanes (%):	11.0	Total Delay Over All Lanes(pcuHr):	52.92									
11/1	-	-	1119	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
11/2	-	-	729	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
12/1	-	-	498	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
12/2	-	-	499	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00

Full Input Data And Results

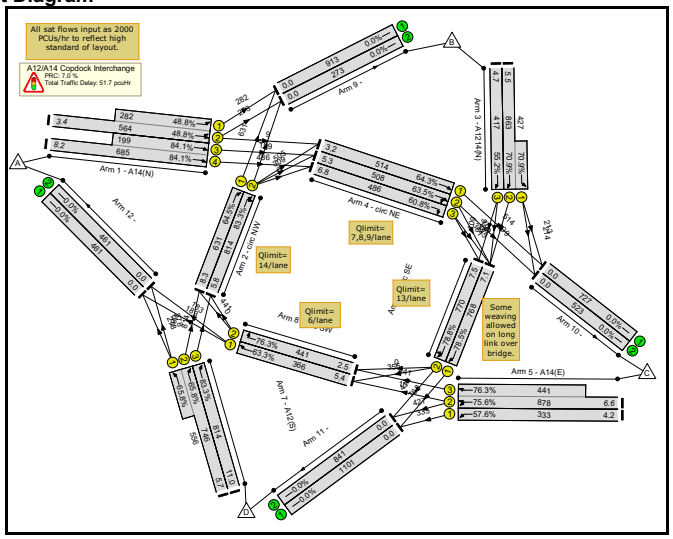
Scenario 2: '80% of 2016 PM' (FG10: '80% of 2016 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	555	9	685	1249
	B	356	0	427	497	1280
	C	10	441	0	760	1211
	D	556	190	814	0	1560
	Tot.	922	1186	1250	1942	5300

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Copdock Interchange - Existing Layout	-	-	-	-	-	-	**84.1%**	**51.7**	-	-	-
A12/A14 Copdock Interchange	-	-	-	-	-	-	**84.1%**	**51.7**	-	-	-
1/2+1/1	A14(N) Ahead Ahead2	A	12	564	2000:2000	578+578	48.8 : 48.8%	2.6	16.3	3.4	0.00
1/4+1/3	A14(N) Ahead	A	12	685	2000:2000	578+237	84.1 : 84.1%	5.3	27.7	8.2	0.00
2/1	circ NW Ahead	B	21	631	2000	978	64.5%	2.9	16.3	8.3	0.00
2/2	circ NW Right Ahead	B	21	814	2000	978	83.3%	2.9	12.7	5.8	0.00
3/2+3/1	A1214(N) Ahead Left	C	16	863	2000:2000	615+602	70.9 : 70.9%	3.9	16.2	5.5	0.00
3/3	A1214(N) Ahead	C	16	417	2000	756	55.2%	1.9	16.3	4.7	0.00
4/1	circ NE Ahead	D	17	514	2000	800	64.3%	2.0	13.7	3.2	0.00
4/2	circ NE Right Ahead	D	17	508	2000	800	63.5%	2.4	16.8	5.3	0.00
4/3	circ NE Right	D	17	486	2000	800	60.8%	2.7	20.2	6.8	0.00
5/1	A14(E) Ahead	E	12	333	2000	578	57.6%	1.9	21.0	4.2	0.00
5/2+5/3	A14(E) Ahead Ahead2	E	12	878	2000:2000	578+578	75.6 : 76.3%	5.1	21.0	6.6	0.00
6/1	circ SE Ahead	F	21	768	2000	978	78.5%	3.3	15.6	7.1	0.00
6/2	circ SE Right Ahead	F	21	770	2000	978	78.8%	3.3	15.6	7.5	0.00
7/2+7/1	A12(S) Ahead Ahead2	G	21	746	2000:2000	289+844	65.8 : 65.8%	2.6	12.4	5.7	0.00
7/3	A12(S) Ahead	G	21	814	2000	978	83.3%	4.7	20.6	11.0	0.00
8/1	circ SW Ahead	H	12	366	2000	578	63.3%	2.2	21.9	5.4	0.00
8/2	circ SW Right	H	12	441	2000	578	76.3%	2.2	17.9	2.5	0.00
9/1		-	-	913	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
9/2		-	-	273	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
10/1		-	-	727	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

10/2		-	-	523	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
11/1		-	-	1101	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
11/2		-	-	841	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
12/1		-	-	461	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
12/2		-	-	461	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	7.0	Total Delay for Signalled Lanes (pcuHr):	13.57	Cycle Time (s):	45
C1	Stream: 2 PRC for Signalled Lanes (%):	14.3	Total Delay for Signalled Lanes (pcuHr):	13.73	Cycle Time (s):	45
C1	Stream: 3 PRC for Signalled Lanes (%):	8.1	Total Delay for Signalled Lanes (pcuHr):	11.63	Cycle Time (s):	45
C1	Stream: 4 PRC for Signalled Lanes (%):	26.9	Total Delay for Signalled Lanes (pcuHr):	12.82	Cycle Time (s):	45
	PRC Over All Lanes (%):	7.0	Total Delay Over All Lanes(pcuHr):	51.75		

Full Input Data And Results

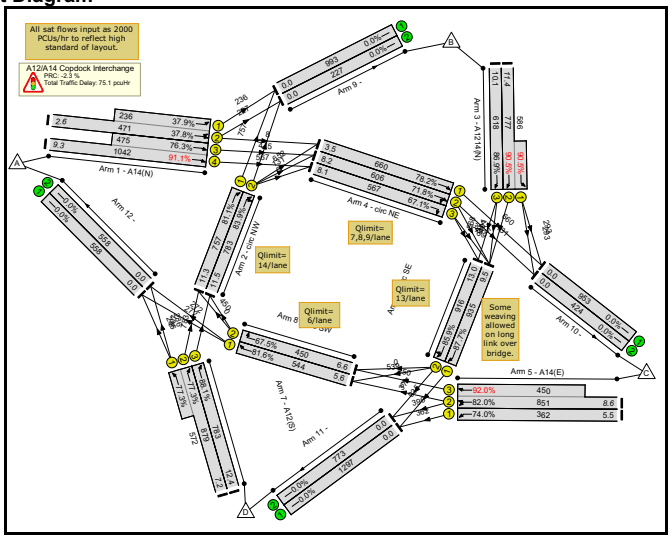
Scenario 3: '80% of 2027 AM' (FG11: '80% of 2027 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination				
Origin	A	B	C	D	Tot.
A	0	463	8	1042	1513
B	539	0	586	270	1395
C	5	450	0	758	1213
D	572	307	783	0	1662
Tot.	1116	1220	1377	2070	5783

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Copdock Interchange - Existing Layout	-	-	-	-	-	-	**92.0%**	**75.1**	-	-	-
A12/A14 Copdock Interchange	-	-	-	-	-	-	**92.0%**	**75.1**	-	-	-
1/2+1/1	A14(N) Ahead Ahead2	A	13	471	2000:2000	622+622	37.8 : 37.9%	1.9	14.4	2.6	0.00
1/4+1/3	A14(N) Ahead	A	13	1042	2000:2000	622+622	91.1 : 76.3%	6.7	23.2	9.3	0.00
2/1	circ NW Ahead	B	20	757	2000	933	81.1%	5.4	25.6	11.3	0.00
2/2	circ NW Right Ahead	B	20	783	2000	933	83.9%	3.1	14.3	11.5	0.00
3/2+3/1	A1214(N) Ahead Left	C	15	777	2000:2000	211+648	90.5 : 90.5%	7.0	32.5	11.4	0.00
3/3	A1214(N) Ahead	C	15	618	2000	711	86.9%	5.4	31.6	10.1	0.00
4/1	circ NE Ahead	D	18	660	2000	844	78.2%	2.6	14.1	3.5	0.00
4/2	circ NE Right Ahead	D	18	606	2000	844	71.8%	3.6	21.2	8.2	0.01
4/3	circ NE Right	D	18	567	2000	844	67.1%	3.5	22.0	8.1	0.00
5/1	A14(E) Ahead	E	10	362	2000	489	74.0%	3.0	29.6	5.5	0.00
5/2+5/3	A14(E) Ahead Ahead2	E	10	851	2000:2000	489+489	82.0 : 92.0%	7.1	29.9	8.6	0.00
6/1	circ SE Ahead	F	23	935	2000	1067	87.7%	4.5	17.2	9.5	0.00
6/2	circ SE Right Ahead	F	23	916	2000	1067	85.9%	5.1	19.9	13.0	0.00
7/2+7/1	A12(S) Ahead Ahead2	G	19	879	2000:2000	397+740	77.3 : 77.3%	3.9	16.1	7.2	0.00
7/3	A12(S) Ahead	G	19	783	2000	889	88.1%	6.0	27.4	12.4	0.00
8/1	circ SW Ahead	H	14	544	2000	667	81.6%	4.4	29.0	5.6	0.00
8/2	circ SW Right	H	14	450	2000	667	67.5%	2.1	17.1	6.6	0.11
9/1		-	-	993	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
9/2		-	-	227	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
10/1		-	-	953	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

10/2	-	-	424	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.00
11/1	-	-	1297	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.00
11/2	-	-	773	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.00
12/1	-	-	558	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.00
12/2	-	-	558	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	-1.3	Total Delay for Signalled Lanes (pcuHr):	17.10	Cycle Time (s): 45
C1	Stream: 2 PRC for Signalled Lanes (%):	-2.3	Total Delay for Signalled Lanes (pcuHr):	19.55	Cycle Time (s): 45
C1	Stream: 3 PRC for Signalled Lanes (%):	2.2	Total Delay for Signalled Lanes (pcuHr):	16.40	Cycle Time (s): 45
C1	Stream: 4 PRC for Signalled Lanes (%):	-0.5	Total Delay for Signalled Lanes (pcuHr):	22.07	Cycle Time (s): 45
	PRC Over All Lanes (%):	-2.3	Total Delay Over All Lanes(pcuHr):	75.11	

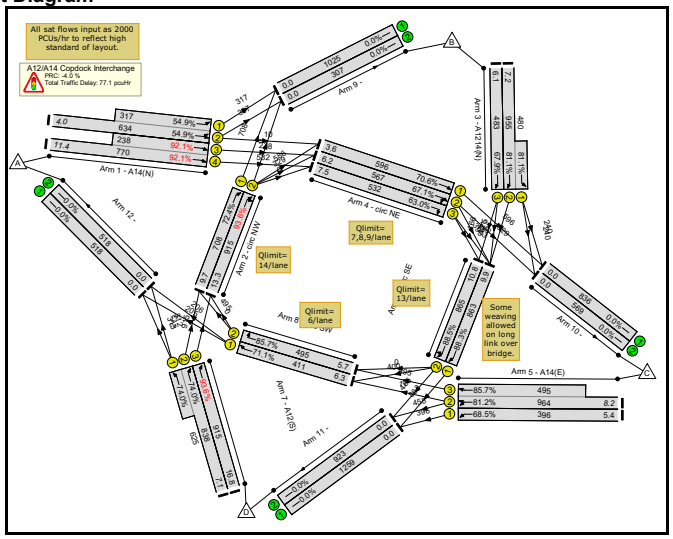
Scenario 4: '80% of 2027 PM' (FG12: '80% of 2027 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	624	10	770	1404
	B	400	0	480	558	1438
	C	11	495	0	854	1360
	D	625	213	915	0	1753
	Tot.	1036	1332	1405	2182	5955

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Copdock Interchange - Existing Layout	-	-	-	-	-	-	**93.6%**	**77.1**	-	-	-
A12/A14 Copdock Interchange	-	-	-	-	-	-	**93.6%**	**77.1**	-	-	-
1/2+1/1	A14(N) Ahead Ahead2	A	12	634	2000:2000	578+578	54.9 : 54.9%	3.0	17.0	4.0	0.00
1/4+1/3	A14(N) Ahead	A	12	770	2000:2000	578+258	92.1 : 92.1%	8.2	38.3	11.4	0.00
2/1	circ NW Ahead	B	21	708	2000	978	72.4%	3.7	18.8	9.7	0.00
2/2	circ NW Right Ahead	B	21	915	2000	978	93.6%	6.8	26.7	13.3	0.00
3/2+3/1	A1214(N) Ahead Left	C	15	955	2000:2000	586+592	81.1 : 81.1%	5.4	20.2	7.2	0.00
3/3	A1214(N) Ahead	C	15	483	2000	711	67.9%	2.7	20.1	6.1	0.00
4/1	circ NE Ahead	D	18	596	2000	844	70.6%	2.0	12.4	3.6	0.00
4/2	circ NE Right Ahead	D	18	567	2000	844	67.1%	2.7	17.0	6.2	0.00
4/3	circ NE Right	D	18	532	2000	844	63.0%	3.3	22.3	7.5	0.00
5/1	A14(E) Ahead	E	12	396	2000	578	68.5%	2.6	24.0	5.4	0.00
5/2+5/3	A14(E) Ahead Ahead2	E	12	964	2000:2000	578+578	81.2 : 85.7%	6.5	24.2	8.2	0.00
6/1	circ SE Ahead	F	21	863	2000	978	88.3%	5.4	22.7	9.9	0.00
6/2	circ SE Right Ahead	F	21	865	2000	978	88.5%	5.5	22.8	10.8	0.00
7/2+7/1	A12(S) Ahead Ahead2	G	21	838	2000:2000	288+845	74.0 : 74.0%	3.3	14.1	7.1	0.00
7/3	A12(S) Ahead	G	21	915	2000	978	93.6%	8.9	34.8	16.8	0.00
8/1	circ SW Ahead	H	12	411	2000	578	71.1%	2.5	21.5	6.3	0.03
8/2	circ SW Right	H	12	495	2000	578	85.7%	4.8	34.8	5.7	0.00
9/1		-	-	1025	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
9/2		-	-	307	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
10/1		-	-	836	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

Full Input Data And Results

10/2		-	-	569	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
11/1		-	-	1259	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
11/2		-	-	923	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
12/1		-	-	518	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
12/2		-	-	518	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

C1	Stream: 1	PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	21.65	Cycle Time (s):	45
C1	Stream: 2	PRC for Signalled Lanes (%):	1.7	Total Delay for Signalled Lanes (pcuHr):	20.02	Cycle Time (s):	45
C1	Stream: 3	PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	19.38	Cycle Time (s):	45
C1	Stream: 4	PRC for Signalled Lanes (%):	10.9	Total Delay for Signalled Lanes (pcuHr):	16.09	Cycle Time (s):	45
		PRC Over All Lanes (%):	-4.0	Total Delay Over All Lanes(pcuHr):	77.13		

Full Input Data And Results

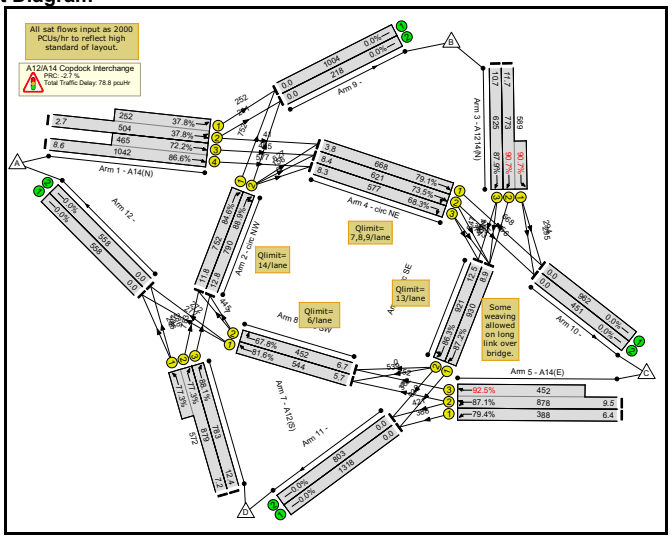
Scenario 5: '80% of 2027+Dev AM' (FG13: '80% of 2027+Dev AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	463	41	1042	1546
	B	539	0	589	270	1398
	C	5	452	0	809	1266
	D	572	307	783	0	1662
	Tot.	1116	1222	1413	2121	5872

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Copdock Interchange - Existing Layout	-	-	-	-	-	-	**92.5%**	**78.8**	-	-	-
A12/A14 Copdock Interchange	-	-	-	-	-	-	**92.5%**	**78.8**	-	-	-
1/2+1/1	A14(N) Ahead Ahead2	A	14	504	2000:2000	667+667	37.8 : 37.8%	1.9	13.6	2.7	0.00
1/4+1/3	A14(N) Ahead	A	14	1042	2000:2000	667+644	86.6 : 72.2%	5.8	20.2	8.6	0.00
2/1	circ NW Ahead	B	19	752	2000	889	84.6%	5.9	28.3	11.8	0.00
2/2	circ NW Right Ahead	B	19	790	2000	889	88.9%	4.5	20.4	12.8	0.00
3/2+3/1	A1214(N) Ahead Left	C	15	773	2000:2000	203+649	90.7 : 90.7%	7.1	33.1	11.7	0.00
3/3	A1214(N) Ahead	C	15	625	2000	711	87.9%	5.7	33.0	10.7	0.00
4/1	circ NE Ahead	D	18	668	2000	844	79.1%	2.6	14.2	3.8	0.00
4/2	circ NE Right Ahead	D	18	621	2000	844	73.5%	3.9	22.6	8.4	0.02
4/3	circ NE Right	D	18	577	2000	844	68.3%	3.9	24.2	8.3	0.00
5/1	A14(E) Ahead	E	10	388	2000	489	79.4%	3.6	33.2	6.4	0.00
5/2+5/3	A14(E) Ahead Ahead2	E	10	878	2000:2000	489+489	87.1 : 92.5%	8.1	33.1	9.5	0.00
6/1	circ SE Ahead	F	23	930	2000	1067	87.2%	4.4	16.9	8.9	0.00
6/2	circ SE Right Ahead	F	23	921	2000	1067	86.3%	5.0	19.4	12.5	0.00
7/2+7/1	A12(S) Ahead Ahead2	G	19	879	2000:2000	397+740	77.3 : 77.3%	3.9	16.1	7.2	0.00
7/3	A12(S) Ahead	G	19	783	2000	889	88.1%	6.0	27.4	12.4	0.00
8/1	circ SW Ahead	H	14	544	2000	667	81.6%	4.4	29.2	5.7	0.00
8/2	circ SW Right	H	14	452	2000	667	67.8%	2.2	17.2	6.7	0.12
9/1		-	-	1004	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
9/2		-	-	218	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
10/1		-	-	962	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

10/2	-	-	451	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.00
	C1	Stream: 1 PRC for Signalled Lanes (%):	1.3	Total Delay for Signalled Lanes (pcuHr):		18.14	Cycle Time (s):	45					
	C1	Stream: 2 PRC for Signalled Lanes (%):	-2.7	Total Delay for Signalled Lanes (pcuHr):		20.99	Cycle Time (s):	45					
	C1	Stream: 3 PRC for Signalled Lanes (%):	2.2	Total Delay for Signalled Lanes (pcuHr):		16.45	Cycle Time (s):	45					
	C1	Stream: 4 PRC for Signalled Lanes (%):	-0.8	Total Delay for Signalled Lanes (pcuHr):		23.23	Cycle Time (s):	45					
		PRC Over All Lanes (%):	-2.7	Total Delay Over All Lanes(pcuHr):		78.81							
11/1	-	-	1318	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.00
11/2	-	-	803	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.00
12/1	-	-	558	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.00
12/2	-	-	558	Inf	Inf	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.00

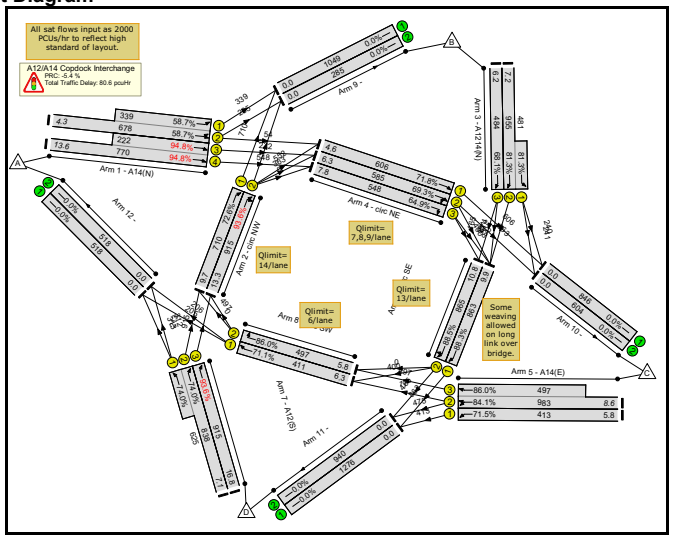
Scenario 6: '80% of 2027+Dev PM' (FG14: '80% of 2027+Dev PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	624	54	770	1448
	B	400	0	481	558	1439
	C	11	497	0	888	1396
	D	625	213	915	0	1753
	Tot.	1036	1334	1450	2216	6036

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Copdock Interchange - Existing Layout	-	-	-	-	-	-	**94.8%**	**80.6**	-	-	-
A12/A14 Copdock Interchange	-	-	-	-	-	-	**94.8%**	**80.6**	-	-	-
1/2+1/1	A14(N) Ahead Ahead2	A	12	678	2000:2000	578+578	58.7 : 58.7%	3.3	17.5	4.3	0.00
1/4+1/3	A14(N) Ahead	A	12	770	2000:2000	578+234	94.8 : 94.8%	10.1	47.2	13.6	0.00
2/1	circ NW Ahead	B	21	710	2000	978	72.6%	3.7	18.9	9.7	0.00
2/2	circ NW Right Ahead	B	21	915	2000	978	93.6%	6.8	26.7	13.3	0.00
3/2+3/1	A1214(N) Ahead Left	C	15	955	2000:2000	583+592	81.3 : 81.3%	5.4	20.3	7.2	0.00
3/3	A1214(N) Ahead	C	15	484	2000	711	68.1%	2.7	20.2	6.2	0.00
4/1	circ NE Ahead	D	18	606	2000	844	71.8%	2.3	13.5	4.6	0.00
4/2	circ NE Right Ahead	D	18	585	2000	844	69.3%	2.8	17.0	6.3	0.00
4/3	circ NE Right	D	18	548	2000	844	64.9%	3.4	22.6	7.8	0.00
5/1	A14(E) Ahead	E	12	413	2000	578	71.5%	2.9	25.1	5.8	0.00
5/2+5/3	A14(E) Ahead Ahead2	E	12	983	2000:2000	578+578	84.1 : 86.0%	6.9	25.2	8.6	0.00
6/1	circ SE Ahead	F	21	863	2000	978	88.3%	5.4	22.6	9.9	0.00
6/2	circ SE Right Ahead	F	21	865	2000	978	88.5%	5.5	22.7	10.8	0.00
7/2+7/1	A12(S) Ahead Ahead2	G	21	838	2000:2000	288+845	74.0 : 74.0%	3.3	14.1	7.1	0.00
7/3	A12(S) Ahead	G	21	915	2000	978	93.6%	8.9	34.8	16.8	0.00
8/1	circ SW Ahead	H	12	411	2000	578	71.1%	2.5	21.5	6.3	0.03
8/2	circ SW Right	H	12	497	2000	578	86.0%	4.9	35.3	5.8	0.00
9/1		-	-	1049	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
9/2		-	-	285	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
10/1		-	-	846	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

10/2		-	-	604	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
11/1		-	-	1276	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
11/2		-	-	940	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
12/1		-	-	518	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
12/2		-	-	518	Inf	Inf	0.0%	0.0	0.0	0.0	0.00

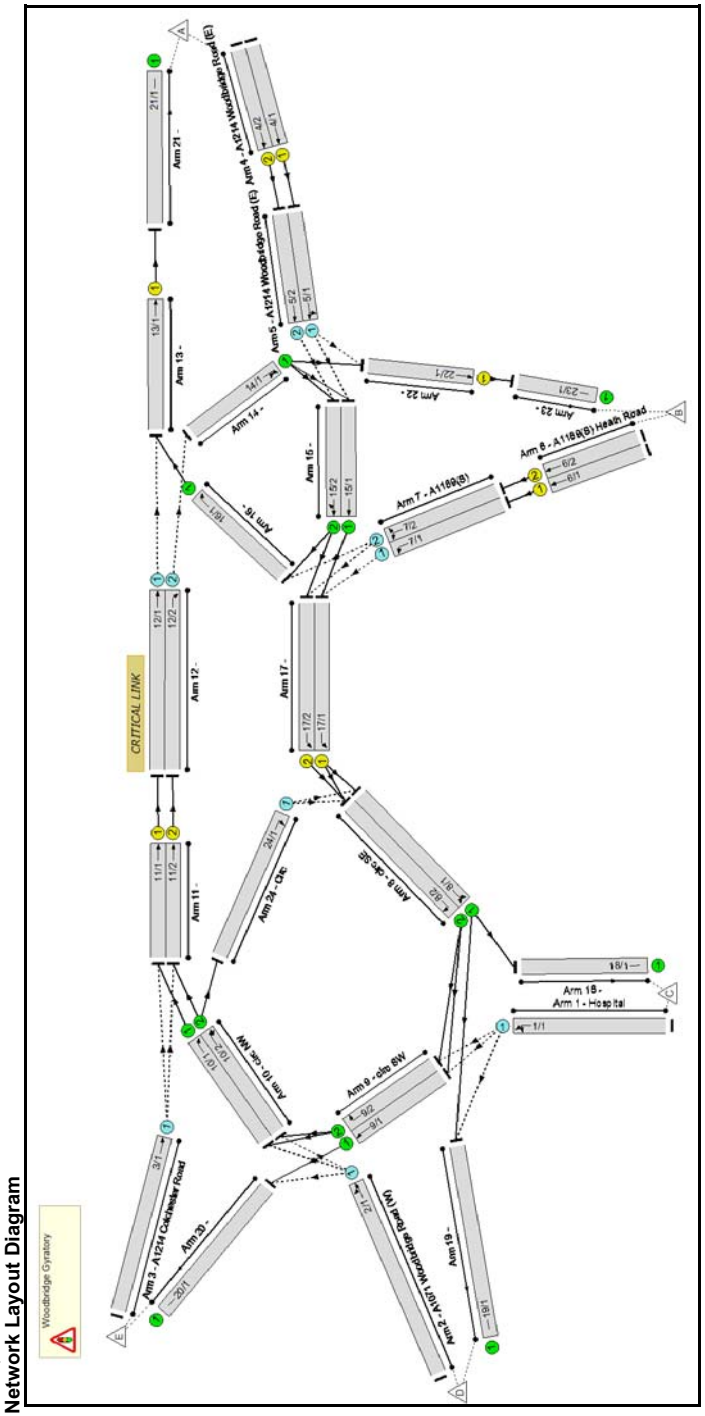
C1	Stream: 1	PRC for Signalled Lanes (%):	-5.4	Total Delay for Signalled Lanes (pcuHr):	23.88	Cycle Time (s):	45
C1	Stream: 2	PRC for Signalled Lanes (%):	1.7	Total Delay for Signalled Lanes (pcuHr):	20.64	Cycle Time (s):	45
C1	Stream: 3	PRC for Signalled Lanes (%):	-4.0	Total Delay for Signalled Lanes (pcuHr):	19.47	Cycle Time (s):	45
C1	Stream: 4	PRC for Signalled Lanes (%):	10.8	Total Delay for Signalled Lanes (pcuHr):	16.58	Cycle Time (s):	45
		PRC Over All Lanes (%):	-5.4	Total Delay Over All Lanes(pcuHr):	80.57		

Full Input Data And Results

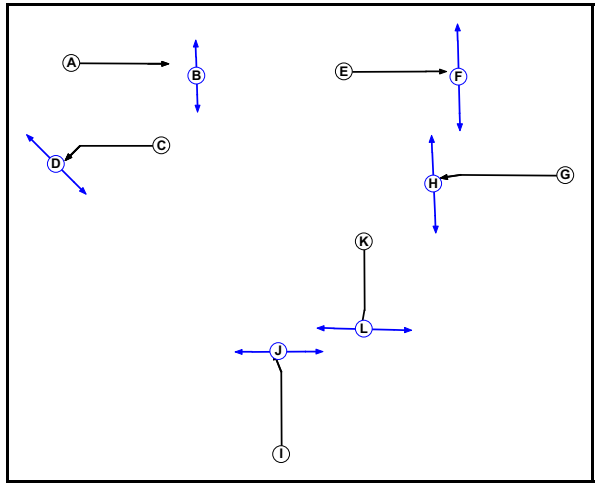
User and Project Details

Project:	**Adastral Park**
Title:	**Woodbridge Gyratory - Existing Layout**
Location:	Ipswich
File name:	10391 J29-A1214 Woodbridge Gyratory.lsg3x
Author:	SMT
Company:	Brookbanks Ltd
Address:	Birmingham
Notes:	

Network Layout Diagram



Phase Diagram



Full Input Data And Results

Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L
A		5	-	-	-	-	-	-	-	-	-	-
B	8		-	-	-	-	-	-	-	-	-	-
C	-	-		5	-	-	-	-	-	-	-	-
D	-	-	8		-	-	-	-	-	-	-	-
E	-	-	-	-		5	-	-	-	-	-	-
F	-	-	-	-	8		-	-	-	-	-	-
G	-	-	-	-	-	-		5	-	-	-	-
H	-	-	-	-	-	-	9		-	-	-	-
I	-	-	-	-	-	-	-	-		5	-	-
J	-	-	-	-	-	-	-	-	8		-	-
K	-	-	-	-	-	-	-	-	-	-		5
L	-	-	-	-	-	-	-	-	-	-	8	

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Pedestrian	1		5	5
C	Traffic	2		7	7
D	Pedestrian	2		5	5
E	Traffic	3		7	7
F	Pedestrian	3		5	5
G	Traffic	4		7	7
H	Pedestrian	4		6	6
I	Traffic	5		7	7
J	Pedestrian	5		5	5
K	Traffic	6		7	7
L	Pedestrian	6		5	5

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D
3	1	E
3	2	F
4	1	G
4	2	H
5	1	I
5	2	J
6	1	K
6	2	L

Give-Way Lane Input Data

Junction: Woodbridge Gyratory

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (Hospital)	9/1 (Ahead)	1586	0	8/1	0.43	To 19/1 (Ahead)	-	-	-	-	-
				8/2	0.43	All					
	9/2 (Ahead)	1586	0	8/1	0.43	All					
				8/2	0.43	All					
	19/1 (Left)	1586	0	8/1	0.43	To 19/1 (Ahead)					
2/1 (A1071 Woodbridge Road (W))	10/1 (Ahead)	1451	0	9/1	0.52	All	-	-	-	-	-
	10/2 (Ahead)	1451	0	9/1	0.52	All					
				9/2	0.52	All					
	20/1 (Left)	1451	0	9/1	0.52	To 20/1 (Ahead)					
3/1 (A1214 Colchester Road)	11/1 (Ahead)	1927	0	10/1	0.59	All	-	-	-	-	-
	11/2 (Ahead)	1927	0	10/1	0.59	All					
				10/2	0.59	All					
5/1 (A1214 Woodbridge Road (E))	15/1 (Ahead)	1671	0	14/1	0.66	To 15/1 (Right) To 22/1 (Ahead)	-	-	-	-	-
	22/1 (Left)	1671	0	14/1	0.66	To 22/1 (Ahead)					
5/2 (A1214 Woodbridge Road (E))	15/2 (Ahead)	1180	0	14/1	0.56	All	-	-	-	-	-
7/1 (A1189(S))	17/1 (Left)	1088	0	15/1	0.74	All	-	-	-	-	-
7/2 (A1189(S))	16/1 (Right)	1088	0	15/1	0.74	All	-	-	-	-	-
				16/1	0.74	All					
				15/2	0.74	All					

	17/2 (Left)	1088	0	15/1	0.74	All					
				15/2	0.74	To 17/2 (Ahead)					
12/1	13/1 (Ahead)	1150	0	16/1	0.77	All	-	-	-	-	-
12/2	14/1 (Right)	1150	0	16/1	0.77	All	-	-	-	-	-
24/1 (Circ)	8/1 (Right)	1799	0	17/1	0.59	All	-	-	-	-	-
				17/2	0.59	All					
	8/2 (Right)	1799	0	17/2	0.59	All					

Full Input Data And Results

Lane Input Data

Junction: Woodbridge Gyratory

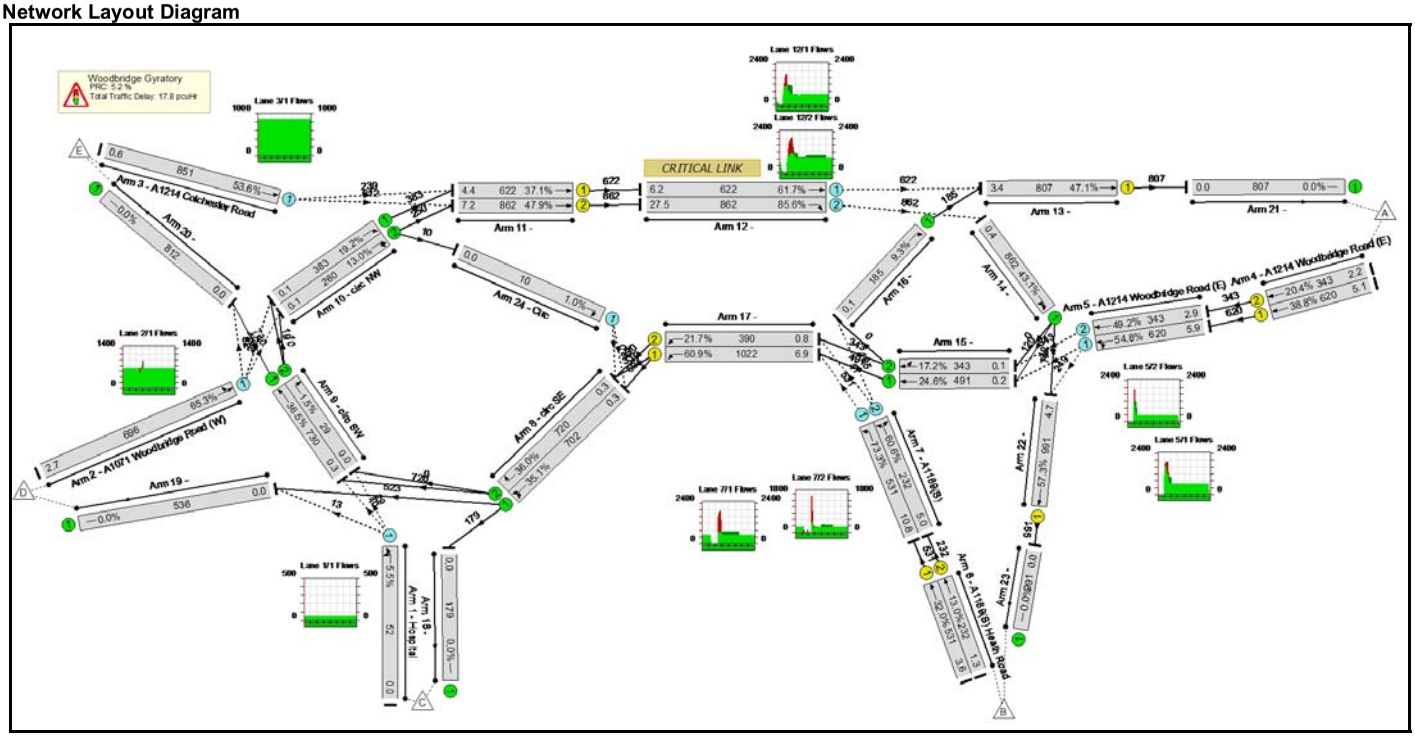
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Hospital)	O		2	3	60.0	User	1052	-	-	-	-	-
2/1 (A1071 Woodbridge Road (W))	O		2	3	60.0	User	1451	-	-	-	-	-
3/1 (A1214 Colchester Road)	O		2	3	60.0	User	1927	-	-	-	-	-
4/1 (A1214 Woodbridge Road (E))	U	G	2	3	60.0	User	1900	-	-	-	-	-
4/2 (A1214 Woodbridge Road (E))	U	G	2	3	60.0	User	2000	-	-	-	-	-
5/1 (A1214 Woodbridge Road (E))	O		2	3	4.0	User	1671	-	-	-	-	-
5/2 (A1214 Woodbridge Road (E))	O		2	3	4.0	User	1180	-	-	-	-	-
6/1 (A1189(S) Heath Road)	U	I	2	3	60.0	Geom	-	3.20	0.00	Y	Arm 7 Ahead	Inf
6/2 (A1189(S) Heath Road)	U	I	2	3	60.0	Geom	-	3.20	0.00	N	Arm 7 Ahead	Inf
7/1 (A1189(S))	O		2	3	2.0	User	1088	-	-	-	-	-
7/2 (A1189(S))	O		2	3	2.0	User	1088	-	-	-	-	-
8/1 (circ SE)	U		2	3	14.0	User	2000	-	-	-	-	-
8/2 (circ SE)	U		2	3	14.0	User	2000	-	-	-	-	-
9/1 (circ SW)	U		2	3	5.0	User	2000	-	-	-	-	-

9/2 (circ SW)	U		2	3	5.0	User	2000	-	-	-	-	-
10/1 (circ NW)	U		2	3	6.0	User	2000	-	-	-	-	-
10/2 (circ NW)	U		2	3	6.0	User	2000	-	-	-	-	-
11/1	U	A	2	3	6.0	Geom	-	3.40	0.00	Y	Arm 12 Ahead	Inf
11/2	U	A	2	3	6.0	Geom	-	3.40	0.00	N	Arm 12 Ahead	Inf
12/1	O		2	3	20.0	User	1150	-	-	-	-	-
12/2	O		2	3	20.0	User	1150	-	-	-	-	-
13/1	U	E	2	3	8.0	Geom	-	3.80	0.00	Y	Arm 21 Ahead	Inf
14/1	U		2	3	6.0	User	2000	-	-	-	-	-
15/1	U		2	3	5.0	User	2000	-	-	-	-	-
15/2	U		2	3	5.0	User	2000	-	-	-	-	-
16/1	U		2	3	11.0	User	2000	-	-	-	-	-
17/1	U	C	2	3	19.0	Geom	-	4.00	0.00	Y	Arm 8 Ahead	50.00
17/2	U	C	2	3	19.0	Geom	-	4.00	0.00	N	Arm 8 Ahead	55.00
22/1	U	K	2	3	6.0	Geom	-	5.00	0.00	Y	Arm 23 Ahead	30.00
24/1 (Circ)	O		2	3	10.0	User	1799	-	-	-	-	-

Scenario 1: '2015 AM' (FG1: '2015 Modelled Flow AM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

Origin \ Destination	A	B	C	D	E	Tot.
A	0	249	90	272	352	963
B	185	0	59	151	368	763
C	19	10	0	13	10	52
D	364	240	10	0	82	696
E	239	492	20	100	0	851
Tot.	807	991	179	536	812	3325

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Woodbridge Gyratory - Existing Layout	-	-	-	-	-	-	**85.6%**	**17.8**	-	-	-
Woodbridge Gyratory	-	-	-	-	-	-	**85.6%**	**17.8**	-	-	-
1/1	Hospital Ahead Left	-	-	52	1052	949	5.5%	0.0	2.0	0.0	0.00
2/1	A1071 Woodbridge Road (W) Ahead Left	-	-	696	1451	1066	65.3%	0.9	4.9	2.7	0.00
3/1	A1214 Colchester Road Ahead	-	-	851	1927	1588	53.6%	0.6	2.4	0.6	0.00
4/1	A1214 Woodbridge Road (E) Ahead	G	100	620	1900	1599	38.8%	0.7	4.1	5.1	0.00
4/2	A1214 Woodbridge Road (E) Ahead	G	100	343	2000	1683	20.4%	0.3	3.2	2.2	0.00
5/1	A1214 Woodbridge Road (E) Ahead Left	-	-	620	1671	1132	54.8%	0.6	3.7	5.9	0.00
5/2	A1214 Woodbridge Road (E) Ahead	-	-	343	1180	697	49.2%	0.5	5.2	2.9	0.00
6/1	A1189(S) Heath Road Ahead	I	102	531	1935	1661	32.0%	0.5	3.3	3.6	0.00
6/2	A1189(S) Heath Road Ahead	I	102	232	2075	1781	13.0%	0.2	2.5	1.3	0.00
7/1	A1189(S) Left	-	-	531	1088	725	73.3%	1.8	12.0	10.8	0.00
7/2	A1189(S) Right Left	-	-	232	1088	383	60.6%	1.0	15.5	5.0	0.00
8/1	circ SE Left Ahead	-	-	702	2000	2000	35.1%	0.3	1.4	0.3	0.00
8/2	circ SE Right	-	-	720	2000	2000	36.0%	0.3	1.4	0.3	0.00
9/1	circ SW Ahead	-	-	730	2000	2000	36.5%	0.3	1.4	0.3	0.00
9/2	circ SW Right	-	-	29	2000	2000	1.5%	0.0	0.9	0.0	0.00
10/1	circ NW Ahead	-	-	383	2000	2000	19.2%	0.1	1.1	0.1	0.00
10/2	circ NW Ahead Right	-	-	260	2000	2000	13.0%	0.1	1.0	0.1	0.00
11/1	Ahead	A	102	622	1955	1678	37.1%	0.6	3.5	4.4	0.00
11/2	Ahead	A	102	862	2095	1798	47.9%	0.9	4.0	7.2	0.00
12/1	Ahead	-	-	622	1150	1007	61.7%	0.9	5.2	6.2	0.00

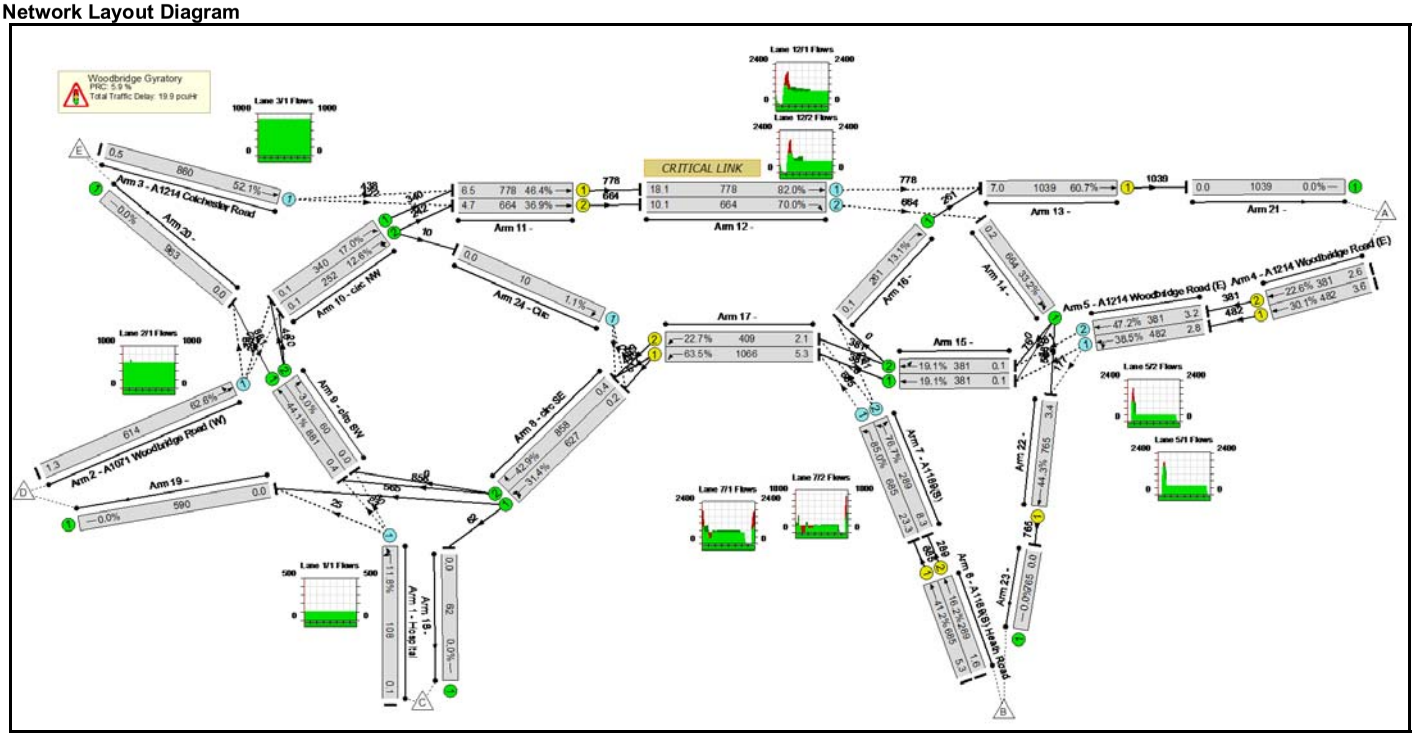
12/2	Right	-	-	862	1150	1007	85.6%	3.8	15.9	27.5	0.00
13/1	Ahead	E	102	807	1995	1712	47.1%	0.6	2.6	3.4	0.00
14/1	Right Ahead	-	-	862	2000	2000	43.1%	0.4	1.6	0.4	0.00
15/1	Ahead	-	-	491	2000	2000	24.6%	0.2	1.2	0.2	0.00
15/2	Right Ahead	-	-	343	2000	2000	17.2%	0.1	1.1	0.1	0.00
16/1	Right	-	-	185	2000	2000	9.3%	0.1	1.0	0.1	0.00
17/1	Ahead	C	102	1022	1956	1679	60.9%	1.1	4.0	6.9	0.00
17/2	Ahead	C	102	390	2098	1801	21.7%	0.2	1.6	0.8	0.00
18/1		-	-	179	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
19/1		-	-	536	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
20/1		-	-	812	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
21/1		-	-	807	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
22/1	Ahead	K	102	991	2014	1729	57.3%	0.8	2.9	4.7	0.00
23/1		-	-	991	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
24/1	Circ Right	-	-	10	1799	971	1.0%	0.0	1.9	0.0	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	87.7	Total Delay for Signalled Lanes (pcuHr):	1.55	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	47.8	Total Delay for Signalled Lanes (pcuHr):	1.32	Cycle Time (s): 120
C1	Stream: 3 PRC for Signalled Lanes (%):	91.0	Total Delay for Signalled Lanes (pcuHr):	0.58	Cycle Time (s): 120
C1	Stream: 4 PRC for Signalled Lanes (%):	132.1	Total Delay for Signalled Lanes (pcuHr):	1.00	Cycle Time (s): 120
C1	Stream: 5 PRC for Signalled Lanes (%):	181.5	Total Delay for Signalled Lanes (pcuHr):	0.64	Cycle Time (s): 120
C1	Stream: 6 PRC for Signalled Lanes (%):	57.0	Total Delay for Signalled Lanes (pcuHr):	0.81	Cycle Time (s): 120
	PRC Over All Lanes (%):	5.2	Total Delay Over All Lanes(pcuHr):	17.80	

Scenario 2: '2015 PM' (FG2: '2015 Modelled Flow PM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

Origin \ Destination	A	B	C	D	E	Tot.
A	0	177	20	166	500	863
B	261	0	10	345	358	974
C	40	20	0	25	23	108
D	300	222	10	0	82	614
E	438	346	22	54	0	860
Tot.	1039	765	62	590	963	3419

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Woodbridge Gyratory - Existing Layout	-	-	-	-	-	-	**85.0%**	**19.9**	-	-	-
Woodbridge Gyratory	-	-	-	-	-	-	**85.0%**	**19.9**	-	-	-
1/1	Hospital Ahead Left	-	-	108	1052	919	11.8%	0.1	2.2	0.1	0.00
2/1	A1071 Woodbridge Road (W) Ahead Left	-	-	614	1451	981	62.6%	0.8	4.9	1.3	0.00
3/1	A1214 Colchester Road Ahead	-	-	860	1927	1650	52.1%	0.5	2.3	0.5	0.00
4/1	A1214 Woodbridge Road (E) Ahead	G	100	482	1900	1599	30.1%	0.5	3.6	3.6	0.00
4/2	A1214 Woodbridge Road (E) Ahead	G	100	381	2000	1683	22.6%	0.3	3.2	2.6	0.00
5/1	A1214 Woodbridge Road (E) Ahead Left	-	-	482	1671	1250	38.5%	0.3	2.4	2.8	0.00
5/2	A1214 Woodbridge Road (E) Ahead	-	-	381	1180	808	47.2%	0.5	4.4	3.2	0.00
6/1	A1189(S) Heath Road Ahead	I	102	685	1935	1661	41.2%	0.7	3.7	5.3	0.00
6/2	A1189(S) Heath Road Ahead	I	102	289	2075	1781	16.2%	0.2	2.6	1.6	0.00
7/1	A1189(S) Left	-	-	685	1088	806	85.0%	3.6	18.8	23.3	0.00
7/2	A1189(S) Right Left	-	-	289	1088	377	76.7%	2.0	25.2	8.3	0.00
8/1	circ SE Left Ahead	-	-	627	2000	2000	31.4%	0.2	1.3	0.2	0.00
8/2	circ SE Right	-	-	858	2000	2000	42.9%	0.4	1.6	0.4	0.00
9/1	circ SW Ahead	-	-	881	2000	2000	44.1%	0.4	1.6	0.4	0.00
9/2	circ SW Right	-	-	60	2000	2000	3.0%	0.0	0.9	0.0	0.00
10/1	circ NW Ahead	-	-	340	2000	2000	17.0%	0.1	1.1	0.1	0.00
10/2	circ NW Ahead Right	-	-	252	2000	2000	12.6%	0.1	1.0	0.1	0.00
11/1	Ahead	A	102	778	1955	1678	46.4%	0.9	4.0	6.5	0.00
11/2	Ahead	A	102	664	2095	1798	36.9%	0.6	3.4	4.7	0.00
12/1	Ahead	-	-	778	1150	949	82.0%	2.7	12.4	18.1	0.00

12/2	Right	-	-	664	1150	949	70.0%	1.4	7.4	10.1	0.00
13/1	Ahead	E	102	1039	1995	1712	60.7%	1.1	3.7	7.0	0.00
14/1	Right Ahead	-	-	664	2000	2000	33.2%	0.2	1.3	0.2	0.00
15/1	Ahead	-	-	381	2000	2000	19.1%	0.1	1.1	0.1	0.00
15/2	Right Ahead	-	-	381	2000	2000	19.1%	0.1	1.1	0.1	0.00
16/1	Right	-	-	261	2000	2000	13.1%	0.1	1.0	0.1	0.00
17/1	Ahead	C	102	1066	1956	1679	63.5%	1.1	3.7	5.3	0.00
17/2	Ahead	C	102	409	2098	1801	22.7%	0.3	2.7	2.1	0.00
18/1		-	-	62	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
19/1		-	-	590	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
20/1		-	-	963	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
21/1		-	-	1039	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
22/1	Ahead	K	102	765	2014	1729	44.3%	0.6	2.6	3.4	0.00
23/1		-	-	765	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
24/1	Circ Right	-	-	10	1799	944	1.1%	0.0	2.0	0.0	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	94.1	Total Delay for Signalled Lanes (pcuHr):	1.48	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	41.7	Total Delay for Signalled Lanes (pcuHr):	1.41	Cycle Time (s): 120
C1	Stream: 3 PRC for Signalled Lanes (%):	48.3	Total Delay for Signalled Lanes (pcuHr):	1.06	Cycle Time (s): 120
C1	Stream: 4 PRC for Signalled Lanes (%):	198.6	Total Delay for Signalled Lanes (pcuHr):	0.83	Cycle Time (s): 120
C1	Stream: 5 PRC for Signalled Lanes (%):	118.2	Total Delay for Signalled Lanes (pcuHr):	0.92	Cycle Time (s): 120
C1	Stream: 6 PRC for Signalled Lanes (%):	103.4	Total Delay for Signalled Lanes (pcuHr):	0.55	Cycle Time (s): 120
	PRC Over All Lanes (%):	5.9	Total Delay Over All Lanes(pcuHr):	19.88	

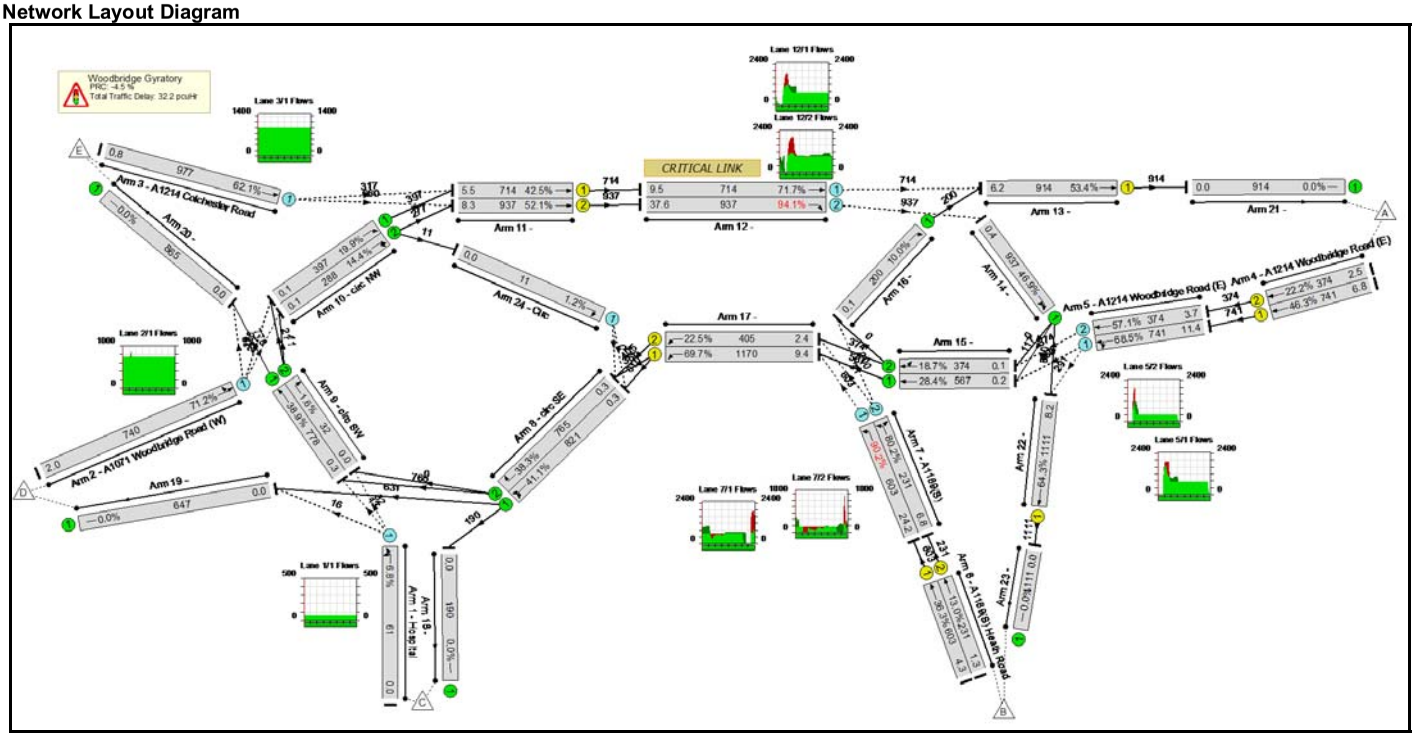
Scenario 3: '2027 AM' (FG3: '2027 Modelled Flow AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination A	B	C	D	E	Tot.
A	0	291	106	344	374	1115
B	200	0	73	170	391	834
C	21	11	0	16	13	61
D	376	266	11	0	87	740
E	317	543	0	117	0	977
Tot.	914	1111	190	647	865	3727

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Woodbridge Gyratory - Existing Layout	-	-	-	-	-	-	**94.1%**	**32.2**	-	-	-
Woodbridge Gyratory	-	-	-	-	-	-	**94.1%**	**32.2**	-	-	-
1/1	Hospital Ahead Left	-	-	61	1052	901	6.8%	0.0	2.1	0.0	0.00
2/1	A1071 Woodbridge Road (W) Ahead Left	-	-	740	1451	1040	71.2%	1.2	6.0	2.0	0.00
3/1	A1214 Colchester Road Ahead	-	-	977	1927	1574	62.1%	0.8	3.0	0.8	0.00
4/1	A1214 Woodbridge Road (E) Ahead	G	100	741	1900	1599	46.3%	0.9	4.6	6.8	0.00
4/2	A1214 Woodbridge Road (E) Ahead	G	100	374	2000	1683	22.2%	0.3	3.2	2.5	0.00
5/1	A1214 Woodbridge Road (E) Ahead Left	-	-	741	1671	1081	68.5%	1.3	6.1	11.4	0.00
5/2	A1214 Woodbridge Road (E) Ahead	-	-	374	1180	655	57.1%	0.7	6.8	3.7	0.00
6/1	A1189(S) Heath Road Ahead	I	102	603	1935	1661	36.3%	0.6	3.5	4.3	0.00
6/2	A1189(S) Heath Road Ahead	I	102	231	2075	1781	13.0%	0.2	2.5	1.3	0.00
7/1	A1189(S) Left	-	-	603	1088	668	90.2%	5.2	31.1	24.2	0.00
7/2	A1189(S) Right Left	-	-	231	1088	288	80.2%	2.8	43.7	6.8	0.00
8/1	circ SE Left Ahead	-	-	821	2000	2000	41.1%	0.3	1.5	0.3	0.00
8/2	circ SE Right	-	-	765	2000	2000	38.3%	0.3	1.5	0.3	0.00
9/1	circ SW Ahead	-	-	778	2000	2000	38.9%	0.3	1.5	0.3	0.00
9/2	circ SW Right	-	-	32	2000	2000	1.6%	0.0	0.9	0.0	0.00
10/1	circ NW Ahead	-	-	397	2000	2000	19.9%	0.1	1.1	0.1	0.00
10/2	circ NW Ahead Right	-	-	288	2000	2000	14.4%	0.1	1.1	0.1	0.00
11/1	Ahead	A	102	714	1955	1678	42.5%	0.7	3.8	5.5	0.00
11/2	Ahead	A	102	937	2095	1798	52.1%	1.1	4.3	8.3	0.00
12/1	Ahead	-	-	714	1150	996	71.7%	1.4	7.2	9.5	0.00

12/2	Right	-	-	937	1150	996	94.1%	8.7	33.6	37.6	0.00
13/1	Ahead	E	102	914	1995	1712	53.4%	0.8	3.3	6.2	0.00
14/1	Right Ahead	-	-	937	2000	2000	46.9%	0.4	1.7	0.4	0.00
15/1	Ahead	-	-	567	2000	2000	28.4%	0.2	1.3	0.2	0.00
15/2	Right Ahead	-	-	374	2000	2000	18.7%	0.1	1.1	0.1	0.00
16/1	Right	-	-	200	2000	2000	10.0%	0.1	1.0	0.1	0.00
17/1	Ahead	C	102	1170	1956	1679	69.7%	1.6	5.1	9.4	0.00
17/2	Ahead	C	102	405	2098	1801	22.5%	0.3	2.8	2.4	0.00
18/1		-	-	190	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
19/1		-	-	647	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
20/1		-	-	865	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
21/1		-	-	914	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
22/1	Ahead	K	102	1111	2014	1729	64.3%	1.3	4.2	8.2	0.00
23/1		-	-	1111	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
24/1	Circ Right	-	-	11	1799	889	1.2%	0.0	2.1	0.0	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	72.7	Total Delay for Signalled Lanes (pcuHr):	1.86	Cycle Time (s):	120
C1	Stream: 2 PRC for Signalled Lanes (%):	29.1	Total Delay for Signalled Lanes (pcuHr):	1.96	Cycle Time (s):	120
C1	Stream: 3 PRC for Signalled Lanes (%):	68.6	Total Delay for Signalled Lanes (pcuHr):	0.84	Cycle Time (s):	120
C1	Stream: 4 PRC for Signalled Lanes (%):	94.2	Total Delay for Signalled Lanes (pcuHr):	1.27	Cycle Time (s):	120
C1	Stream: 5 PRC for Signalled Lanes (%):	147.9	Total Delay for Signalled Lanes (pcuHr):	0.74	Cycle Time (s):	120
C1	Stream: 6 PRC for Signalled Lanes (%):	40.0	Total Delay for Signalled Lanes (pcuHr):	1.30	Cycle Time (s):	120
	PRC Over All Lanes (%):	-4.5	Total Delay Over All Lanes(pcuHr):	32.19		

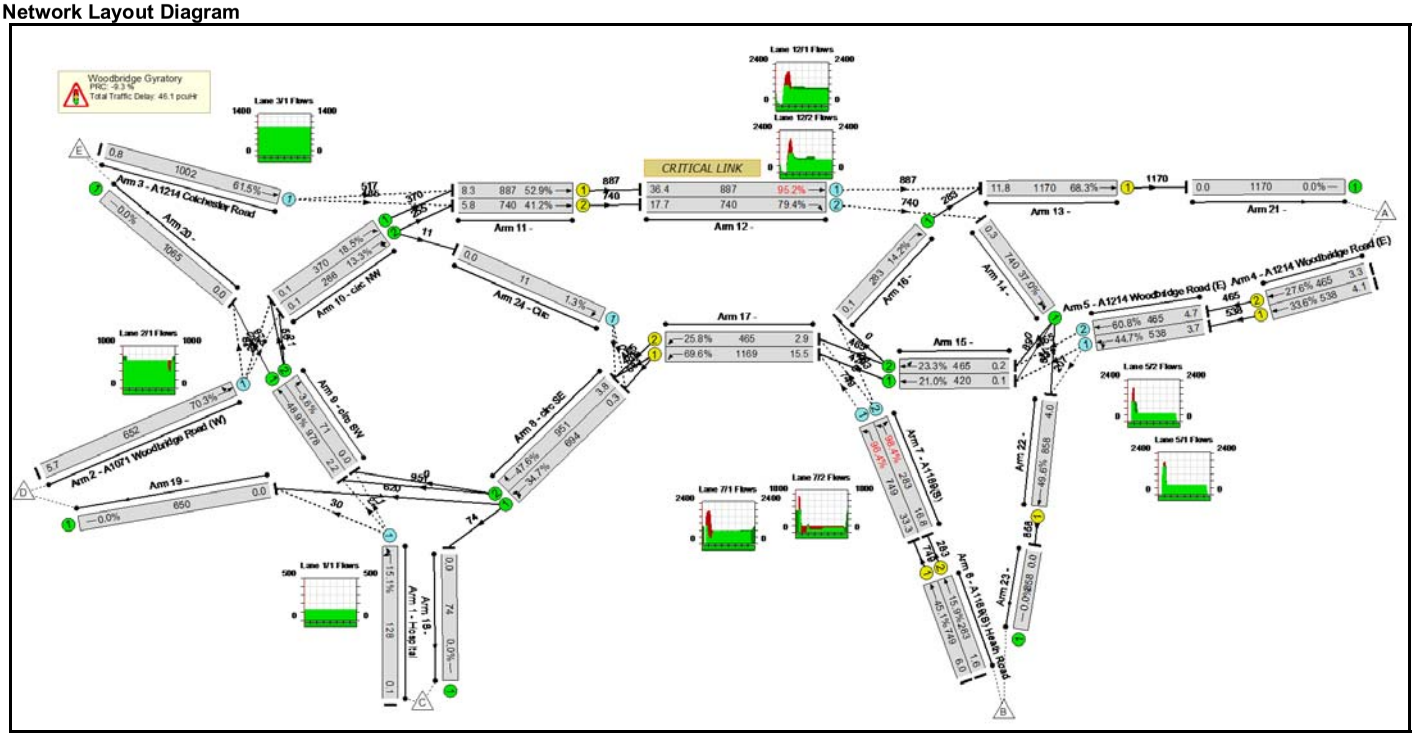
Scenario 4: '2027 PM' (FG4: '2027 Modelled Flow PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination A	B	C	D	E	Tot.
A	0	207	21	242	533	1003
B	283	0	11	320	418	1032
C	50	21	0	30	27	128
D	320	234	11	0	87	652
E	517	396	31	58	0	1002
Tot.	1170	858	74	650	1065	3817

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Woodbridge Gyratory - Existing Layout	-	-	-	-	-	-	**98.4%**	**46.1**	-	-	-
Woodbridge Gyratory	-	-	-	-	-	-	**98.4%**	**46.1**	-	-	-
1/1	Hospital Ahead Left	-	-	128	1052	847	15.1%	0.1	2.5	0.1	0.00
2/1	A1071 Woodbridge Road (W) Ahead Left	-	-	652	1451	928	70.3%	1.2	6.7	5.7	0.00
3/1	A1214 Colchester Road Ahead	-	-	1002	1927	1629	61.5%	0.8	2.9	0.8	0.00
4/1	A1214 Woodbridge Road (E) Ahead	G	100	538	1900	1599	33.6%	0.6	3.8	4.1	0.00
4/2	A1214 Woodbridge Road (E) Ahead	G	100	465	2000	1683	27.6%	0.4	3.4	3.3	0.00
5/1	A1214 Woodbridge Road (E) Ahead Left	-	-	538	1671	1204	44.7%	0.4	2.8	3.7	0.00
5/2	A1214 Woodbridge Road (E) Ahead	-	-	465	1180	765	60.8%	0.8	6.3	4.7	0.00
6/1	A1189(S) Heath Road Ahead	I	102	749	1935	1661	45.1%	0.8	3.9	6.0	0.00
6/2	A1189(S) Heath Road Ahead	I	102	283	2075	1781	15.9%	0.2	2.6	1.6	0.00
7/1	A1189(S) Left	-	-	749	1088	777	96.4%	11.4	55.0	33.3	0.00
7/2	A1189(S) Right Left	-	-	283	1088	288	98.4%	9.5	120.2	16.8	0.00
8/1	circ SE Left Ahead	-	-	694	2000	2000	34.7%	0.3	1.4	0.3	0.00
8/2	circ SE Right	-	-	951	2000	2000	47.6%	0.5	1.7	3.8	0.00
9/1	circ SW Ahead	-	-	978	2000	2000	48.9%	0.5	1.8	2.2	0.00
9/2	circ SW Right	-	-	71	2000	2000	3.6%	0.0	0.9	0.0	0.00
10/1	circ NW Ahead	-	-	370	2000	2000	18.5%	0.1	1.1	0.1	0.00
10/2	circ NW Ahead Right	-	-	266	2000	2000	13.3%	0.1	1.0	0.1	0.00
11/1	Ahead	A	102	887	1955	1678	52.9%	1.1	4.5	8.3	0.00
11/2	Ahead	A	102	740	2095	1798	41.2%	0.7	3.6	5.8	0.00
12/1	Ahead	-	-	887	1150	932	95.2%	8.5	34.5	36.4	0.00

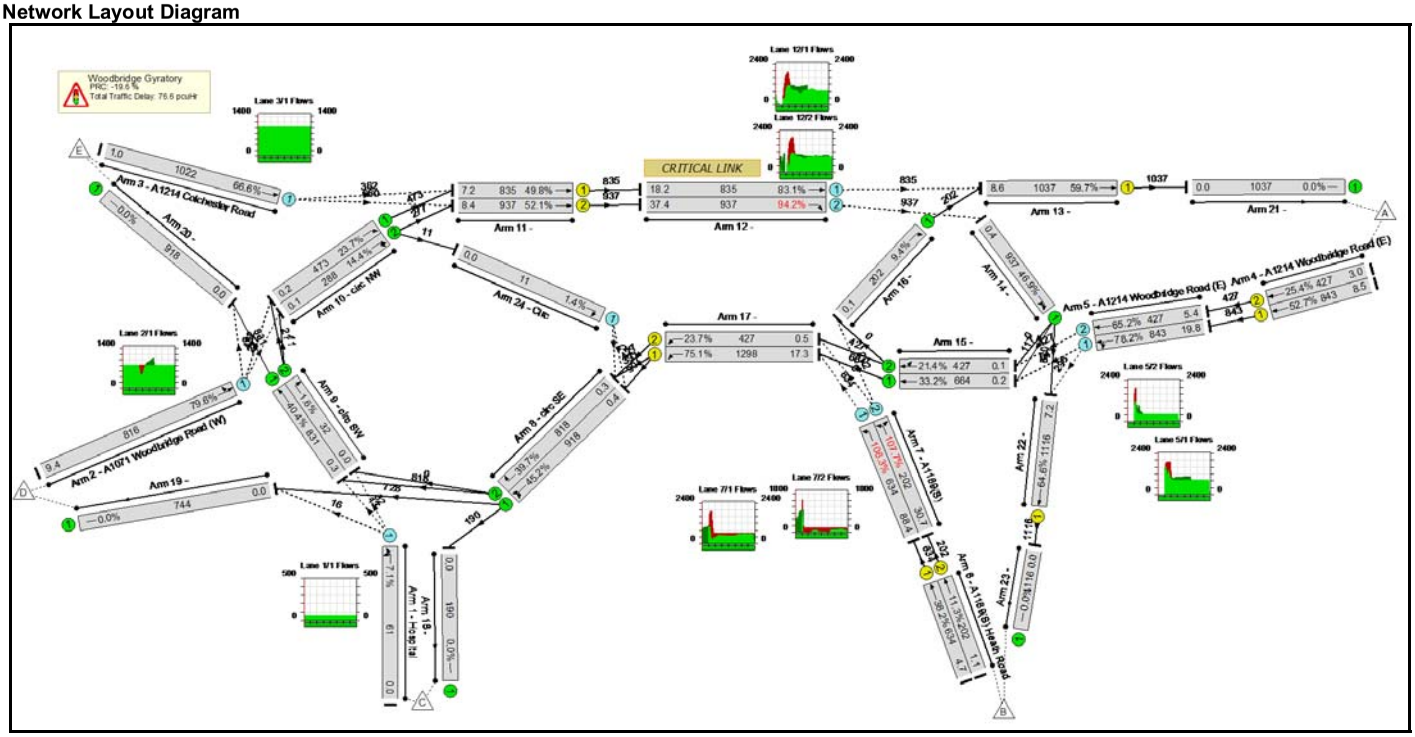
12/2	Right	-	-	740	1150	932	79.4%	2.4	11.7	17.7	0.00
13/1	Ahead	E	102	1170	1995	1712	68.3%	1.8	5.4	11.8	0.00
14/1	Right Ahead	-	-	740	2000	2000	37.0%	0.3	1.4	0.3	0.00
15/1	Ahead	-	-	420	2000	2000	21.0%	0.1	1.1	0.1	0.00
15/2	Right Ahead	-	-	465	2000	2000	23.3%	0.2	1.2	0.2	0.00
16/1	Right	-	-	283	2000	2000	14.2%	0.1	1.0	0.1	0.00
17/1	Ahead	C	102	1169	1956	1679	69.6%	2.2	6.7	15.5	0.00
17/2	Ahead	C	102	465	2098	1801	25.8%	0.4	2.9	2.9	0.00
18/1		-	-	74	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
19/1		-	-	650	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
20/1		-	-	1065	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
21/1		-	-	1170	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
22/1	Ahead	K	102	858	2014	1729	49.6%	0.7	2.8	4.0	0.00
23/1		-	-	858	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
24/1	Circ Right	-	-	11	1799	858	1.3%	0.0	2.2	0.0	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	70.3	Total Delay for Signalled Lanes (pcuHr):	1.83	Cycle Time (s):	120
C1	Stream: 2 PRC for Signalled Lanes (%):	29.3	Total Delay for Signalled Lanes (pcuHr):	2.56	Cycle Time (s):	120
C1	Stream: 3 PRC for Signalled Lanes (%):	31.7	Total Delay for Signalled Lanes (pcuHr):	1.76	Cycle Time (s):	120
C1	Stream: 4 PRC for Signalled Lanes (%):	167.5	Total Delay for Signalled Lanes (pcuHr):	1.01	Cycle Time (s):	120
C1	Stream: 5 PRC for Signalled Lanes (%):	99.6	Total Delay for Signalled Lanes (pcuHr):	1.02	Cycle Time (s):	120
C1	Stream: 6 PRC for Signalled Lanes (%):	81.3	Total Delay for Signalled Lanes (pcuHr):	0.66	Cycle Time (s):	120
	PRC Over All Lanes (%):	-9.3	Total Delay Over All Lanes(pcuHr):	46.09		

Scenario 5: '2027+Dev AM' (FG5: '2027+Dev Modelled Flow AM', Plan 1: 'Network Control Plan 1')
Traffic Flows, Desired
Desired Flow :

Origin	Destination A	B	C	D	E	Tot.
A	0	296	106	441	427	1270
B	202	0	73	170	391	836
C	21	11	0	16	13	61
D	452	266	11	0	87	816
E	362	543	0	117	0	1022
Tot.	1037	1116	190	744	918	4005

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Woodbridge Gyratory - Existing Layout	-	-	-	-	-	-	**107.7%**	**76.6**	-	-	-
Woodbridge Gyratory	-	-	-	-	-	-	**107.7%**	**76.6**	-	-	-
1/1	Hospital Ahead Left	-	-	61	1052	857	7.1%	0.0	2.3	0.0	0.00
2/1	A1071 Woodbridge Road (W) Ahead Left	-	-	816	1451	1025	79.6%	2.0	9.0	9.4	0.00
3/1	A1214 Colchester Road Ahead	-	-	1022	1927	1534	66.6%	1.0	3.5	1.0	0.00
4/1	A1214 Woodbridge Road (E) Ahead	G	100	843	1900	1599	52.7%	1.2	5.1	8.5	0.00
4/2	A1214 Woodbridge Road (E) Ahead	G	100	427	2000	1683	25.4%	0.4	3.3	3.0	0.00
5/1	A1214 Woodbridge Road (E) Ahead Left	-	-	843	1671	1078	78.2%	2.3	9.8	19.8	0.00
5/2	A1214 Woodbridge Road (E) Ahead	-	-	427	1180	655	65.2%	1.0	8.4	5.4	0.00
6/1	A1189(S) Heath Road Ahead	I	102	634	1935	1661	38.2%	0.6	3.5	4.7	0.00
6/2	A1189(S) Heath Road Ahead	I	102	202	2075	1781	11.3%	0.1	2.5	1.1	0.00
7/1	A1189(S) Left	-	-	634	1088	597	106.3%	31.5	178.9	88.4	0.00
7/2	A1189(S) Right Left	-	-	202	1088	188	107.7%	14.6	260.2	30.7	0.00
8/1	circ SE Left Ahead	-	-	918	2000	2000	45.2%	0.4	1.6	0.4	0.00
8/2	circ SE Right	-	-	818	2000	2000	39.7%	0.3	1.5	0.3	0.00
9/1	circ SW Ahead	-	-	831	2000	2000	40.4%	0.3	1.5	0.3	0.00
9/2	circ SW Right	-	-	32	2000	2000	1.6%	0.0	0.9	0.0	0.00
10/1	circ NW Ahead	-	-	473	2000	2000	23.7%	0.2	1.2	0.2	0.00
10/2	circ NW Ahead Right	-	-	288	2000	2000	14.4%	0.1	1.1	0.1	0.00
11/1	Ahead	A	102	835	1955	1678	49.8%	1.0	4.2	7.2	0.00
11/2	Ahead	A	102	937	2095	1798	52.1%	1.1	4.3	8.4	0.00
12/1	Ahead	-	-	835	1150	1005	83.1%	3.2	13.8	18.2	0.00

Full Input Data And Results

12/2	Right	-	-	937	1150	994	94.2%	9.1	34.9	37.4	0.00
13/1	Ahead	E	102	1037	1995	1712	59.7%	1.2	4.2	8.6	0.00
14/1	Right Ahead	-	-	937	2000	2000	46.9%	0.4	1.7	0.4	0.00
15/1	Ahead	-	-	664	2000	2000	33.2%	0.2	1.3	0.2	0.00
15/2	Right Ahead	-	-	427	2000	2000	21.4%	0.1	1.1	0.1	0.00
16/1	Right	-	-	202	2000	2000	9.4%	0.1	1.0	0.1	0.00
17/1	Ahead	C	102	1298	1956	1679	75.1%	2.5	7.2	17.3	0.00
17/2	Ahead	C	102	427	2098	1801	23.7%	0.2	1.7	0.5	0.00
18/1		-	-	190	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
19/1		-	-	744	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
20/1		-	-	918	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
21/1		-	-	1037	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
22/1	Ahead	K	102	1116	2014	1729	64.6%	1.3	4.3	7.2	0.00
23/1		-	-	1116	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
24/1	Circ Right	-	-	11	1799	804	1.4%	0.0	2.3	0.0	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	72.7	Total Delay for Signalled Lanes (pcuHr):	2.09	Cycle Time (s):	120
C1	Stream: 2 PRC for Signalled Lanes (%):	19.9	Total Delay for Signalled Lanes (pcuHr):	2.71	Cycle Time (s):	120
C1	Stream: 3 PRC for Signalled Lanes (%):	50.7	Total Delay for Signalled Lanes (pcuHr):	1.19	Cycle Time (s):	120
C1	Stream: 4 PRC for Signalled Lanes (%):	70.7	Total Delay for Signalled Lanes (pcuHr):	1.59	Cycle Time (s):	120
C1	Stream: 5 PRC for Signalled Lanes (%):	135.8	Total Delay for Signalled Lanes (pcuHr):	0.76	Cycle Time (s):	120
C1	Stream: 6 PRC for Signalled Lanes (%):	39.4	Total Delay for Signalled Lanes (pcuHr):	1.33	Cycle Time (s):	120
	PRC Over All Lanes (%):	-19.6	Total Delay Over All Lanes(pcuHr):	76.63		

Full Input Data And Results

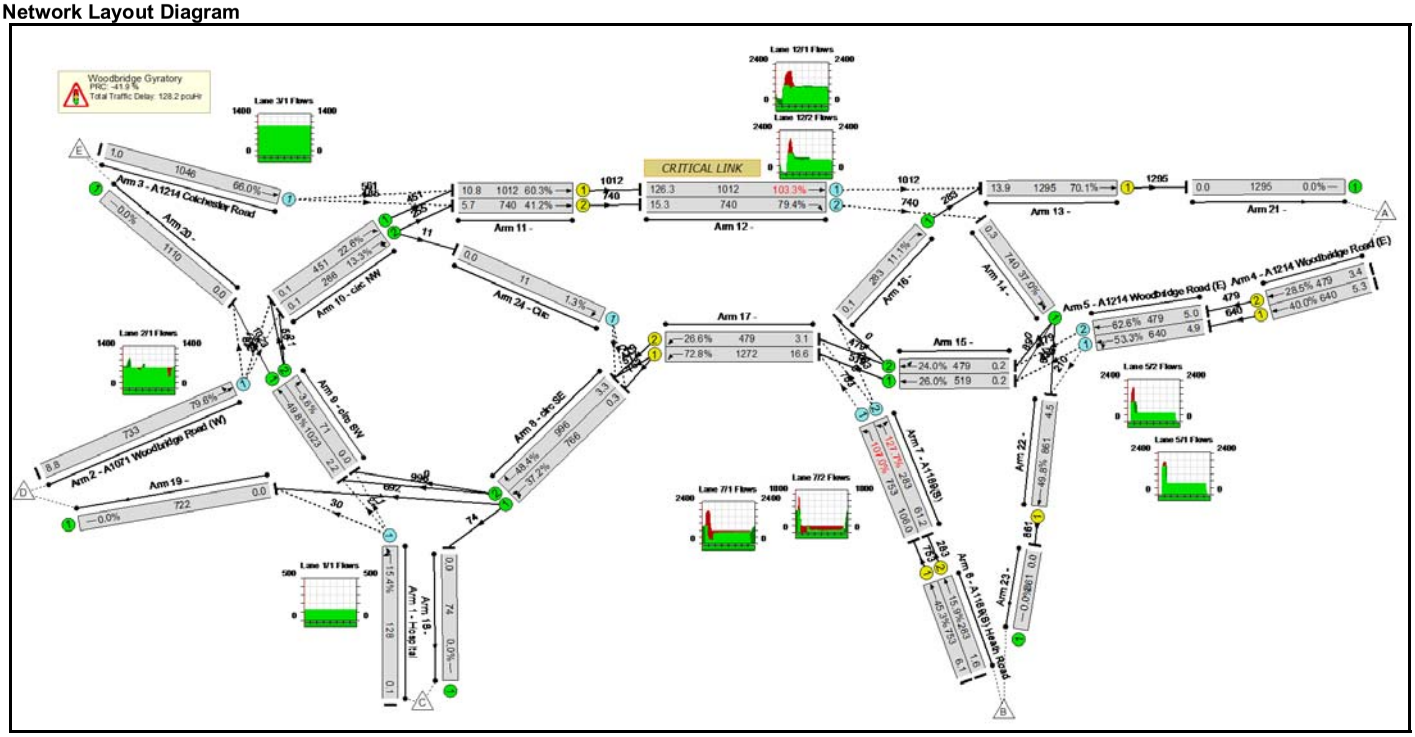
Scenario 6: '2027+Dev PM' (FG6: '2027+Dev Modelled Flow PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin	Destination A	B	C	D	E	Tot.
A	0	210	21	314	574	1119
B	283	0	11	320	422	1036
C	50	21	0	30	27	128
D	401	234	11	0	87	733
E	561	396	31	58	0	1046
Tot.	1295	861	74	722	1110	4062

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Woodbridge Gyratory - Existing Layout	-	-	-	-	-	-	**127.7%**	**128.2**	-	-	-
Woodbridge Gyratory	-	-	-	-	-	-	**127.7%**	**128.2**	-	-	-
1/1	Hospital Ahead Left	-	-	128	1052	829	15.4%	0.1	2.6	0.1	0.00
2/1	A1071 Woodbridge Road (W) Ahead Left	-	-	733	1451	920	79.6%	2.1	10.1	8.8	0.00
3/1	A1214 Colchester Road Ahead	-	-	1046	1927	1584	66.0%	1.0	3.3	1.0	0.00
4/1	A1214 Woodbridge Road (E) Ahead	G	100	640	1900	1599	40.0%	0.7	4.1	5.3	0.00
4/2	A1214 Woodbridge Road (E) Ahead	G	100	479	2000	1683	28.5%	0.5	3.5	3.4	0.00
5/1	A1214 Woodbridge Road (E) Ahead Left	-	-	640	1671	1201	53.3%	0.6	3.3	4.9	0.00
5/2	A1214 Woodbridge Road (E) Ahead	-	-	479	1180	765	62.6%	0.9	6.7	5.0	0.00
6/1	A1189(S) Heath Road Ahead	I	102	753	1935	1661	45.3%	0.8	4.0	6.1	0.00
6/2	A1189(S) Heath Road Ahead	I	102	283	2075	1781	15.9%	0.2	2.6	1.6	0.00
7/1	A1189(S) Left	-	-	753	1088	704	107.0%	38.5	183.9	106.0	0.00
7/2	A1189(S) Right Left	-	-	283	1088	222	127.7%	39.9	507.3	61.2	0.00
8/1	circ SE Left Ahead	-	-	766	2000	2000	37.2%	0.3	1.4	0.3	0.00
8/2	circ SE Right	-	-	996	2000	2000	48.4%	0.5	1.8	3.3	0.00
9/1	circ SW Ahead	-	-	1023	2000	2000	49.8%	0.5	1.8	2.2	0.00
9/2	circ SW Right	-	-	71	2000	2000	3.6%	0.0	0.9	0.0	0.00
10/1	circ NW Ahead	-	-	451	2000	2000	22.6%	0.1	1.2	0.1	0.00
10/2	circ NW Ahead Right	-	-	266	2000	2000	13.3%	0.1	1.0	0.1	0.00
11/1	Ahead	A	102	1012	1955	1678	60.3%	1.4	5.1	10.8	0.00
11/2	Ahead	A	102	740	2095	1798	41.2%	0.7	3.5	5.7	0.00
12/1	Ahead	-	-	1012	1150	979	103.3%	30.9	109.9	126.3	0.00

12/2	Right	-	-	740	1150	932	79.4%	2.2	10.8	15.3	0.00
13/1	Ahead	E	102	1295	1995	1712	70.1%	2.0	6.1	13.9	0.00
14/1	Right Ahead	-	-	740	2000	2000	37.0%	0.3	1.4	0.3	0.00
15/1	Ahead	-	-	519	2000	2000	26.0%	0.2	1.2	0.2	0.00
15/2	Right Ahead	-	-	479	2000	2000	24.0%	0.2	1.2	0.2	0.00
16/1	Right	-	-	283	2000	2000	11.1%	0.1	1.0	0.1	0.00
17/1	Ahead	C	102	1272	1956	1679	72.8%	2.4	7.1	16.6	0.00
17/2	Ahead	C	102	479	2098	1801	26.6%	0.4	2.9	3.1	0.00
18/1		-	-	74	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
19/1		-	-	722	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
20/1		-	-	1110	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
21/1		-	-	1295	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
22/1	Ahead	K	102	861	2014	1729	49.8%	0.7	2.8	4.5	0.00
23/1		-	-	861	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
24/1	Circ Right	-	-	11	1799	820	1.3%	0.0	2.4	0.0	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	49.2	Total Delay for Signalled Lanes (pcuHr):	2.17	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	23.6	Total Delay for Signalled Lanes (pcuHr):	2.81	Cycle Time (s): 120
C1	Stream: 3 PRC for Signalled Lanes (%):	28.3	Total Delay for Signalled Lanes (pcuHr):	2.02	Cycle Time (s): 120
C1	Stream: 4 PRC for Signalled Lanes (%):	124.9	Total Delay for Signalled Lanes (pcuHr):	1.20	Cycle Time (s): 120
C1	Stream: 5 PRC for Signalled Lanes (%):	98.5	Total Delay for Signalled Lanes (pcuHr):	1.03	Cycle Time (s): 120
C1	Stream: 6 PRC for Signalled Lanes (%):	80.7	Total Delay for Signalled Lanes (pcuHr):	0.67	Cycle Time (s): 120
	PRC Over All Lanes (%):	-41.9	Total Delay Over All Lanes(pcuHr):	128.16	

Full Input Data And Results

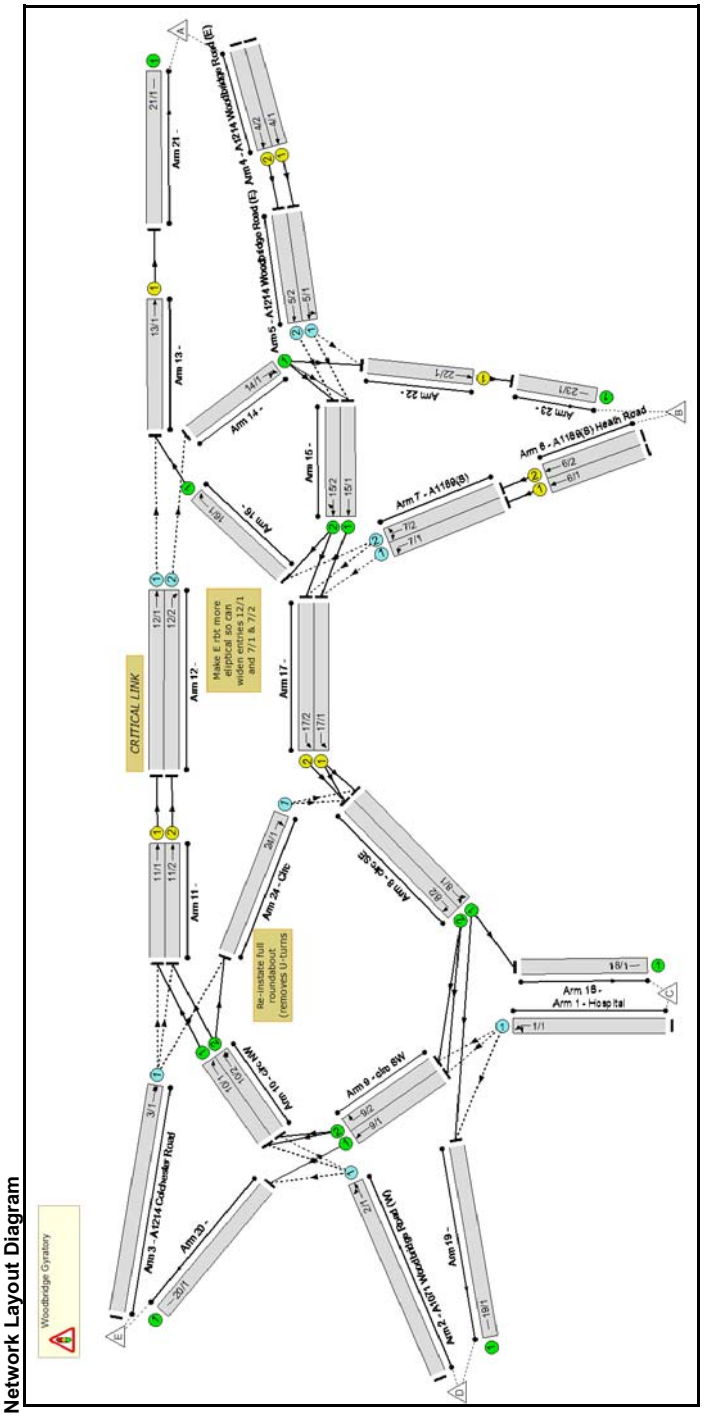
Full Input Data And Results

User and Project Details

Project:	**Adastral Park**
Title:	**Woodbridge Gyratory - Improved Layout**
Location:	Ipswich
File name:	10391 J29-A1214 Woodbridge Gyratory - Improved.lsg3x
Author:	SMT
Company:	Brookbanks Ltd
Address:	Birmingham
Notes:	Make En rbt more of an eclipse so can bring forward and widen entry from Heath Road and can widen Woodbridge Road Eb ahead lane. Reinstate full movements at W rbt to remove u-turns from E rbt.

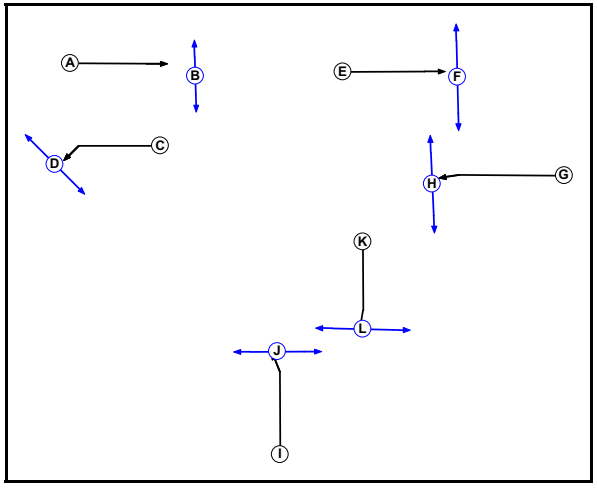
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L
A		5	-	-	-	-	-	-	-	-	-	-
B	8		-	-	-	-	-	-	-	-	-	-
C	-	-		5	-	-	-	-	-	-	-	-
D	-	-	8		-	-	-	-	-	-	-	-
E	-	-	-	-		5	-	-	-	-	-	-
F	-	-	-	-	8		-	-	-	-	-	-
G	-	-	-	-	-	-		5	-	-	-	-
H	-	-	-	-	-	-	9		-	-	-	-
I	-	-	-	-	-	-	-	-		5	-	-
J	-	-	-	-	-	-	-	8			-	-
K	-	-	-	-	-	-	-	-	-	-		5
L	-	-	-	-	-	-	-	-	-	-	8	

Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Pedestrian	1		5	5
C	Traffic	2		7	7
D	Pedestrian	2		5	5
E	Traffic	3		7	7
F	Pedestrian	3		5	5
G	Traffic	4		7	7
H	Pedestrian	4		6	6
I	Traffic	5		7	7
J	Pedestrian	5		5	5
K	Traffic	6		7	7
L	Pedestrian	6		5	5

Full Input Data And Results

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D
3	1	E
3	2	F
4	1	G
4	2	H
5	1	I
5	2	J
6	1	K
6	2	L

Give-Way Lane Input Data

Junction: Woodbridge Gyratory											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
1/1 (Hospital)	9/1 (Ahead)	1586	0	8/1	0.43	To 19/1 (Ahead)	-	-	-	-	-
				8/2	0.43	All					
	9/2 (Ahead)	1586	0	8/1	0.43	All					
				8/2	0.43	All					
	19/1 (Left)	1586	0	8/1	0.43	To 19/1 (Ahead)					
2/1 (A1071 Woodbridge Road (W))	10/1 (Ahead)	1451	0	9/1	0.52	All					
	10/2 (Ahead)	1451	0	9/1	0.52	All					
				9/2	0.52	All					
	20/1 (Left)	1451	0	9/1	0.52	To 20/1 (Ahead)					
3/1 (A1214 Colchester Road)	11/1 (Ahead)	1927	0	10/1	0.59	All					
	11/2 (Ahead)	1927	0	10/1	0.59	All					
				10/2	0.59	All					
	24/1 (Ahead)	1927	0	10/1	0.59	All					
				10/2	0.59	All					
5/1 (A1214 Woodbridge Road (E))	15/1 (Ahead)	1671	0	14/1	0.66	To 15/1 (Right) To 22/1 (Ahead)	-	-	-	-	-
	22/1 (Left)	1671	0	14/1	0.66	To 22/1 (Ahead)					
5/2 (A1214 Woodbridge Road (E))	15/2 (Ahead)	1180	0	14/1	0.56	All	-	-	-	-	-
7/1 (A1189(S))	17/1 (Left)	1130	0	15/1	0.76	All	-	-	-	-	-
7/2	16/1 (Right)	1130	0	15/1	0.76	All	-	-	-	-	-

(A1189(S))				16/1	0.76	All					
				15/2	0.76	All					
	17/2 (Left)	1130	0	15/1	0.76	All					
				15/2	0.76	To 17/2 (Ahead)					
12/1	13/1 (Ahead)	1300	0	16/1	0.80	All	-	-	-	-	-
12/2	14/1 (Right)	1150	0	16/1	0.77	All	-	-	-	-	-
24/1 (Circ)	8/1 (Right)	1799	0	17/1	0.59	All	-	-	-	-	-
				17/2	0.59	All					
	8/2 (Right)	1799	0	17/2	0.59	All					

Lane Input Data

Junction: Woodbridge Gyratory

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (Hospital)	O		2	3	60.0	User	1052	-	-	-	-	-
2/1 (A1071 Woodbridge Road (W))	O		2	3	60.0	User	1451	-	-	-	-	-
3/1 (A1214 Colchester Road)	O		2	3	60.0	User	1927	-	-	-	-	-
4/1 (A1214 Woodbridge Road (E))	U	G	2	3	60.0	User	1900	-	-	-	-	-
4/2 (A1214 Woodbridge Road (E))	U	G	2	3	60.0	User	2000	-	-	-	-	-
5/1 (A1214 Woodbridge Road (E))	O		2	3	4.0	User	1671	-	-	-	-	-
5/2 (A1214 Woodbridge Road (E))	O		2	3	4.0	User	1180	-	-	-	-	-
6/1 (A1189(S) Heath Road)	U	I	2	3	60.0	Geom	-	3.20	0.00	Y	Arm 7 Ahead	Inf
6/2 (A1189(S) Heath Road)	U	I	2	3	60.0	Geom	-	3.20	0.00	N	Arm 7 Ahead	Inf
7/1 (A1189(S))	O		2	3	3.0	User	1088	-	-	-	-	-
7/2 (A1189(S))	O		2	3	3.0	User	1130	-	-	-	-	-
8/1 (circ SE)	U		2	3	14.0	User	2000	-	-	-	-	-
8/2 (circ SE)	U		2	3	14.0	User	2000	-	-	-	-	-
9/1 (circ SW)	U		2	3	5.0	User	2000	-	-	-	-	-

9/2 (circ SW)	U		2	3	5.0	User	2000	-	-	-	-	-
10/1 (circ NW)	U		2	3	6.0	User	2000	-	-	-	-	-
10/2 (circ NW)	U		2	3	6.0	User	2000	-	-	-	-	-
11/1	U	A	2	3	6.0	Geom	-	3.40	0.00	Y	Arm 12 Ahead	Inf
11/2	U	A	2	3	6.0	Geom	-	3.40	0.00	N	Arm 12 Ahead	Inf
12/1	O		2	3	20.0	User	1300	-	-	-	-	-
12/2	O		2	3	20.0	User	1150	-	-	-	-	-
13/1	U	E	2	3	8.0	Geom	-	3.80	0.00	Y	Arm 21 Ahead	Inf
14/1	U		2	3	6.0	User	2000	-	-	-	-	-
15/1	U		2	3	5.0	User	2000	-	-	-	-	-
15/2	U		2	3	5.0	User	2050	-	-	-	-	-
16/1	U		2	3	11.0	User	2050	-	-	-	-	-
17/1	U	C	2	3	18.0	Geom	-	4.00	0.00	Y	Arm 8 Ahead	50.00
17/2	U	C	2	3	18.0	Geom	-	4.00	0.00	N	Arm 8 Ahead	55.00
22/1	U	K	2	3	6.0	Geom	-	5.00	0.00	Y	Arm 23 Ahead	30.00
24/1 (Circ)	O		2	3	10.0	User	1799	-	-	-	-	-

Full Input Data And Results

Scenario 1: '2027+Dev AM' (FG5: '2027+Dev Modelled Flow AM', Plan 1: 'Network Control Plan 1')

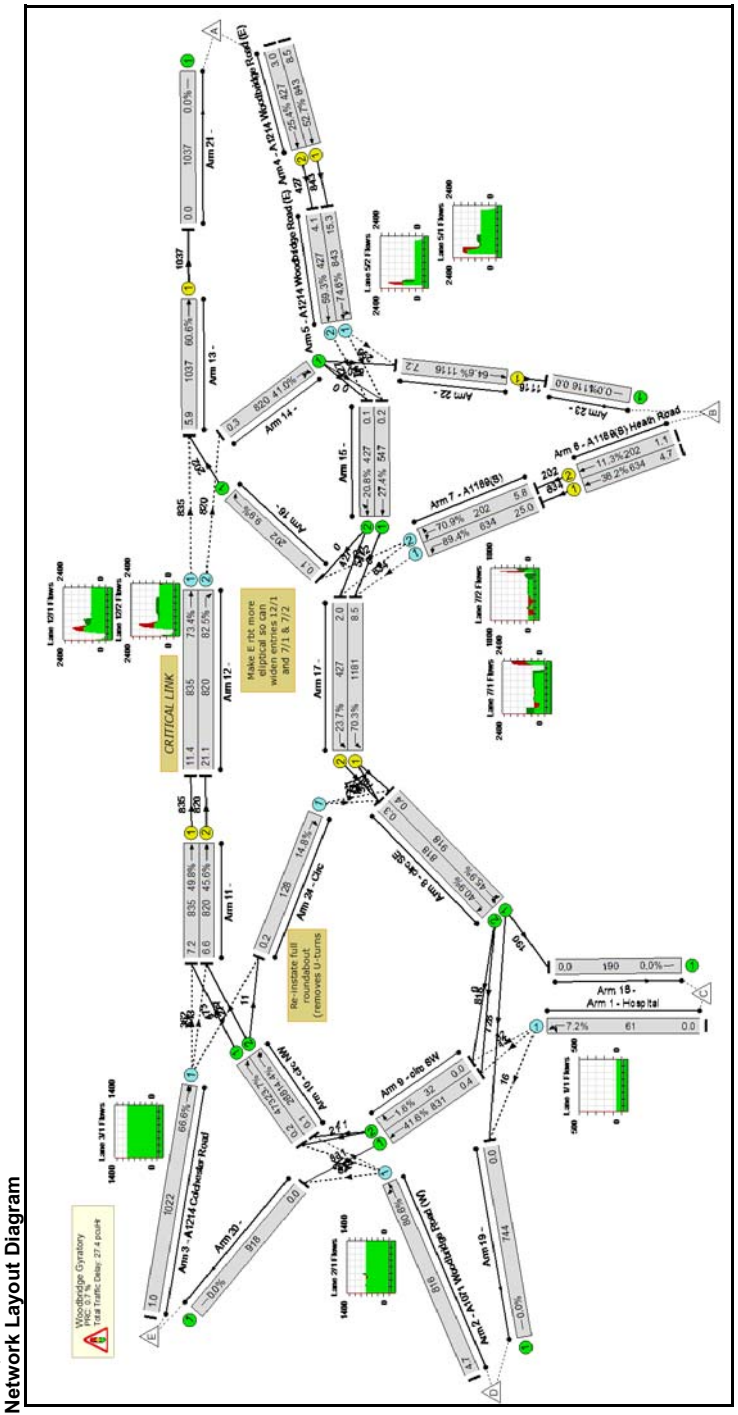
Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	296	106	441	427	1270
	B	202	0	73	170	391	836
	C	21	11	0	16	13	61
	D	452	266	11	0	87	816
	E	362	543	0	117	0	1022
	Tot.	1037	1116	190	744	918	4005

Full Input Data And Results

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Woodbridge Gyratory - Improved Layout	-	-	-	-	-	-	**89.4%**	**27.4**	-	-	-
Woodbridge Gyratory	-	-	-	-	-	-	**89.4%**	**27.4**	-	-	-
1/1	Hospital Ahead Left	-	-	61	1052	853	7.2%	0.0	2.3	0.0	0.00
2/1	A1071 Woodbridge Road (W) Ahead Left	-	-	816	1451	1013	80.6%	2.0	9.0	4.7	0.00
3/1	A1214 Colchester Road Ahead Ahead2	-	-	1022	1927	1534	66.6%	1.0	3.5	1.0	0.00
4/1	A1214 Woodbridge Road (E) Ahead	G	100	843	1900	1599	52.7%	1.2	5.1	8.5	0.00
4/2	A1214 Woodbridge Road (E) Ahead	G	100	427	2000	1683	25.4%	0.4	3.3	3.0	0.00
5/1	A1214 Woodbridge Road (E) Ahead Left	-	-	843	1671	1130	74.6%	1.7	7.3	15.3	0.00
5/2	A1214 Woodbridge Road (E) Ahead	-	-	427	1180	721	59.3%	0.8	6.4	4.1	0.00
6/1	A1189(S) Heath Road Ahead	I	102	634	1935	1661	38.2%	0.6	3.5	4.7	0.00
6/2	A1189(S) Heath Road Ahead	I	102	202	2075	1781	11.3%	0.1	2.5	1.1	0.00
7/1	A1189(S) Left	-	-	634	1088	709	89.4%	4.9	27.8	25.0	0.00
7/2	A1189(S) Right Left	-	-	202	1130	285	70.9%	2.0	35.7	5.8	0.00
8/1	circ SE Left Ahead	-	-	918	2000	2000	45.9%	0.4	1.7	0.4	0.00
8/2	circ SE Right	-	-	818	2000	2000	40.9%	0.3	1.5	0.3	0.00
9/1	circ SW Ahead	-	-	831	2000	2000	41.6%	0.4	1.5	0.4	0.00
9/2	circ SW Right	-	-	32	2000	2000	1.6%	0.0	0.9	0.0	0.00
10/1	circ NW Ahead	-	-	473	2000	2000	23.7%	0.2	1.2	0.2	0.00
10/2	circ NW Ahead Right	-	-	288	2000	2000	14.4%	0.1	1.1	0.1	0.00
11/1	Ahead	A	102	835	1955	1678	49.8%	1.0	4.2	7.2	0.00
11/2	Ahead	A	102	820	2095	1798	45.6%	0.9	3.8	6.6	0.00
12/1	Ahead	-	-	835	1300	1138	73.4%	1.6	6.8	11.4	0.00

Full Input Data And Results

12/2	Right	-	-	820	1150	994	82.5%	3.0	13.1	21.1	0.00
13/1	Ahead	E	102	1037	1995	1712	60.6%	0.9	3.3	5.9	0.00
14/1	Right Ahead	-	-	820	2000	2000	41.0%	0.3	1.5	0.3	0.00
15/1	Ahead	-	-	547	2000	2000	27.4%	0.2	1.2	0.2	0.00
15/2	Right Ahead	-	-	427	2050	2050	20.8%	0.1	1.1	0.1	0.00
16/1	Right	-	-	202	2050	2050	9.9%	0.1	1.0	0.1	0.00
17/1	Ahead	C	102	1181	1956	1679	70.3%	1.6	4.9	8.5	0.00
17/2	Ahead	C	102	427	2098	1801	23.7%	0.3	2.7	2.0	0.00
18/1		-	-	190	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
19/1		-	-	744	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
20/1		-	-	918	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
21/1		-	-	1037	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
22/1	Ahead	K	102	1116	2014	1729	64.6%	1.2	3.8	7.2	0.00
23/1		-	-	1116	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
24/1	Circ Right	-	-	128	1799	865	14.8%	0.1	2.5	0.2	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	80.9	Total Delay for Signalled Lanes (pcuHr):	1.85	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	27.9	Total Delay for Signalled Lanes (pcuHr):	1.92	Cycle Time (s): 120
C1	Stream: 3 PRC for Signalled Lanes (%):	48.6	Total Delay for Signalled Lanes (pcuHr):	0.95	Cycle Time (s): 120
C1	Stream: 4 PRC for Signalled Lanes (%):	70.7	Total Delay for Signalled Lanes (pcuHr):	1.59	Cycle Time (s): 120
C1	Stream: 5 PRC for Signalled Lanes (%):	135.8	Total Delay for Signalled Lanes (pcuHr):	0.76	Cycle Time (s): 120
C1	Stream: 6 PRC for Signalled Lanes (%):	39.4	Total Delay for Signalled Lanes (pcuHr):	1.17	Cycle Time (s): 120
	PRC Over All Lanes (%):	0.7	Total Delay Over All Lanes(pcuHr):	27.44	

Full Input Data And Results

Scenario 2: '2027+Dev PM' (FG6: '2027+Dev Modelled Flow PM', Plan 1: 'Network Control Plan 1')

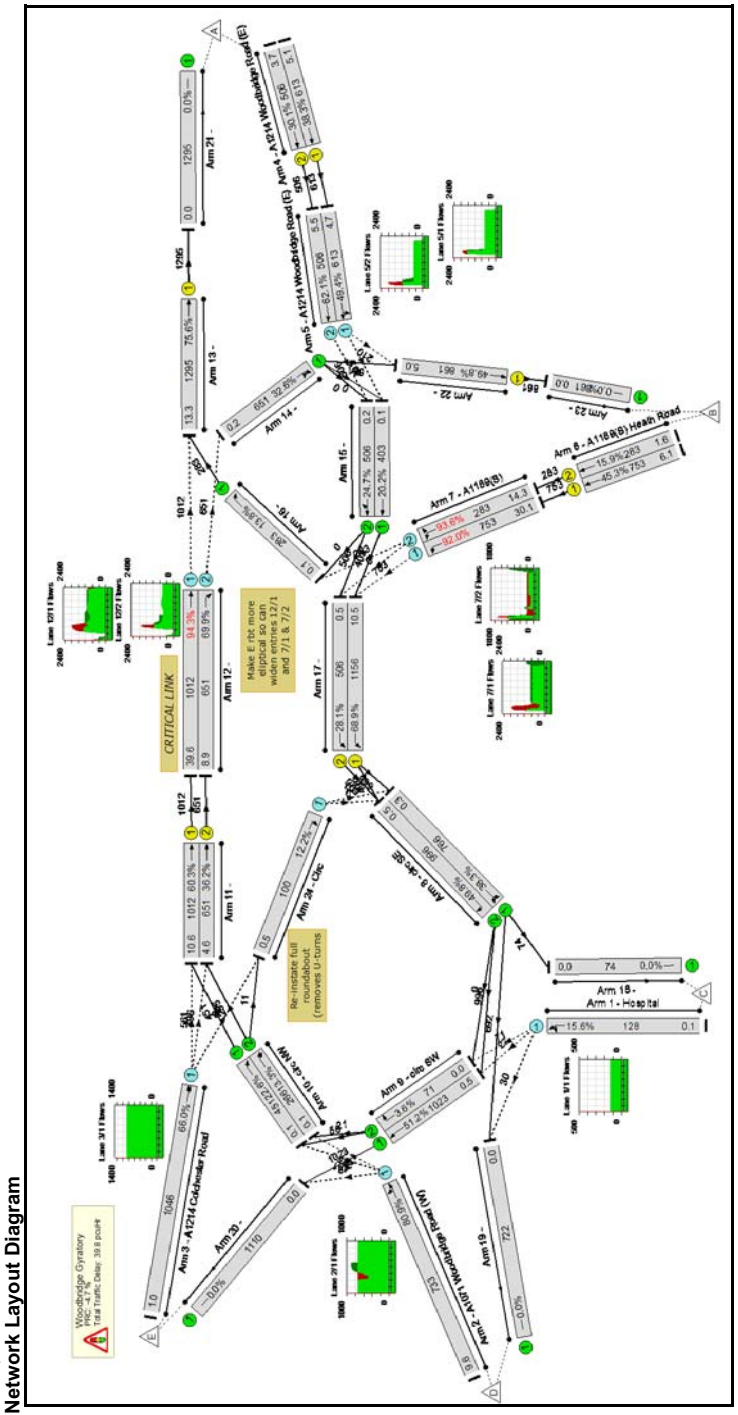
Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	210	21	314	574	1119
	B	283	0	11	320	422	1036
	C	50	21	0	30	27	128
	D	401	234	11	0	87	733
	E	561	396	31	58	0	1046
	Tot.	1295	861	74	722	1110	4062

Full Input Data And Results

Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Total Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)	Average Excess Queue (pcu)
Network: Woodbridge Gyratory - Improved Layout	-	-	-	-	-	-	**94.3%**	**39.8**	-	-	-
Woodbridge Gyratory	-	-	-	-	-	-	**94.3%**	**39.8**	-	-	-
1/1	Hospital Ahead Left	-	-	128	1052	820	15.6%	0.1	2.6	0.1	0.00
2/1	A1071 Woodbridge Road (W) Ahead Left	-	-	733	1451	906	80.9%	2.2	10.8	9.6	0.00
3/1	A1214 Colchester Road Ahead Ahead2	-	-	1046	1927	1584	66.0%	1.0	3.3	1.0	0.00
4/1	A1214 Woodbridge Road (E) Ahead	G	100	613	1900	1599	38.3%	0.7	4.0	5.1	0.00
4/2	A1214 Woodbridge Road (E) Ahead	G	100	506	2000	1683	30.1%	0.5	3.5	3.7	0.00
5/1	A1214 Woodbridge Road (E) Ahead Left	-	-	613	1671	1241	49.4%	0.5	3.0	4.7	0.00
5/2	A1214 Woodbridge Road (E) Ahead	-	-	506	1180	815	62.1%	0.9	6.3	5.5	0.00
6/1	A1189(S) Heath Road Ahead	I	102	753	1935	1661	45.3%	0.8	4.0	6.1	0.00
6/2	A1189(S) Heath Road Ahead	I	102	283	2075	1781	15.9%	0.2	2.6	1.6	0.00
7/1	A1189(S) Left	-	-	753	1088	818	92.0%	7.8	37.4	30.1	0.00
7/2	A1189(S) Right Left	-	-	283	1130	302	93.6%	7.0	89.3	14.3	0.00
8/1	circ SE Left Ahead	-	-	766	2000	2000	38.3%	0.3	1.5	0.3	0.00
8/2	circ SE Right	-	-	996	2000	2000	49.8%	0.5	1.8	0.5	0.00
9/1	circ SW Ahead	-	-	1023	2000	2000	51.2%	0.5	1.8	0.5	0.00
9/2	circ SW Right	-	-	71	2000	2000	3.6%	0.0	0.9	0.0	0.00
10/1	circ NW Ahead	-	-	451	2000	2000	22.6%	0.1	1.2	0.1	0.00
10/2	circ NW Ahead Right	-	-	266	2000	2000	13.3%	0.1	1.0	0.1	0.00
11/1	Ahead	A	102	1012	1955	1678	60.3%	1.5	5.2	10.6	0.00
11/2	Ahead	A	102	651	2095	1798	36.2%	0.6	3.3	4.6	0.00
12/1	Ahead	-	-	1012	1300	1074	94.3%	7.8	27.8	39.6	0.00

12/2	Right	-	-	651	1150	932	69.9%	1.3	7.0	8.9	0.00
13/1	Ahead	E	102	1295	1995	1712	75.6%	2.2	6.0	13.3	0.00
14/1	Right Ahead	-	-	651	2000	2000	32.6%	0.2	1.3	0.2	0.00
15/1	Ahead	-	-	403	2000	2000	20.2%	0.1	1.1	0.1	0.00
15/2	Right Ahead	-	-	506	2050	2050	24.7%	0.2	1.2	0.2	0.00
16/1	Right	-	-	283	2050	2050	13.8%	0.1	1.0	0.1	0.00
17/1	Ahead	C	102	1156	1956	1679	68.9%	1.6	5.0	10.5	0.00
17/2	Ahead	C	102	506	2098	1801	28.1%	0.2	1.5	0.5	0.00
18/1		-	-	74	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
19/1		-	-	722	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
20/1		-	-	1110	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
21/1		-	-	1295	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
22/1	Ahead	K	102	861	2014	1729	49.8%	0.7	3.0	5.0	0.00
23/1		-	-	861	Inf	Inf	0.0%	0.0	0.0	0.0	0.00
24/1	Circ Right	-	-	100	1799	823	12.2%	0.1	3.1	0.5	0.00

C1	Stream: 1 PRC for Signalled Lanes (%):	49.2	Total Delay for Signalled Lanes (pcuHr):	2.06	Cycle Time (s): 120
C1	Stream: 2 PRC for Signalled Lanes (%):	30.7	Total Delay for Signalled Lanes (pcuHr):	1.83	Cycle Time (s): 120
C1	Stream: 3 PRC for Signalled Lanes (%):	19.0	Total Delay for Signalled Lanes (pcuHr):	2.17	Cycle Time (s): 120
C1	Stream: 4 PRC for Signalled Lanes (%):	134.8	Total Delay for Signalled Lanes (pcuHr):	1.19	Cycle Time (s): 120
C1	Stream: 5 PRC for Signalled Lanes (%):	98.5	Total Delay for Signalled Lanes (pcuHr):	1.03	Cycle Time (s): 120
C1	Stream: 6 PRC for Signalled Lanes (%):	80.7	Total Delay for Signalled Lanes (pcuHr):	0.71	Cycle Time (s): 120
	PRC Over All Lanes (%):	-4.7	Total Delay Over All Lanes(pcuHr):	39.84	

Junctions 9

ARCADY 9 - Roundabout Module

Filename: 10391 J30-Foxhall jw Heath - Rev1.j9
Path: P:\10391\Traffic\Junctions\J30 - Foxhall Road jw Heath Road
Report generation date: 14/06/2017 13:46:43

»Existing Layout - 2016, AM
»Existing Layout - 2016, PM
»Existing Layout - 2027, AM
»Existing Layout - 2027, PM
»Existing Layout - 2027+Dev, AM
»Existing Layout - 2027+Dev, PM
»Improved Layout - 2027+Dev, AM
»Improved Layout - 2027+Dev, PM

Summary of junction performance

	AM						PM					
	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
Existing Layout - 2016												
1 - A1189 Heath Road	8.4	35.89	0.90	E	31.17	-1 % [2 - Foxhall Road (E)]	8.4	37.98	0.90	E	39.53	-6 % [4 - Foxhall Road (W)]
2 - Foxhall Road (E)	4.7	38.71	0.82	E			6.3	48.70	0.87	E		
3 - A1189 Bixley Road	5.6	22.50	0.85	C			5.9	23.67	0.85	C		
4 - Foxhall Road (W)	3.7	32.11	0.78	D			8.1	63.12	0.90	F		
Existing Layout - 2027												
1 - A1189 Heath Road	19.8	80.00	0.96	F	61.35	-7 % [2 - Foxhall Road (E)]	20.5	87.59	0.97	F	99.50	-12 % [4 - Foxhall Road (W)]
2 - Foxhall Road (E)	9.6	76.07	0.92	F			15.8	116.77	0.96	F		
3 - A1189 Bixley Road	9.9	38.32	0.91	E			11.1	42.83	0.92	E		
4 - Foxhall Road (W)	6.8	56.82	0.88	F			29.2	210.11	1.01	F		
Existing Layout - 2027+Dev												
1 - A1189 Heath Road	30.9	123.04	0.99	F	158.86	-15 % [2 - Foxhall Road (E)]	27.6	116.18	0.98	F	253.63	-18 % [4 - Foxhall Road (W)]
2 - Foxhall Road (E)	64.3	419.95	1.07	F			53.6	343.45	1.05	F		
3 - A1189 Bixley Road	13.8	53.31	0.94	F			14.5	55.79	0.94	F		
4 - Foxhall Road (W)	18.2	136.73	0.97	F			108.0	707.85	1.14	F		

	AM						PM					
	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
Improved Layout - 2027+Dev												
1 - A1189 Heath Road	14.0	56.58	0.94	F	63.12	-7 % [2 - Foxhall Road (E)]	17.0	72.31	0.96	F	92.54	-10 % [4 - Foxhall Road (W)]
2 - Foxhall Road (E)	12.6	84.82	0.94	F			11.7	77.90	0.93	F		
3 - A1189 Bixley Road	17.2	66.70	0.95	F			17.3	66.50	0.96	F		
4 - Foxhall Road (W)	5.9	44.01	0.86	E			28.5	181.55	1.00	F		

Values shown are the highest values encountered over all time segments. Delay is the maximum value of Av. delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted Av.s. Res Cap indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

Generated on 14/06/2017 13:47:13 using Junctions 9 (9.0.1.4646)

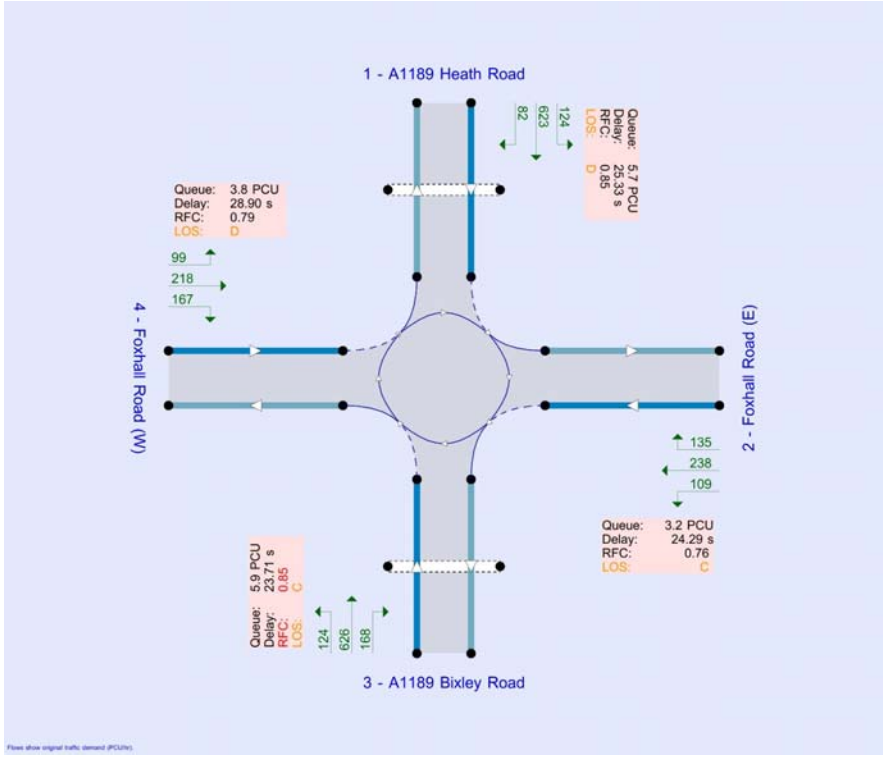
File summary

File Description

Title	Foxhall Road jw Heath Road
Location	Ipswich
Site number	
Date	07/12/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	10391
Enumerator	BCL\Sue.Tadman
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
5.75			✓	Delay	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 period length (min)	Time segment length (min)	Run automatically
D1	2016	AM	FLAT	07:45	09:15	90	15	✓
D2	2016	PM	FLAT	16:45	18:15	90	15	✓
D3	2027	AM	FLAT	07:45	09:15	90	15	✓
D4	2027	PM	FLAT	16:45	18:15	90	15	✓
D5	2027+Dev	AM	FLAT	07:45	09:15	90	15	✓
D6	2027+Dev	PM	FLAT	16:45	18:15	90	15	✓

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Existing Layout - 2016, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Description	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	WSP entry widths & flare lengths	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Foxhall Road jw Heath Road and Bixley Road	Standard Roundabout	1,2,3,4	31.17	D

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-1	2 - Foxhall Road (E)

Arms

Arms

Arm	Name	Description
1	A1189 Heath Road	
2	Foxhall Road (E)	
3	A1189 Bixley Road	
4	Foxhall Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	l' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Heath Road	4.10	6.92	3.9	40.0	33.0	19.0	
2 - Foxhall Road (E)	3.60	5.99	0.6	17.0	33.0	17.0	
3 - A1189 Bixley Road	3.90	4.70	7.3	20.0	33.0	20.0	
4 - Foxhall Road (W)	3.40	3.90	2.9	15.0	33.0	22.0	

Pelican/Puffin Crossings

Arm	VGAP (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1 - A1189 Heath Road	10.00	3.00	2.90	2.00	5.00	8.00	30.00
3 - A1189 Bixley Road	15.00	3.00	2.90	2.00	5.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Heath Road	0.652	1594
2 - Foxhall Road (E)	0.561	1185
3 - A1189 Bixley Road	0.606	1408
4 - Foxhall Road (W)	0.544	1141

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Heath Road	Percentage	Calibration against PARAMICS output	75.00
2 - Foxhall Road (E)	Percentage	Calibration against PARAMICS output	80.00
3 - A1189 Bixley Road	Percentage	Calibration against PARAMICS output	95.00
4 - Foxhall Road (W)	Percentage	Calibration against PARAMICS output	85.00

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	2016	AM	FLAT	07:45	09:15	90	15	✓

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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Heath Road		FLAT	✓	877	100.000
2 - Foxhall Road (E)		FLAT	✓	450	100.000
3 - A1189 Bixley Road		FLAT	✓	914	100.000
4 - Foxhall Road (W)		FLAT	✓	425	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - A1189 Heath Road	Global	60.00
2 - Foxhall Road (E)		
3 - A1189 Bixley Road	Global	60.00
4 - Foxhall Road (W)		

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	0	110	663	104
	2 - Foxhall Road (E)	140	0	107	203
	3 - A1189 Bixley Road	662	123	0	129
	4 - Foxhall Road (W)	106	190	129	0

Vehicle Mix

HV %s

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	5	5	5	5
	2 - Foxhall Road (E)	5	5	5	5
	3 - A1189 Bixley Road	5	5	5	5
	4 - Foxhall Road (W)	5	5	5	5

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Heath Road	0.90	35.89	8.4	E	877	1316
2 - Foxhall Road (E)	0.82	38.71	4.7	E	450	675
3 - A1189 Bixley Road	0.85	22.50	5.6	C	914	1371
4 - Foxhall Road (W)	0.78	32.11	3.7	D	425	638

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	877	219	430	60.00	985	0.890	850	886	0.0	6.6	24.598	C
2 - Foxhall Road (E)	450	113	869		558	0.806	435	412	0.0	3.7	28.076	D
3 - A1189 Bixley Road	914	229	433	60.00	1089	0.839	895	872	0.0	4.8	17.984	C
4 - Foxhall Road (W)	425	106	904		552	0.770	413	423	0.0	3.1	25.321	D

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	877	219	441	60.00	980	0.895	873	906	6.6	7.6	33.198	D
2 - Foxhall Road (E)	450	113	892		548	0.821	448	422	3.7	4.3	36.364	E
3 - A1189 Bixley Road	914	229	445	60.00	1082	0.845	912	895	4.8	5.3	21.807	C
4 - Foxhall Road (W)	425	106	923		543	0.783	424	434	3.1	3.5	31.005	D

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	877	219	442	60.00	980	0.895	875	907	7.6	8.0	34.663	D
2 - Foxhall Road (E)	450	113	894		547	0.823	449	422	4.3	4.5	37.741	E
3 - A1189 Bixley Road	914	229	446	60.00	1081	0.845	913	897	5.3	5.4	22.226	C
4 - Foxhall Road (W)	425	106	924		542	0.784	425	435	3.5	3.6	31.694	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	877	219	442	60.00	979	0.895	876	908	8.0	8.2	35.301	E
2 - Foxhall Road (E)	450	113	895		546	0.823	450	423	4.5	4.6	38.271	E
3 - A1189 Bixley Road	914	229	447	60.00	1081	0.846	914	898	5.4	5.5	22.377	C
4 - Foxhall Road (W)	425	106	925		542	0.784	425	436	3.6	3.6	31.930	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	877	219	442	60.00	979	0.895	876	908	8.2	8.3	35.659	E
2 - Foxhall Road (E)	450	113	895		546	0.824	450	423	4.6	4.7	38.546	E
3 - A1189 Bixley Road	914	229	447	60.00	1081	0.846	914	898	5.5	5.6	22.452	C
4 - Foxhall Road (W)	425	106	925		542	0.784	425	436	3.6	3.7	32.044	D

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	877	219	442	60.00	979	0.895	877	908	8.3	8.4	35.886	E
2 - Foxhall Road (E)	450	113	896		546	0.824	450	423	4.7	4.7	38.708	E
3 - A1189 Bixley Road	914	229	447	60.00	1081	0.846	914	899	5.6	5.6	22.499	C
4 - Foxhall Road (W)	425	106	925		542	0.784	425	436	3.7	3.7	32.112	D

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Existing Layout - 2016, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Description	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	WSP entry widths & flare lengths	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Foxhall Road jw Heath Road and Bixley Road	Standard Roundabout	1,2,3,4	39.53	E

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-6	4 - Foxhall Road (W)

Arms

Arms

Arm	Name	Description
1	A1189 Heath Road	
2	Foxhall Road (E)	
3	A1189 Bixley Road	
4	Foxhall Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Heath Road	4.10	6.92	3.9	40.0	33.0	19.0	
2 - Foxhall Road (E)	3.60	5.99	0.6	17.0	33.0	17.0	
3 - A1189 Bixley Road	3.90	4.70	7.3	20.0	33.0	20.0	
4 - Foxhall Road (W)	3.40	3.90	2.9	15.0	33.0	22.0	

Pelican/Puffin Crossings

Arm	VGAP (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1 - A1189 Heath Road	10.00	3.00	2.90	2.00	5.00	8.00	30.00
3 - A1189 Bixley Road	15.00	3.00	2.90	2.00	5.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Heath Road	0.652	1594
2 - Foxhall Road (E)	0.561	1185
3 - A1189 Bixley Road	0.606	1408
4 - Foxhall Road (W)	0.544	1141

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Heath Road	Percentage	Calibration against PARAMICS output	75.00
2 - Foxhall Road (E)	Percentage	Calibration against PARAMICS output	80.00
3 - A1189 Bixley Road	Percentage	Calibration against PARAMICS output	95.00
4 - Foxhall Road (W)	Percentage	Calibration against PARAMICS output	85.00

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	2016	PM	FLAT	16:45	18:15	90	15	✓

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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Heath Road		FLAT	✓	829	100.000
2 - Foxhall Road (E)		FLAT	✓	482	100.000
3 - A1189 Bixley Road		FLAT	✓	918	100.000
4 - Foxhall Road (W)		FLAT	✓	484	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - A1189 Heath Road	Global	60.00
2 - Foxhall Road (E)		
3 - A1189 Bixley Road	Global	60.00
4 - Foxhall Road (W)		

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	0	124	623	82
	2 - Foxhall Road (E)	135	0	109	238
	3 - A1189 Bixley Road	626	168	0	124
	4 - Foxhall Road (W)	99	218	167	0

Vehicle Mix

HV %s

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	5	5	5	5
	2 - Foxhall Road (E)	5	5	5	5
	3 - A1189 Bixley Road	5	5	5	5
	4 - Foxhall Road (W)	5	5	5	5

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Heath Road	0.90	37.98	8.4	E	829	1244
2 - Foxhall Road (E)	0.87	48.70	6.3	E	482	723
3 - A1189 Bixley Road	0.85	23.67	5.9	C	918	1377
4 - Foxhall Road (W)	0.90	63.12	8.1	F	484	726

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	829	207	532	60.00	935	0.886	803	837	0.0	6.4	25.150	D
2 - Foxhall Road (E)	482	121	843		570	0.846	464	493	0.0	4.6	31.592	D
3 - A1189 Bixley Road	918	230	438	60.00	1086	0.846	898	868	0.0	5.0	18.526	C
4 - Foxhall Road (W)	484	121	907		550	0.879	462	430	0.0	5.5	36.734	E

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	829	207	549	60.00	927	0.894	825	857	6.4	7.4	34.459	D
2 - Foxhall Road (E)	482	121	867		559	0.862	478	507	4.6	5.5	43.690	E
3 - A1189 Bixley Road	918	230	452	60.00	1078	0.852	916	893	5.0	5.5	22.781	C
4 - Foxhall Road (W)	484	121	926		541	0.894	479	442	5.5	6.8	54.069	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	829	207	551	60.00	926	0.895	827	859	7.4	7.9	36.334	E
2 - Foxhall Road (E)	482	121	870		558	0.864	480	509	5.5	5.8	46.410	E
3 - A1189 Bixley Road	918	230	454	60.00	1077	0.852	917	896	5.5	5.7	23.306	C
4 - Foxhall Road (W)	484	121	928		540	0.896	482	443	6.8	7.4	58.662	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	829	207	552	60.00	926	0.896	828	859	7.9	8.1	37.183	E
2 - Foxhall Road (E)	482	121	871		557	0.865	481	509	5.8	6.0	47.605	E
3 - A1189 Bixley Road	918	230	454	60.00	1077	0.853	918	898	5.7	5.8	23.507	C
4 - Foxhall Road (W)	484	121	928		540	0.896	483	443	7.4	7.7	60.894	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	829	207	552	60.00	925	0.896	828	859	8.1	8.3	37.665	E
2 - Foxhall Road (E)	482	121	871		557	0.865	481	509	6.0	6.2	48.273	E
3 - A1189 Bixley Road	918	230	455	60.00	1076	0.853	918	898	5.8	5.9	23.610	C
4 - Foxhall Road (W)	484	121	929		540	0.896	483	444	7.7	7.9	62.227	F

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	829	207	552	60.00	925	0.896	829	860	8.3	8.4	37.977	E
2 - Foxhall Road (E)	482	121	871		557	0.865	482	510	6.2	6.3	48.696	E
3 - A1189 Bixley Road	918	230	455	60.00	1076	0.853	918	898	5.9	5.9	23.672	C
4 - Foxhall Road (W)	484	121	929		540	0.896	483	444	7.9	8.1	63.115	F

Existing Layout - 2027, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Description	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	WSP entry widths & flare lengths	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Foxhall Road jw Heath Road and Bixley Road	Standard Roundabout	1,2,3,4	61.35	F

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-7	2 - Foxhall Road (E)

Arms

Arms

Arm	Name	Description
1	A1189 Heath Road	
2	Foxhall Road (E)	
3	A1189 Bixley Road	
4	Foxhall Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	l' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Heath Road	4.10	6.92	3.9	40.0	33.0	19.0	
2 - Foxhall Road (E)	3.60	5.99	0.6	17.0	33.0	17.0	
3 - A1189 Bixley Road	3.90	4.70	7.3	20.0	33.0	20.0	
4 - Foxhall Road (W)	3.40	3.90	2.9	15.0	33.0	22.0	

Pelican/Puffin Crossings

Arm	VGAP (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1 - A1189 Heath Road	10.00	3.00	2.90	2.00	5.00	8.00	30.00
3 - A1189 Bixley Road	15.00	3.00	2.90	2.00	5.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Heath Road	0.652	1594
2 - Foxhall Road (E)	0.561	1185
3 - A1189 Bixley Road	0.606	1408
4 - Foxhall Road (W)	0.544	1141

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Heath Road	Percentage	Calibration against PARAMICS output	75.00
2 - Foxhall Road (E)	Percentage	Calibration against PARAMICS output	80.00
3 - A1189 Bixley Road	Percentage	Calibration against PARAMICS output	95.00
4 - Foxhall Road (W)	Percentage	Calibration against PARAMICS output	85.00

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	AM	FLAT	07:45	09:15	90	15	✓

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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Heath Road		FLAT	✓	931	100.000
2 - Foxhall Road (E)		FLAT	✓	479	100.000
3 - A1189 Bixley Road		FLAT	✓	971	100.000
4 - Foxhall Road (W)		FLAT	✓	452	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - A1189 Heath Road	Global	60.00
2 - Foxhall Road (E)		
3 - A1189 Bixley Road	Global	60.00
4 - Foxhall Road (W)		

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	0	117	704	110
	2 - Foxhall Road (E)	149	0	114	216
	3 - A1189 Bixley Road	703	131	0	137
	4 - Foxhall Road (W)	113	202	137	0

Vehicle Mix

HV %s

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	5	5	5	5
	2 - Foxhall Road (E)	5	5	5	5
	3 - A1189 Bixley Road	5	5	5	5
	4 - Foxhall Road (W)	5	5	5	5

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Heath Road	0.96	80.00	19.8	F	931	1397
2 - Foxhall Road (E)	0.92	76.07	9.6	F	479	719
3 - A1189 Bixley Road	0.91	38.32	9.9	E	971	1457
4 - Foxhall Road (W)	0.88	56.82	6.8	F	452	678

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	931	233	452	60.00	974	0.955	888	932	0.0	10.8	34.455	D
2 - Foxhall Road (E)	479	120	908		541	0.886	456	432	0.0	5.7	38.082	E
3 - A1189 Bixley Road	971	243	453	60.00	1077	0.901	942	911	0.0	7.3	24.218	C
4 - Foxhall Road (W)	452	113	951		530	0.853	433	444	0.0	4.7	34.387	D

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	931	233	466	60.00	968	0.962	917	958	10.8	14.2	57.532	F
2 - Foxhall Road (E)	479	120	938		527	0.908	472	446	5.7	7.3	59.152	F
3 - A1189 Bixley Road	971	243	468	60.00	1068	0.909	966	942	7.3	8.6	33.946	D
4 - Foxhall Road (W)	452	113	977		518	0.873	448	458	4.7	5.8	49.291	E

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	931	233	468	60.00	967	0.963	923	962	14.2	16.3	66.546	F
2 - Foxhall Road (E)	479	120	943		525	0.912	475	448	7.3	8.3	66.708	F
3 - A1189 Bixley Road	971	243	471	60.00	1067	0.910	969	947	8.6	9.2	36.152	E
4 - Foxhall Road (W)	452	113	980		516	0.875	450	460	5.8	6.2	53.197	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	931	233	469	60.00	966	0.964	925	963	16.3	17.7	72.419	F
2 - Foxhall Road (E)	479	120	945		524	0.914	477	449	8.3	8.9	71.054	F
3 - A1189 Bixley Road	971	243	472	60.00	1066	0.911	970	950	9.2	9.5	37.236	E
4 - Foxhall Road (W)	452	113	981		516	0.876	451	461	6.2	6.5	55.039	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	931	233	469	60.00	966	0.964	926	964	17.7	18.9	76.697	F
2 - Foxhall Road (E)	479	120	947		523	0.915	477	449	8.9	9.3	73.966	F
3 - A1189 Bixley Road	971	243	473	60.00	1066	0.911	970	951	9.5	9.8	37.884	E
4 - Foxhall Road (W)	452	113	982		516	0.877	451	462	6.5	6.7	56.114	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	931	233	470	60.00	966	0.964	927	964	18.9	19.8	79.998	F
2 - Foxhall Road (E)	479	120	948		523	0.916	478	449	9.3	9.6	76.073	F
3 - A1189 Bixley Road	971	243	474	60.00	1065	0.911	970	952	9.8	9.9	38.318	E
4 - Foxhall Road (W)	452	113	982		515	0.877	451	462	6.7	6.8	56.818	F

Generated on 14/06/2017 13:47:13 using Junctions 9 (9.0.1.4646)

Existing Layout - 2027, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Description	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	WSP entry widths & flare lengths	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Foxhall Road jw Heath Road and Bixley Road	Standard Roundabout	1,2,3,4	99.50	F

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-12	4 - Foxhall Road (W)

Arms

Arms

Arm	Name	Description
1	A1189 Heath Road	
2	Foxhall Road (E)	
3	A1189 Bixley Road	
4	Foxhall Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Heath Road	4.10	6.92	3.9	40.0	33.0	19.0	
2 - Foxhall Road (E)	3.60	5.99	0.6	17.0	33.0	17.0	
3 - A1189 Bixley Road	3.90	4.70	7.3	20.0	33.0	20.0	
4 - Foxhall Road (W)	3.40	3.90	2.9	15.0	33.0	22.0	

Pelican/Puffin Crossings

Arm	VGAP (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1 - A1189 Heath Road	10.00	3.00	2.90	2.00	5.00	8.00	30.00
3 - A1189 Bixley Road	15.00	3.00	2.90	2.00	5.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Heath Road	0.652	1594
2 - Foxhall Road (E)	0.561	1185
3 - A1189 Bixley Road	0.606	1408
4 - Foxhall Road (W)	0.544	1141

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Heath Road	Percentage	Calibration against PARAMICS output	75.00
2 - Foxhall Road (E)	Percentage	Calibration against PARAMICS output	80.00
3 - A1189 Bixley Road	Percentage	Calibration against PARAMICS output	95.00
4 - Foxhall Road (W)	Percentage	Calibration against PARAMICS output	85.00

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
D4	2027	PM	FLAT	16:45	18:15	90	15	✓

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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Heath Road		FLAT	✓	883	100.000
2 - Foxhall Road (E)		FLAT	✓	514	100.000
3 - A1189 Bixley Road		FLAT	✓	978	100.000
4 - Foxhall Road (W)		FLAT	✓	516	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - A1189 Heath Road	Global	60.00
2 - Foxhall Road (E)		
3 - A1189 Bixley Road	Global	60.00
4 - Foxhall Road (W)		

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	0	132	664	87
	2 - Foxhall Road (E)	144	0	116	254
	3 - A1189 Bixley Road	667	179	0	132
	4 - Foxhall Road (W)	106	232	178	0

Vehicle Mix

HV %s

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	5	5	5	5
	2 - Foxhall Road (E)	5	5	5	5
	3 - A1189 Bixley Road	5	5	5	5
	4 - Foxhall Road (W)	5	5	5	5

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Heath Road	0.97	87.59	20.5	F	883	1325
2 - Foxhall Road (E)	0.96	116.77	15.8	F	514	771
3 - A1189 Bixley Road	0.92	42.83	11.1	E	978	1467
4 - Foxhall Road (W)	1.01	210.11	29.2	F	516	774

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	883	221	552	60.00	925	0.954	841	879	0.0	10.5	35.384	E
2 - Foxhall Road (E)	514	129	880		553	0.929	484	513	0.0	7.4	44.271	E
3 - A1189 Bixley Road	978	245	458	60.00	1074	0.910	947	906	0.0	7.8	25.421	D
4 - Foxhall Road (W)	516	129	955		528	0.977	477	450	0.0	9.8	55.218	F

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	883	221	571	60.00	916	0.964	869	905	10.5	14.0	59.934	F
2 - Foxhall Road (E)	514	129	910		540	0.952	502	530	7.4	10.3	76.027	F
3 - A1189 Bixley Road	978	245	475	60.00	1065	0.918	972	937	7.8	9.3	36.707	E
4 - Foxhall Road (W)	516	129	981		516	1.001	495	465	9.8	15.1	106.775	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	883	221	575	60.00	914	0.966	874	909	14.0	16.3	70.394	F
2 - Foxhall Road (E)	514	129	915		537	0.956	506	533	10.3	12.2	91.113	F
3 - A1189 Bixley Road	978	245	478	60.00	1063	0.920	975	943	9.3	10.1	39.624	E
4 - Foxhall Road (W)	516	129	985		514	1.004	499	468	15.1	19.3	138.527	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	883	221	577	60.00	913	0.967	876	911	16.3	18.1	77.611	F
2 - Foxhall Road (E)	514	129	918		536	0.959	508	535	12.2	13.7	101.724	F
3 - A1189 Bixley Road	978	245	480	60.00	1062	0.921	976	946	10.1	10.6	41.168	E
4 - Foxhall Road (W)	516	129	987		513	1.005	501	469	19.3	22.9	164.988	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	883	221	578	60.00	913	0.967	878	912	18.1	19.4	83.135	F
2 - Foxhall Road (E)	514	129	920		535	0.960	509	536	13.7	14.9	109.997	F
3 - A1189 Bixley Road	978	245	481	60.00	1061	0.922	977	948	10.6	10.9	42.145	E
4 - Foxhall Road (W)	516	129	988		513	1.006	503	470	22.9	26.2	188.529	F

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	883	221	579	60.00	912	0.968	879	913	19.4	20.5	87.590	F
2 - Foxhall Road (E)	514	129	921		535	0.961	510	537	14.9	15.8	116.774	F
3 - A1189 Bixley Road	978	245	482	60.00	1061	0.922	977	950	10.9	11.1	42.826	E
4 - Foxhall Road (W)	516	129	988		513	1.007	504	470	26.2	29.2	210.110	F

Existing Layout - 2027+Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Description	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	WSP entry widths & flare lengths	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Foxhall Road jw Heath Road and Bixley Road	Standard Roundabout	1,2,3,4	158.86	F

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-15	2 - Foxhall Road (E)

Arms

Arms

Arm	Name	Description
1	A1189 Heath Road	
2	Foxhall Road (E)	
3	A1189 Bixley Road	
4	Foxhall Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Heath Road	4.10	6.92	3.9	40.0	33.0	19.0	
2 - Foxhall Road (E)	3.60	5.99	0.6	17.0	33.0	17.0	
3 - A1189 Bixley Road	3.90	4.70	7.3	20.0	33.0	20.0	
4 - Foxhall Road (W)	3.40	3.90	2.9	15.0	33.0	22.0	

Pelican/Puffin Crossings

Arm	VGAP (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1 - A1189 Heath Road	10.00	3.00	2.90	2.00	5.00	8.00	30.00
3 - A1189 Bixley Road	15.00	3.00	2.90	2.00	5.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Heath Road	0.652	1594
2 - Foxhall Road (E)	0.561	1185
3 - A1189 Bixley Road	0.606	1408
4 - Foxhall Road (W)	0.544	1141

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Heath Road	Percentage	Calibration against PARAMICS output	75.00
2 - Foxhall Road (E)	Percentage	Calibration against PARAMICS output	80.00
3 - A1189 Bixley Road	Percentage	Calibration against PARAMICS output	95.00
4 - Foxhall Road (W)	Percentage	Calibration against PARAMICS output	85.00

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
D5	2027+Dev	AM	FLAT	07:45	09:15	90	15	✓

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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Heath Road		FLAT	✓	933	100.000
2 - Foxhall Road (E)		FLAT	✓	564	100.000
3 - A1189 Bixley Road		FLAT	✓	973	100.000
4 - Foxhall Road (W)		FLAT	✓	503	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - A1189 Heath Road	Global	60.00
2 - Foxhall Road (E)		
3 - A1189 Bixley Road	Global	60.00
4 - Foxhall Road (W)		

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	0	119	704	110
	2 - Foxhall Road (E)	153	0	118	293
	3 - A1189 Bixley Road	703	133	0	137
	4 - Foxhall Road (W)	113	253	137	0

Vehicle Mix

HV %s

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	5	5	5	5
	2 - Foxhall Road (E)	5	5	5	5
	3 - A1189 Bixley Road	5	5	5	5
	4 - Foxhall Road (W)	5	5	5	5

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Heath Road	0.99	123.04	30.9	F	933	1400
2 - Foxhall Road (E)	1.07	419.95	64.3	F	564	846
3 - A1189 Bixley Road	0.94	53.31	13.8	F	973	1460
4 - Foxhall Road (W)	0.97	136.73	18.2	F	503	755

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	493	60.00	954	0.978	882	921	0.0	12.8	39.314	E
2 - Foxhall Road (E)	564	141	898		545	1.034	508	478	0.0	14.1	68.241	F
3 - A1189 Bixley Road	973	243	505	60.00	1047	0.929	937	900	0.0	8.9	28.579	D
4 - Foxhall Road (W)	503	126	943		534	0.943	471	500	0.0	7.9	47.899	E

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	511	60.00	946	0.987	911	948	12.8	18.2	71.814	F
2 - Foxhall Road (E)	564	141	928		532	1.061	522	494	14.1	24.6	151.344	F
3 - A1189 Bixley Road	973	243	520	60.00	1039	0.937	964	930	8.9	11.1	43.722	E
4 - Foxhall Road (W)	503	126	970		521	0.966	489	514	7.9	11.4	85.103	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	515	60.00	944	0.989	917	953	18.2	22.2	88.712	F
2 - Foxhall Road (E)	564	141	934		529	1.066	524	498	24.6	34.6	219.168	F
3 - A1189 Bixley Road	973	243	522	60.00	1037	0.938	968	936	11.1	12.2	48.205	E
4 - Foxhall Road (W)	503	126	974		519	0.969	494	517	11.4	13.7	103.830	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	517	60.00	943	0.990	920	955	22.2	25.5	101.967	F
2 - Foxhall Road (E)	564	141	937		527	1.069	524	499	34.6	44.5	285.963	F
3 - A1189 Bixley Road	973	243	523	60.00	1037	0.938	970	939	12.2	12.9	50.658	F
4 - Foxhall Road (W)	503	126	976		518	0.970	496	517	13.7	15.5	117.310	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	518	60.00	942	0.990	922	956	25.5	28.4	113.190	F
2 - Foxhall Road (E)	564	141	939		527	1.071	524	500	44.5	54.4	352.846	F
3 - A1189 Bixley Road	973	243	523	60.00	1037	0.938	971	941	12.9	13.4	52.225	F
4 - Foxhall Road (W)	503	126	977		518	0.971	497	518	15.5	17.0	127.950	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	519	60.00	942	0.991	923	956	28.4	30.9	123.044	F
2 - Foxhall Road (E)	564	141	941		526	1.072	524	501	54.4	64.3	419.950	F
3 - A1189 Bixley Road	973	243	523	60.00	1037	0.939	972	942	13.4	13.8	53.309	F
4 - Foxhall Road (W)	503	126	977		518	0.972	498	518	17.0	18.2	136.730	F

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Existing Layout - 2027+Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Description	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	WSP entry widths & flare lengths	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Foxhall Road jw Heath Road and Bixley Road	Standard Roundabout	1,2,3,4	253.63	F

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-18	4 - Foxhall Road (W)

Arms

Arms

Arm	Name	Description
1	A1189 Heath Road	
2	Foxhall Road (E)	
3	A1189 Bixley Road	
4	Foxhall Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Heath Road	4.10	6.92	3.9	40.0	33.0	19.0	
2 - Foxhall Road (E)	3.60	5.99	0.6	17.0	33.0	17.0	
3 - A1189 Bixley Road	3.90	4.70	7.3	20.0	33.0	20.0	
4 - Foxhall Road (W)	3.40	3.90	2.9	15.0	33.0	22.0	

Pelican/Puffin Crossings

Arm	VGAP (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1 - A1189 Heath Road	10.00	3.00	2.90	2.00	5.00	8.00	30.00
3 - A1189 Bixley Road	15.00	3.00	2.90	2.00	5.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Heath Road	0.652	1594
2 - Foxhall Road (E)	0.561	1185
3 - A1189 Bixley Road	0.606	1408
4 - Foxhall Road (W)	0.544	1141

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Heath Road	Percentage	Calibration against PARAMICS output	75.00
2 - Foxhall Road (E)	Percentage	Calibration against PARAMICS output	80.00
3 - A1189 Bixley Road	Percentage	Calibration against PARAMICS output	95.00
4 - Foxhall Road (W)	Percentage	Calibration against PARAMICS output	85.00

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
D6	2027+Dev	PM	FLAT	16:45	18:15	90	15	✓

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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Heath Road		FLAT	✓	887	100.000
2 - Foxhall Road (E)		FLAT	✓	572	100.000
3 - A1189 Bixley Road		FLAT	✓	982	100.000
4 - Foxhall Road (W)		FLAT	✓	583	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - A1189 Heath Road	Global	60.00
2 - Foxhall Road (E)		
3 - A1189 Bixley Road	Global	60.00
4 - Foxhall Road (W)		

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	0	136	664	87
	2 - Foxhall Road (E)	147	0	119	306
	3 - A1189 Bixley Road	667	183	0	132
	4 - Foxhall Road (W)	106	299	178	0

Vehicle Mix

HV %s

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	5	5	5	5
	2 - Foxhall Road (E)	5	5	5	5
	3 - A1189 Bixley Road	5	5	5	5
	4 - Foxhall Road (W)	5	5	5	5

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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Heath Road	0.98	116.18	27.6	F	887	1331
2 - Foxhall Road (E)	1.05	343.45	53.6	F	572	858
3 - A1189 Bixley Road	0.94	55.79	14.5	F	982	1473
4 - Foxhall Road (W)	1.14	707.85	108.0	F	583	875

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	588	60.00	908	0.977	837	867	0.0	12.4	40.250	E
2 - Foxhall Road (E)	572	143	863		561	1.019	520	563	0.0	13.1	63.413	F
3 - A1189 Bixley Road	982	246	494	60.00	1054	0.932	945	888	0.0	9.1	28.840	D
4 - Foxhall Road (W)	583	146	952		529	1.101	503	487	0.0	20.0	89.100	F

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	601	60.00	902	0.984	867	892	12.4	17.4	72.456	F
2 - Foxhall Road (E)	572	143	891		548	1.043	536	577	13.1	22.0	135.276	F
3 - A1189 Bixley Road	982	246	510	60.00	1045	0.940	973	917	9.1	11.4	44.653	E
4 - Foxhall Road (W)	583	146	980		516	1.129	513	503	20.0	37.6	219.884	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	602	60.00	901	0.984	873	895	17.4	20.8	87.893	F
2 - Foxhall Road (E)	572	143	896		546	1.047	539	579	22.0	30.2	189.863	F
3 - A1189 Bixley Road	982	246	513	60.00	1043	0.942	977	922	11.4	12.7	49.658	E
4 - Foxhall Road (W)	583	146	984		514	1.133	513	505	37.6	55.2	340.355	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	602	60.00	901	0.984	876	897	20.8	23.5	99.282	F
2 - Foxhall Road (E)	572	143	898		545	1.049	540	580	30.2	38.2	241.872	F
3 - A1189 Bixley Road	982	246	514	60.00	1042	0.942	979	925	12.7	13.5	52.526	F
4 - Foxhall Road (W)	583	146	986		514	1.135	513	507	55.2	72.7	462.130	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	602	60.00	901	0.984	878	898	23.5	25.7	108.456	F
2 - Foxhall Road (E)	572	143	900		544	1.051	541	580	38.2	45.9	292.908	F
3 - A1189 Bixley Road	982	246	514	60.00	1042	0.943	980	926	13.5	14.1	54.428	F
4 - Foxhall Road (W)	583	146	987		513	1.136	513	507	72.7	90.4	584.774	F

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	602	60.00	901	0.984	879	898	25.7	27.6	116.179	F
2 - Foxhall Road (E)	572	143	901		544	1.052	541	580	45.9	53.6	343.446	F
3 - A1189 Bixley Road	982	246	515	60.00	1042	0.943	980	927	14.1	14.5	55.788	F
4 - Foxhall Road (W)	583	146	988		513	1.137	512	508	90.4	108.0	707.851	F

Improved Layout - 2027+Dev, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Improved Layout	Add 1.0M on Heath Road entry and 1.0M on flare Add 1.5M on Foxhall Road (E) entry and 1.5M on flare Add 1.0M on Foxhall Road (W) entry and 1.0M on flare	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Foxhall Road jw Heath Road and Bixley Road	Standard Roundabout	1,2,3,4	63.12	F

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-7	2 - Foxhall Road (E)

Arms

Arms

Arm	Name	Description
1	A1189 Heath Road	
2	Foxhall Road (E)	
3	A1189 Bixley Road	
4	Foxhall Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Heath Road	4.10	7.92	4.9	40.0	33.0	19.0	
2 - Foxhall Road (E)	3.60	7.49	2.1	17.0	33.0	17.0	
3 - A1189 Bixley Road	3.90	4.70	7.3	20.0	33.0	20.0	
4 - Foxhall Road (W)	3.40	4.90	3.9	15.0	33.0	22.0	

Pelican/Puffin Crossings

Arm	VGAP (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1 - A1189 Heath Road	10.00	3.00	2.90	2.00	5.00	8.00	30.00
3 - A1189 Bixley Road	15.00	3.00	2.90	2.00	5.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Heath Road	0.668	1672
2 - Foxhall Road (E)	0.586	1307
3 - A1189 Bixley Road	0.606	1408
4 - Foxhall Road (W)	0.566	1248

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Heath Road	Percentage	Calibration against PARAMICS output	75.00
2 - Foxhall Road (E)	Percentage	Calibration against PARAMICS output	80.00
3 - A1189 Bixley Road	Percentage	Calibration against PARAMICS output	95.00
4 - Foxhall Road (W)	Percentage	Calibration against PARAMICS output	85.00

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
D5	2027+Dev	AM	FLAT	07:45	09:15	90	15	✓

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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Heath Road		FLAT	✓	933	100.000
2 - Foxhall Road (E)		FLAT	✓	564	100.000
3 - A1189 Bixley Road		FLAT	✓	973	100.000
4 - Foxhall Road (W)		FLAT	✓	503	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - A1189 Heath Road	Global	60.00
2 - Foxhall Road (E)		
3 - A1189 Bixley Road	Global	60.00
4 - Foxhall Road (W)		

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	0	119	704	110
	2 - Foxhall Road (E)	153	0	118	293
	3 - A1189 Bixley Road	703	133	0	137
	4 - Foxhall Road (W)	113	253	137	0

Vehicle Mix

HV %s

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	5	5	5	5
	2 - Foxhall Road (E)	5	5	5	5
	3 - A1189 Bixley Road	5	5	5	5
	4 - Foxhall Road (W)	5	5	5	5

Generated on 14/06/2017 13:47:13 using Junctions 9 (9.0.1.4646)

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Heath Road	0.94	56.58	14.0	F	933	1400
2 - Foxhall Road (E)	0.94	84.82	12.6	F	564	846
3 - A1189 Bixley Road	0.95	66.70	17.2	F	973	1460
4 - Foxhall Road (W)	0.86	44.01	5.9	E	503	755

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	504	60.00	1001	0.932	897	929	0.0	9.0	29.891	D
2 - Foxhall Road (E)	564	141	915		617	0.914	536	486	0.0	7.0	38.728	E
3 - A1189 Bixley Road	973	243	530	60.00	1033	0.942	934	921	0.0	9.8	30.844	D
4 - Foxhall Road (W)	503	126	948		605	0.831	486	516	0.0	4.3	28.620	D

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	519	60.00	994	0.939	924	957	9.0	11.2	46.014	E
2 - Foxhall Road (E)	564	141	943		604	0.934	555	501	7.0	9.3	62.850	F
3 - A1189 Bixley Road	973	243	548	60.00	1023	0.951	961	950	9.8	12.7	49.843	E
4 - Foxhall Road (W)	503	126	977		591	0.851	500	533	4.3	5.1	39.084	E

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	521	60.00	993	0.940	928	962	11.2	12.4	50.853	F
2 - Foxhall Road (E)	564	141	947		602	0.937	559	503	9.3	10.6	72.254	F
3 - A1189 Bixley Road	973	243	551	60.00	1021	0.953	966	954	12.7	14.4	56.871	F
4 - Foxhall Road (W)	503	126	982		589	0.855	502	536	5.1	5.5	41.634	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	522	60.00	993	0.940	930	964	12.4	13.1	53.560	F
2 - Foxhall Road (E)	564	141	948		601	0.938	560	504	10.6	11.5	77.957	F
3 - A1189 Bixley Road	973	243	553	60.00	1020	0.954	968	956	14.4	15.6	61.265	F
4 - Foxhall Road (W)	503	126	984		587	0.856	502	537	5.5	5.7	42.834	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	522	60.00	992	0.940	931	966	13.1	13.6	55.329	F
2 - Foxhall Road (E)	564	141	949		601	0.939	561	504	11.5	12.1	81.899	F
3 - A1189 Bixley Road	973	243	554	60.00	1019	0.955	970	957	15.6	16.5	64.366	F
4 - Foxhall Road (W)	503	126	985		587	0.857	502	538	5.7	5.8	43.541	E

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	933	233	522	60.00	992	0.940	931	966	13.6	14.0	56.580	F
2 - Foxhall Road (E)	564	141	950		601	0.939	562	504	12.1	12.6	84.818	F
3 - A1189 Bixley Road	973	243	554	60.00	1019	0.955	970	957	16.5	17.2	66.700	F
4 - Foxhall Road (W)	503	126	986		586	0.858	503	538	5.8	5.9	44.014	E

Improved Layout - 2027+Dev, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Improved Layout	Add 1.0M on Heath Road entry and 1.0M on flare Add 1.5M on Foxhall Road (E) entry and 1.5M on flare Add 1.0M on Foxhall Road (W) entry and 1.0M on flare	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Foxhall Road jw Heath Road and Bixley Road	Standard Roundabout	1,2,3,4	92.54	F

Junction Network Options

Driving side	Lighting	Res Cap (%)	First arm reaching threshold
Left	Normal/unknown	-10	4 - Foxhall Road (W)

Arms

Arms

Arm	Name	Description
1	A1189 Heath Road	
2	Foxhall Road (E)	
3	A1189 Bixley Road	
4	Foxhall Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Heath Road	4.10	7.92	4.9	40.0	33.0	19.0	
2 - Foxhall Road (E)	3.60	7.49	2.1	17.0	33.0	17.0	
3 - A1189 Bixley Road	3.90	4.70	7.3	20.0	33.0	20.0	
4 - Foxhall Road (W)	3.40	4.90	3.9	15.0	33.0	22.0	

Pelican/Puffin Crossings

Arm	VGAP (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1 - A1189 Heath Road	10.00	3.00	2.90	2.00	5.00	8.00	30.00
3 - A1189 Bixley Road	15.00	3.00	2.90	2.00	5.00	8.00	30.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Heath Road	0.668	1672
2 - Foxhall Road (E)	0.586	1307
3 - A1189 Bixley Road	0.606	1408
4 - Foxhall Road (W)	0.566	1248

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Heath Road	Percentage	Calibration against PARAMICS output	75.00
2 - Foxhall Road (E)	Percentage	Calibration against PARAMICS output	80.00
3 - A1189 Bixley Road	Percentage	Calibration against PARAMICS output	95.00
4 - Foxhall Road (W)	Percentage	Calibration against PARAMICS output	85.00

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
D6	2027+Dev	PM	FLAT	16:45	18:15	90	15	✓

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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Heath Road		FLAT	✓	887	100.000
2 - Foxhall Road (E)		FLAT	✓	572	100.000
3 - A1189 Bixley Road		FLAT	✓	982	100.000
4 - Foxhall Road (W)		FLAT	✓	583	100.000

Demand overview (Pedestrians)

Arm	Profile type	Av. Ped flow (Ped/hr)
1 - A1189 Heath Road	Global	60.00
2 - Foxhall Road (E)		
3 - A1189 Bixley Road	Global	60.00
4 - Foxhall Road (W)		

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	0	136	664	87
	2 - Foxhall Road (E)	147	0	119	306
	3 - A1189 Bixley Road	667	183	0	132
	4 - Foxhall Road (W)	106	299	178	0

Vehicle Mix

HV %s

		To			
		1 - A1189 Heath Road	2 - Foxhall Road (E)	3 - A1189 Bixley Road	4 - Foxhall Road (W)
From	1 - A1189 Heath Road	5	5	5	5
	2 - Foxhall Road (E)	5	5	5	5
	3 - A1189 Bixley Road	5	5	5	5
	4 - Foxhall Road (W)	5	5	5	5

Generated on 14/06/2017 13:47:13 using Junctions 9 (9.0.1.4646)

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Heath Road	0.96	72.31	17.0	F	887	1331
2 - Foxhall Road (E)	0.93	77.90	11.7	F	572	858
3 - A1189 Bixley Road	0.96	66.50	17.3	F	982	1473
4 - Foxhall Road (W)	1.00	181.55	28.5	F	583	875

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	620	60.00	943	0.940	849	879	0.0	9.5	32.554	D
2 - Foxhall Road (E)	572	143	885		631	0.907	545	584	0.0	6.7	36.932	E
3 - A1189 Bixley Road	982	246	515	60.00	1042	0.943	942	915	0.0	10.0	30.849	D
4 - Foxhall Road (W)	583	146	956		601	0.970	543	502	0.0	9.9	49.681	E

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	641	60.00	933	0.951	876	906	9.5	12.3	52.923	F
2 - Foxhall Road (E)	572	143	913		618	0.926	564	604	6.7	8.7	58.660	F
3 - A1189 Bixley Road	982	246	532	60.00	1032	0.952	970	944	10.0	12.9	49.852	E
4 - Foxhall Road (W)	583	146	985		587	0.993	562	518	9.9	15.0	94.629	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	645	60.00	931	0.953	880	911	12.3	14.1	60.744	F
2 - Foxhall Road (E)	572	143	918		615	0.930	567	607	8.7	9.9	66.868	F
3 - A1189 Bixley Road	982	246	536	60.00	1030	0.954	975	950	12.9	14.6	56.816	F
4 - Foxhall Road (W)	583	146	990		585	0.997	567	521	15.0	19.1	121.714	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	648	60.00	929	0.954	882	913	14.1	15.3	65.790	F
2 - Foxhall Road (E)	572	143	921		614	0.931	569	609	9.9	10.7	71.843	F
3 - A1189 Bixley Road	982	246	537	60.00	1029	0.954	977	952	14.6	15.7	61.152	F
4 - Foxhall Road (W)	583	146	992		584	0.999	569	522	19.1	22.6	144.017	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	649	60.00	929	0.955	883	915	15.3	16.2	69.465	F
2 - Foxhall Road (E)	572	143	922		614	0.932	570	610	10.7	11.3	75.312	F
3 - A1189 Bixley Road	982	246	538	60.00	1028	0.955	979	954	15.7	16.6	64.205	F
4 - Foxhall Road (W)	583	146	993		583	1.000	571	523	22.6	25.7	163.681	F

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Ped demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Heath Road	887	222	650	60.00	928	0.956	884	916	16.2	17.0	72.313	F
2 - Foxhall Road (E)	572	143	923		613	0.933	570	611	11.3	11.7	77.896	F
3 - A1189 Bixley Road	982	246	538	60.00	1028	0.955	979	955	16.6	17.3	66.501	F
4 - Foxhall Road (W)	583	146	994		583	1.001	572	523	25.7	28.5	181.551	F

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.1.4646 []

Filename: 10391 J31-Felixstowe jw Bixley - Rev1.j9
Path: P:\10391\Traffic\Junctions\J31 - Felixstowe Road jw Bixley Road
Report generation date: 14/06/2017 11:39:19

»Existing Layout - 2015, AM
»Existing Layout - 2015, PM
»Existing Layout - 2027, AM
»Existing Layout - 2027, PM
»Existing Layout - 2027+Dev, AM
»Existing Layout - 2027+Dev, PM
»Improved Layout (incr flares) - 2027+Dev, AM
»Improved Layout (incr flares) - 2027+Dev, PM

Summary of junction performance

	AM						PM					
	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
Existing Layout [Lane Simulation] - 2015												
1 - A1189 Bixley Road	12.0	34.76		D	35.01	% [ ]	3.5	11.56		B	37.12	% [ ]
2 - Bucklesham Road (E)	2.1	45.39		E			3.1	56.96		F		
3 - A1156 Felixstowe Road (S)	6.7	26.58		D			20.2	67.39		F		
4 - A1156 Felixstowe Road (W)	9.7	42.98		E			5.3	26.15		D		
Existing Layout [Lane Simulation] - 2027												
1 - A1189 Bixley Road	25.9	66.13		F	56.61	% [ ]	9.2	22.39		C	91.28	% [ ]
2 - Bucklesham Road (E)	4.2	78.03		F			9.8	171.00		F		
3 - A1156 Felixstowe Road (S)	12.2	41.63		E			56.1	169.77		F		
4 - A1156 Felixstowe Road (W)	12.3	55.21		F			16.6	72.69		F		
Existing Layout [Lane Simulation] - 2027+Dev												
1 - A1189 Bixley Road	34.9	95.56		F	73.46	% [ ]	12.5	25.69		D	91.56	% [ ]
2 - Bucklesham Road (E)	4.0	71.29		F			13.6	201.40		F		
3 - A1156 Felixstowe Road (S)	18.4	56.98		F			57.5	155.06		F		
4 - A1156 Felixstowe Road (W)	13.9	60.20		F			20.8	80.63		F		

	AM						PM					
	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap	Q (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Res Cap
Improved Layout (incr flares) [Lane Simulation] - 2027+Dev												
1 - A1189 Bixley Road	24.9	67.91		F	60.52	% [ ]	7.7	21.34		C	69.89	% [ ]
2 - Bucklesham Road (E)	5.0	99.33		F			10.6	185.58		F		
3 - A1156 Felixstowe Road (S)	14.0	39.84		E			28.1	93.82		F		
4 - A1156 Felixstowe Road (W)	17.3	66.68		F			21.0	85.39		F		

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 Av. delay per arriving vehicle. Arm and junction delays are Av.s for all movements, including movements with zero delay. Res Cap indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

File summary

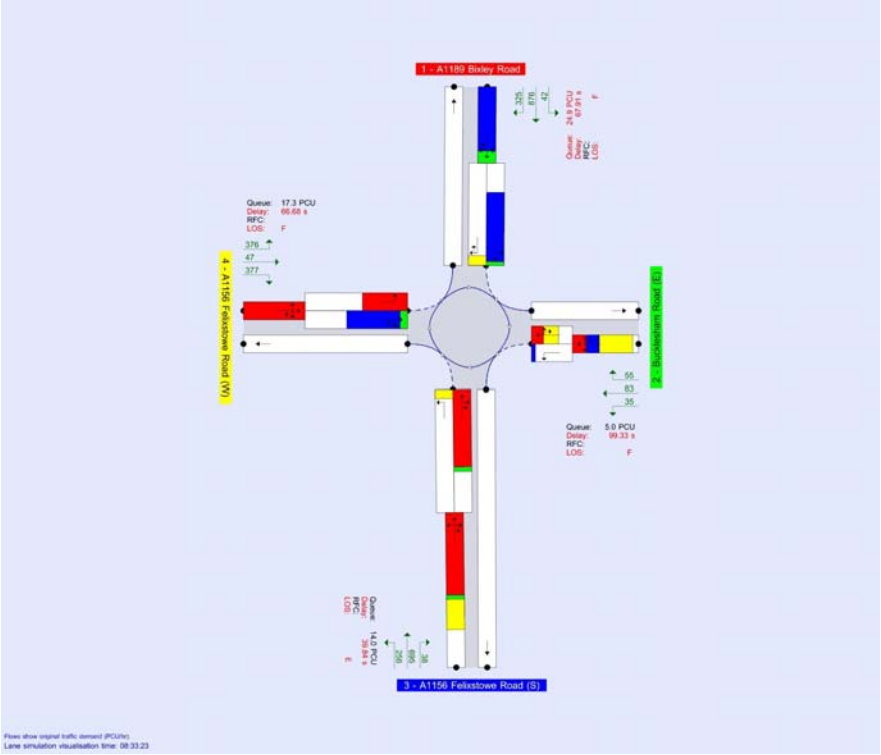
File Description

Title	Felixstowe Road jw Bixley Road
Location	Ipswich
Site number	
Date	22/02/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	10391
Enumerator	BCL\Sue.Tadman
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Av. delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Generated on 14/06/2017 11:40:11 using Junctions 9 (9.0.1.4646)



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Av. Delay threshold (s)	Q threshold (PCU)
5.75			✓	Delay	0.85	36.00	20.00

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
5.00	100000	100000	-1	3	1	✓	1773298220	94	49.95

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	2015	AM	FLAT	07:45	09:15	90	15	✓
D2	2015	PM	FLAT	16:45	18:15	90	15	✓
D3	2027	AM	FLAT	07:45	09:15	90	15	✓
D4	2027	PM	FLAT	16:45	18:15	90	15	✓
D5	2027+Dev	AM	FLAT	07:45	09:15	90	15	✓
D6	2027+Dev	PM	FLAT	16:45	18:15	90	15	✓

Existing Layout - 2015, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing Layout [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	1 - A1189 Bixley Road - Lane Simulation	Arm 1: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Felixstowe Road jw Bixley Road	Standard Roundabout	1,2,3,4	35.01	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A1189 Bixley Road	
2	Bucklesham Road (E)	
3	A1156 Felixstowe Road (S)	
4	A1156 Felixstowe Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	l' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Bixley Road	4.20	6.30	20.0	17.0	28.0	22.0	
2 - Bucklesham Road (E)	3.50	7.40	10.0	8.0	28.0	52.0	
3 - A1156 Felixstowe Road (S)	4.10	7.80	18.0	24.0	28.0	29.0	
4 - A1156 Felixstowe Road (W)	3.70	8.20	17.0	15.0	28.0	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	0.683	1782
2 - Bucklesham Road (E)	0.541	1349
3 - A1156 Felixstowe Road (S)	0.713	1941
4 - A1156 Felixstowe Road (W)	0.684	1835

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

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Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Bixley Road	Percentage	Calibrate against PARAMICS queues	130.00
2 - Bucklesham Road (E)	Percentage	Calibrate against PARAMICS queues	75.00
3 - A1156 Felixstowe Road (S)	Percentage	Calibrate against PARAMICS queues	100.00
4 - A1156 Felixstowe Road (W)	Percentage	Calibrate against PARAMICS queues	80.00

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A1189 Bixley Road	Evenly split	10.00
2 - Bucklesham Road (E)	Evenly split	10.00
3 - A1156 Felixstowe Road (S)	Evenly split	10.00
4 - A1156 Felixstowe Road (W)	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Min Cap (PCU/hr)	Max Cap (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	2,3	✓	4.00	0	99999
		2	1,4	✓	4.00	0	99999
	2	1	(1,2,3,4)		Infinity		
2 - Bucklesham Road (E)	1 [Give-way line]	1	3	✓	2.00	0	99999
		2	1,2,4	✓	2.00	0	99999
	2	1	(1,2,3,4)		Infinity		
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	4	✓	5.00	0	99999
		2	1,2,3	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	1	✓	5.00	0	99999
		2	2,3,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	0.341	891
		2	0.341	891
2 - Bucklesham Road (E)	1 [Give-way line]	1	0.271	674
		2	0.271	674
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	0.356	970
		2	0.356	970
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	0.342	918
		2	0.342	918

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A1189 Bixley Road	Bucklesham Road (E)	A1156 Felixstowe Road (S)	A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1 [Give-way line]	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Bucklesham Road (E)	1 [Give-way line]	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

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	2015	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over time	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Bixley Road		FLAT	✓	1176	100.000
2 - Bucklesham Road (E)		FLAT	✓	153	100.000
3 - A1156 Felixstowe Road (S)		FLAT	✓	894	100.000
4 - A1156 Felixstowe Road (W)		FLAT	✓	791	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	41	800	335
	2 - Bucklesham Road (E)	49	0	31	73
	3 - A1156 Felixstowe Road (S)	634	35	0	225
	4 - A1156 Felixstowe Road (W)	379	44	368	0

Vehicle Mix

07:45 - 08:00

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

08:00 - 08:15

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

08:15 - 08:30

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

08:30 - 08:45

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

08:45 - 09:00

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

09:00 - 09:15

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Bixley Road	34.76	12.0	D	1163	1744
2 - Bucklesham Road (E)	45.39	2.1	E	151	226
3 - A1156 Felixstowe Road (S)	26.58	6.7	D	897	1346
4 - A1156 Felixstowe Road (W)	42.98	9.7	E	789	1184

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1146	286	440	1159	1053	0.0	7.3	19.829	C
2 - Bucklesham Road (E)	155	39	1483	155	116	0.0	1.8	33.456	D
3 - A1156 Felixstowe Road (S)	892	223	455	876	1183	0.0	6.7	19.552	C
4 - A1156 Felixstowe Road (W)	776	194	712	781	619	0.0	6.9	25.440	D

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1160	290	439	1168	1091	7.3	9.7	28.704	D
2 - Bucklesham Road (E)	151	38	1491	151	116	1.8	1.8	44.251	E
3 - A1156 Felixstowe Road (S)	890	222	453	904	1189	6.7	5.9	26.583	D
4 - A1156 Felixstowe Road (W)	796	199	728	802	629	6.9	8.1	35.143	E

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1184	296	455	1192	1072	9.7	9.4	29.986	D
2 - Bucklesham Road (E)	155	39	1519	151	128	1.8	1.7	43.055	E
3 - A1156 Felixstowe Road (S)	909	227	454	900	1216	5.9	6.1	24.496	C
4 - A1156 Felixstowe Road (W)	804	201	726	801	627	8.1	9.3	40.984	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1153	288	441	1173	1092	9.4	8.7	29.408	D
2 - Bucklesham Road (E)	147	37	1494	151	120	1.7	1.8	45.392	E
3 - A1156 Felixstowe Road (S)	897	224	452	911	1193	6.1	5.0	24.045	C
4 - A1156 Felixstowe Road (W)	794	199	741	792	622	9.3	9.7	42.980	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1168	292	463	1158	1052	8.7	12.0	32.827	D
2 - Bucklesham Road (E)	142	36	1496	146	124	1.8	1.6	41.355	E
3 - A1156 Felixstowe Road (S)	892	223	442	896	1200	5.0	5.9	23.993	C
4 - A1156 Felixstowe Road (W)	793	198	716	798	622	9.7	8.9	42.556	E

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1165	291	448	1182	1075	12.0	10.4	34.756	D
2 - Bucklesham Road (E)	154	39	1508	149	122	1.6	2.1	40.887	E
3 - A1156 Felixstowe Road (S)	903	226	453	901	1203	5.9	5.9	23.397	C
4 - A1156 Felixstowe Road (W)	771	193	724	799	630	8.9	7.2	39.348	E

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	829	963	0.860	830	0.0	3.0	11.103	B
			2	1,4	330	963	0.343	329	0.0	0.6	5.842	A
		2	1	(1,2,3,4)	1146			1159	0.0	3.8	10.184	B
	Exit	1	1		1053			1053	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	29	205	0.142	29	0.0	0.1	16.301	C
			2	1,2,4	126	205	0.617	126	0.0	1.0	24.394	C
		2	1	(1,2,3,4)	155			155	0.0	0.7	10.478	B
	Exit	1	1		116			116	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	213	808	0.263	214	0.0	0.4	5.943	A
			2	1,2,3	668	808	0.826	662	0.0	3.1	14.097	B
		2	1	(1,2,3,4)	892			880	0.0	3.3	7.384	A
	Exit	1	1		1183			1183	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	378	539	0.701	373	0.0	2.3	16.925	C
			2	2,3,4	404	539	0.748	407	0.0	2.2	17.908	C
		2	1	(1,2,3,4)	776			782	0.0	2.4	7.886	A
	Exit	1	1		619			619	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	837	964	0.869	840	3.0	2.7	12.302	B
			2	1,4	327	964	0.339	328	0.6	0.7	6.050	A
		2	1	(1,2,3,4)	1160			1164	3.8	6.2	18.155	C
	Exit	1	1		1091			1091	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	27	203	0.132	26	0.1	0.2	22.498	C
			2	1,2,4	126	203	0.619	125	1.0	1.0	28.514	D
		2	1	(1,2,3,4)	151			153	0.7	0.6	16.885	C
	Exit	1	1		116			116	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	230	809	0.284	229	0.4	0.5	6.635	A
			2	1,2,3	674	809	0.834	675	3.1	2.9	16.182	C
		2	1	(1,2,3,4)	890			904	3.3	2.5	12.835	B
	Exit	1	1		1189			1189	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	395	535	0.738	394	2.3	2.3	19.704	C
			2	2,3,4	403	535	0.754	408	2.2	2.3	20.772	C
		2	1	(1,2,3,4)	796			798	2.4	3.5	14.890	B
	Exit	1	1		629			629	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	856	957	0.895	857	2.7	2.7	12.126	B
			2	1,4	332	957	0.347	334	0.7	0.6	5.981	A
		2	1	(1,2,3,4)	1184			1189	6.2	6.1	19.596	C
	Exit	1	1		1072			1072	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	32	198	0.160	32	0.2	0.1	20.473	C
			2	1,2,4	121	198	0.612	119	1.0	0.9	29.039	D
		2	1	(1,2,3,4)	155			153	0.6	0.6	15.799	C
	Exit	1	1		128			128	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	226	809	0.279	225	0.5	0.5	6.766	A
			2	1,2,3	676	809	0.835	674	2.9	2.9	15.681	C
		2	1	(1,2,3,4)	909			902	2.5	2.7	11.038	B
	Exit	1	1		1216			1216	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	382	536	0.713	382	2.3	2.2	20.407	C
			2	2,3,4	419	536	0.783	418	2.3	2.4	21.306	C
		2	1	(1,2,3,4)	804			801	3.5	4.7	20.062	C
	Exit	1	1		627			627	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	837	963	0.869	841	2.7	2.8	12.248	B
			2	1,4	331	963	0.344	332	0.6	0.5	5.927	A
		2	1	(1,2,3,4)	1153			1168	6.1	5.4	18.948	C
	Exit	1	1		1092			1092	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	31	203	0.152	30	0.1	0.2	22.264	C
			2	1,2,4	121	203	0.598	121	0.9	1.0	28.445	D
		2	1	(1,2,3,4)	147			152	0.6	0.6	18.322	C
	Exit	1	1		120			120	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	216	809	0.267	217	0.5	0.3	6.367	A
			2	1,2,3	688	809	0.851	693	2.9	2.6	16.017	C
		2	1	(1,2,3,4)	897			905	2.7	2.1	10.422	B
	Exit	1	1		1193			1193	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	382	532	0.719	387	2.2	2.3	20.306	C
			2	2,3,4	411	532	0.772	405	2.4	2.7	22.318	C
		2	1	(1,2,3,4)	794			793	4.7	4.8	21.595	C
	Exit	1	1		622			622	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	833	953	0.874	833	2.8	3.0	12.488	B
			2	1,4	325	953	0.341	325	0.5	0.7	6.031	A
		2	1	(1,2,3,4)	1168			1158	5.4	8.3	22.150	C
	Exit	1	1		1052			1052	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	28	202	0.140	28	0.2	0.2	21.976	C
			2	1,2,4	115	202	0.568	118	1.0	0.8	28.096	D
		2	1	(1,2,3,4)	142			143	0.6	0.6	14.365	B
	Exit	1	1		124			124	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	226	813	0.278	227	0.3	0.3	6.399	A
			2	1,2,3	668	813	0.822	669	2.6	2.9	15.526	C
		2	1	(1,2,3,4)	892			894	2.1	2.7	10.749	B
	Exit	1	1		1200			1200	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	372	538	0.691	371	2.3	2.0	20.497	C
			2	2,3,4	430	538	0.798	427	2.7	2.7	21.407	C
		2	1	(1,2,3,4)	793			802	4.8	4.1	21.626	C
	Exit	1	1		622			622	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	847	960	0.883	848	3.0	2.8	12.716	B
			2	1,4	333	960	0.347	334	0.7	0.4	6.241	A
		2	1	(1,2,3,4)	1165			1180	8.3	7.2	23.956	C
	Exit	1	1		1075			1075	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	30	200	0.149	29	0.2	0.2	22.414	C
			2	1,2,4	119	200	0.598	120	0.8	0.9	28.444	D
		2	1	(1,2,3,4)	154			149	0.6	0.9	14.267	B
	Exit	1	1		122			122	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	227	809	0.281	226	0.3	0.4	6.244	A
			2	1,2,3	676	809	0.835	675	2.9	2.9	15.801	C
		2	1	(1,2,3,4)	903			903	2.7	2.6	10.134	B
	Exit	1	1		1203			1203	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	380	536	0.709	386	2.0	1.8	19.626	C
			2	2,3,4	412	536	0.768	413	2.7	2.2	21.110	C
		2	1	(1,2,3,4)	771			792	4.1	3.2	19.107	C
	Exit	1	1		630			630	0.0	0.0	0.000	A

Existing Layout - 2015, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing Layout [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	3 - A1156 Felixstowe Road (S) - Lane Simulation	Arm 3: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Felixstowe Road jw Bixley Road	Standard Roundabout	1,2,3,4	37.12	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A1189 Bixley Road	
2	Bucklesham Road (E)	
3	A1156 Felixstowe Road (S)	
4	A1156 Felixstowe Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Bixley Road	4.20	6.30	20.0	17.0	28.0	22.0	
2 - Bucklesham Road (E)	3.50	7.40	10.0	8.0	28.0	52.0	
3 - A1156 Felixstowe Road (S)	4.10	7.80	18.0	24.0	28.0	29.0	
4 - A1156 Felixstowe Road (W)	3.70	8.20	17.0	15.0	28.0	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	0.683	1782
2 - Bucklesham Road (E)	0.541	1349
3 - A1156 Felixstowe Road (S)	0.713	1941
4 - A1156 Felixstowe Road (W)	0.684	1835

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

Generated on 14/06/2017 11:40:11 using Junctions 9 (9.0.1.4646)

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Bixley Road	Percentage	Calibrate against PARAMICS queues	130.00
2 - Bucklesham Road (E)	Percentage	Calibrate against PARAMICS queues	75.00
3 - A1156 Felixstowe Road (S)	Percentage	Calibrate against PARAMICS queues	100.00
4 - A1156 Felixstowe Road (W)	Percentage	Calibrate against PARAMICS queues	80.00

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A1189 Bixley Road	Evenly split	10.00
2 - Bucklesham Road (E)	Evenly split	10.00
3 - A1156 Felixstowe Road (S)	Evenly split	10.00
4 - A1156 Felixstowe Road (W)	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Min Cap (PCU/hr)	Max Cap (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	2,3	✓	4.00	0	99999
		2	1,4	✓	4.00	0	99999
	2	1	(1,2,3,4)		Infinity		
2 - Bucklesham Road (E)	1 [Give-way line]	1	3	✓	2.00	0	99999
		2	1,2,4	✓	2.00	0	99999
	2	1	(1,2,3,4)		Infinity		
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	4	✓	5.00	0	99999
		2	1,2,3	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	1	✓	5.00	0	99999
		2	2,3,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	0.341	891
		2	0.341	891
2 - Bucklesham Road (E)	1 [Give-way line]	1	0.271	674
		2	0.271	674
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	0.356	970
		2	0.356	970
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	0.342	918
		2	0.342	918

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A1189 Bixley Road	Bucklesham Road (E)	A1156 Felixstowe Road (S)	A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1 [Give-way line]	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Bucklesham Road (E)	1 [Give-way line]	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

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	2015	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over time	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Bixley Road		FLAT	✓	1098	100.000
2 - Bucklesham Road (E)		FLAT	✓	198	100.000
3 - A1156 Felixstowe Road (S)		FLAT	✓	1043	100.000
4 - A1156 Felixstowe Road (W)		FLAT	✓	674	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	53	659	386
	2 - Bucklesham Road (E)	75	0	34	89
	3 - A1156 Felixstowe Road (S)	706	13	0	324
	4 - A1156 Felixstowe Road (W)	366	29	279	0

Vehicle Mix

16:45 - 17:00

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

17:00 - 17:15

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	1	1	1
	2 - Bucklesham Road (E)	1	1	1	1
	3 - A1156 Felixstowe Road (S)	1	1	1	1
	4 - A1156 Felixstowe Road (W)	1	1	1	1

17:15 - 17:30

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	1	1	1
	2 - Bucklesham Road (E)	1	1	1	1
	3 - A1156 Felixstowe Road (S)	1	1	1	1
	4 - A1156 Felixstowe Road (W)	1	1	1	1

17:30 - 17:45

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	1	1	1
	2 - Bucklesham Road (E)	1	1	1	1
	3 - A1156 Felixstowe Road (S)	1	1	1	1
	4 - A1156 Felixstowe Road (W)	1	1	1	1

17:45 - 18:00

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	1	1	1
	2 - Bucklesham Road (E)	1	1	1	1
	3 - A1156 Felixstowe Road (S)	1	1	1	1
	4 - A1156 Felixstowe Road (W)	1	1	1	1

18:00 - 18:15

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	1	1	1
	2 - Bucklesham Road (E)	1	1	1	1
	3 - A1156 Felixstowe Road (S)	1	1	1	1
	4 - A1156 Felixstowe Road (W)	1	1	1	1

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Bixley Road	11.56	3.5	B	1097	1646
2 - Bucklesham Road (E)	56.96	3.1	F	196	295
3 - A1156 Felixstowe Road (S)	67.39	20.2	F	1041	1562
4 - A1156 Felixstowe Road (W)	26.15	5.3	D	672	1008

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1100	275	320	1100	1133	0.0	3.5	10.277	B
2 - Bucklesham Road (E)	202	50	1319	202	100	0.0	2.4	36.026	E
3 - A1156 Felixstowe Road (S)	1052	263	549	1020	972	0.0	11.9	26.660	D
4 - A1156 Felixstowe Road (W)	676	169	784	669	785	0.0	4.5	19.631	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1089	272	331	1093	1121	3.5	3.5	11.304	B
2 - Bucklesham Road (E)	193	48	1327	190	96	2.4	3.0	52.168	F
3 - A1156 Felixstowe Road (S)	1029	257	523	1014	994	11.9	16.7	53.145	F
4 - A1156 Felixstowe Road (W)	670	167	768	684	769	4.5	4.5	24.736	C

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1100	275	331	1097	1137	3.5	3.5	11.561	B
2 - Bucklesham Road (E)	186	46	1336	185	92	3.0	2.1	44.649	E
3 - A1156 Felixstowe Road (S)	1042	260	535	1045	987	16.7	15.4	56.881	F
4 - A1156 Felixstowe Road (W)	671	168	791	678	789	4.5	4.2	24.803	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1092	273	307	1095	1138	3.5	3.4	10.628	B
2 - Bucklesham Road (E)	191	48	1308	202	94	2.1	2.7	56.961	F
3 - A1156 Felixstowe Road (S)	1041	260	549	1063	961	15.4	18.0	62.834	F
4 - A1156 Felixstowe Road (W)	654	164	803	642	809	4.2	4.5	22.822	C

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1112	278	334	1111	1132	3.4	3.4	11.156	B
2 - Bucklesham Road (E)	202	50	1346	194	99	2.7	3.1	50.489	F
3 - A1156 Felixstowe Road (S)	1025	256	548	1032	992	18.0	19.1	67.388	F
4 - A1156 Felixstowe Road (W)	683	171	786	681	794	4.5	5.2	25.387	D

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1090	272	318	1100	1149	3.4	3.0	11.378	B
2 - Bucklesham Road (E)	205	51	1321	200	97	3.1	2.8	45.832	E
3 - A1156 Felixstowe Road (S)	1060	265	541	1046	981	19.1	20.2	63.797	F
4 - A1156 Felixstowe Road (W)	679	170	787	680	800	5.2	5.3	26.151	D

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	712	1017	0.700	715	0.0	1.6	8.487	A
			2	1,4	385	1017	0.379	385	0.0	0.6	5.453	A
		2	1	(1,2,3,4)	1100			1097	0.0	1.3	2.831	A
	Exit	1	1		1133			1133	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	39	238	0.162	38	0.0	0.1	15.469	C
			2	1,2,4	163	238	0.686	164	0.0	1.1	22.161	C
		2	1	(1,2,3,4)	202			202	0.0	1.2	14.825	B
	Exit	1	1		100			100	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	313	775	0.404	312	0.0	0.7	7.548	A
			2	1,2,3	709	775	0.915	708	0.0	3.7	16.220	C
		2	1	(1,2,3,4)	1052			1022	0.0	7.4	13.043	B
	Exit	1	1		972			972	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	369	520	0.711	364	0.0	2.3	16.826	C
			2	2,3,4	302	520	0.581	305	0.0	1.2	14.468	B
		2	1	(1,2,3,4)	676			671	0.0	1.1	3.824	A
	Exit	1	1		785			785	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	723	1012	0.715	724	1.6	1.7	8.993	A
			2	1,4	365	1012	0.361	369	0.6	0.5	5.844	A
		2	1	(1,2,3,4)	1089			1089	1.3	1.4	3.409	A
	Exit	1	1		1121			1121	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	36	236	0.153	36	0.1	0.2	17.033	C
			2	1,2,4	156	236	0.659	155	1.1	1.2	26.371	D
		2	1	(1,2,3,4)	193			192	1.2	1.5	27.500	D
	Exit	1	1		96			96	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	310	784	0.396	312	0.7	0.5	8.997	A
			2	1,2,3	704	784	0.898	702	3.7	4.0	19.329	C
		2	1	(1,2,3,4)	1029			1014	7.4	12.3	36.950	E
	Exit	1	1		994			994	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	362	524	0.691	368	2.3	1.7	19.612	C
			2	2,3,4	318	524	0.606	316	1.2	1.7	16.182	C
		2	1	(1,2,3,4)	670			680	1.1	1.1	6.665	A
	Exit	1	1		769			769	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	711	1011	0.703	712	1.7	1.7	9.164	A
			2	1,4	385	1011	0.381	385	0.5	0.8	5.877	A
		2	1	(1,2,3,4)	1100			1097	1.4	1.0	3.560	A
	Exit	1	1		1137			1137	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	35	235	0.150	36	0.2	0.2	18.271	C
			2	1,2,4	149	235	0.637	149	1.2	1.0	25.341	D
		2	1	(1,2,3,4)	186			185	1.5	0.9	20.587	C
	Exit	1	1		92			92	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	323	780	0.414	321	0.5	0.9	8.671	A
			2	1,2,3	719	780	0.921	723	4.0	3.4	19.220	C
		2	1	(1,2,3,4)	1042			1041	12.3	11.1	40.961	E
	Exit	1	1		987			987	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	355	518	0.686	360	1.7	1.7	20.197	C
			2	2,3,4	316	518	0.610	318	1.7	1.5	15.897	C
		2	1	(1,2,3,4)	671			671	1.1	1.0	6.563	A
	Exit	1	1		789			789	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	709	1022	0.694	714	1.7	1.6	8.883	A
			2	1,4	381	1022	0.373	381	0.8	0.6	5.676	A
		2	1	(1,2,3,4)	1092			1091	1.0	1.3	2.880	A
	Exit	1	1		1138			1138	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	33	240	0.139	34	0.2	0.1	17.010	C
			2	1,2,4	166	240	0.690	168	1.0	1.0	26.952	D
		2	1	(1,2,3,4)	191			199	0.9	1.5	31.720	D
	Exit	1	1		94			94	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	335	775	0.432	335	0.9	0.7	9.111	A
			2	1,2,3	722	775	0.932	727	3.4	3.7	19.791	C
		2	1	(1,2,3,4)	1041			1057	11.1	13.5	46.353	E
	Exit	1	1		961			961	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	351	515	0.683	347	1.7	1.9	19.083	C
			2	2,3,4	297	515	0.578	296	1.5	1.5	15.971	C
		2	1	(1,2,3,4)	654			649	1.0	1.0	5.171	A
	Exit	1	1		809			809	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	723	1010	0.715	724	1.6	1.6	9.014	A
			2	1,4	389	1010	0.385	387	0.6	0.7	5.833	A
		2	1	(1,2,3,4)	1112			1112	1.3	1.0	3.259	A
	Exit	1	1		1132			1132	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	33	233	0.142	33	0.1	0.2	18.152	C
			2	1,2,4	162	233	0.697	161	1.0	1.2	26.058	D
		2	1	(1,2,3,4)	202			195	1.5	1.7	25.954	D
	Exit	1	1		99			99	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	317	775	0.409	318	0.7	0.8	9.521	A
			2	1,2,3	712	775	0.918	714	3.7	3.6	19.641	C
		2	1	(1,2,3,4)	1025			1029	13.5	14.8	50.905	F
	Exit	1	1		992			992	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	363	519	0.700	362	1.9	2.0	19.514	C
			2	2,3,4	319	519	0.613	318	1.5	1.7	16.734	C
		2	1	(1,2,3,4)	683			682	1.0	1.5	7.119	A
	Exit	1	1		794			794	0.0	0.0	0.000	A

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18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	720	1017	0.708	724	1.6	1.6	9.153	A
			2	1,4	375	1017	0.369	376	0.7	0.5	5.691	A
		2	1	(1,2,3,4)	1090			1096	1.0	0.9	3.437	A
	Exit	1	1		1149			1149	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	37	238	0.158	36	0.2	0.2	18.285	C
			2	1,2,4	165	238	0.695	164	1.2	1.3	24.644	C
		2	1	(1,2,3,4)	205			203	1.7	1.3	22.291	C
	Exit	1	1		97			97	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	330	778	0.424	331	0.8	0.7	8.978	A
			2	1,2,3	715	778	0.919	715	3.6	4.0	19.225	C
		2	1	(1,2,3,4)	1060			1045	14.8	15.5	48.087	E
	Exit	1	1		981			981	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	378	519	0.729	375	2.0	2.3	19.146	C
			2	2,3,4	304	519	0.587	305	1.7	1.3	16.512	C
		2	1	(1,2,3,4)	679			683	1.5	1.8	8.367	A
	Exit	1	1		800			800	0.0	0.0	0.000	A

Existing Layout - 2027, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing Layout [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	1 - A1189 Bixley Road - Lane Simulation	Arm 1: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	3 - A1156 Felixstowe Road (S) - Lane Simulation	Arm 3: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	4 - A1156 Felixstowe Road (W) - Lane Simulation	Arm 4: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Felixstowe Road jw Bixley Road	Standard Roundabout	1,2,3,4	56.61	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A1189 Bixley Road	
2	Bucklesham Road (E)	
3	A1156 Felixstowe Road (S)	
4	A1156 Felixstowe Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Bixley Road	4.20	6.30	20.0	17.0	28.0	22.0	
2 - Bucklesham Road (E)	3.50	7.40	10.0	8.0	28.0	52.0	
3 - A1156 Felixstowe Road (S)	4.10	7.80	18.0	24.0	28.0	29.0	
4 - A1156 Felixstowe Road (W)	3.70	8.20	17.0	15.0	28.0	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	0.683	1782
2 - Bucklesham Road (E)	0.541	1349
3 - A1156 Felixstowe Road (S)	0.713	1941
4 - A1156 Felixstowe Road (W)	0.684	1835

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

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Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Bixley Road	Percentage	Calibrate against PARAMICS queues	130.00
2 - Bucklesham Road (E)	Percentage	Calibrate against PARAMICS queues	75.00
3 - A1156 Felixstowe Road (S)	Percentage	Calibrate against PARAMICS queues	100.00
4 - A1156 Felixstowe Road (W)	Percentage	Calibrate against PARAMICS queues	80.00

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A1189 Bixley Road	Evenly split	10.00
2 - Bucklesham Road (E)	Evenly split	10.00
3 - A1156 Felixstowe Road (S)	Evenly split	10.00
4 - A1156 Felixstowe Road (W)	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Min Cap (PCU/hr)	Max Cap (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	2,3	✓	4.00	0	99999
		2	1,4	✓	4.00	0	99999
	2	1	(1,2,3,4)		Infinity		
2 - Bucklesham Road (E)	1 [Give-way line]	1	3	✓	2.00	0	99999
		2	1,2,4	✓	2.00	0	99999
	2	1	(1,2,3,4)		Infinity		
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	4	✓	5.00	0	99999
		2	1,2,3	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	1	✓	5.00	0	99999
		2	2,3,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	0.341	891
		2	0.341	891
2 - Bucklesham Road (E)	1 [Give-way line]	1	0.271	674
		2	0.271	674
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	0.356	970
		2	0.356	970
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	0.342	918
		2	0.342	918

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A1189 Bixley Road	Bucklesham Road (E)	A1156 Felixstowe Road (S)	A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1 [Give-way line]	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Bucklesham Road (E)	1 [Give-way line]	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

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	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over time	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Bixley Road		FLAT	✓	1238	100.000
2 - Bucklesham Road (E)		FLAT	✓	173	100.000
3 - A1156 Felixstowe Road (S)		FLAT	✓	967	100.000
4 - A1156 Felixstowe Road (W)		FLAT	✓	794	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	42	871	325
2 - Bucklesham Road (E)	55	0	35	83
3 - A1156 Felixstowe Road (S)	686	38	0	243
4 - A1156 Felixstowe Road (W)	376	47	371	0

Vehicle Mix

07:45 - 08:00

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

08:00 - 08:15

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

08:15 - 08:30

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

08:30 - 08:45

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

08:45 - 09:00

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

09:00 - 09:15

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Bixley Road	66.13	25.9	F	1241	1861
2 - Bucklesham Road (E)	78.03	4.2	F	176	263
3 - A1156 Felixstowe Road (S)	41.63	12.2	E	966	1449
4 - A1156 Felixstowe Road (W)	55.21	12.3	F	783	1174

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1241	310	432	1185	1094	0.0	14.7	27.136	D
2 - Bucklesham Road (E)	173	43	1492	176	124	0.0	2.2	39.414	E
3 - A1156 Felixstowe Road (S)	985	246	440	966	1229	0.0	7.6	20.629	C
4 - A1156 Felixstowe Road (W)	788	197	773	753	632	0.0	9.1	27.587	D

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1263	316	444	1284	1105	14.7	15.9	49.203	E
2 - Bucklesham Road (E)	177	44	1603	184	125	2.2	3.6	69.623	F
3 - A1156 Felixstowe Road (S)	961	240	477	965	1310	7.6	9.3	32.988	D
4 - A1156 Felixstowe Road (W)	757	189	775	774	667	9.1	8.2	44.265	E

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1189	297	442	1208	1100	15.9	17.0	51.138	F
2 - Bucklesham Road (E)	174	43	1524	168	126	3.6	4.2	78.030	F
3 - A1156 Felixstowe Road (S)	934	233	461	949	1231	9.3	9.3	39.727	E
4 - A1156 Felixstowe Road (W)	779	195	763	779	646	8.2	9.8	43.607	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1262	316	465	1241	1129	17.0	21.0	55.578	F
2 - Bucklesham Road (E)	165	41	1578	176	128	4.2	2.5	61.609	F
3 - A1156 Felixstowe Road (S)	966	241	468	985	1286	9.3	10.6	41.627	E
4 - A1156 Felixstowe Road (W)	804	201	782	812	672	9.8	11.3	45.964	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1248	312	470	1211	1088	21.0	22.5	59.735	F
2 - Bucklesham Road (E)	180	45	1547	177	134	2.5	3.4	61.947	F
3 - A1156 Felixstowe Road (S)	972	243	456	963	1268	10.6	10.3	39.617	E
4 - A1156 Felixstowe Road (W)	792	198	760	798	659	11.3	12.3	55.207	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1239	310	473	1230	1087	22.5	25.9	66.132	F
2 - Bucklesham Road (E)	184	46	1565	180	137	3.4	3.9	68.778	F
3 - A1156 Felixstowe Road (S)	980	245	479	954	1267	10.3	12.2	36.625	E
4 - A1156 Felixstowe Road (W)	775	194	771	788	662	12.3	10.9	50.775	F

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	884	967	0.915	882	0.0	3.3	11.962	B
			2	1,4	305	967	0.315	302	0.0	0.5	5.729	A
		2	1	(1,2,3,4)	1241			1189	0.0	10.8	16.710	C
	Exit	1	1		1094			1094	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	38	203	0.187	39	0.0	0.1	18.674	C
			2	1,2,4	136	203	0.672	137	0.0	1.0	23.778	C
		2	1	(1,2,3,4)	173			174	0.0	1.1	16.227	C
	Exit	1	1		124			124	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	247	814	0.304	244	0.0	0.7	6.169	A
			2	1,2,3	728	814	0.895	721	0.0	3.3	14.786	B
		2	1	(1,2,3,4)	985			976	0.0	3.6	7.989	A
	Exit	1	1		1229			1229	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	364	523	0.696	356	0.0	2.5	16.558	C
			2	2,3,4	397	523	0.759	396	0.0	2.4	19.308	C
		2	1	(1,2,3,4)	788			761	0.0	4.2	9.476	A
	Exit	1	1		632			632	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	950	962	0.988	951	3.3	3.5	13.260	B
			2	1,4	334	962	0.347	333	0.5	0.6	6.165	A
		2	1	(1,2,3,4)	1263			1284	10.8	11.8	37.786	E
	Exit	1	1		1105			1105	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	41	181	0.226	40	0.1	0.3	21.815	C
			2	1,2,4	142	181	0.787	144	1.0	1.4	33.607	D
		2	1	(1,2,3,4)	177			183	1.1	1.9	38.339	E
	Exit	1	1		125			125	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	245	800	0.306	246	0.7	0.3	7.072	A
			2	1,2,3	720	800	0.900	719	3.3	3.7	17.927	C
		2	1	(1,2,3,4)	961			965	3.6	5.3	17.696	C
	Exit	1	1		1310			1310	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	364	522	0.698	372	2.5	1.7	19.799	C
			2	2,3,4	401	522	0.768	402	2.4	2.3	23.001	C
		2	1	(1,2,3,4)	757			765	4.2	4.1	22.673	C
	Exit	1	1		667			667	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	886	962	0.921	885	3.5	3.4	13.423	B
			2	1,4	322	962	0.335	323	0.6	0.5	6.282	A
		2	1	(1,2,3,4)	1189			1208	11.8	13.1	39.646	E
	Exit	1	1		1100			1100	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	30	197	0.153	30	0.3	0.2	21.256	C
			2	1,2,4	139	197	0.706	137	1.4	1.4	33.818	D
		2	1	(1,2,3,4)	174			169	1.9	2.7	46.743	E
	Exit	1	1		126			126	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	237	806	0.294	237	0.3	0.3	6.923	A
			2	1,2,3	712	806	0.883	712	3.7	3.5	17.956	C
		2	1	(1,2,3,4)	934			949	5.3	5.5	24.594	C
	Exit	1	1		1231			1231	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	367	525	0.699	372	1.7	1.8	20.528	C
			2	2,3,4	403	525	0.766	407	2.3	2.5	22.010	C
		2	1	(1,2,3,4)	779			770	4.1	5.5	22.295	C
	Exit	1	1		646			646	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	916	952	0.962	913	3.4	3.4	13.188	B
			2	1,4	329	952	0.345	328	0.5	0.6	6.274	A
		2	1	(1,2,3,4)	1262			1245	13.1	17.0	44.165	E
	Exit	1	1		1129			1129	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	36	186	0.193	36	0.2	0.2	23.910	C
			2	1,2,4	138	186	0.742	141	1.4	1.1	32.514	D
		2	1	(1,2,3,4)	165			174	2.7	1.2	30.846	D
	Exit	1	1		128			128	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	254	803	0.317	256	0.3	0.5	6.829	A
			2	1,2,3	730	803	0.909	730	3.5	3.7	18.242	C
		2	1	(1,2,3,4)	966			985	5.5	6.4	26.245	D
	Exit	1	1		1286			1286	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	381	520	0.732	381	1.8	2.3	20.798	C
			2	2,3,4	430	520	0.826	431	2.5	2.8	22.990	C
		2	1	(1,2,3,4)	804			811	5.5	6.1	23.966	C
	Exit	1	1		672			672	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	893	950	0.940	894	3.4	3.3	13.452	B
			2	1,4	319	950	0.335	317	0.6	0.8	6.010	A
		2	1	(1,2,3,4)	1248			1212	17.0	18.4	48.307	E
	Exit	1	1		1088			1088	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	36	192	0.190	38	0.2	0.2	24.948	C
			2	1,2,4	141	192	0.734	139	1.1	1.4	33.078	D
		2	1	(1,2,3,4)	180			177	1.2	1.8	30.507	D
	Exit	1	1		134			134	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	253	808	0.313	258	0.5	0.3	7.142	A
			2	1,2,3	708	808	0.876	706	3.7	3.6	17.355	C
		2	1	(1,2,3,4)	972			960	6.4	6.4	24.912	C
	Exit	1	1		1268			1268	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	369	526	0.702	365	2.3	2.8	22.471	C
			2	2,3,4	429	526	0.815	432	2.8	2.3	23.102	C
		2	1	(1,2,3,4)	792			798	6.1	7.2	32.397	D
	Exit	1	1		659			659	0.0	0.0	0.000	A

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09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	897	949	0.945	896	3.3	3.4	13.710	B
			2	1,4	337	949	0.356	333	0.8	0.8	6.506	A
		2	1	(1,2,3,4)	1239			1234	18.4	21.7	54.407	F
	Exit	1	1		1087			1087	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	36	188	0.193	35	0.2	0.4	22.627	C
			2	1,2,4	147	188	0.783	146	1.4	1.4	34.217	D
		2	1	(1,2,3,4)	184			184	1.8	2.2	37.375	E
	Exit	1	1		137			137	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	237	800	0.297	237	0.3	0.5	6.806	A
			2	1,2,3	725	800	0.906	717	3.6	3.9	17.715	C
		2	1	(1,2,3,4)	980			962	6.4	7.9	21.875	C
	Exit	1	1		1267			1267	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	354	523	0.676	358	2.8	2.0	20.523	C
			2	2,3,4	430	523	0.822	430	2.3	2.7	22.753	C
		2	1	(1,2,3,4)	775			784	7.2	6.3	29.369	D
	Exit	1	1		662			662	0.0	0.0	0.000	A

Existing Layout - 2027, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing Layout [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	3 - A1156 Felixstowe Road (S) - Lane Simulation	Arm 3: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	4 - A1156 Felixstowe Road (W) - Lane Simulation	Arm 4: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Felixstowe Road jw Bixley Road	Standard Roundabout	1,2,3,4	91.28	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A1189 Bixley Road	
2	Bucklesham Road (E)	
3	A1156 Felixstowe Road (S)	
4	A1156 Felixstowe Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Bixley Road	4.20	6.30	20.0	17.0	28.0	22.0	
2 - Bucklesham Road (E)	3.50	7.40	10.0	8.0	28.0	52.0	
3 - A1156 Felixstowe Road (S)	4.10	7.80	18.0	24.0	28.0	29.0	
4 - A1156 Felixstowe Road (W)	3.70	8.20	17.0	15.0	28.0	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	0.683	1782
2 - Bucklesham Road (E)	0.541	1349
3 - A1156 Felixstowe Road (S)	0.713	1941
4 - A1156 Felixstowe Road (W)	0.684	1835

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

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Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Bixley Road	Percentage	Calibrate against PARAMICS queues	130.00
2 - Bucklesham Road (E)	Percentage	Calibrate against PARAMICS queues	75.00
3 - A1156 Felixstowe Road (S)	Percentage	Calibrate against PARAMICS queues	100.00
4 - A1156 Felixstowe Road (W)	Percentage	Calibrate against PARAMICS queues	80.00

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A1189 Bixley Road	Evenly split	10.00
2 - Bucklesham Road (E)	Evenly split	10.00
3 - A1156 Felixstowe Road (S)	Evenly split	10.00
4 - A1156 Felixstowe Road (W)	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Min Cap (PCU/hr)	Max Cap (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	2,3	✓	4.00	0	99999
		2	1,4	✓	4.00	0	99999
	2	1	(1,2,3,4)		Infinity		
2 - Bucklesham Road (E)	1 [Give-way line]	1	3	✓	2.00	0	99999
		2	1,2,4	✓	2.00	0	99999
	2	1	(1,2,3,4)		Infinity		
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	4	✓	5.00	0	99999
		2	1,2,3	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	1	✓	5.00	0	99999
		2	2,3,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	0.341	891
		2	0.341	891
2 - Bucklesham Road (E)	1 [Give-way line]	1	0.271	674
		2	0.271	674
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	0.356	970
		2	0.356	970
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	0.342	918
		2	0.342	918

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A1189 Bixley Road	Bucklesham Road (E)	A1156 Felixstowe Road (S)	A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1 [Give-way line]	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Bucklesham Road (E)	1 [Give-way line]	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

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
D4	2027	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over time	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Bixley Road		FLAT	✓	1258	100.000
2 - Bucklesham Road (E)		FLAT	✓	204	100.000
3 - A1156 Felixstowe Road (S)		FLAT	✓	1079	100.000
4 - A1156 Felixstowe Road (W)		FLAT	✓	806	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	60	750	448
2 - Bucklesham Road (E)	77	0	36	91
3 - A1156 Felixstowe Road (S)	732	14	0	333
4 - A1156 Felixstowe Road (W)	412	32	362	0

Vehicle Mix

16:45 - 17:00

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

17:00 - 17:15

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

17:15 - 17:30

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

17:30 - 17:45

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

17:45 - 18:00

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

18:00 - 18:15

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Bixley Road	22.39	9.2	C	1245	1867
2 - Bucklesham Road (E)	171.00	9.8	F	205	307
3 - A1156 Felixstowe Road (S)	169.77	56.1	F	1077	1615
4 - A1156 Felixstowe Road (W)	72.69	16.6	F	811	1217

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1261	315	405	1260	1142	0.0	6.7	17.040	C
2 - Bucklesham Road (E)	194	49	1543	194	122	0.0	4.0	51.798	F
3 - A1156 Felixstowe Road (S)	1086	272	596	1021	1141	0.0	20.3	43.646	E
4 - A1156 Felixstowe Road (W)	807	202	779	768	838	0.0	9.0	27.343	D

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1238	309	397	1246	1190	6.7	7.2	21.055	C
2 - Bucklesham Road (E)	197	49	1536	210	108	4.0	5.4	104.927	F
3 - A1156 Felixstowe Road (S)	1065	266	631	1057	1115	20.3	26.1	82.137	F
4 - A1156 Felixstowe Road (W)	816	204	811	777	877	9.0	11.9	42.871	E

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1245	311	398	1230	1177	7.2	7.5	19.153	C
2 - Bucklesham Road (E)	206	51	1522	215	106	5.4	7.5	125.361	F
3 - A1156 Felixstowe Road (S)	1072	268	619	1001	1117	26.1	40.2	122.179	F
4 - A1156 Felixstowe Road (W)	825	206	786	790	834	11.9	16.4	65.735	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1246	312	403	1246	1219	7.5	6.8	20.118	C
2 - Bucklesham Road (E)	212	53	1551	203	98	7.5	9.0	148.711	F
3 - A1156 Felixstowe Road (S)	1080	270	620	1077	1134	40.2	46.8	150.297	F
4 - A1156 Felixstowe Road (W)	806	201	818	804	878	16.4	15.4	69.417	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1231	308	404	1242	1227	6.8	7.4	22.395	C
2 - Bucklesham Road (E)	209	52	1540	208	106	9.0	9.8	171.003	F
3 - A1156 Felixstowe Road (S)	1096	274	609	1073	1139	46.8	51.6	169.769	F
4 - A1156 Felixstowe Road (W)	819	205	820	810	861	15.4	16.6	72.687	F

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1247	312	407	1238	1181	7.4	9.2	21.295	C
2 - Bucklesham Road (E)	209	52	1533	204	111	9.8	9.8	145.711	F
3 - A1156 Felixstowe Road (S)	1061	265	595	1039	1142	51.6	56.1	161.099	F
4 - A1156 Felixstowe Road (W)	793	198	787	801	847	16.6	15.0	67.632	F

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	820	979	0.838	822	0.0	2.2	10.457	B
			2	1,4	438	979	0.447	438	0.0	1.0	6.265	A
		2	1	(1,2,3,4)	1261			1258	0.0	3.4	8.041	A
	Exit	1	1		1142			1142	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	33	193	0.170	36	0.0	0.1	19.512	C
			2	1,2,4	157	193	0.816	158	0.0	1.6	27.437	D
		2	1	(1,2,3,4)	194			190	0.0	2.3	25.126	D
	Exit	1	1		122			122	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	315	758	0.415	317	0.0	0.6	8.340	A
			2	1,2,3	707	758	0.933	705	0.0	4.1	18.758	C
		2	1	(1,2,3,4)	1086			1022	0.0	15.5	27.956	D
	Exit	1	1		1141			1141	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	385	521	0.738	382	0.0	2.3	19.062	C
			2	2,3,4	392	521	0.751	386	0.0	2.6	18.090	C
		2	1	(1,2,3,4)	807			776	0.0	4.1	8.640	A
	Exit	1	1		838			838	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	785	982	0.799	788	2.2	2.3	10.868	B
			2	1,4	454	982	0.463	458	1.0	0.7	6.957	A
		2	1	(1,2,3,4)	1238			1239	3.4	4.2	11.598	B
	Exit	1	1		1190			1190	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	39	194	0.201	37	0.1	0.3	25.434	D
			2	1,2,4	172	194	0.885	173	1.6	1.4	34.294	D
		2	1	(1,2,3,4)	197			211	2.3	3.7	72.327	F
	Exit	1	1		108			108	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	324	746	0.435	325	0.6	0.4	9.098	A
			2	1,2,3	730	746	0.979	732	4.1	4.3	21.181	C
		2	1	(1,2,3,4)	1065			1054	15.5	21.4	64.493	F
	Exit	1	1		1115			1115	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	391	512	0.762	394	2.3	2.4	23.138	C
			2	2,3,4	386	512	0.753	383	2.6	2.7	21.697	C
		2	1	(1,2,3,4)	816			777	4.1	6.9	20.306	C
	Exit	1	1		877			877	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	795	982	0.810	790	2.3	2.8	10.759	B
			2	1,4	444	982	0.452	440	0.7	0.9	6.714	A
		2	1	(1,2,3,4)	1245			1238	4.2	3.8	9.850	A
	Exit	1	1		1177			1177	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	38	197	0.191	36	0.3	0.3	22.764	C
			2	1,2,4	179	197	0.910	179	1.4	1.7	34.771	D
		2	1	(1,2,3,4)	206			217	3.7	5.6	92.461	F
	Exit	1	1		106			106	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	294	750	0.392	296	0.4	0.7	9.397	A
			2	1,2,3	706	750	0.942	705	4.3	4.4	22.396	C
		2	1	(1,2,3,4)	1072			1000	21.4	35.1	103.795	F
	Exit	1	1		1117			1117	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	410	519	0.790	407	2.4	3.1	24.770	C
			2	2,3,4	386	519	0.743	383	2.7	2.7	23.013	C
		2	1	(1,2,3,4)	825			796	6.9	10.7	41.724	E
	Exit	1	1		834			834	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	798	980	0.815	795	2.8	2.4	10.979	B
			2	1,4	447	980	0.456	451	0.9	0.8	6.866	A
		2	1	(1,2,3,4)	1246			1245	3.8	3.6	10.625	B
	Exit	1	1		1219			1219	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	36	191	0.186	34	0.3	0.3	23.672	C
			2	1,2,4	168	191	0.878	169	1.7	1.6	34.298	D
		2	1	(1,2,3,4)	212			203	5.6	7.2	115.966	F
	Exit	1	1		98			98	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	332	750	0.443	335	0.7	0.8	9.959	A
			2	1,2,3	745	750	0.994	742	4.4	4.7	22.337	C
		2	1	(1,2,3,4)	1080			1077	35.1	41.2	131.750	F
	Exit	1	1		1134			1134	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	414	511	0.812	414	3.1	2.8	24.345	C
			2	2,3,4	394	511	0.772	391	2.7	2.7	23.232	C
		2	1	(1,2,3,4)	806			809	10.7	9.9	45.552	E
	Exit	1	1		878			878	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	801	979	0.818	802	2.4	2.6	11.235	B
			2	1,4	444	979	0.453	440	0.8	1.1	6.778	A
		2	1	(1,2,3,4)	1231			1245	3.6	3.8	12.724	B
	Exit	1	1		1227			1227	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	41	193	0.212	39	0.3	0.3	25.581	D
			2	1,2,4	169	193	0.875	168	1.6	1.6	35.314	E
		2	1	(1,2,3,4)	209			210	7.2	7.9	138.005	F
	Exit	1	1		106			106	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	329	754	0.436	328	0.8	1.0	10.055	B
			2	1,2,3	742	754	0.985	744	4.7	4.6	22.577	C
		2	1	(1,2,3,4)	1096			1071	41.2	46.0	151.113	F
	Exit	1	1		1139			1139	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	417	510	0.817	421	2.8	2.8	24.918	C
			2	2,3,4	384	510	0.754	390	2.7	2.6	23.642	C
		2	1	(1,2,3,4)	819			801	9.9	11.3	48.391	E
	Exit	1	1		861			861	0.0	0.0	0.000	A

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18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	813	978	0.831	809	2.6	3.0	11.130	B
			2	1,4	430	978	0.439	429	1.1	0.8	6.460	A
		2	1	(1,2,3,4)	1247			1243	3.8	5.3	11.905	B
	Exit	1	1		1181			1181	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	37	195	0.193	38	0.3	0.2	21.425	C
			2	1,2,4	168	195	0.863	166	1.6	1.7	33.381	D
		2	1	(1,2,3,4)	209			205	7.9	8.0	116.189	F
	Exit	1	1		111			111	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	325	758	0.429	320	1.0	1.2	9.821	A
			2	1,2,3	718	758	0.947	719	4.6	4.4	22.390	C
		2	1	(1,2,3,4)	1061			1044	46.0	50.4	143.514	F
	Exit	1	1		1142			1142	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	413	519	0.796	409	2.8	2.6	24.231	C
			2	2,3,4	386	519	0.744	392	2.6	2.5	24.402	C
		2	1	(1,2,3,4)	793			799	11.3	10.0	43.847	E
	Exit	1	1		847			847	0.0	0.0	0.000	A

Existing Layout - 2027+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing Layout [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	1 - A1189 Bixley Road - Lane Simulation	Arm 1: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	3 - A1156 Felixstowe Road (S) - Lane Simulation	Arm 3: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	4 - A1156 Felixstowe Road (W) - Lane Simulation	Arm 4: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Felixstowe Road jw Bixley Road	Standard Roundabout	1,2,3,4	73.46	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A1189 Bixley Road	
2	Bucklesham Road (E)	
3	A1156 Felixstowe Road (S)	
4	A1156 Felixstowe Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Bixley Road	4.20	6.30	20.0	17.0	28.0	22.0	
2 - Bucklesham Road (E)	3.50	7.40	10.0	8.0	28.0	52.0	
3 - A1156 Felixstowe Road (S)	4.10	7.80	18.0	24.0	28.0	29.0	
4 - A1156 Felixstowe Road (W)	3.70	8.20	17.0	15.0	28.0	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	0.683	1782
2 - Bucklesham Road (E)	0.541	1349
3 - A1156 Felixstowe Road (S)	0.713	1941
4 - A1156 Felixstowe Road (W)	0.684	1835

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

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Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Bixley Road	Percentage	Calibrate against PARAMICS queues	130.00
2 - Bucklesham Road (E)	Percentage	Calibrate against PARAMICS queues	75.00
3 - A1156 Felixstowe Road (S)	Percentage	Calibrate against PARAMICS queues	100.00
4 - A1156 Felixstowe Road (W)	Percentage	Calibrate against PARAMICS queues	80.00

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A1189 Bixley Road	Evenly split	10.00
2 - Bucklesham Road (E)	Evenly split	10.00
3 - A1156 Felixstowe Road (S)	Evenly split	10.00
4 - A1156 Felixstowe Road (W)	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Min Cap (PCU/hr)	Max Cap (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	2,3	✓	4.00	0	99999
		2	1,4	✓	4.00	0	99999
	2	1	(1,2,3,4)		Infinity		
2 - Bucklesham Road (E)	1 [Give-way line]	1	3	✓	2.00	0	99999
		2	1,2,4	✓	2.00	0	99999
	2	1	(1,2,3,4)		Infinity		
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	4	✓	5.00	0	99999
		2	1,2,3	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	1	✓	5.00	0	99999
		2	2,3,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	0.341	891
		2	0.341	891
2 - Bucklesham Road (E)	1 [Give-way line]	1	0.271	674
		2	0.271	674
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	0.356	970
		2	0.356	970
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	0.342	918
		2	0.342	918

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A1189 Bixley Road	Bucklesham Road (E)	A1156 Felixstowe Road (S)	A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1 [Give-way line]	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Bucklesham Road (E)	1 [Give-way line]	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

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
D5	2027+Dev	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over time	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Bixley Road		FLAT	✓	1243	100.000
2 - Bucklesham Road (E)		FLAT	✓	173	100.000
3 - A1156 Felixstowe Road (S)		FLAT	✓	989	100.000
4 - A1156 Felixstowe Road (W)		FLAT	✓	800	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	42	876	325
2 - Bucklesham Road (E)	55	0	35	83
3 - A1156 Felixstowe Road (S)	695	38	0	256
4 - A1156 Felixstowe Road (W)	376	47	377	0

Vehicle Mix

07:45 - 08:00

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

08:00 - 08:15

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

08:15 - 08:30

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

08:30 - 08:45

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

08:45 - 09:00

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

09:00 - 09:15

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Bixley Road	95.56	34.9	F	1237	1855
2 - Bucklesham Road (E)	71.29	4.0	F	173	260
3 - A1156 Felixstowe Road (S)	56.98	18.4	F	993	1489
4 - A1156 Felixstowe Road (W)	60.20	13.9	F	798	1197

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1222	306	457	1184	1086	0.0	15.2	28.815	D
2 - Bucklesham Road (E)	176	44	1518	176	123	0.0	2.5	42.387	E
3 - A1156 Felixstowe Road (S)	1000	250	444	970	1251	0.0	11.0	26.745	D
4 - A1156 Felixstowe Road (W)	799	200	770	774	644	0.0	10.5	31.150	D

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1232	308	465	1200	1094	15.2	21.6	56.841	F
2 - Bucklesham Road (E)	169	42	1537	161	129	2.5	4.0	69.117	F
3 - A1156 Felixstowe Road (S)	994	248	435	971	1263	11.0	11.7	36.681	E
4 - A1156 Felixstowe Road (W)	803	201	767	792	639	10.5	12.1	50.803	F

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1229	307	478	1208	1114	21.6	25.5	69.578	F
2 - Bucklesham Road (E)	171	43	1565	171	121	4.0	2.9	69.229	F
3 - A1156 Felixstowe Road (S)	982	246	459	989	1277	11.7	12.0	44.585	E
4 - A1156 Felixstowe Road (W)	785	196	788	804	660	12.1	11.3	54.637	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1251	313	479	1242	1137	25.5	29.9	84.124	F
2 - Bucklesham Road (E)	172	43	1595	170	125	2.9	3.2	67.588	F
3 - A1156 Felixstowe Road (S)	994	249	455	1007	1310	12.0	13.1	45.981	E
4 - A1156 Felixstowe Road (W)	797	199	794	822	668	11.3	12.0	56.446	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1248	312	471	1255	1119	29.9	33.9	95.559	F
2 - Bucklesham Road (E)	180	45	1596	174	130	3.2	3.9	71.291	F
3 - A1156 Felixstowe Road (S)	973	243	463	971	1306	13.1	13.7	50.272	F
4 - A1156 Felixstowe Road (W)	794	199	776	815	659	12.0	12.8	60.198	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1239	310	463	1243	1138	33.9	34.9	95.029	F
2 - Bucklesham Road (E)	173	43	1588	173	118	3.9	3.5	71.280	F
3 - A1156 Felixstowe Road (S)	1014	254	461	993	1300	13.7	18.4	56.980	F
4 - A1156 Felixstowe Road (W)	808	202	792	809	662	12.8	13.9	58.648	F

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	879	956	0.920	880	0.0	3.2	11.849	B
			2	1,4	306	956	0.320	304	0.0	0.5	5.518	A
		2	1	(1,2,3,4)	1222			1185	0.0	11.5	18.514	C
	Exit	1	1		1086			1086	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	36	198	0.184	37	0.0	0.2	20.282	C
			2	1,2,4	140	198	0.709	140	0.0	1.2	25.177	D
		2	1	(1,2,3,4)	176			177	0.0	1.1	17.871	C
	Exit	1	1		123			123	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	252	812	0.310	253	0.0	0.7	6.760	A
			2	1,2,3	722	812	0.889	717	0.0	3.9	16.047	C
		2	1	(1,2,3,4)	1000			975	0.0	6.4	13.005	B
	Exit	1	1		1251			1251	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	357	524	0.682	355	0.0	2.3	17.625	C
			2	2,3,4	419	524	0.800	419	0.0	2.7	19.251	C
		2	1	(1,2,3,4)	799			776	0.0	5.5	12.430	B
	Exit	1	1		644			644	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	896	952	0.942	893	3.2	3.5	13.539	B
			2	1,4	303	952	0.318	307	0.5	0.4	6.047	A
		2	1	(1,2,3,4)	1232			1199	11.5	17.7	45.225	E
	Exit	1	1		1094			1094	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	34	194	0.175	34	0.2	0.3	22.247	C
			2	1,2,4	128	194	0.658	128	1.2	1.3	32.713	D
		2	1	(1,2,3,4)	169			162	1.1	2.4	38.416	E
	Exit	1	1		129			129	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	256	815	0.314	255	0.7	0.7	7.198	A
			2	1,2,3	721	815	0.884	716	3.9	3.8	17.827	C
		2	1	(1,2,3,4)	994			977	6.4	7.2	21.641	C
	Exit	1	1		1263			1263	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	370	524	0.706	365	2.3	2.4	21.161	C
			2	2,3,4	428	524	0.817	427	2.7	2.9	24.550	C
		2	1	(1,2,3,4)	803			799	5.5	6.9	27.841	D
	Exit	1	1		639			639	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	886	947	0.936	886	3.5	3.3	13.781	B
			2	1,4	323	947	0.341	322	0.4	0.6	6.266	A
		2	1	(1,2,3,4)	1229			1208	17.7	21.6	57.735	F
	Exit	1	1		1114			1114	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	35	188	0.184	34	0.3	0.1	23.678	C
			2	1,2,4	134	188	0.713	137	1.3	1.1	33.077	D
		2	1	(1,2,3,4)	171			169	2.4	1.6	38.136	E
	Exit	1	1		121			121	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	255	807	0.316	256	0.7	0.4	7.139	A
			2	1,2,3	734	807	0.909	733	3.8	3.7	18.877	C
		2	1	(1,2,3,4)	982			988	7.2	7.8	28.752	D
	Exit	1	1		1277			1277	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	362	519	0.698	365	2.4	2.1	21.594	C
			2	2,3,4	436	519	0.840	439	2.9	2.9	25.354	D
		2	1	(1,2,3,4)	785			798	6.9	6.2	31.036	D
	Exit	1	1		660			660	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	920	946	0.973	921	3.3	3.5	13.801	B
			2	1,4	324	946	0.342	321	0.6	0.8	6.105	A
		2	1	(1,2,3,4)	1251			1244	21.6	25.6	72.297	F
	Exit	1	1		1137			1137	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	35	182	0.195	35	0.1	0.2	25.075	D
			2	1,2,4	136	182	0.747	134	1.1	1.4	33.733	D
		2	1	(1,2,3,4)	172			171	1.6	1.7	35.712	E
	Exit	1	1		125			125	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	266	808	0.329	268	0.4	0.4	7.241	A
			2	1,2,3	742	808	0.918	739	3.7	3.9	18.136	C
		2	1	(1,2,3,4)	994			1007	7.8	8.8	30.634	D
	Exit	1	1		1310			1310	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	382	517	0.740	384	2.1	2.0	21.068	C
			2	2,3,4	433	517	0.837	439	2.9	2.8	24.356	C
		2	1	(1,2,3,4)	797			815	6.2	7.2	33.602	D
	Exit	1	1		668			668	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	928	949	0.978	930	3.5	3.6	13.983	B
			2	1,4	326	949	0.343	325	0.8	0.6	6.485	A
		2	1	(1,2,3,4)	1248			1254	25.6	29.7	83.526	F
	Exit	1	1		1119			1119	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	37	182	0.202	35	0.2	0.3	23.674	C
			2	1,2,4	140	182	0.767	139	1.4	1.4	33.776	D
		2	1	(1,2,3,4)	180			176	1.7	2.3	39.490	E
	Exit	1	1		130			130	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	249	805	0.309	250	0.4	0.4	7.111	A
			2	1,2,3	723	805	0.897	721	3.9	3.6	18.567	C
		2	1	(1,2,3,4)	973			972	8.8	9.7	34.658	D
	Exit	1	1		1306			1306	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	375	522	0.719	384	2.0	1.9	21.779	C
			2	2,3,4	428	522	0.820	431	2.8	2.9	25.502	D
		2	1	(1,2,3,4)	794			803	7.2	8.1	36.359	E
	Exit	1	1		659			659	0.0	0.0	0.000	A

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09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	915	953	0.960	918	3.6	3.5	14.086	B
			2	1,4	325	953	0.341	325	0.6	0.7	6.139	A
		2	1	(1,2,3,4)	1239			1240	29.7	30.7	83.217	F
	Exit	1	1		1138			1138	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	38	183	0.209	37	0.3	0.3	23.137	C
			2	1,2,4	137	183	0.749	136	1.4	1.3	33.028	D
		2	1	(1,2,3,4)	173			176	2.3	1.9	40.681	E
	Exit	1	1		118			118	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	254	806	0.316	255	0.4	0.5	6.980	A
			2	1,2,3	738	806	0.915	739	3.6	4.1	19.350	C
		2	1	(1,2,3,4)	1014			992	9.7	13.9	41.095	E
	Exit	1	1		1300			1300	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	384	518	0.741	382	1.9	2.3	21.458	C
			2	2,3,4	421	518	0.814	427	2.9	2.4	24.066	C
		2	1	(1,2,3,4)	808			805	8.1	9.2	36.274	E
	Exit	1	1		662			662	0.0	0.0	0.000	A

Existing Layout - 2027+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - Existing Layout [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	2 - Bucklesham Road (E) - Lane Simulation	Arm 2: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	3 - A1156 Felixstowe Road (S) - Lane Simulation	Arm 3: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	4 - A1156 Felixstowe Road (W) - Lane Simulation	Arm 4: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.

Analysis Set Details

ID	Name	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Layout	✓	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Felixstowe Road jw Bixley Road	Standard Roundabout	1,2,3,4	91.56	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A1189 Bixley Road	
2	Bucklesham Road (E)	
3	A1156 Felixstowe Road (S)	
4	A1156 Felixstowe Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	I' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Bixley Road	4.20	6.30	20.0	17.0	28.0	22.0	
2 - Bucklesham Road (E)	3.50	7.40	10.0	8.0	28.0	52.0	
3 - A1156 Felixstowe Road (S)	4.10	7.80	18.0	24.0	28.0	29.0	
4 - A1156 Felixstowe Road (W)	3.70	8.20	17.0	15.0	28.0	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	0.683	1782
2 - Bucklesham Road (E)	0.541	1349
3 - A1156 Felixstowe Road (S)	0.713	1941
4 - A1156 Felixstowe Road (W)	0.684	1835

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

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Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Bixley Road	Percentage	Calibrate against PARAMICS queues	130.00
2 - Bucklesham Road (E)	Percentage	Calibrate against PARAMICS queues	75.00
3 - A1156 Felixstowe Road (S)	Percentage	Calibrate against PARAMICS queues	100.00
4 - A1156 Felixstowe Road (W)	Percentage	Calibrate against PARAMICS queues	80.00

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A1189 Bixley Road	Evenly split	10.00
2 - Bucklesham Road (E)	Evenly split	10.00
3 - A1156 Felixstowe Road (S)	Evenly split	10.00
4 - A1156 Felixstowe Road (W)	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Min Cap (PCU/hr)	Max Cap (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	2,3	✓	4.00	0	99999
		2	1,4	✓	4.00	0	99999
	2	1	(1,2,3,4)		Infinity		
2 - Bucklesham Road (E)	1 [Give-way line]	1	3	✓	2.00	0	99999
		2	1,2,4	✓	2.00	0	99999
	2	1	(1,2,3,4)		Infinity		
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	4	✓	5.00	0	99999
		2	1,2,3	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	1	✓	5.00	0	99999
		2	2,3,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	0.341	891
		2	0.341	891
2 - Bucklesham Road (E)	1 [Give-way line]	1	0.271	674
		2	0.271	674
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	0.356	970
		2	0.356	970
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	0.342	918
		2	0.342	918

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A1189 Bixley Road	Bucklesham Road (E)	A1156 Felixstowe Road (S)	A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1 [Give-way line]	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Bucklesham Road (E)	1 [Give-way line]	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

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
D6	2027+Dev	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over time	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Bixley Road		FLAT	✓	1267	100.000
2 - Bucklesham Road (E)		FLAT	✓	204	100.000
3 - A1156 Felixstowe Road (S)		FLAT	✓	1092	100.000
4 - A1156 Felixstowe Road (W)		FLAT	✓	818	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	60	759	448
	2 - Bucklesham Road (E)	77	0	36	91
	3 - A1156 Felixstowe Road (S)	738	14	0	340
	4 - A1156 Felixstowe Road (W)	412	32	374	0

Vehicle Mix

16:45 - 17:00

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

17:00 - 17:15

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

17:15 - 17:30

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

17:30 - 17:45

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

17:45 - 18:00

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

18:00 - 18:15

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Bixley Road	25.69	12.5	D	1252	1878
2 - Bucklesham Road (E)	201.40	13.6	F	202	303
3 - A1156 Felixstowe Road (S)	155.06	57.5	F	1090	1635
4 - A1156 Felixstowe Road (W)	80.63	20.8	F	819	1228

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1256	314	404	1246	1199	0.0	5.9	14.683	B
2 - Bucklesham Road (E)	204	51	1549	187	101	0.0	5.3	59.936	F
3 - A1156 Felixstowe Road (S)	1088	272	597	1034	1140	0.0	20.1	43.756	E
4 - A1156 Felixstowe Road (W)	823	206	797	805	833	0.0	10.5	32.688	D

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1241	310	429	1282	1192	5.9	6.7	23.484	C
2 - Bucklesham Road (E)	189	47	1607	187	104	5.3	6.6	116.925	F
3 - A1156 Felixstowe Road (S)	1076	269	599	1033	1195	20.1	27.5	80.535	F
4 - A1156 Felixstowe Road (W)	809	202	792	830	840	10.5	10.9	56.837	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1249	312	411	1259	1189	6.7	6.6	23.786	C
2 - Bucklesham Road (E)	211	53	1568	200	102	6.6	8.9	148.279	F
3 - A1156 Felixstowe Road (S)	1062	265	620	1056	1148	27.5	32.6	101.920	F
4 - A1156 Felixstowe Road (W)	813	203	804	797	873	10.9	14.3	55.081	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1241	310	423	1200	1205	6.6	12.5	25.687	D
2 - Bucklesham Road (E)	200	50	1513	189	110	8.9	10.3	181.178	F
3 - A1156 Felixstowe Road (S)	1073	268	567	1075	1135	32.6	35.3	119.306	F
4 - A1156 Felixstowe Road (W)	823	206	805	822	837	14.3	18.8	77.180	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1265	316	425	1265	1197	12.5	7.8	24.152	C
2 - Bucklesham Road (E)	200	50	1599	200	91	10.3	10.6	201.402	F
3 - A1156 Felixstowe Road (S)	1129	282	646	1049	1154	35.3	47.5	137.798	F
4 - A1156 Felixstowe Road (W)	823	206	796	826	898	18.8	17.6	80.630	F

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1261	315	397	1292	1194	7.8	6.5	22.154	C
2 - Bucklesham Road (E)	209	52	1587	198	102	10.6	13.6	172.765	F
3 - A1156 Felixstowe Road (S)	1113	278	621	1045	1164	47.5	57.5	155.059	F
4 - A1156 Felixstowe Road (W)	820	205	815	776	851	17.6	20.8	72.251	F

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	803	979	0.820	805	0.0	2.4	9.791	A
			2	1,4	446	979	0.455	441	0.0	1.0	6.796	A
		2	1	(1,2,3,4)	1256			1249	0.0	2.6	5.908	A
	Exit	1	1		1199			1199	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	32	191	0.169	32	0.0	0.2	19.728	C
			2	1,2,4	159	191	0.829	155	0.0	1.6	28.269	D
		2	1	(1,2,3,4)	204			191	0.0	3.4	32.812	D
	Exit	1	1		101			101	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	310	758	0.409	310	0.0	0.8	8.938	A
			2	1,2,3	727	758	0.959	724	0.0	4.5	18.821	C
		2	1	(1,2,3,4)	1088			1037	0.0	14.9	27.922	D
	Exit	1	1		1140			1140	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	413	516	0.800	418	0.0	2.4	18.525	C
			2	2,3,4	385	516	0.746	387	0.0	2.1	19.412	C
		2	1	(1,2,3,4)	823			798	0.0	6.0	13.491	B
	Exit	1	1		833			833	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	829	968	0.857	835	2.4	2.1	11.495	B
			2	1,4	443	968	0.458	447	1.0	1.0	6.761	A
		2	1	(1,2,3,4)	1241			1272	2.6	3.6	13.689	B
	Exit	1	1		1192			1192	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	39	180	0.215	35	0.2	0.4	22.911	C
			2	1,2,4	149	180	0.830	153	1.6	1.4	35.678	E
		2	1	(1,2,3,4)	189			188	3.4	4.8	83.223	F
	Exit	1	1		104			104	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	320	757	0.423	319	0.8	0.8	9.430	A
			2	1,2,3	709	757	0.937	714	4.5	4.1	21.419	C
		2	1	(1,2,3,4)	1076			1029	14.9	22.6	62.701	F
	Exit	1	1		1195			1195	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	411	518	0.795	412	2.4	2.5	23.571	C
			2	2,3,4	417	518	0.806	418	2.1	2.8	23.402	C
		2	1	(1,2,3,4)	809			829	6.0	5.6	33.387	D
	Exit	1	1		840			840	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	808	976	0.827	804	2.1	2.4	11.031	B
			2	1,4	450	976	0.461	455	1.0	0.8	6.707	A
		2	1	(1,2,3,4)	1249			1257	3.6	3.4	14.267	B
	Exit	1	1		1189			1189	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	34	188	0.180	35	0.4	0.2	25.210	D
			2	1,2,4	167	188	0.889	165	1.4	1.6	35.192	E
		2	1	(1,2,3,4)	211			201	4.8	7.0	114.571	F
	Exit	1	1		102			102	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	331	749	0.441	325	0.8	1.0	9.243	A
			2	1,2,3	722	749	0.963	731	4.1	4.1	21.763	C
		2	1	(1,2,3,4)	1062			1053	22.6	27.5	84.162	F
	Exit	1	1		1148			1148	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	402	514	0.781	398	2.5	3.0	23.438	C
			2	2,3,4	399	514	0.775	399	2.8	3.0	24.493	C
		2	1	(1,2,3,4)	813			801	5.6	8.4	31.016	D
	Exit	1	1		873			873	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	786	971	0.809	786	2.4	2.8	11.768	B
			2	1,4	422	971	0.435	414	0.8	1.3	7.227	A
		2	1	(1,2,3,4)	1241			1208	3.4	8.5	15.475	C
	Exit	1	1		1205			1205	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	34	199	0.170	36	0.2	0.2	25.282	D
			2	1,2,4	153	199	0.769	153	1.6	1.6	36.092	E
		2	1	(1,2,3,4)	200			187	7.0	8.6	146.500	F
	Exit	1	1		110			110	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	335	769	0.436	339	1.0	0.8	9.722	A
			2	1,2,3	736	769	0.957	737	4.1	4.5	21.582	C
		2	1	(1,2,3,4)	1073			1071	27.5	29.9	101.346	F
	Exit	1	1		1135			1135	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	406	514	0.790	411	3.0	2.7	24.895	C
			2	2,3,4	409	514	0.795	411	3.0	3.0	24.585	C
		2	1	(1,2,3,4)	823			815	8.4	13.1	52.359	F
	Exit	1	1		837			837	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	784	970	0.808	786	2.8	2.6	11.444	B
			2	1,4	481	970	0.496	479	1.3	1.0	7.431	A
		2	1	(1,2,3,4)	1265			1265	8.5	4.2	14.208	B
	Exit	1	1		1197			1197	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	32	181	0.175	33	0.2	0.2	26.189	D
			2	1,2,4	169	181	0.930	167	1.6	1.8	37.236	E
		2	1	(1,2,3,4)	200			200	8.6	8.7	166.506	F
	Exit	1	1		91			91	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	324	740	0.437	330	0.8	0.7	9.747	A
			2	1,2,3	722	740	0.975	719	4.5	4.6	22.318	C
		2	1	(1,2,3,4)	1129			1046	29.9	42.2	119.279	F
	Exit	1	1		1154			1154	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	415	517	0.804	415	2.7	2.7	23.999	C
			2	2,3,4	415	517	0.803	412	3.0	2.6	23.700	C
		2	1	(1,2,3,4)	823			830	13.1	12.3	56.815	F
	Exit	1	1		898			898	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	833	983	0.848	837	2.6	2.7	11.344	B
			2	1,4	457	983	0.465	455	1.0	0.9	6.604	A
		2	1	(1,2,3,4)	1261			1290	4.2	2.9	12.471	B
	Exit	1	1		1194			1194	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	35	184	0.188	32	0.2	0.4	21.959	C
			2	1,2,4	166	184	0.903	166	1.8	1.7	37.170	E
		2	1	(1,2,3,4)	209			201	8.7	11.5	141.301	F
	Exit	1	1		102			102	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	303	749	0.404	307	0.7	0.7	10.294	B
			2	1,2,3	737	749	0.984	737	4.6	4.8	22.100	C
		2	1	(1,2,3,4)	1113			1040	42.2	52.0	137.456	F
	Exit	1	1		1164			1164	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	389	511	0.761	390	2.7	2.7	25.586	D
			2	2,3,4	392	511	0.766	385	2.6	3.2	24.955	C
		2	1	(1,2,3,4)	820			781	12.3	14.8	47.651	E
	Exit	1	1		851			851	0.0	0.0	0.000	A

Improved Layout (incr flares) - 2027+Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A2 - Improved Layout (incr flares) [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	1 - A1189 Bixley Road - Lane Simulation	Arm 1: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	3 - A1156 Felixstowe Road (S) - Lane Simulation	Arm 3: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	4 - A1156 Felixstowe Road (W) - Lane Simulation	Arm 4: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.

Analysis Set Details

ID	Name	Use Lane Simulation	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Improved Layout (incr flares)	✓	Extend flare on Bixley Road approach by 1-PCU and on Felixstowe Road(S) approach by 1-PCUs	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Felixstowe Road jw Bixley Road	Standard Roundabout	1,2,3,4	60.52	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A1189 Bixley Road	
2	Bucklesham Road (E)	
3	A1156 Felixstowe Road (S)	
4	A1156 Felixstowe Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	l' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Bixley Road	4.20	6.30	26.0	17.0	28.0	22.0	
2 - Bucklesham Road (E)	3.50	7.40	10.0	8.0	28.0	52.0	
3 - A1156 Felixstowe Road (S)	4.10	7.80	24.0	24.0	28.0	29.0	
4 - A1156 Felixstowe Road (W)	3.70	8.20	17.0	15.0	28.0	29.0	

Generated on 14/06/2017 11:40:11 using Junctions 9 (9.0.1.4646)

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	0.689	1812
2 - Bucklesham Road (E)	0.541	1349
3 - A1156 Felixstowe Road (S)	0.728	2016
4 - A1156 Felixstowe Road (W)	0.684	1835

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Bixley Road	Percentage	Calibrate against PARAMICS queues	130.00
2 - Bucklesham Road (E)	Percentage	Calibrate against PARAMICS queues	75.00
3 - A1156 Felixstowe Road (S)	Percentage	Calibrate against PARAMICS queues	100.00
4 - A1156 Felixstowe Road (W)	Percentage	Calibrate against PARAMICS queues	80.00

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A1189 Bixley Road	Evenly split	10.00
2 - Bucklesham Road (E)	Evenly split	10.00
3 - A1156 Felixstowe Road (S)	Evenly split	10.00
4 - A1156 Felixstowe Road (W)	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Min Cap (PCU/hr)	Max Cap (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	2,3	✓	5.00	0	99999
		2	1,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		
2 - Bucklesham Road (E)	1 [Give-way line]	1	3	✓	2.00	0	99999
		2	1,2,4	✓	2.00	0	99999
	2	1	(1,2,3,4)		Infinity		
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	4	✓	6.00	0	99999
		2	1,2,3	✓	6.00	0	99999
	2	1	(1,2,3,4)		Infinity		
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	1	✓	5.00	0	99999
		2	2,3,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	0.344	906
		2	0.344	906
2 - Bucklesham Road (E)	1 [Give-way line]	1	0.271	674
		2	0.271	674
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	0.364	1008
		2	0.364	1008
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	0.342	918
		2	0.342	918

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A1189 Bixley Road	Bucklesham Road (E)	A1156 Felixstowe Road (S)	A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1 [Give-way line]	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Bucklesham Road (E)	1 [Give-way line]	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

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
D5	2027+Dev	AM	FLAT	07:45	09:15	90	15	✓

Vehicle mix varies over time	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Bixley Road		FLAT	✓	1243	100.000
2 - Bucklesham Road (E)		FLAT	✓	173	100.000
3 - A1156 Felixstowe Road (S)		FLAT	✓	989	100.000
4 - A1156 Felixstowe Road (W)		FLAT	✓	800	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	42	876	325
	2 - Bucklesham Road (E)	55	0	35	83
	3 - A1156 Felixstowe Road (S)	695	38	0	256
	4 - A1156 Felixstowe Road (W)	376	47	377	0

Vehicle Mix

07:45 - 08:00

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	1	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

08:00 - 08:15

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

08:15 - 08:30

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

08:30 - 08:45

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

08:45 - 09:00

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

09:00 - 09:15

HV %s

		To			
		1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
From	1 - A1189 Bixley Road	0	0	0	0
	2 - Bucklesham Road (E)	0	0	0	0
	3 - A1156 Felixstowe Road (S)	0	0	0	0
	4 - A1156 Felixstowe Road (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Bixley Road	67.91	24.9	F	1244	1865
2 - Bucklesham Road (E)	99.33	5.0	F	171	256
3 - A1156 Felixstowe Road (S)	39.84	14.0	E	1003	1504
4 - A1156 Felixstowe Road (W)	66.68	17.3	F	798	1197

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1242	310	447	1217	1096	0.0	12.2	24.690	C
2 - Bucklesham Road (E)	170	42	1541	171	123	0.0	2.8	45.674	E
3 - A1156 Felixstowe Road (S)	999	250	460	965	1252	0.0	8.1	18.756	C
4 - A1156 Felixstowe Road (W)	773	193	774	770	651	0.0	8.5	28.524	D

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1228	307	433	1234	1126	12.2	15.5	43.968	E
2 - Bucklesham Road (E)	173	43	1545	169	122	2.8	4.0	73.384	F
3 - A1156 Felixstowe Road (S)	1002	250	467	1003	1247	8.1	9.1	32.380	D
4 - A1156 Felixstowe Road (W)	813	203	800	759	669	8.5	12.2	46.672	E

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1253	313	465	1191	1133	15.5	22.2	52.857	F
2 - Bucklesham Road (E)	176	44	1528	171	128	4.0	5.0	91.725	F
3 - A1156 Felixstowe Road (S)	991	248	459	1015	1240	9.1	8.8	34.216	D
4 - A1156 Felixstowe Road (W)	807	202	799	800	675	12.2	12.0	54.842	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1264	316	453	1256	1117	22.2	18.7	54.521	F
2 - Bucklesham Road (E)	164	41	1583	182	125	5.0	3.7	99.331	F
3 - A1156 Felixstowe Road (S)	1025	256	488	981	1278	8.8	14.0	39.843	E
4 - A1156 Felixstowe Road (W)	781	195	793	777	676	12.0	11.2	50.424	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1237	309	453	1239	1162	18.7	24.5	67.907	F
2 - Bucklesham Road (E)	180	45	1570	181	122	3.7	4.1	77.557	F
3 - A1156 Felixstowe Road (S)	1002	251	470	1021	1281	14.0	8.5	39.489	E
4 - A1156 Felixstowe Road (W)	802	201	820	795	671	11.2	14.0	62.098	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1238	309	462	1234	1120	24.5	24.9	66.561	F
2 - Bucklesham Road (E)	160	40	1568	154	128	4.1	4.0	80.315	F
3 - A1156 Felixstowe Road (S)	997	249	437	1003	1285	8.5	10.5	34.892	D
4 - A1156 Felixstowe Road (W)	811	203	789	793	652	14.0	17.3	66.685	F

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Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	897	978	0.917	895	0.0	3.9	13.665	B
			2	1,4	323	978	0.331	322	0.0	0.7	5.539	A
		2	1	(1,2,3,4)	1242			1220	0.0	7.5	13.106	B
	Exit	1	1		1096			1096	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	33	193	0.173	32	0.0	0.2	17.807	C
			2	1,2,4	138	193	0.716	139	0.0	1.2	27.487	D
		2	1	(1,2,3,4)	170			172	0.0	1.4	20.088	C
	Exit	1	1		123			123	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	255	841	0.303	249	0.0	0.8	5.778	A
			2	1,2,3	724	841	0.862	715	0.0	4.1	15.318	C
		2	1	(1,2,3,4)	999			979	0.0	3.3	5.805	A
	Exit	1	1		1252			1252	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	355	523	0.679	358	0.0	1.6	16.784	C
			2	2,3,4	405	523	0.775	411	0.0	2.2	19.548	C
		2	1	(1,2,3,4)	773			760	0.0	4.7	10.021	B
	Exit	1	1		651			651	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	907	984	0.922	909	3.9	3.9	15.652	C
			2	1,4	324	984	0.330	325	0.7	0.5	6.306	A
		2	1	(1,2,3,4)	1228			1231	7.5	11.0	30.775	D
	Exit	1	1		1126			1126	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	28	192	0.144	27	0.2	0.3	20.623	C
			2	1,2,4	142	192	0.738	142	1.2	1.2	32.424	D
		2	1	(1,2,3,4)	173			170	1.4	2.5	42.558	E
	Exit	1	1		122			122	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	255	838	0.304	254	0.8	0.4	6.621	A
			2	1,2,3	747	838	0.891	749	4.1	3.8	19.072	C
		2	1	(1,2,3,4)	1002			1001	3.3	4.8	16.491	C
	Exit	1	1		1247			1247	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	379	515	0.736	365	1.6	2.7	20.498	C
			2	2,3,4	392	515	0.761	394	2.2	2.5	24.850	C
		2	1	(1,2,3,4)	813			771	4.7	6.9	23.834	C
	Exit	1	1		669			669	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	874	970	0.901	870	3.9	4.3	16.043	C
			2	1,4	321	970	0.331	321	0.5	0.5	6.234	A
		2	1	(1,2,3,4)	1253			1195	11.0	17.3	39.340	E
	Exit	1	1		1133			1133	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	33	196	0.167	33	0.3	0.2	23.058	C
			2	1,2,4	138	196	0.706	138	1.2	1.5	34.267	D
		2	1	(1,2,3,4)	176			171	2.5	3.3	59.386	F
	Exit	1	1		128			128	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	271	841	0.322	271	0.4	0.4	6.550	A
			2	1,2,3	742	841	0.882	744	3.8	4.0	18.944	C
		2	1	(1,2,3,4)	991			1013	4.8	4.4	18.542	C
	Exit	1	1		1240			1240	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	380	516	0.737	373	2.7	2.4	21.268	C
			2	2,3,4	432	516	0.837	427	2.5	3.1	24.674	C
		2	1	(1,2,3,4)	807			812	6.9	6.4	31.834	D
	Exit	1	1		675			675	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	919	975	0.943	917	4.3	4.2	15.551	C
			2	1,4	337	975	0.345	339	0.5	0.5	6.473	A
		2	1	(1,2,3,4)	1264			1256	17.3	14.0	41.383	E
	Exit	1	1		1117			1117	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	35	185	0.191	33	0.2	0.2	22.773	C
			2	1,2,4	145	185	0.785	149	1.5	1.2	35.786	E
		2	1	(1,2,3,4)	164			180	3.3	2.3	66.275	F
	Exit	1	1		125			125	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	245	831	0.295	247	0.4	0.7	6.511	A
			2	1,2,3	743	831	0.895	734	4.0	4.4	20.592	C
		2	1	(1,2,3,4)	1025			988	4.4	9.0	22.700	C
	Exit	1	1		1278			1278	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	368	517	0.712	363	2.4	2.5	21.154	C
			2	2,3,4	413	517	0.799	415	3.1	3.0	24.928	C
		2	1	(1,2,3,4)	781			782	6.4	5.6	27.189	D
	Exit	1	1		676			676	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	907	975	0.930	909	4.2	4.2	16.839	C
			2	1,4	331	975	0.340	330	0.5	0.6	6.119	A
		2	1	(1,2,3,4)	1237			1238	14.0	19.7	53.833	F
	Exit	1	1		1162			1162	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	40	187	0.213	41	0.2	0.2	24.283	C
			2	1,2,4	143	187	0.767	140	1.2	1.5	33.777	D
		2	1	(1,2,3,4)	180			183	2.3	2.5	45.499	E
	Exit	1	1		122			122	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	254	837	0.304	255	0.7	0.3	7.095	A
			2	1,2,3	759	837	0.906	766	4.4	3.6	19.321	C
		2	1	(1,2,3,4)	1002			1013	9.0	4.6	23.417	C
	Exit	1	1		1281			1281	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	383	510	0.752	381	2.5	2.5	23.046	C
			2	2,3,4	419	510	0.822	415	3.0	2.6	24.198	C
		2	1	(1,2,3,4)	802			802	5.6	8.9	38.376	E
	Exit	1	1		671			671	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	919	971	0.947	920	4.2	4.1	15.883	C
			2	1,4	312	971	0.322	315	0.6	0.3	6.255	A
		2	1	(1,2,3,4)	1238			1232	19.7	20.5	53.521	F
	Exit	1	1		1120			1120	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	30	188	0.160	32	0.2	0.1	22.018	C
			2	1,2,4	124	188	0.663	123	1.5	1.5	34.773	D
		2	1	(1,2,3,4)	160			154	2.5	2.4	48.821	E
	Exit	1	1		128			128	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	262	849	0.309	262	0.3	0.6	6.698	A
			2	1,2,3	741	849	0.873	741	3.6	4.2	19.084	C
		2	1	(1,2,3,4)	997			1003	4.6	5.8	19.209	C
	Exit	1	1		1285			1285	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	371	519	0.716	370	2.5	2.4	22.781	C
			2	2,3,4	425	519	0.821	423	2.6	3.1	25.560	D
		2	1	(1,2,3,4)	811			797	8.9	11.8	42.988	E
	Exit	1	1		652			652	0.0	0.0	0.000	A

Improved Layout (incr flares) - 2027+Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A2 - Improved Layout (incr flares) [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	3 - A1156 Felixstowe Road (S) - Lane Simulation	Arm 3: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	4 - A1156 Felixstowe Road (W) - Lane Simulation	Arm 4: Q at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.

Analysis Set Details

ID	Name	Use Lane Simulation	Description	Include in report	Use specific Demand Set(s)	Specific Demand Set (s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A2	Improved Layout (incr flares)	✓	Extend flare on Bixley Road approach by 1-PCU and on Felixstowe Road(S) approach by 1-PCUs	✓	✓	D5,D6	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Felixstowe Road jw Bixley Road	Standard Roundabout	1,2,3,4	69.89	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	A1189 Bixley Road	
2	Bucklesham Road (E)	
3	A1156 Felixstowe Road (S)	
4	A1156 Felixstowe Road (W)	

Roundabout Geometry

Arm	V (m)	E (m)	l' (m)	R (m)	D (m)	PHI (deg)	Exit only
1 - A1189 Bixley Road	4.20	6.30	26.0	17.0	28.0	22.0	
2 - Bucklesham Road (E)	3.50	7.40	10.0	8.0	28.0	52.0	
3 - A1156 Felixstowe Road (S)	4.10	7.80	24.0	24.0	28.0	29.0	
4 - A1156 Felixstowe Road (W)	3.70	8.20	17.0	15.0	28.0	29.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	0.689	1812
2 - Bucklesham Road (E)	0.541	1349
3 - A1156 Felixstowe Road (S)	0.728	2016
4 - A1156 Felixstowe Road (W)	0.684	1835

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

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Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
1 - A1189 Bixley Road	Percentage	Calibrate against PARAMICS queues	130.00
2 - Bucklesham Road (E)	Percentage	Calibrate against PARAMICS queues	75.00
3 - A1156 Felixstowe Road (S)	Percentage	Calibrate against PARAMICS queues	100.00
4 - A1156 Felixstowe Road (W)	Percentage	Calibrate against PARAMICS queues	80.00

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1 - A1189 Bixley Road	Evenly split	10.00
2 - Bucklesham Road (E)	Evenly split	10.00
3 - A1156 Felixstowe Road (S)	Evenly split	10.00
4 - A1156 Felixstowe Road (W)	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Min Cap (PCU/hr)	Max Cap (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	2,3	✓	5.00	0	99999
		2	1,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		
2 - Bucklesham Road (E)	1 [Give-way line]	1	3	✓	2.00	0	99999
		2	1,2,4	✓	2.00	0	99999
	2	1	(1,2,3,4)		Infinity		
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	4	✓	6.00	0	99999
		2	1,2,3	✓	6.00	0	99999
	2	1	(1,2,3,4)		Infinity		
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	1	✓	5.00	0	99999
		2	2,3,4	✓	5.00	0	99999
	2	1	(1,2,3,4)		Infinity		

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1 - A1189 Bixley Road	1 [Give-way line]	1	0.344	906
		2	0.344	906
2 - Bucklesham Road (E)	1 [Give-way line]	1	0.271	674
		2	0.271	674
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1	0.364	1008
		2	0.364	1008
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	0.342	918
		2	0.342	918

Lane Movements

Arm	Lane Level	Lane	Destination arm			
			A1189 Bixley Road	Bucklesham Road (E)	A1156 Felixstowe Road (S)	A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1 [Give-way line]	1		✓	✓	
		2	✓			✓
	2	1	✓	✓	✓	✓
2 - Bucklesham Road (E)	1 [Give-way line]	1			✓	
		2	✓	✓		✓
	2	1	✓	✓	✓	✓
3 - A1156 Felixstowe Road (S)	1 [Give-way line]	1				✓
		2	✓	✓	✓	
	2	1	✓	✓	✓	✓
4 - A1156 Felixstowe Road (W)	1 [Give-way line]	1	✓			
		2		✓	✓	✓
	2	1	✓	✓	✓	✓

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
D6	2027+Dev	PM	FLAT	16:45	18:15	90	15	✓

Vehicle mix varies over time	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	Av. Demand (PCU/hr)	Scaling Factor (%)
1 - A1189 Bixley Road		FLAT	✓	1267	100.000
2 - Bucklesham Road (E)		FLAT	✓	204	100.000
3 - A1156 Felixstowe Road (S)		FLAT	✓	1092	100.000
4 - A1156 Felixstowe Road (W)		FLAT	✓	818	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	60	759	448
2 - Bucklesham Road (E)	77	0	36	91
3 - A1156 Felixstowe Road (S)	738	14	0	340
4 - A1156 Felixstowe Road (W)	412	32	374	0

Vehicle Mix

16:45 - 17:00

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	1	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

17:00 - 17:15

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

17:15 - 17:30

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

17:30 - 17:45

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

17:45 - 18:00

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

18:00 - 18:15

HV %s

From \ To	1 - A1189 Bixley Road	2 - Bucklesham Road (E)	3 - A1156 Felixstowe Road (S)	4 - A1156 Felixstowe Road (W)
1 - A1189 Bixley Road	0	0	0	0
2 - Bucklesham Road (E)	0	0	0	0
3 - A1156 Felixstowe Road (S)	0	0	0	0
4 - A1156 Felixstowe Road (W)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1189 Bixley Road	21.34	7.7	C	1273	1909
2 - Bucklesham Road (E)	185.58	10.6	F	200	300
3 - A1156 Felixstowe Road (S)	93.82	28.1	F	1087	1631
4 - A1156 Felixstowe Road (W)	85.39	21.0	F	815	1222

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1287	322	402	1277	1178	0.0	7.2	16.083	C
2 - Bucklesham Road (E)	210	53	1578	184	101	0.0	6.1	62.674	F
3 - A1156 Felixstowe Road (S)	1072	268	622	1036	1140	0.0	15.0	33.209	D
4 - A1156 Felixstowe Road (W)	803	201	791	790	868	0.0	10.5	32.129	D

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1276	319	422	1284	1212	7.2	7.7	20.496	C
2 - Bucklesham Road (E)	193	48	1601	181	105	6.1	7.9	134.636	F
3 - A1156 Felixstowe Road (S)	1095	274	608	1078	1174	15.0	21.2	64.856	F
4 - A1156 Felixstowe Road (W)	840	210	813	821	873	10.5	14.8	56.688	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1268	317	408	1269	1200	7.7	7.4	21.338	C
2 - Bucklesham Road (E)	198	49	1575	197	102	7.9	8.5	156.796	F
3 - A1156 Felixstowe Road (S)	1083	271	608	1074	1164	21.2	23.1	71.351	F
4 - A1156 Felixstowe Road (W)	825	206	807	801	875	14.8	20.5	79.630	F

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1283	321	400	1309	1233	7.4	6.3	20.569	C
2 - Bucklesham Road (E)	201	50	1605	200	104	8.5	8.7	153.805	F
3 - A1156 Felixstowe Road (S)	1106	276	637	1098	1169	23.1	28.1	89.591	F
4 - A1156 Felixstowe Road (W)	820	205	818	815	916	20.5	19.2	85.394	F

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1270	318	431	1267	1185	6.3	6.7	17.640	C
2 - Bucklesham Road (E)	192	48	1591	185	107	8.7	10.6	185.582	F
3 - A1156 Felixstowe Road (S)	1081	270	603	1086	1172	28.1	26.3	93.820	F
4 - A1156 Felixstowe Road (W)	805	201	801	815	888	19.2	18.5	84.212	F

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	1254	313	422	1238	1212	6.7	6.2	16.773	C
2 - Bucklesham Road (E)	207	52	1550	207	110	10.6	8.6	145.994	F
3 - A1156 Felixstowe Road (S)	1088	272	607	1096	1150	26.3	24.8	79.398	F
4 - A1156 Felixstowe Road (W)	795	199	829	805	874	18.5	21.0	84.743	F

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	812	998	0.814	808	0.0	3.0	11.682	B
			2	1,4	469	998	0.470	469	0.0	0.9	6.339	A
		2	1	(1,2,3,4)	1287			1281	0.0	3.3	6.250	A
	Exit	1	1		1178			1178	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	32	185	0.172	31	0.0	0.3	19.604	C
			2	1,2,4	157	185	0.845	153	0.0	1.7	27.989	D
		2	1	(1,2,3,4)	210			189	0.0	4.1	35.363	E
	Exit	1	1		101			101	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	314	781	0.402	316	0.0	0.8	7.685	A
			2	1,2,3	722	781	0.924	720	0.0	4.5	19.142	C
		2	1	(1,2,3,4)	1072			1036	0.0	9.6	17.423	C
	Exit	1	1		1140			1140	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	400	518	0.772	399	0.0	2.4	18.178	C
			2	2,3,4	396	518	0.764	391	0.0	2.7	19.054	C
		2	1	(1,2,3,4)	803			796	0.0	5.4	13.250	B
	Exit	1	1		868			868	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	819	989	0.828	826	3.0	2.6	12.787	B
			2	1,4	458	989	0.463	458	0.9	1.1	6.868	A
		2	1	(1,2,3,4)	1276			1277	3.3	4.0	9.790	A
	Exit	1	1		1212			1212	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	33	181	0.182	32	0.3	0.3	21.970	C
			2	1,2,4	150	181	0.832	149	1.7	1.7	36.375	E
		2	1	(1,2,3,4)	193			183	4.1	5.9	100.064	F
	Exit	1	1		105			105	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	335	787	0.426	334	0.8	0.8	8.632	A
			2	1,2,3	745	787	0.947	744	4.5	4.9	23.389	C
		2	1	(1,2,3,4)	1095			1081	9.6	15.4	45.948	E
	Exit	1	1		1174			1174	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	411	512	0.803	413	2.4	2.7	24.105	C
			2	2,3,4	407	512	0.796	408	2.7	2.7	24.089	C
		2	1	(1,2,3,4)	840			819	5.4	9.4	32.508	D
	Exit	1	1		873			873	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	819	995	0.822	825	2.6	2.8	12.963	B
			2	1,4	443	995	0.445	444	1.1	0.7	7.255	A
		2	1	(1,2,3,4)	1268			1262	4.0	4.0	10.395	B
	Exit	1	1		1200			1200	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	31	186	0.167	33	0.3	0.2	25.466	D
			2	1,2,4	165	186	0.887	164	1.7	1.7	37.439	E
		2	1	(1,2,3,4)	198			196	5.9	6.6	122.132	F
	Exit	1	1		102			102	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	339	787	0.431	341	0.8	0.7	8.995	A
			2	1,2,3	734	787	0.933	733	4.9	4.7	22.575	C
		2	1	(1,2,3,4)	1083			1073	15.4	17.6	52.916	F
	Exit	1	1		1164			1164	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	404	513	0.787	408	2.7	2.8	25.562	D
			2	2,3,4	399	513	0.777	393	2.7	2.8	24.916	C
		2	1	(1,2,3,4)	825			803	9.4	14.9	54.374	F
	Exit	1	1		875			875	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	829	999	0.830	839	2.8	2.4	13.036	B
			2	1,4	468	999	0.469	470	0.7	1.0	7.104	A
		2	1	(1,2,3,4)	1283			1297	4.0	2.8	9.665	A
	Exit	1	1		1233			1233	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	33	180	0.181	34	0.2	0.2	24.553	C
			2	1,2,4	166	180	0.921	166	1.7	1.6	35.924	E
		2	1	(1,2,3,4)	201			198	6.6	6.9	119.537	F
	Exit	1	1		104			104	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	349	776	0.449	351	0.7	0.7	9.547	A
			2	1,2,3	747	776	0.962	746	4.7	5.0	24.410	C
		2	1	(1,2,3,4)	1106			1095	17.6	22.4	69.801	F
	Exit	1	1		1169			1169	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	424	510	0.830	427	2.8	3.2	27.283	D
			2	2,3,4	392	510	0.768	388	2.8	2.8	24.926	C
		2	1	(1,2,3,4)	820			816	14.9	13.3	59.305	F
	Exit	1	1		916			916	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	820	985	0.832	819	2.4	3.1	12.461	B
			2	1,4	446	985	0.453	448	1.0	0.7	6.947	A
		2	1	(1,2,3,4)	1270			1266	2.8	2.9	7.128	A
	Exit	1	1		1185			1185	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	31	183	0.168	30	0.2	0.3	25.236	D
			2	1,2,4	154	183	0.844	155	1.6	1.6	38.217	E
		2	1	(1,2,3,4)	192			185	6.9	8.7	149.693	F
	Exit	1	1		107			107	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	352	788	0.447	354	0.7	0.6	9.717	A
			2	1,2,3	740	788	0.939	731	5.0	5.1	23.894	C
		2	1	(1,2,3,4)	1081			1092	22.4	20.5	74.530	F
	Exit	1	1		1172			1172	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	401	515	0.779	401	3.2	2.7	24.826	C
			2	2,3,4	406	515	0.787	414	2.8	2.5	24.653	C
		2	1	(1,2,3,4)	805			807	13.3	13.3	59.349	F
	Exit	1	1		888			888	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1 - A1189 Bixley Road	Entry	1	1	2,3	801	989	0.810	799	3.1	2.8	12.153	B
			2	1,4	444	989	0.449	439	0.7	1.1	6.726	A
		2	1	(1,2,3,4)	1254			1245	2.9	2.4	6.641	A
	Exit	1	1		1212			1212	0.0	0.0	0.000	A
2 - Bucklesham Road (E)	Entry	1	1	3	35	191	0.185	39	0.3	0.1	23.856	C
			2	1,2,4	170	191	0.890	168	1.6	1.8	35.418	E
		2	1	(1,2,3,4)	207			206	8.7	6.7	113.604	F
	Exit	1	1		110			110	0.0	0.0	0.000	A
3 - A1156 Felixstowe Road (S)	Entry	1	1	4	352	787	0.447	347	0.6	1.1	9.351	A
			2	1,2,3	746	787	0.948	749	5.1	4.4	23.114	C
		2	1	(1,2,3,4)	1088			1098	20.5	19.2	61.107	F
	Exit	1	1		1150			1150	0.0	0.0	0.000	A
4 - A1156 Felixstowe Road (W)	Entry	1	1	1	399	507	0.785	397	2.7	2.8	25.170	D
			2	2,3,4	402	507	0.792	407	2.5	2.6	26.457	D
		2	1	(1,2,3,4)	795			801	13.3	15.6	59.680	F
	Exit	1	1		874			874	0.0	0.0	0.000	A