

planning
transport
design
environment
infrastructure

Document 3.1 – ES Volume 2

Appendix 4.1: Transport Assessment Part 3

Wheelabrator Kemsley (K3 Generating Station) and Wheelabrator Kemsley North
(WKN) Waste to Energy Facility DCO

September 2019 -Submission Version

PINS ref: EN010083



Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	355	1232	0.512	627	0	0.0	1.0	5.905	A
	2 - Grovehurst Road	331	83	840	1036	0.320	329	142	0.0	0.5	5.083	A
	3 - A249 onslip (NB)			906				264				
	4 - B2005 - link	356	89	0	1674	0.213	355	906	0.0	0.3	2.726	A
2 - South	1 - A249 onslip (SB)			485				540				
	2 - B2005 - link	909	227	129	1899	0.479	905	356	0.0	0.9	3.609	A
	3 - A249 offslip (SB)	428	107	1034	969	0.442	425	0	0.0	0.8	6.586	A
	4 - Swale Way	509	127	387	1083	0.470	505	1072	0.0	0.9	6.194	A
	5 - Grovehurst Road	460	115	568	1084	0.424	457	325	0.0	0.7	5.714	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	426	1178	0.639	751	0	1.0	1.7	8.360	A
	2 - Grovehurst Road	396	99	1007	903	0.438	394	170	0.5	0.8	7.059	A
	3 - A249 onslip (NB)			1085				316				
	4 - B2005 - link	427	107	0	1674	0.255	426	1085	0.3	0.3	2.884	A
2 - South	1 - A249 onslip (SB)			580				647				
	2 - B2005 - link	1088	272	154	1883	0.578	1086	426	0.9	1.4	4.508	A
	3 - A249 offslip (SB)	512	128	1240	790	0.648	508	0	0.8	1.8	12.580	B
	4 - Swale Way	608	152	463	1038	0.586	606	1285	0.9	1.4	8.296	A
	5 - Grovehurst Road	549	137	680	989	0.555	547	389	0.7	1.2	8.105	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	516	1110	0.831	912	0	1.7	4.4	17.290	C
	2 - Grovehurst Road	484	121	1222	732	0.662	480	206	0.8	1.9	14.066	B
	3 - A249 onslip (NB)			1319				383				
	4 - B2005 - link	517	129	0	1674	0.309	516	1319	0.3	0.4	3.109	A
2 - South	1 - A249 onslip (SB)			704				787				
	2 - B2005 - link	1323	331	187	1863	0.710	1318	516	1.4	2.4	6.565	A
	3 - A249 offslip (SB)	626	157	1506	560	1.118	542	0	1.8	23.0	100.388	F
	4 - Swale Way	744	186	537	994	0.749	739	1510	1.4	2.8	13.808	B
	5 - Grovehurst Road	673	168	826	866	0.777	665	449	1.2	3.2	17.242	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	521	1106	0.834	922	0	4.4	4.7	19.198	C
	2 - Grovehurst Road	484	121	1235	722	0.671	484	208	1.9	2.0	15.096	C
	3 - A249 onslip (NB)			1332				387				
	4 - B2005 - link	521	130	0	1674	0.311	521	1332	0.4	0.5	3.121	A
2 - South	1 - A249 onslip (SB)			710				795				
	2 - B2005 - link	1336	334	189	1861	0.718	1335	521	2.4	2.5	6.832	A
	3 - A249 offslip (SB)	626	157	1524	544	1.152	541	0	23.0	44.4	226.403	F
	4 - Swale Way	744	186	541	991	0.751	744	1524	2.8	2.9	14.509	B
	5 - Grovehurst Road	673	168	833	861	0.782	672	452	3.2	3.4	18.906	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	439	1169	0.645	765	0	4.7	1.9	9.145	A
	2 - Grovehurst Road	396	99	1029	886	0.447	400	175	2.0	0.8	7.483	A
	3 - A249 onslip (NB)			1104				325				
	4 - B2005 - link	439	110	0	1674	0.262	439	1104	0.5	0.4	2.916	A
	1 - A249 onslip (SB)			595				658				

2 - South	2 - B2005 - link	1107	277	157	1881	0.589	1111	438	2.5	1.4	4.700	A
	3 - A249 offslip (SB)	512	128	1268	766	0.668	680	0	44.4	2.3	87.971	F
	4 - Swale Way	608	152	528	998	0.609	613	1420	2.9	1.6	9.463	A
	5 - Grovehurst Road	549	137	695	977	0.562	558	446	3.4	1.3	8.742	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	361	1228	0.514	634	0	1.9	1.1	6.092	A
	2 - Grovehurst Road	331	83	851	1027	0.323	333	144	0.8	0.5	5.193	A
	3 - A249 onslip (NB)			916				268				
	4 - B2005 - link	361	90	0	1674	0.215	361	916	0.4	0.3	2.740	A
2 - South	1 - A249 onslip (SB)			490				547				
	2 - B2005 - link	919	230	130	1898	0.484	921	360	1.4	0.9	3.694	A
	3 - A249 offslip (SB)	428	107	1051	954	0.449	434	0	2.3	0.8	7.000	A
	4 - Swale Way	509	127	394	1079	0.472	512	1091	1.6	0.9	6.376	A
	5 - Grovehurst Road	460	115	575	1078	0.427	462	330	1.3	0.8	5.870	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.03	0.55	1.00	1.40	1.45			N/A	N/A
	2 - Grovehurst Road	0.47	0.00	0.00	0.47	0.47			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.91	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.78	0.06	0.72	1.18	1.68			N/A	N/A
	4 - Swale Way	0.87	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.73	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.73	0.05	0.65	4.41	6.71			N/A	N/A
	2 - Grovehurst Road	0.77	0.07	0.74	1.50	1.56			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.35	0.05	0.60	3.24	4.84			N/A	N/A
	3 - A249 offslip (SB)	1.77	0.04	0.39	4.71	8.57			N/A	N/A
	4 - Swale Way	1.38	0.06	0.88	3.00	4.32			N/A	N/A
	5 - Grovehurst Road	1.22	0.06	0.71	2.74	3.91			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.43	0.03	0.35	9.69	24.07			N/A	N/A
	2 - Grovehurst Road	1.87	0.03	0.28	1.87	6.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.39	0.03	0.27	2.39	3.14			N/A	N/A
	3 - A249 offslip (SB)	23.01	5.30	19.81	41.09	49.00			N/A	N/A
	4 - Swale Way	2.82	0.03	0.30	2.89	12.89			N/A	N/A
	5 - Grovehurst Road	3.21	0.03	0.32	5.55	16.72			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	4.71	0.03	0.30	4.71	20.41			N/A	N/A
	2 - Grovehurst Road	1.98	0.03	0.29	1.98	7.30			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.86			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.49	0.03	0.27	2.49	2.49			N/A	N/A
	3 - A249 offslip (SB)	44.35	15.08	40.37	73.03	84.68			N/A	N/A
	4 - Swale Way	2.92	0.03	0.28	2.92	7.64			N/A	N/A
	5 - Grovehurst Road	3.40	0.03	0.29	3.40	13.85			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.86	0.05	0.47	4.95	8.03			N/A	N/A
	2 - Grovehurst Road	0.82	0.06	0.71	1.40	1.84			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.45	0.11	1.18	2.69	3.51			N/A	N/A
	3 - A249 offslip (SB)	2.25	0.03	0.33	4.58	11.96			N/A	N/A
	4 - Swale Way	1.59	0.06	0.91	3.72	5.33			N/A	N/A
	5 - Grovehurst Road	1.31	0.05	0.50	3.18	4.85			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.07	0.03	0.34	2.48	5.33			N/A	N/A
	2 - Grovehurst Road	0.48	0.04	0.36	1.38	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.95	0.05	0.59	1.91	2.77			N/A	N/A
	3 - A249 offslip (SB)	0.83	0.03	0.26	0.83	0.83			N/A	N/A
	4 - Swale Way	0.90	0.04	0.38	2.18	3.78			N/A	N/A
	5 - Grovehurst Road	0.75	0.03	0.34	1.75	3.41			N/A	N/A

2031, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	22.68	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	258.52	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	813	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	442	100.000
	4 - Swale Way		ONE HOUR	✓	1252	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	633
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	521	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	465	322
		3 - A249 offslip (SB)	1	27	0	198	216
		4 - Swale Way	662	431	0	0	159
		5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	20
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	26	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	17	2	0	0	3
		5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.93	41.91	9.7	51.5	E	746	1119
	2 - Grovehurst Road	0.32	6.69	0.5	1.8	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.43	3.63	0.7	1.5	A	682	1023
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.49	3.84	1.0	1.5	A	766	1149
	3 - A249 offslip (SB)	0.51	7.65	1.0	3.6	A	406	608
	4 - Swale Way	1.33	617.22	194.5	200.0	F	1149	1723
	5 - Grovehurst Road	0.73	16.36	2.6	12.0	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	612	153	577	1085	0.564	607	0	0.0	1.3	7.458	A
	2 - Grovehurst Road	171	43	856	1056	0.162	170	327	0.0	0.2	4.061	A
	3 - A249 onslip (NB)			622				404				
	4 - B2005 - link	579	145	0	1730	0.335	577	622	0.0	0.5	3.116	A
2 - South	1 - A249 onslip (SB)			656				605				
	2 - B2005 - link	624	156	79	1876	0.333	622	577	0.0	0.5	2.867	A
	3 - A249 offslip (SB)	333	83	702	1254	0.265	331	0	0.0	0.4	3.897	A
	4 - Swale Way	943	236	456	1176	0.801	928	577	0.0	3.7	13.753	B
	5 - Grovehurst Road	402	101	862	897	0.448	399	521	0.0	0.8	7.177	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	731	183	678	1010	0.723	726	0	1.3	2.5	12.447	B
	2 - Grovehurst Road	204	51	1016	927	0.220	204	388	0.2	0.3	4.978	A
	3 - A249 onslip (NB)			745				475				
	4 - B2005 - link	678	170	0	1730	0.392	678	745	0.5	0.6	3.419	A
2 - South	1 - A249 onslip (SB)			771				702				
	2 - B2005 - link	747	187	95	1866	0.400	746	676	0.5	0.7	3.213	A
	3 - A249 offslip (SB)	397	99	841	1129	0.352	397	0	0.4	0.5	4.913	A
	4 - Swale Way	1126	281	547	1116	1.008	1068	691	3.7	18.0	48.927	E
	5 - Grovehurst Road	480	120	996	794	0.605	477	619	0.8	1.5	11.269	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	895	224	737	967	0.926	872	0	2.5	8.3	31.976	D
	2 - Grovehurst Road	250	62	1169	800	0.312	249	439	0.3	0.4	6.525	A
	3 - A249 onslip (NB)			898				520				
	4 - B2005 - link	737	184	0	1730	0.426	737	898	0.6	0.7	3.621	A
2 - South	1 - A249 onslip (SB)			850				715				
	2 - B2005 - link	901	225	116	1854	0.486	899	734	0.7	0.9	3.770	A
	3 - A249 offslip (SB)	487	122	1015	972	0.501	485	0	0.5	1.0	7.363	A
	4 - Swale Way	1378	345	663	1039	1.327	1037	838	18.0	103.3	220.307	F
	5 - Grovehurst Road	588	147	982	805	0.730	584	718	1.5	2.5	15.929	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	895	224	738	966	0.927	890	0	8.3	9.7	41.906	E
	2 - Grovehurst Road	250	62	1184	788	0.317	250	444	0.4	0.5	6.695	A
	3 - A249 onslip (NB)			913				521				
	4 - B2005 - link	738	185	0	1730	0.427	738	913	0.7	0.7	3.628	A
2 - South	1 - A249 onslip (SB)			852				715				
	2 - B2005 - link	915	229	117	1853	0.494	915	736	0.9	1.0	3.838	A
	3 - A249 offslip (SB)	487	122	1032	957	0.509	487	0	1.0	1.0	7.645	A
	4 - Swale Way	1378	345	670	1034	1.333	1034	848	103.3	189.5	504.156	F
	5 - Grovehurst Road	588	147	980	807	0.728	588	725	2.5	2.6	16.356	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	731	183	695	997	0.733	758	0	9.7	2.9	16.572	C
	2 - Grovehurst Road	204	51	1053	896	0.228	205	401	0.5	0.3	5.211	A
	3 - A249 onslip (NB)			771				487				
	4 - B2005 - link	695	174	0	1730	0.402	695	771	0.7	0.7	3.480	A
2 - South	1 - A249 onslip (SB)			789				725				

2 - South	2 - B2005 - link	774	193	96	1865	0.415	775	693	1.0	0.7	3.306	A
	3 - A249 offslip (SB)	397	99	871	1101	0.361	399	0	1.0	0.6	5.140	A
	4 - Swale Way	1126	281	561	1107	1.017	1106	709	189.5	194.5	617.219	F
	5 - Grovehurst Road	480	120	1030	767	0.626	484	637	2.6	1.7	12.837	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	612	153	664	1020	0.600	618	0	2.9	1.5	9.055	A
	2 - Grovehurst Road	171	43	923	1006	0.170	171	359	0.3	0.2	4.315	A
	3 - A249 onslip (NB)			632				462				
	4 - B2005 - link	664	166	0	1730	0.384	664	632	0.7	0.6	3.380	A
2 - South	1 - A249 onslip (SB)			743				733				
	2 - B2005 - link	634	158	80	1875	0.338	635	662	0.7	0.5	2.903	A
	3 - A249 offslip (SB)	333	83	715	1242	0.268	334	0	0.6	0.4	3.966	A
	4 - Swale Way	943	236	463	1172	0.804	1166	586	194.5	138.6	514.936	F
	5 - Grovehurst Road	402	101	1071	735	0.547	404	558	1.7	1.2	10.946	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.27	0.55	1.18	1.65	1.85			N/A	N/A
	2 - Grovehurst Road	0.19	0.00	0.00	0.19	0.19			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.50	0.00	0.00	0.50	0.50			N/A	N/A
	3 - A249 offslip (SB)	0.36	0.00	0.00	0.36	0.36			N/A	N/A
	4 - Swale Way	3.73	0.03	0.35	8.10	20.19			N/A	N/A
	5 - Grovehurst Road	0.80	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.49	0.06	0.92	6.61	10.03			N/A	N/A
	2 - Grovehurst Road	0.28	0.00	0.00	0.28	0.28			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.20	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.66	0.10	0.83	1.37	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.54	0.06	0.66	1.33	1.42			N/A	N/A
	4 - Swale Way	18.03	0.39	10.22	44.42	60.17			N/A	N/A
	5 - Grovehurst Road	1.48	0.09	1.11	2.94	3.96			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.33	0.07	1.24	24.08	38.23			N/A	N/A
	2 - Grovehurst Road	0.45	0.03	0.25	0.46	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.74	0.03	0.25	0.74	0.74			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.94	0.03	0.25	0.94	0.94			N/A	N/A
	3 - A249 offslip (SB)	0.99	0.03	0.26	0.99	0.99			N/A	N/A
	4 - Swale Way	103.34	58.14	99.83	143.51	157.81			N/A	N/A
	5 - Grovehurst Road	2.55	0.03	0.30	2.94	11.99			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	9.74	0.05	0.47	27.47	51.49			N/A	N/A
	2 - Grovehurst Road	0.46	0.03	0.32	1.41	1.82			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.74	0.03	0.27	0.74	1.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.97	0.03	0.27	0.97	1.19			N/A	N/A
	3 - A249 offslip (SB)	1.02	0.03	0.28	1.02	3.61			N/A	N/A
	4 - Swale Way	189.55	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.61	0.03	0.28	2.61	6.62			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.90	0.04	0.42	7.97	14.56			N/A	N/A
	2 - Grovehurst Road	0.30	0.00	0.00	0.30	0.30			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.68	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.71	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.09	0.79	1.36	1.43			N/A	N/A
	4 - Swale Way	194.45	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.73	0.06	0.78	4.30	6.41			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.53	0.03	0.31	2.76	7.90			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.03	0.28	0.66	1.08			N/A	N/A
	4 - Swale Way	138.59	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.24	0.05	0.47	2.99	4.69			N/A	N/A

2031 + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	201.95	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	433.44	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1084	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	619	100.000
	4 - Swale Way		ONE HOUR	✓	753	100.000
	5 - Grovehurst Road		ONE HOUR	✓	774	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	123	0	961
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	159	402	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	419	0	0	1008	231
		3 - A249 offslip (SB)	1	22	0	380	216
		4 - Swale Way	447	228	0	0	78
		5 - Grovehurst Road	289	313	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	15
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	5	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	15	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	34	9	0	0	9
		5 - Grovehurst Road	1	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.05	115.95	40.9	101.5	F	995	1492
	2 - Grovehurst Road	1.28	491.95	95.5	138.9	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.09	0.4	1.9	A	496	744
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.83	11.30	4.9	21.4	B	1503	2254
	3 - A249 offslip (SB)	1.82	1961.28	232.1	187.4	F	568	852
	4 - Swale Way	0.96	63.51	13.9	61.7	F	691	1036
	5 - Grovehurst Road	1.35	553.51	114.8	166.8	F	710	1065

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	816	204	416	1219	0.669	808	0	0.0	2.0	8.605	A
	2 - Grovehurst Road	555	139	1015	919	0.604	549	210	0.0	1.5	9.581	A
	3 - A249 onslip (NB)			1237				327				
	4 - B2005 - link	418	104	0	1685	0.248	416	1237	0.0	0.3	2.835	A
2 - South	1 - A249 onslip (SB)			547				859				
	2 - B2005 - link	1234	308	128	1935	0.638	1227	419	0.0	1.7	5.039	A
	3 - A249 offslip (SB)	466	117	1355	712	0.655	459	0	0.0	1.8	13.850	B
	4 - Swale Way	567	142	658	928	0.611	561	1155	0.0	1.5	9.660	A
	5 - Grovehurst Road	583	146	830	897	0.649	576	389	0.0	1.8	10.964	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	974	244	491	1161	0.839	964	0	2.0	4.7	17.350	C
	2 - Grovehurst Road	663	166	1207	767	0.864	648	249	1.5	5.2	27.422	D
	3 - A249 onslip (NB)			1469				386				
	4 - B2005 - link	492	123	0	1685	0.292	491	1469	0.3	0.4	3.016	A
2 - South	1 - A249 onslip (SB)			643				1020				
	2 - B2005 - link	1465	366	150	1921	0.763	1460	493	1.7	3.1	7.715	A
	3 - A249 offslip (SB)	556	139	1610	493	1.129	476	0	1.8	21.9	112.604	F
	4 - Swale Way	677	169	756	870	0.778	670	1330	1.5	3.2	17.420	C
	5 - Grovehurst Road	696	174	987	769	0.905	676	439	1.8	6.7	33.370	D

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1194	298	516	1142	1.045	1110	0	4.7	25.4	61.328	F
	2 - Grovehurst Road	811	203	1354	648	1.252	642	272	5.2	47.6	163.846	F
	3 - A249 onslip (NB)			1593				403				
	4 - B2005 - link	516	129	0	1685	0.306	516	1593	0.4	0.4	3.079	A
2 - South	1 - A249 onslip (SB)			658				1117				
	2 - B2005 - link	1596	399	143	1925	0.829	1590	515	3.1	4.6	10.545	B
	3 - A249 offslip (SB)	682	170	1733	386	1.764	386	0	21.9	95.8	572.700	F
	4 - Swale Way	829	207	773	861	0.963	798	1347	3.2	10.9	43.937	E
	5 - Grovehurst Road	852	213	1132	647	1.317	643	439	6.7	59.1	199.862	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1194	298	516	1142	1.045	1132	0	25.4	40.9	115.949	F
	2 - Grovehurst Road	811	203	1373	633	1.283	632	275	47.6	92.4	406.105	F
	3 - A249 onslip (NB)			1603				403				
	4 - B2005 - link	516	129	0	1685	0.306	516	1603	0.4	0.4	3.079	A
2 - South	1 - A249 onslip (SB)			655				1127				
	2 - B2005 - link	1607	402	140	1927	0.834	1606	515	4.6	4.8	11.140	B
	3 - A249 offslip (SB)	682	170	1746	375	1.817	375	0	95.8	172.5	1300.581	F
	4 - Swale Way	829	207	775	860	0.964	817	1347	10.9	13.9	63.506	F
	5 - Grovehurst Road	852	213	1152	630	1.354	629	439	59.1	114.8	486.874	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	974	244	514	1144	0.852	1106	0	40.9	8.0	82.444	F
	2 - Grovehurst Road	663	166	1349	652	1.016	650	271	92.4	95.5	491.951	F
	3 - A249 onslip (NB)			1598				402				
	4 - B2005 - link	514	128	0	1685	0.305	514	1598	0.4	0.4	3.074	A
2 - South	1 - A249 onslip (SB)			671				1093				

2 - South	2 - B2005 - link	1600	400	157	1917	0.835	1600	515	4.8	4.9	11.301	B
	3 - A249 offslip (SB)	556	139	1756	367	1.515	367	0	172.5	219.8	1811.455	F
	4 - Swale Way	677	169	769	863	0.784	716	1354	13.9	4.0	29.261	D
	5 - Grovehurst Road	696	174	1060	711	0.979	704	425	114.8	112.6	553.514	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	816	204	519	1140	0.716	837	0	8.0	2.6	12.684	B
	2 - Grovehurst Road	555	139	1114	843	0.658	834	242	95.5	25.6	265.216	F
	3 - A249 onslip (NB)			1534				415				
	4 - B2005 - link	519	130	0	1685	0.308	519	1534	0.4	0.4	3.087	A
2 - South	1 - A249 onslip (SB)			708				1035				
	2 - B2005 - link	1513	378	184	1900	0.796	1516	524	4.9	4.1	9.475	A
	3 - A249 offslip (SB)	466	117	1700	417	1.118	417	0	219.8	232.1	1961.282	F
	4 - Swale Way	567	142	755	871	0.651	575	1362	4.0	1.9	12.498	B
	5 - Grovehurst Road	583	146	914	836	0.697	828	416	112.6	51.2	358.781	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.97	0.22	1.13	3.53	4.46			N/A	N/A
	2 - Grovehurst Road	1.48	0.04	0.43	3.87	6.41			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.73	0.64	1.26	1.96	2.36			N/A	N/A
	3 - A249 offslip (SB)	1.81	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	1.53	0.55	1.42	1.97	2.49			N/A	N/A
	5 - Grovehurst Road	1.79	0.04	0.37	4.61	9.01			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.68	0.08	1.27	12.61	18.65			N/A	N/A
	2 - Grovehurst Road	5.16	0.08	1.18	14.24	21.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.11	0.06	1.00	8.47	13.01			N/A	N/A
	3 - A249 offslip (SB)	21.91	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.23	0.08	1.42	8.34	12.13			N/A	N/A
	5 - Grovehurst Road	6.75	0.09	1.83	18.65	27.84			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	25.43	2.78	19.86	51.75	64.48			N/A	N/A
	2 - Grovehurst Road	47.58	21.96	44.87	70.99	79.88			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.57	0.03	0.31	4.65	20.81			N/A	N/A
	3 - A249 offslip (SB)	95.82	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	10.90	0.14	4.34	29.16	41.79			N/A	N/A
	5 - Grovehurst Road	59.06	30.29	56.39	84.81	94.28			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	40.91	5.43	32.82	82.01	101.46			N/A	N/A
	2 - Grovehurst Road	92.42	53.41	89.47	126.76	138.94			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.30	1.21	1.94			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.82	0.03	0.28	4.82	7.81			N/A	N/A
	3 - A249 offslip (SB)	172.46	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	13.89	0.09	3.08	40.02	61.72			N/A	N/A
	5 - Grovehurst Road	114.79	72.73	112.08	151.11	163.65			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	7.96	0.07	1.09	23.02	36.70			N/A	N/A
	2 - Grovehurst Road	95.47	58.64	92.91	127.37	138.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.90	0.07	1.30	13.78	21.44			N/A	N/A
	3 - A249 offslip (SB)	219.78	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	4.01	0.04	0.44	11.25	20.41			N/A	N/A
	5 - Grovehurst Road	112.64	66.99	109.40	152.73	166.80			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.63	0.03	0.31	3.86	13.16			N/A	N/A
	2 - Grovehurst Road	25.56	5.86	22.01	45.87	54.76			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.07	0.13	1.85	9.81	13.53			N/A	N/A
	3 - A249 offslip (SB)	232.07	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	1.93	0.03	0.32	3.43	10.00			N/A	N/A
	5 - Grovehurst Road	51.25	24.23	48.48	75.81	85.04			N/A	N/A

2031 + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	281.15	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	667.17	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1178	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	528	100.000
	4 - Swale Way		ONE HOUR	✓	1350	100.000
	5 - Grovehurst Road		ONE HOUR	✓	613	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	430	0	748
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	277	559	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	187	0	0	509	402
		3 - A249 offslip (SB)	1	39	0	201	287
		4 - Swale Way	755	434	0	0	161
		5 - Grovehurst Road	150	356	0	107	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	0	0	18
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	1	0	0	25	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	16	2	0	0	3
		5 - Grovehurst Road	0	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.27	516.87	153.1	200.0	F	1081	1621
	2 - Grovehurst Road	0.50	8.49	1.0	2.5	A	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.41	3.55	0.7	1.5	A	659	988
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.54	4.14	1.2	1.9	A	967	1451
	3 - A249 offslip (SB)	0.66	11.91	1.9	5.0	B	485	727
	4 - Swale Way	1.70	1709.09	466.5	181.9	F	1239	1858
	5 - Grovehurst Road	0.83	25.14	4.5	23.0	D	562	844

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	887	222	600	1110	0.799	872	0	0.0	3.7	14.384	B
	2 - Grovehurst Road	293	73	955	990	0.296	291	517	0.0	0.4	5.140	A
	3 - A249 onslip (NB)			820				427				
	4 - B2005 - link	602	150	0	1730	0.348	600	820	0.0	0.5	3.181	A
2 - South	1 - A249 onslip (SB)			682				789				
	2 - B2005 - link	820	205	80	1925	0.426	817	603	0.0	0.7	3.242	A
	3 - A249 offslip (SB)	398	99	896	1106	0.360	395	0	0.0	0.6	5.053	A
	4 - Swale Way	1016	254	683	1029	0.987	961	609	0.0	14.0	38.581	E
	5 - Grovehurst Road	461	115	1015	794	0.582	456	628	0.0	1.4	10.506	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1059	265	655	1067	0.992	1013	0	3.7	15.3	45.623	E
	2 - Grovehurst Road	350	87	1081	886	0.395	349	587	0.4	0.6	6.686	A
	3 - A249 onslip (NB)			961				468				
	4 - B2005 - link	655	164	0	1730	0.379	655	961	0.5	0.6	3.349	A
2 - South	1 - A249 onslip (SB)			752				826				
	2 - B2005 - link	961	240	96	1915	0.502	960	656	0.7	1.0	3.765	A
	3 - A249 offslip (SB)	475	119	1055	965	0.492	473	0	0.6	1.0	7.293	A
	4 - Swale Way	1214	303	808	947	1.282	944	720	14.0	81.3	195.941	F
	5 - Grovehurst Road	551	138	1031	783	0.704	547	721	1.4	2.3	15.035	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1297	324	711	1025	1.266	1022	0	15.3	84.1	185.456	F
	2 - Grovehurst Road	428	107	1124	854	0.502	427	608	0.6	1.0	8.408	A
	3 - A249 onslip (NB)			1038				513				
	4 - B2005 - link	711	178	0	1730	0.411	711	1038	0.6	0.7	3.532	A
2 - South	1 - A249 onslip (SB)			829				831				
	2 - B2005 - link	1030	258	116	1902	0.542	1030	712	1.0	1.2	4.122	A
	3 - A249 offslip (SB)	581	145	1146	885	0.657	578	0	1.0	1.8	11.575	B
	4 - Swale Way	1486	372	910	879	1.692	878	814	81.3	233.3	652.058	F
	5 - Grovehurst Road	675	169	993	814	0.829	667	796	2.3	4.3	23.244	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1297	324	715	1021	1.270	1021	0	84.1	153.0	419.681	F
	2 - Grovehurst Road	428	107	1126	852	0.503	428	610	1.0	1.0	8.491	A
	3 - A249 onslip (NB)			1039				515				
	4 - B2005 - link	715	179	0	1730	0.413	715	1039	0.7	0.7	3.545	A
2 - South	1 - A249 onslip (SB)			834				832				
	2 - B2005 - link	1031	258	118	1901	0.542	1031	716	1.2	1.2	4.135	A
	3 - A249 offslip (SB)	581	145	1149	883	0.658	581	0	1.8	1.9	11.907	B
	4 - Swale Way	1486	372	913	877	1.695	877	817	233.3	385.7	1276.509	F
	5 - Grovehurst Road	675	169	992	815	0.828	674	798	4.3	4.5	25.144	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1059	265	659	1064	0.995	1059	0	153.0	153.1	516.868	F
	2 - Grovehurst Road	350	87	1113	859	0.407	351	605	1.0	0.7	7.096	A
	3 - A249 onslip (NB)			992				471				
	4 - B2005 - link	659	165	0	1730	0.381	659	992	0.7	0.6	3.365	A
2 - South	1 - A249 onslip (SB)			758				829				

2 - South	2 - B2005 - link	993	248	98	1914	0.519	993	660	1.2	1.1	3.915	A
	3 - A249 offslip (SB)	475	119	1091	933	0.509	478	0	1.9	1.1	7.968	A
	4 - Swale Way	1214	303	829	933	1.301	933	740	385.7	455.9	1598.075	F
	5 - Grovehurst Road	551	138	1027	787	0.701	559	735	4.5	2.5	16.360	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	887	222	612	1100	0.806	1093	0	153.1	101.5	420.448	F
	2 - Grovehurst Road	293	73	1103	864	0.339	294	602	0.7	0.5	6.316	A
	3 - A249 onslip (NB)			962				435				
	4 - B2005 - link	612	153	0	1730	0.354	612	962	0.6	0.6	3.223	A
2 - South	1 - A249 onslip (SB)			694				824				
	2 - B2005 - link	969	242	81	1924	0.504	970	613	1.1	1.0	3.774	A
	3 - A249 offslip (SB)	398	99	1051	968	0.411	399	0	1.1	0.7	6.341	A
	4 - Swale Way	1016	254	767	974	1.043	974	683	455.9	466.5	1709.085	F
	5 - Grovehurst Road	461	115	1053	766	0.603	465	688	2.5	1.6	12.122	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.67	0.04	0.40	9.91	19.24			N/A	N/A
	2 - Grovehurst Road	0.42	0.00	0.00	0.42	0.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.74	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.56	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	13.95	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.35	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	15.27	0.36	8.67	37.39	50.56			N/A	N/A
	2 - Grovehurst Road	0.64	0.13	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.11	0.96	1.56	1.88			N/A	N/A
	3 - A249 offslip (SB)	0.95	0.08	0.87	1.61	1.96			N/A	N/A
	4 - Swale Way	81.33	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.25	0.09	1.33	5.24	7.31			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	84.06	43.94	80.59	120.28	133.50			N/A	N/A
	2 - Grovehurst Road	0.99	0.03	0.26	0.99	0.99			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.69	0.03	0.25	0.69	0.69			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.17	0.03	0.26	1.17	1.17			N/A	N/A
	3 - A249 offslip (SB)	1.85	0.03	0.28	1.85	5.02			N/A	N/A
	4 - Swale Way	233.31	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.26	0.04	0.38	10.67	22.98			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	153.03	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.00	0.03	0.27	1.00	2.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.70	0.03	0.27	0.70	1.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.18	0.03	0.26	1.18	1.18			N/A	N/A
	3 - A249 offslip (SB)	1.89	0.03	0.28	1.89	3.94			N/A	N/A
	4 - Swale Way	385.73	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.50	0.03	0.31	5.19	21.21			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	153.12	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.69	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.62	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.09	0.55	1.04	1.38	1.38			N/A	N/A
	3 - A249 offslip (SB)	1.05	0.08	0.91	1.84	2.47			N/A	N/A
	4 - Swale Way	455.93	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.46	0.04	0.44	6.79	11.67			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	101.54	43.66	95.45	156.59	177.64			N/A	N/A
	2 - Grovehurst Road	0.52	0.05	0.49	1.30	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.55	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.02	0.55	1.02	1.43	1.49			N/A	N/A
	3 - A249 offslip (SB)	0.71	0.05	0.47	1.32	1.87			N/A	N/A
	4 - Swale Way	466.51	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.56	0.04	0.37	3.97	7.74			N/A	N/A

2031 + K3 Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	17.09	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	63.21	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	864	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	692	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	822
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	911	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	389	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	18
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	39	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.87	23.91	6.0	30.7	C	793	1189
	2 - Grovehurst Road	0.70	17.33	2.3	9.2	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.74	7.39	2.7	5.4	A	1137	1705
	3 - A249 offslip (SB)	1.23	299.63	58.5	98.5	F	523	785
	4 - Swale Way	0.78	16.38	3.4	16.3	C	635	952
	5 - Grovehurst Road	0.81	21.80	3.9	19.5	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	650	163	355	1221	0.533	646	0	0.0	1.1	6.218	A
	2 - Grovehurst Road	331	83	860	1014	0.327	329	142	0.0	0.5	5.244	A
	3 - A249 onslip (NB)			925				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	925	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				551				
	2 - B2005 - link	927	232	129	1885	0.492	924	357	0.0	1.0	3.729	A
	3 - A249 offslip (SB)	429	107	1052	947	0.453	426	0	0.0	0.8	6.869	A
	4 - Swale Way	521	130	386	1064	0.490	517	1092	0.0	0.9	6.540	A
	5 - Grovehurst Road	460	115	579	1066	0.432	457	324	0.0	0.8	5.884	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	426	1167	0.666	773	0	1.1	1.9	9.080	A
	2 - Grovehurst Road	396	99	1030	877	0.451	394	170	0.5	0.8	7.440	A
	3 - A249 onslip (NB)			1108				316				
	4 - B2005 - link	427	107	0	1664	0.256	426	1108	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				660				
	2 - B2005 - link	1110	278	154	1870	0.594	1108	427	1.0	1.4	4.717	A
	3 - A249 offslip (SB)	512	128	1262	763	0.671	508	0	0.8	2.0	13.846	B
	4 - Swale Way	622	156	463	1019	0.610	620	1308	0.9	1.5	8.956	A
	5 - Grovehurst Road	549	137	694	967	0.568	547	388	0.8	1.3	8.520	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	515	1100	0.865	937	0	1.9	5.5	20.571	C
	2 - Grovehurst Road	484	121	1247	703	0.689	479	205	0.8	2.1	15.761	C
	3 - A249 onslip (NB)			1344				382				
	4 - B2005 - link	515	129	0	1664	0.310	515	1344	0.3	0.4	3.134	A
2 - South	1 - A249 onslip (SB)			703				802				
	2 - B2005 - link	1347	337	187	1850	0.728	1342	516	1.4	2.6	7.028	A
	3 - A249 offslip (SB)	628	157	1529	531	1.181	518	0	2.0	29.3	126.540	F
	4 - Swale Way	762	190	528	981	0.776	755	1520	1.5	3.2	15.455	C
	5 - Grovehurst Road	673	168	842	841	0.800	663	441	1.3	3.6	19.356	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	520	1096	0.868	949	0	5.5	6.0	23.913	C
	2 - Grovehurst Road	484	121	1262	690	0.702	484	207	2.1	2.3	17.332	C
	3 - A249 onslip (NB)			1359				386				
	4 - B2005 - link	520	130	0	1664	0.313	520	1359	0.4	0.5	3.148	A
2 - South	1 - A249 onslip (SB)			710				811				
	2 - B2005 - link	1363	341	189	1848	0.737	1362	521	2.6	2.7	7.392	A
	3 - A249 offslip (SB)	628	157	1551	512	1.227	510	0	29.3	58.5	299.629	F
	4 - Swale Way	762	190	530	980	0.778	761	1532	3.2	3.4	16.381	C
	5 - Grovehurst Road	673	168	849	834	0.806	672	442	3.6	3.9	21.797	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	441	1156	0.672	792	0	6.0	2.1	10.303	B
	2 - Grovehurst Road	396	99	1058	855	0.463	401	175	2.3	0.9	8.031	A
	3 - A249 onslip (NB)			1132				327				
	4 - B2005 - link	441	110	0	1664	0.265	441	1132	0.5	0.4	2.947	A
	1 - A249 onslip (SB)			599				673				

2 - South	2 - B2005 - link	1135	284	157	1867	0.608	1140	441	2.7	1.6	4.979	A
	3 - A249 offslip (SB)	512	128	1297	733	0.699	721	0	58.5	6.4	169.516	F
	4 - Swale Way	622	156	543	972	0.640	628	1475	3.4	1.8	10.648	B
	5 - Grovehurst Road	549	137	712	953	0.576	559	459	3.9	1.4	9.365	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	650	163	362	1215	0.535	654	0	2.1	1.2	6.458	A
	2 - Grovehurst Road	331	83	872	1004	0.330	333	144	0.9	0.5	5.375	A
	3 - A249 onslip (NB)			936				268				
	4 - B2005 - link	361	90	0	1664	0.217	362	936	0.4	0.3	2.767	A
2 - South	1 - A249 onslip (SB)			492				559				
	2 - B2005 - link	939	235	130	1884	0.498	941	362	1.6	1.0	3.825	A
	3 - A249 offslip (SB)	429	107	1071	930	0.461	451	0	6.4	0.9	7.860	A
	4 - Swale Way	521	130	400	1056	0.493	524	1123	1.8	1.0	6.811	A
	5 - Grovehurst Road	460	115	588	1058	0.435	462	336	1.4	0.8	6.066	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.12	0.55	1.03	1.12	1.12			N/A	N/A
	2 - Grovehurst Road	0.48	0.00	0.00	0.48	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.96	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.82	0.05	0.57	1.58	2.08			N/A	N/A
	4 - Swale Way	0.95	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.75	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.94	0.05	0.63	5.03	7.80			N/A	N/A
	2 - Grovehurst Road	0.81	0.06	0.73	1.31	1.77			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.44	0.05	0.56	3.58	5.42			N/A	N/A
	3 - A249 offslip (SB)	1.95	0.04	0.39	5.18	9.67			N/A	N/A
	4 - Swale Way	1.53	0.06	0.89	3.54	5.02			N/A	N/A
	5 - Grovehurst Road	1.29	0.06	0.67	2.94	4.36			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.49	0.04	0.40	14.47	29.66			N/A	N/A
	2 - Grovehurst Road	2.10	0.03	0.29	2.10	8.82			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.60	0.03	0.28	2.60	4.81			N/A	N/A
	3 - A249 offslip (SB)	29.26	9.84	26.49	47.90	55.52			N/A	N/A
	4 - Swale Way	3.23	0.03	0.32	4.83	16.27			N/A	N/A
	5 - Grovehurst Road	3.61	0.03	0.34	7.70	19.53			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	5.98	0.03	0.33	9.43	30.65			N/A	N/A
	2 - Grovehurst Road	2.26	0.03	0.29	2.26	9.19			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.75	0.03	0.27	2.75	2.75			N/A	N/A
	3 - A249 offslip (SB)	58.55	27.05	55.31	87.55	98.51			N/A	N/A
	4 - Swale Way	3.36	0.03	0.29	3.36	10.77			N/A	N/A
	5 - Grovehurst Road	3.89	0.03	0.30	4.07	17.89			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.12	0.04	0.44	5.78	9.78			N/A	N/A
	2 - Grovehurst Road	0.88	0.06	0.67	1.65	2.19			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.57	0.10	1.19	3.07	4.11			N/A	N/A
	3 - A249 offslip (SB)	6.42	0.10	2.06	17.31	25.30			N/A	N/A
	4 - Swale Way	1.83	0.06	0.90	4.52	6.62			N/A	N/A
	5 - Grovehurst Road	1.39	0.05	0.47	3.53	5.54			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.17	0.03	0.32	2.42	5.94			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.35	1.45	1.68			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.05	0.50	2.18	3.24			N/A	N/A
	3 - A249 offslip (SB)	0.87	0.03	0.26	0.87	0.87			N/A	N/A
	4 - Swale Way	0.99	0.04	0.36	2.45	4.49			N/A	N/A
	5 - Grovehurst Road	0.78	0.03	0.33	1.74	3.70			N/A	N/A

2031 + K3 Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	28.29	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	309.29	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	828	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	443	100.000
	4 - Swale Way		ONE HOUR	✓	1279	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	648
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	522	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	480	322
		3 - A249 offslip (SB)	1	27	0	199	216
		4 - Swale Way	688	432	0	0	159
	5 - Grovehurst Road	110	318	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	22
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	28	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	19	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.95	52.38	12.5	60.4	F	760	1140
	2 - Grovehurst Road	0.33	6.94	0.5	1.9	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.62	0.7	1.5	A	672	1008
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.51	3.99	1.0	1.5	A	781	1172
	3 - A249 offslip (SB)	0.52	8.08	1.1	3.7	A	407	610
	4 - Swale Way	1.38	732.25	233.1	233.1	F	1174	1760
	5 - Grovehurst Road	0.73	16.62	2.6	12.4	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	623	156	576	1068	0.584	618	0	0.0	1.4	7.912	A
	2 - Grovehurst Road	171	43	867	1037	0.165	170	327	0.0	0.2	4.150	A
	3 - A249 onslip (NB)			633				404				
	4 - B2005 - link	578	145	0	1719	0.336	576	633	0.0	0.5	3.145	A
2 - South	1 - A249 onslip (SB)			656				623				
	2 - B2005 - link	637	159	79	1854	0.343	635	577	0.0	0.5	2.947	A
	3 - A249 offslip (SB)	334	83	714	1236	0.270	332	0	0.0	0.4	3.976	A
	4 - Swale Way	963	241	457	1160	0.830	945	589	0.0	4.4	15.697	C
	5 - Grovehurst Road	402	101	880	873	0.460	399	522	0.0	0.8	7.535	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	670	999	0.745	739	0	1.4	2.8	13.568	B
	2 - Grovehurst Road	204	51	1024	908	0.225	204	385	0.2	0.3	5.112	A
	3 - A249 onslip (NB)			758				470				
	4 - B2005 - link	671	168	0	1719	0.390	670	758	0.5	0.6	3.431	A
2 - South	1 - A249 onslip (SB)			764				712				
	2 - B2005 - link	762	190	95	1845	0.413	761	669	0.5	0.7	3.320	A
	3 - A249 offslip (SB)	398	100	856	1107	0.360	397	0	0.4	0.6	5.067	A
	4 - Swale Way	1150	287	547	1100	1.045	1069	706	4.4	24.7	62.026	F
	5 - Grovehurst Road	480	120	999	780	0.615	477	617	0.8	1.5	11.774	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	724	959	0.951	882	0	2.8	10.2	37.265	E
	2 - Grovehurst Road	250	62	1172	783	0.319	249	434	0.3	0.5	6.739	A
	3 - A249 onslip (NB)			910				512				
	4 - B2005 - link	725	181	0	1719	0.422	724	910	0.6	0.7	3.620	A
2 - South	1 - A249 onslip (SB)			839				718				
	2 - B2005 - link	914	229	116	1832	0.499	913	723	0.7	1.0	3.910	A
	3 - A249 offslip (SB)	488	122	1029	950	0.513	486	0	0.6	1.0	7.719	A
	4 - Swale Way	1408	352	661	1025	1.373	1024	853	24.7	120.6	264.476	F
	5 - Grovehurst Road	588	147	973	801	0.734	584	713	1.5	2.6	16.243	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	725	958	0.951	902	0	10.2	12.5	52.384	F
	2 - Grovehurst Road	250	62	1189	768	0.325	250	439	0.5	0.5	6.943	A
	3 - A249 onslip (NB)			926				513				
	4 - B2005 - link	725	181	0	1719	0.422	725	926	0.7	0.7	3.623	A
2 - South	1 - A249 onslip (SB)			841				717				
	2 - B2005 - link	931	233	117	1832	0.508	931	724	1.0	1.0	3.994	A
	3 - A249 offslip (SB)	488	122	1048	933	0.523	488	0	1.0	1.1	8.078	A
	4 - Swale Way	1408	352	670	1020	1.381	1020	865	120.6	217.8	588.082	F
	5 - Grovehurst Road	588	147	970	804	0.732	588	720	2.6	2.6	16.621	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	682	990	0.752	781	0	12.5	3.2	19.834	C
	2 - Grovehurst Road	204	51	1065	873	0.234	205	398	0.5	0.3	5.394	A
	3 - A249 onslip (NB)			792				478				
	4 - B2005 - link	681	170	0	1719	0.396	682	792	0.7	0.7	3.471	A
	1 - A249 onslip (SB)			776				726				

2 - South	2 - B2005 - link	797	199	96	1844	0.432	798	680	1.0	0.8	3.445	A
	3 - A249 offslip (SB)	398	100	894	1072	0.372	400	0	1.1	0.6	5.375	A
	4 - Swale Way	1150	287	565	1089	1.056	1089	730	217.8	233.1	732.247	F
	5 - Grovehurst Road	480	120	1018	765	0.628	484	635	2.6	1.7	12.963	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	623	156	651	1013	0.616	630	0	3.2	1.6	9.551	A
	2 - Grovehurst Road	171	43	926	992	0.172	171	354	0.3	0.2	4.391	A
	3 - A249 onslip (NB)			644				454				
	4 - B2005 - link	651	163	0	1719	0.379	651	644	0.7	0.6	3.374	A
2 - South	1 - A249 onslip (SB)			730				735				
	2 - B2005 - link	647	162	80	1853	0.349	648	649	0.8	0.5	2.991	A
	3 - A249 offslip (SB)	334	83	729	1223	0.273	334	0	0.6	0.4	4.056	A
	4 - Swale Way	963	241	464	1155	0.834	1150	599	233.1	186.2	656.726	F
	5 - Grovehurst Road	402	101	1061	731	0.550	404	553	1.7	1.3	11.081	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.37	0.54	1.28	1.81	1.97			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.41	0.03	0.31	5.60	21.27			N/A	N/A
	5 - Grovehurst Road	0.84	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.77	0.06	1.02	7.38	11.18			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.70	0.10	0.84	1.38	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.56	0.07	0.70	1.34	1.42			N/A	N/A
	4 - Swale Way	24.67	0.67	14.86	59.72	80.00			N/A	N/A
	5 - Grovehurst Road	1.55	0.09	1.15	3.10	4.20			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	10.16	0.10	3.04	28.26	41.97			N/A	N/A
	2 - Grovehurst Road	0.46	0.03	0.25	0.46	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.25	0.72	0.72			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.99	0.03	0.26	0.99	0.99			N/A	N/A
	3 - A249 offslip (SB)	1.04	0.03	0.26	1.04	1.04			N/A	N/A
	4 - Swale Way	120.62	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.59	0.03	0.31	3.17	12.37			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	12.49	0.07	1.35	36.69	60.37			N/A	N/A
	2 - Grovehurst Road	0.48	0.03	0.32	1.44	1.92			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.73	0.03	0.27	0.73	1.02			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.03	0.27	1.03	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.08	0.03	0.28	1.08	3.73			N/A	N/A
	4 - Swale Way	217.77	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.65	0.03	0.28	2.65	6.79			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.24	0.04	0.41	8.85	16.50			N/A	N/A
	2 - Grovehurst Road	0.31	0.00	0.00	0.31	0.31			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.66	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.77	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.60	0.10	0.83	1.37	1.43			N/A	N/A
	4 - Swale Way	233.06	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.74	0.05	0.69	4.43	6.69			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.64	0.03	0.31	2.59	8.29			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.38	0.03	0.30	0.90	1.20			N/A	N/A
	4 - Swale Way	186.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.25	0.05	0.46	3.09	4.87			N/A	N/A

2031 + K3 and WKN Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	19.08	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	70.37	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	874	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	702	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	832
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	921	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	399	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	19
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	17	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	41	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.89	27.05	6.8	36.8	D	802	1203
	2 - Grovehurst Road	0.72	18.61	2.4	10.3	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.75	7.74	2.9	5.8	A	1145	1718
	3 - A249 offslip (SB)	1.27	339.52	65.8	105.6	F	523	785
	4 - Swale Way	0.79	17.79	3.7	18.6	C	644	966
	5 - Grovehurst Road	0.82	24.03	4.3	21.2	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	658	164	355	1211	0.543	653	0	0.0	1.2	6.405	A
	2 - Grovehurst Road	331	83	867	1003	0.330	329	142	0.0	0.5	5.325	A
	3 - A249 onslip (NB)			932				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	932	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				558				
	2 - B2005 - link	934	234	129	1872	0.499	930	357	0.0	1.0	3.806	A
	3 - A249 offslip (SB)	429	107	1059	935	0.459	426	0	0.0	0.8	7.022	A
	4 - Swale Way	529	132	386	1053	0.502	525	1098	0.0	1.0	6.761	A
	5 - Grovehurst Road	460	115	587	1055	0.436	457	324	0.0	0.8	5.993	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	426	1157	0.679	782	0	1.2	2.0	9.508	A
	2 - Grovehurst Road	396	99	1039	865	0.458	394	170	0.5	0.8	7.632	A
	3 - A249 onslip (NB)			1116				316				
	4 - B2005 - link	426	107	0	1664	0.256	426	1116	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				669				
	2 - B2005 - link	1118	280	154	1857	0.602	1116	427	1.0	1.5	4.848	A
	3 - A249 offslip (SB)	512	128	1270	750	0.683	508	0	0.8	2.1	14.578	B
	4 - Swale Way	631	158	462	1009	0.625	629	1316	1.0	1.6	9.399	A
	5 - Grovehurst Road	549	137	703	954	0.576	547	388	0.8	1.3	8.796	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	514	1091	0.882	946	0	2.0	6.1	22.577	C
	2 - Grovehurst Road	484	121	1255	690	0.703	479	205	0.8	2.2	16.666	C
	3 - A249 onslip (NB)			1352				382				
	4 - B2005 - link	514	129	0	1664	0.309	514	1352	0.3	0.4	3.131	A
2 - South	1 - A249 onslip (SB)			701				812				
	2 - B2005 - link	1354	339	186	1837	0.737	1350	515	1.5	2.7	7.306	A
	3 - A249 offslip (SB)	628	157	1536	517	1.214	506	0	2.1	32.5	141.159	F
	4 - Swale Way	773	193	523	974	0.793	765	1519	1.6	3.5	16.645	C
	5 - Grovehurst Road	673	168	851	825	0.815	662	437	1.3	3.9	20.894	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	520	1087	0.885	960	0	6.1	6.8	27.054	D
	2 - Grovehurst Road	484	121	1272	676	0.717	484	207	2.2	2.4	18.606	C
	3 - A249 onslip (NB)			1370				386				
	4 - B2005 - link	520	130	0	1664	0.312	520	1370	0.4	0.5	3.146	A
2 - South	1 - A249 onslip (SB)			709				822				
	2 - B2005 - link	1372	343	189	1836	0.748	1372	520	2.7	2.9	7.738	A
	3 - A249 offslip (SB)	628	157	1561	495	1.267	494	0	32.5	65.8	339.516	F
	4 - Swale Way	773	193	524	973	0.794	772	1531	3.5	3.7	17.787	C
	5 - Grovehurst Road	673	168	859	818	0.822	671	437	3.9	4.3	24.030	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	441	1146	0.686	804	0	6.8	2.3	11.046	B
	2 - Grovehurst Road	396	99	1070	840	0.471	402	175	2.4	0.9	8.327	A
	3 - A249 onslip (NB)			1144				327				
	4 - B2005 - link	441	110	0	1664	0.265	441	1144	0.5	0.4	2.945	A
	1 - A249 onslip (SB)			599				683				

2 - South	2 - B2005 - link	1147	287	158	1855	0.618	1152	441	2.9	1.6	5.155	A
	3 - A249 offslip (SB)	512	128	1309	716	0.716	705	0	65.8	17.7	216.862	F
	4 - Swale Way	631	158	538	965	0.654	638	1476	3.7	2.0	11.240	B
	5 - Grovehurst Road	549	137	722	939	0.585	561	454	4.3	1.4	9.788	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	658	164	363	1205	0.546	662	0	2.3	1.2	6.686	A
	2 - Grovehurst Road	331	83	881	992	0.334	333	144	0.9	0.5	5.474	A
	3 - A249 onslip (NB)			944				270				
	4 - B2005 - link	363	91	0	1664	0.218	363	944	0.4	0.3	2.768	A
2 - South	1 - A249 onslip (SB)			494				567				
	2 - B2005 - link	946	237	130	1871	0.506	949	363	1.6	1.0	3.912	A
	3 - A249 offslip (SB)	429	107	1079	918	0.468	496	0	17.7	0.9	10.002	B
	4 - Swale Way	529	132	415	1036	0.510	532	1160	2.0	1.1	7.185	A
	5 - Grovehurst Road	460	115	598	1045	0.440	463	349	1.4	0.8	6.203	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.17	0.56	1.06	1.17	1.56			N/A	N/A
	2 - Grovehurst Road	0.49	0.00	0.00	0.49	0.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.99	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.84	0.05	0.49	1.73	2.50			N/A	N/A
	4 - Swale Way	0.99	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.76	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.05	0.05	0.64	5.42	8.41			N/A	N/A
	2 - Grovehurst Road	0.83	0.06	0.72	1.43	1.86			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.49	0.05	0.54	3.74	5.71			N/A	N/A
	3 - A249 offslip (SB)	2.06	0.04	0.39	5.46	10.26			N/A	N/A
	4 - Swale Way	1.63	0.06	0.89	3.83	5.56			N/A	N/A
	5 - Grovehurst Road	1.33	0.05	0.65	3.10	4.63			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.14	0.04	0.44	17.07	32.35			N/A	N/A
	2 - Grovehurst Road	2.22	0.03	0.30	2.22	9.98			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.72	0.03	0.28	2.72	5.84			N/A	N/A
	3 - A249 offslip (SB)	32.47	12.32	29.85	51.41	58.96			N/A	N/A
	4 - Swale Way	3.53	0.03	0.33	6.34	18.60			N/A	N/A
	5 - Grovehurst Road	3.92	0.04	0.36	9.17	21.20			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	6.81	0.03	0.35	13.53	36.84			N/A	N/A
	2 - Grovehurst Road	2.42	0.03	0.29	2.42	10.32			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.89	0.03	0.27	2.89	2.89			N/A	N/A
	3 - A249 offslip (SB)	65.77	33.45	62.79	94.89	105.62			N/A	N/A
	4 - Swale Way	3.69	0.03	0.29	3.69	13.36			N/A	N/A
	5 - Grovehurst Road	4.27	0.03	0.31	5.66	20.82			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.26	0.04	0.43	6.17	10.69			N/A	N/A
	2 - Grovehurst Road	0.91	0.06	0.64	1.77	2.47			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.64	0.09	1.20	3.37	4.54			N/A	N/A
	3 - A249 offslip (SB)	17.65	3.94	15.07	31.43	37.50			N/A	N/A
	4 - Swale Way	1.95	0.06	0.82	4.96	7.48			N/A	N/A
	5 - Grovehurst Road	1.44	0.05	0.45	3.73	5.94			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.22	0.03	0.32	2.36	6.27			N/A	N/A
	2 - Grovehurst Road	0.51	0.03	0.35	1.47	1.79			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.05	0.48	2.36	3.54			N/A	N/A
	3 - A249 offslip (SB)	0.89	0.03	0.26	0.89	0.89			N/A	N/A
	4 - Swale Way	1.06	0.04	0.36	2.62	4.95			N/A	N/A
	5 - Grovehurst Road	0.80	0.03	0.32	1.70	3.85			N/A	N/A

2031 + K3 and WKN Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	32.18	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	341.81	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	838	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	444	100.000
	4 - Swale Way		ONE HOUR	✓	1300	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	658
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	523	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	490	322
		3 - A249 offslip (SB)	1	27	0	200	216
		4 - Swale Way	708	433	0	0	159
		5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	23
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	30	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	20	3	0	0	3
		5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.97	59.50	14.5	64.9	F	769	1153
	2 - Grovehurst Road	0.33	7.06	0.5	2.0	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.58	0.7	1.4	A	671	1006
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.52	4.11	1.1	1.5	A	787	1181
	3 - A249 offslip (SB)	0.53	8.36	1.1	3.8	A	407	611
	4 - Swale Way	1.41	804.56	257.9	257.9	F	1193	1789
	5 - Grovehurst Road	0.74	16.85	2.7	12.7	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	580	1060	0.595	625	0	0.0	1.4	8.178	A
	2 - Grovehurst Road	171	43	877	1028	0.166	170	328	0.0	0.2	4.194	A
	3 - A249 onslip (NB)			641				407				
	4 - B2005 - link	582	145	0	1730	0.336	580	641	0.0	0.5	3.125	A
2 - South	1 - A249 onslip (SB)			656				637				
	2 - B2005 - link	642	160	79	1834	0.350	639	577	0.0	0.5	3.009	A
	3 - A249 offslip (SB)	334	84	719	1225	0.273	333	0	0.0	0.4	4.028	A
	4 - Swale Way	979	245	455	1154	0.848	959	596	0.0	4.9	17.071	C
	5 - Grovehurst Road	402	101	894	858	0.469	399	520	0.0	0.9	7.779	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	670	995	0.757	747	0	1.4	2.9	14.214	B
	2 - Grovehurst Road	204	51	1033	899	0.227	204	384	0.2	0.3	5.176	A
	3 - A249 onslip (NB)			766				471				
	4 - B2005 - link	671	168	0	1730	0.388	670	766	0.5	0.6	3.394	A
2 - South	1 - A249 onslip (SB)			760				720				
	2 - B2005 - link	767	192	95	1825	0.421	767	665	0.5	0.7	3.400	A
	3 - A249 offslip (SB)	399	100	861	1094	0.365	398	0	0.4	0.6	5.168	A
	4 - Swale Way	1169	292	546	1095	1.067	1070	714	4.9	29.5	71.101	F
	5 - Grovehurst Road	480	120	1002	773	0.621	477	614	0.9	1.6	12.065	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	723	957	0.965	889	0	2.9	11.4	40.584	E
	2 - Grovehurst Road	250	62	1179	775	0.322	249	432	0.3	0.5	6.835	A
	3 - A249 onslip (NB)			917				511				
	4 - B2005 - link	723	181	0	1730	0.418	723	917	0.6	0.7	3.574	A
2 - South	1 - A249 onslip (SB)			833				722				
	2 - B2005 - link	918	229	116	1812	0.506	917	717	0.7	1.0	4.014	A
	3 - A249 offslip (SB)	489	122	1033	937	0.521	487	0	0.6	1.1	7.953	A
	4 - Swale Way	1431	358	658	1021	1.401	1021	861	29.5	132.2	293.937	F
	5 - Grovehurst Road	588	147	972	798	0.737	584	707	1.6	2.6	16.488	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	724	956	0.965	910	0	11.4	14.5	59.498	F
	2 - Grovehurst Road	250	62	1197	760	0.329	250	437	0.5	0.5	7.060	A
	3 - A249 onslip (NB)			935				512				
	4 - B2005 - link	724	181	0	1730	0.418	724	935	0.7	0.7	3.577	A
2 - South	1 - A249 onslip (SB)			835				721				
	2 - B2005 - link	936	234	117	1812	0.517	936	718	1.0	1.1	4.107	A
	3 - A249 offslip (SB)	489	122	1052	919	0.532	489	0	1.1	1.1	8.356	A
	4 - Swale Way	1431	358	667	1016	1.409	1015	874	132.2	236.1	641.497	F
	5 - Grovehurst Road	588	147	968	801	0.734	588	715	2.6	2.7	16.854	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	679	988	0.762	798	0	14.5	3.5	22.452	C
	2 - Grovehurst Road	204	51	1078	860	0.237	205	398	0.5	0.3	5.500	A
	3 - A249 onslip (NB)			807				477				
	4 - B2005 - link	678	170	0	1730	0.392	679	807	0.7	0.6	3.424	A
	1 - A249 onslip (SB)			769				730				

2 - South	2 - B2005 - link	809	202	96	1824	0.444	810	673	1.1	0.8	3.557	A
	3 - A249 offslip (SB)	399	100	906	1052	0.379	401	0	1.1	0.6	5.543	A
	4 - Swale Way	1169	292	566	1082	1.080	1082	742	236.1	257.9	804.559	F
	5 - Grovehurst Road	480	120	1015	763	0.629	484	633	2.7	1.8	13.058	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	648	1011	0.624	638	0	3.5	1.7	9.828	A
	2 - Grovehurst Road	171	43	933	985	0.173	171	353	0.3	0.2	4.425	A
	3 - A249 onslip (NB)			652				452				
	4 - B2005 - link	648	162	0	1730	0.374	648	652	0.6	0.6	3.326	A
2 - South	1 - A249 onslip (SB)			722				739				
	2 - B2005 - link	653	163	80	1833	0.356	654	642	0.8	0.6	3.056	A
	3 - A249 offslip (SB)	334	84	734	1211	0.276	335	0	0.6	0.4	4.115	A
	4 - Swale Way	979	245	463	1149	0.852	1145	606	257.9	216.4	746.281	F
	5 - Grovehurst Road	402	101	1058	728	0.552	404	550	1.8	1.3	11.179	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.44	0.53	1.33	1.90	2.26			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.92	0.03	0.30	4.92	20.76			N/A	N/A
	5 - Grovehurst Road	0.87	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.94	0.06	1.08	7.84	11.86			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.72	0.10	0.84	1.39	1.46			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.07	0.72	1.34	1.42			N/A	N/A
	4 - Swale Way	29.49	0.82	17.95	71.29	95.34			N/A	N/A
	5 - Grovehurst Road	1.59	0.09	1.17	3.21	4.34			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	11.40	0.14	4.45	30.67	44.10			N/A	N/A
	2 - Grovehurst Road	0.47	0.03	0.25	0.47	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.71	0.03	0.25	0.71	0.71			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.02	0.03	0.26	1.02	1.02			N/A	N/A
	3 - A249 offslip (SB)	1.07	0.03	0.26	1.07	1.07			N/A	N/A
	4 - Swale Way	132.15	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.63	0.03	0.31	3.36	12.68			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	14.51	0.09	3.09	41.90	64.87			N/A	N/A
	2 - Grovehurst Road	0.49	0.03	0.32	1.45	1.97			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.27	0.72	1.09			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.03	0.27	1.06	1.36			N/A	N/A
	3 - A249 offslip (SB)	1.12	0.03	0.28	1.12	3.80			N/A	N/A
	4 - Swale Way	236.12	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.69	0.03	0.28	2.69	7.00			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.45	0.04	0.41	9.42	17.69			N/A	N/A
	2 - Grovehurst Road	0.31	0.00	0.00	0.31	0.31			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.65	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.80	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.62	0.10	0.84	1.37	1.43			N/A	N/A
	4 - Swale Way	257.86	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.76	0.05	0.63	4.51	6.88			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.71	0.03	0.31	2.49	8.47			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.56	0.08	0.78	1.36	1.43			N/A	N/A
	3 - A249 offslip (SB)	0.38	0.03	0.31	0.99	1.25			N/A	N/A
	4 - Swale Way	216.41	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.26	0.05	0.45	3.16	5.00			N/A	N/A

2031 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	234.18	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	479.85	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1110	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	620	100.000
	4 - Swale Way		ONE HOUR	✓	769	100.000

5 - Grovehurst Road	ONE HOUR	✓	775	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	123	0	987
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	159	403	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	419	0	0	1034	231
		3 - A249 offslip (SB)	1	22	0	381	216
		4 - Swale Way	462	229	0	0	78
	5 - Grovehurst Road	289	313	0	173	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	16
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	36	10	0	0	9
	5 - Grovehurst Road	0	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.08	150.73	55.7	115.9	F	1019	1528
	2 - Grovehurst Road	1.30	548.09	104.6	158.1	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.10	0.4	1.9	A	491	736
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.84	11.53	5.0	23.7	B	1510	2265
	3 - A249 offslip (SB)	1.83	2188.77	246.6	187.3	F	569	853
	4 - Swale Way	0.99	79.58	18.3	68.8	F	706	1058
	5 - Grovehurst Road	1.38	616.18	124.9	181.2	F	711	1067

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	836	209	416	1208	0.692	827	0	0.0	2.2	9.258	A
	2 - Grovehurst Road	555	139	1033	897	0.619	549	209	0.0	1.6	10.167	B
	3 - A249 onslip (NB)			1256				326				
	4 - B2005 - link	417	104	0	1674	0.249	416	1256	0.0	0.3	2.859	A
2 - South	1 - A249 onslip (SB)			548				869				
	2 - B2005 - link	1252	313	129	1922	0.651	1245	419	0.0	1.8	5.257	A
	3 - A249 offslip (SB)	467	117	1373	689	0.677	459	0	0.0	2.0	15.141	C
	4 - Swale Way	579	145	657	916	0.632	572	1175	0.0	1.7	10.293	B
	5 - Grovehurst Road	583	146	841	884	0.660	576	389	0.0	1.9	11.431	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	489	1151	0.867	984	0	2.2	5.6	20.081	C
	2 - Grovehurst Road	663	166	1226	743	0.892	644	247	1.6	6.1	32.040	D
	3 - A249 onslip (NB)			1486				384				
	4 - B2005 - link	489	122	0	1674	0.292	489	1486	0.3	0.4	3.038	A
2 - South	1 - A249 onslip (SB)			642				1030				
	2 - B2005 - link	1483	371	150	1909	0.777	1477	492	1.8	3.3	8.214	A
	3 - A249 offslip (SB)	557	139	1627	470	1.185	458	0	2.0	26.8	137.237	F
	4 - Swale Way	691	173	746	864	0.800	683	1338	1.7	3.6	19.126	C
	5 - Grovehurst Road	697	174	999	754	0.925	673	431	1.9	7.7	37.333	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1222	306	509	1135	1.076	1114	0	5.6	32.7	74.428	F
	2 - Grovehurst Road	811	203	1355	637	1.273	632	267	6.1	51.0	178.442	F
	3 - A249 onslip (NB)			1590				398				
	4 - B2005 - link	509	127	0	1674	0.304	509	1590	0.4	0.4	3.091	A
2 - South	1 - A249 onslip (SB)			651				1117				
	2 - B2005 - link	1593	398	141	1914	0.832	1588	510	3.3	4.7	10.817	B
	3 - A249 offslip (SB)	683	171	1729	381	1.790	381	0	26.8	102.2	631.948	F
	4 - Swale Way	847	212	760	857	0.988	808	1350	3.6	13.4	51.143	F
	5 - Grovehurst Road	853	213	1135	636	1.341	633	432	7.7	62.8	216.388	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1222	306	509	1135	1.076	1130	0	32.7	55.7	150.735	F
	2 - Grovehurst Road	811	203	1370	625	1.298	625	269	51.0	97.7	436.836	F
	3 - A249 onslip (NB)			1597				397				
	4 - B2005 - link	509	127	0	1674	0.304	509	1597	0.4	0.4	3.091	A
2 - South	1 - A249 onslip (SB)			647				1126				
	2 - B2005 - link	1602	400	138	1916	0.836	1601	509	4.7	4.9	11.331	B
	3 - A249 offslip (SB)	683	171	1739	373	1.832	373	0	102.2	179.7	1374.497	F
	4 - Swale Way	847	212	762	856	0.989	827	1350	13.4	18.3	79.580	F
	5 - Grovehurst Road	853	213	1155	618	1.380	618	433	62.8	121.7	527.345	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	509	1135	0.879	1115	0	55.7	26.3	135.747	F
	2 - Grovehurst Road	663	166	1357	636	1.042	635	268	97.7	104.6	548.089	F
	3 - A249 onslip (NB)			1594				398				
	4 - B2005 - link	509	127	0	1674	0.304	509	1594	0.4	0.4	3.090	A

2 - South	1 - A249 onslip (SB)			664				1101				
	2 - B2005 - link	1597	399	153	1907	0.837	1597	511	4.9	5.0	11.533	B
	3 - A249 offslip (SB)	557	139	1749	364	1.530	364	0	179.7	228.0	1946.151	F
	4 - Swale Way	691	173	757	859	0.805	746	1357	18.3	4.7	40.128	E
	5 - Grovehurst Road	697	174	1081	685	1.017	684	422	121.7	124.9	616.183	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	836	209	512	1133	0.737	929	0	26.3	3.0	25.233	D
	2 - Grovehurst Road	555	139	1193	771	0.720	763	248	104.6	52.5	372.857	F
	3 - A249 onslip (NB)			1550				406				
	4 - B2005 - link	512	128	0	1674	0.306	512	1550	0.4	0.4	3.098	A
2 - South	1 - A249 onslip (SB)			700				1041				
	2 - B2005 - link	1535	384	182	1889	0.813	1537	518	5.0	4.5	10.302	B
	3 - A249 offslip (SB)	467	117	1719	392	1.190	392	0	228.0	246.6	2188.768	F
	4 - Swale Way	579	145	744	866	0.669	589	1366	4.7	2.1	13.489	B
	5 - Grovehurst Road	583	146	927	821	0.711	814	407	124.9	67.2	426.884	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.17	0.17	1.20	4.19	5.44			N/A	N/A
	2 - Grovehurst Road	1.58	0.03	0.35	3.84	8.07			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.84	0.66	1.35	2.24	2.66			N/A	N/A
	3 - A249 offslip (SB)	1.99	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	1.67	0.53	1.04	2.45	2.87			N/A	N/A
	5 - Grovehurst Road	1.87	0.03	0.34	4.28	9.77			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.59	0.10	1.94	14.75	21.30			N/A	N/A
	2 - Grovehurst Road	6.14	0.08	1.38	17.16	26.07			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.35	0.06	1.13	9.06	13.82			N/A	N/A
	3 - A249 offslip (SB)	26.83	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.63	0.08	1.14	9.34	13.49			N/A	N/A
	5 - Grovehurst Road	7.70	0.10	2.31	21.15	31.28			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	32.70	6.88	27.91	60.14	72.30			N/A	N/A
	2 - Grovehurst Road	50.97	23.74	48.14	75.84	85.24			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.66	0.03	0.31	4.98	21.54			N/A	N/A
	3 - A249 offslip (SB)	102.21	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	13.39	0.29	7.26	33.20	45.26			N/A	N/A
	5 - Grovehurst Road	62.82	32.76	60.10	89.69	99.52			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	55.70	14.95	49.28	97.98	115.90			N/A	N/A
	2 - Grovehurst Road	97.66	57.37	94.69	133.02	145.52			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.29	1.20	1.92			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.88	0.03	0.28	4.88	8.06			N/A	N/A
	3 - A249 offslip (SB)	179.71	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	18.26	0.20	8.06	48.55	68.79			N/A	N/A
	5 - Grovehurst Road	121.66	78.62	118.98	158.61	171.25			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	26.30	4.46	21.78	50.07	60.94			N/A	N/A
	2 - Grovehurst Road	104.55	59.93	101.19	144.08	158.13			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.99	0.05	0.81	14.31	23.67			N/A	N/A
	3 - A249 offslip (SB)	227.98	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	4.71	0.05	0.46	13.36	23.87			N/A	N/A
	5 - Grovehurst Road	124.92	76.91	121.71	166.73	181.22			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.00	0.03	0.31	4.40	15.00			N/A	N/A
	2 - Grovehurst Road	52.46	23.68	49.40	78.98	89.06			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.52	0.14	2.18	10.82	14.82			N/A	N/A
	3 - A249 offslip (SB)	246.62	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	2.10	0.03	0.31	3.50	10.78			N/A	N/A
	5 - Grovehurst Road	67.24	31.86	63.74	99.73	111.89			N/A	N/A

2031 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	310.55	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	730.37	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1192	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	529	100.000
	4 - Swale Way		ONE HOUR	✓	1376	100.000

5 - Grovehurst Road	ONE HOUR	✓	613	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	430	0	762
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	277	560	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	187	0	0	524	402
		3 - A249 offslip (SB)	1	39	0	202	287
		4 - Swale Way	780	435	0	0	161
	5 - Grovehurst Road	150	356	0	107	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	0	0	19
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	1	0	0	27	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	17	3	0	0	3
	5 - Grovehurst Road	0	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.29	565.98	168.5	200.0	F	1094	1641
	2 - Grovehurst Road	0.51	8.59	1.0	2.4	A	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.41	3.54	0.7	1.5	A	656	984
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.55	4.21	1.2	1.9	A	968	1452
	3 - A249 offslip (SB)	0.66	12.22	1.9	5.6	B	485	728
	4 - Swale Way	1.73	1847.29	504.9	180.3	F	1263	1894
	5 - Grovehurst Road	0.83	25.85	4.6	23.5	D	562	844

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	897	224	599	1103	0.814	881	0	0.0	4.0	15.315	C
	2 - Grovehurst Road	293	73	965	978	0.300	291	516	0.0	0.4	5.232	A
	3 - A249 onslip (NB)			829				426				
	4 - B2005 - link	602	150	0	1730	0.348	599	829	0.0	0.5	3.179	A
2 - South	1 - A249 onslip (SB)			679				798				
	2 - B2005 - link	827	207	80	1906	0.434	824	599	0.0	0.8	3.317	A
	3 - A249 offslip (SB)	398	100	903	1092	0.365	396	0	0.0	0.6	5.154	A
	4 - Swale Way	1036	259	681	1022	1.014	966	619	0.0	17.4	45.187	E
	5 - Grovehurst Road	461	115	1022	782	0.590	456	625	0.0	1.4	10.867	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1072	268	651	1063	1.008	1017	0	4.0	17.6	50.652	F
	2 - Grovehurst Road	350	87	1086	877	0.399	349	583	0.4	0.7	6.801	A
	3 - A249 onslip (NB)			969				466				
	4 - B2005 - link	652	163	0	1730	0.377	651	969	0.5	0.6	3.338	A
2 - South	1 - A249 onslip (SB)			746				829				
	2 - B2005 - link	964	241	96	1896	0.509	963	650	0.8	1.0	3.856	A
	3 - A249 offslip (SB)	476	119	1059	953	0.499	474	0	0.6	1.0	7.488	A
	4 - Swale Way	1237	309	803	942	1.314	940	730	17.4	91.7	223.478	F
	5 - Grovehurst Road	551	138	1027	779	0.707	548	715	1.4	2.3	15.290	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1312	328	708	1020	1.286	1018	0	17.6	91.2	202.458	F
	2 - Grovehurst Road	428	107	1124	849	0.505	427	602	0.7	1.0	8.512	A
	3 - A249 onslip (NB)			1040				511				
	4 - B2005 - link	708	177	0	1730	0.409	708	1040	0.6	0.7	3.523	A
2 - South	1 - A249 onslip (SB)			823				834				
	2 - B2005 - link	1028	257	116	1883	0.546	1027	707	1.0	1.2	4.201	A
	3 - A249 offslip (SB)	582	146	1144	878	0.663	579	0	1.0	1.9	11.882	B
	4 - Swale Way	1515	379	901	876	1.729	876	821	91.7	251.4	711.688	F
	5 - Grovehurst Road	675	169	990	810	0.834	667	788	2.3	4.4	23.799	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1312	328	712	1017	1.291	1017	0	91.2	165.1	454.457	F
	2 - Grovehurst Road	428	107	1126	847	0.506	428	602	1.0	1.0	8.591	A
	3 - A249 onslip (NB)			1041				514				
	4 - B2005 - link	712	178	0	1730	0.412	712	1041	0.7	0.7	3.536	A
2 - South	1 - A249 onslip (SB)			828				835				
	2 - B2005 - link	1028	257	118	1883	0.546	1028	711	1.2	1.2	4.212	A
	3 - A249 offslip (SB)	582	146	1146	876	0.665	582	0	1.9	1.9	12.221	B
	4 - Swale Way	1515	379	904	875	1.732	875	824	251.4	411.5	1369.530	F
	5 - Grovehurst Road	675	169	989	811	0.833	674	790	4.4	4.6	25.850	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1072	268	656	1060	1.011	1058	0	165.1	168.5	565.975	F
	2 - Grovehurst Road	350	87	1115	852	0.410	351	599	1.0	0.7	7.199	A
	3 - A249 onslip (NB)			997				470				
	4 - B2005 - link	656	164	0	1730	0.379	656	997	0.7	0.6	3.352	A

2 - South	1 - A249 onslip (SB)			752				831				
	2 - B2005 - link	994	248	98	1895	0.524	994	654	1.2	1.1	3.999	A
	3 - A249 offslip (SB)	476	119	1092	924	0.515	479	0	1.9	1.1	8.156	A
	4 - Swale Way	1237	309	822	929	1.332	929	749	411.5	488.5	1712.460	F
	5 - Grovehurst Road	551	138	1023	783	0.704	560	728	4.6	2.5	16.687	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	897	224	609	1096	0.819	1089	0	168.5	120.5	478.385	F
	2 - Grovehurst Road	293	73	1104	859	0.341	294	594	0.7	0.5	6.380	A
	3 - A249 onslip (NB)			964				433				
	4 - B2005 - link	608	152	0	1730	0.352	609	964	0.6	0.5	3.211	A
2 - South	1 - A249 onslip (SB)			688				827				
	2 - B2005 - link	968	242	81	1905	0.508	969	606	1.1	1.0	3.848	A
	3 - A249 offslip (SB)	398	100	1050	960	0.415	400	0	1.1	0.7	6.439	A
	4 - Swale Way	1036	259	760	970	1.068	970	690	488.5	504.9	1847.292	F
	5 - Grovehurst Road	461	115	1050	762	0.606	465	680	2.5	1.6	12.294	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.98	0.04	0.37	9.89	21.43			N/A	N/A
	2 - Grovehurst Road	0.42	0.00	0.00	0.42	0.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.76	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	17.42	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.40	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	17.58	0.43	10.25	42.78	57.60			N/A	N/A
	2 - Grovehurst Road	0.66	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.11	0.97	1.63	1.93			N/A	N/A
	3 - A249 offslip (SB)	0.98	0.08	0.88	1.68	2.05			N/A	N/A
	4 - Swale Way	91.74	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.29	0.09	1.34	5.34	7.46			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	91.18	48.26	87.55	129.86	143.90			N/A	N/A
	2 - Grovehurst Road	1.00	0.03	0.26	1.00	1.00			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.69	0.03	0.25	0.69	0.69			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.19	0.03	0.26	1.19	1.19			N/A	N/A
	3 - A249 offslip (SB)	1.90	0.03	0.28	1.90	5.59			N/A	N/A
	4 - Swale Way	251.40	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.37	0.04	0.38	11.14	23.54			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	165.12	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.01	0.03	0.27	1.01	2.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.70	0.03	0.27	0.70	1.47			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.20	0.03	0.26	1.20	1.20			N/A	N/A
	3 - A249 offslip (SB)	1.94	0.03	0.28	1.94	4.11			N/A	N/A
	4 - Swale Way	411.48	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.62	0.03	0.31	5.75	22.18			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	168.49	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.70	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.11	0.55	1.06	1.11	1.55			N/A	N/A
	3 - A249 offslip (SB)	1.08	0.08	0.91	1.91	2.64			N/A	N/A
	4 - Swale Way	488.48	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.51	0.04	0.44	6.90	11.93			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	120.49	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.52	0.05	0.50	1.30	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.55	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.04	0.55	1.03	1.10	1.10			N/A	N/A
	3 - A249 offslip (SB)	0.72	0.05	0.46	1.41	1.95			N/A	N/A
	4 - Swale Way	504.89	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.59	0.04	0.37	4.02	7.89			N/A	N/A

2031 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	249.08	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	510.32	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1120	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	620	100.000
	4 - Swale Way		ONE HOUR	✓	779	100.000

5 - Grovehurst Road	ONE HOUR	✓	775	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	123	0	997
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	159	403	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	419	0	0	1044	231
		3 - A249 offslip (SB)	1	22	0	381	216
		4 - Swale Way	472	229	0	0	78
	5 - Grovehurst Road	289	313	0	173	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	17
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	17	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	38	10	0	0	1
	5 - Grovehurst Road	0	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.09	167.96	62.8	122.8	F	1028	1542
	2 - Grovehurst Road	1.30	571.10	107.4	163.8	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.30	3.08	0.4	1.9	A	487	731
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.84	11.68	5.0	24.9	B	1512	2268
	3 - A249 offslip (SB)	1.84	2323.79	254.1	187.3	F	569	853
	4 - Swale Way	1.00	89.28	21.1	72.3	F	715	1072
	5 - Grovehurst Road	1.41	671.35	136.1	194.0	F	711	1067

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	843	211	415	1198	0.704	834	0	0.0	2.3	9.654	A
	2 - Grovehurst Road	555	139	1040	886	0.626	548	209	0.0	1.6	10.481	B
	3 - A249 onslip (NB)			1263				326				
	4 - B2005 - link	417	104	0	1674	0.249	415	1263	0.0	0.3	2.859	A
2 - South	1 - A249 onslip (SB)			548				876				
	2 - B2005 - link	1259	315	129	1911	0.659	1251	419	0.0	1.9	5.394	A
	3 - A249 offslip (SB)	467	117	1380	677	0.689	458	0	0.0	2.1	15.885	C
	4 - Swale Way	586	147	657	912	0.643	580	1181	0.0	1.7	10.610	B
	5 - Grovehurst Road	583	146	848	872	0.669	576	388	0.0	1.9	11.854	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1007	252	487	1143	0.881	991	0	2.3	6.1	21.742	C
	2 - Grovehurst Road	663	166	1232	731	0.906	642	247	1.6	6.7	34.622	D
	3 - A249 onslip (NB)			1492				382				
	4 - B2005 - link	487	122	0	1674	0.291	487	1492	0.3	0.4	3.033	A
2 - South	1 - A249 onslip (SB)			639				1036				
	2 - B2005 - link	1488	372	150	1898	0.784	1482	490	1.9	3.5	8.511	A
	3 - A249 offslip (SB)	557	139	1631	459	1.214	449	0	2.1	29.3	150.514	F
	4 - Swale Way	700	175	741	863	0.811	692	1338	1.7	3.9	20.044	C
	5 - Grovehurst Road	697	174	1006	740	0.941	670	428	1.9	8.6	41.023	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1233	308	504	1131	1.091	1113	0	6.1	36.3	81.126	F
	2 - Grovehurst Road	811	203	1351	633	1.282	629	265	6.7	52.4	185.148	F
	3 - A249 onslip (NB)			1587				393				
	4 - B2005 - link	504	126	0	1674	0.301	504	1587	0.4	0.4	3.076	A
2 - South	1 - A249 onslip (SB)			643				1117				
	2 - B2005 - link	1589	397	139	1905	0.835	1584	504	3.5	4.7	11.040	B
	3 - A249 offslip (SB)	683	171	1723	378	1.806	378	0	29.3	105.5	664.625	F
	4 - Swale Way	858	214	754	857	1.001	813	1348	3.9	14.9	55.236	F
	5 - Grovehurst Road	853	213	1138	625	1.365	622	429	8.6	66.3	232.662	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1233	308	503	1131	1.090	1127	0	36.3	62.8	167.958	F
	2 - Grovehurst Road	811	203	1364	623	1.303	622	266	52.4	99.8	448.871	F
	3 - A249 onslip (NB)			1593				393				
	4 - B2005 - link	503	126	0	1674	0.301	503	1593	0.4	0.4	3.075	A
2 - South	1 - A249 onslip (SB)			639				1127				
	2 - B2005 - link	1597	399	136	1907	0.838	1597	503	4.7	5.0	11.526	B
	3 - A249 offslip (SB)	683	171	1732	370	1.844	370	0	105.5	183.6	1418.681	F
	4 - Swale Way	858	214	755	856	1.002	833	1347	14.9	21.1	89.279	F
	5 - Grovehurst Road	853	213	1158	607	1.405	607	430	66.3	127.9	565.901	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1007	252	504	1130	0.891	1113	0	62.8	36.4	162.944	F
	2 - Grovehurst Road	663	166	1352	633	1.047	632	265	99.8	107.4	571.104	F
	3 - A249 onslip (NB)			1590				394				
	4 - B2005 - link	504	126	0	1674	0.301	504	1590	0.4	0.4	3.077	A

2 - South	1 - A249 onslip (SB)			654				1105				
	2 - B2005 - link	1592	398	148	1899	0.839	1592	506	5.0	5.0	11.684	B
	3 - A249 offslip (SB)	557	139	1740	364	1.533	364	0	183.6	232.1	2023.846	F
	4 - Swale Way	700	175	751	858	0.816	764	1353	21.1	5.2	48.743	E
	5 - Grovehurst Road	697	174	1095	665	1.048	664	420	127.9	136.1	671.345	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	843	211	507	1128	0.747	976	0	36.4	3.2	40.814	E
	2 - Grovehurst Road	555	139	1232	732	0.758	725	251	107.4	64.8	429.511	F
	3 - A249 onslip (NB)			1557				401				
	4 - B2005 - link	507	127	0	1674	0.303	507	1557	0.4	0.4	3.085	A
2 - South	1 - A249 onslip (SB)			692				1045				
	2 - B2005 - link	1545	386	179	1880	0.822	1546	513	5.0	4.8	10.861	B
	3 - A249 offslip (SB)	467	117	1725	378	1.233	378	0	232.1	254.1	2323.791	F
	4 - Swale Way	586	147	739	865	0.678	598	1365	5.2	2.2	14.070	B
	5 - Grovehurst Road	583	146	935	807	0.723	802	403	136.1	81.5	490.403	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.29	0.16	1.24	4.59	5.94			N/A	N/A
	2 - Grovehurst Road	1.63	0.03	0.32	3.08	8.47			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.90	0.67	1.39	2.43	2.77			N/A	N/A
	3 - A249 offslip (SB)	2.09	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	1.74	0.52	1.10	2.65	3.05			N/A	N/A
	5 - Grovehurst Road	1.94	0.03	0.32	3.73	10.19			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.14	0.12	2.43	15.94	22.68			N/A	N/A
	2 - Grovehurst Road	6.72	0.07	1.32	19.01	29.33			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.48	0.07	1.20	9.44	14.30			N/A	N/A
	3 - A249 offslip (SB)	29.31	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.86	0.09	1.30	9.89	14.22			N/A	N/A
	5 - Grovehurst Road	8.62	0.10	2.75	23.64	34.78			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	36.30	9.23	31.79	64.14	76.05			N/A	N/A
	2 - Grovehurst Road	52.44	23.99	49.44	78.58	88.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.74	0.03	0.31	5.33	22.17			N/A	N/A
	3 - A249 offslip (SB)	105.53	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	14.92	0.47	9.06	35.44	47.22			N/A	N/A
	5 - Grovehurst Road	66.33	34.96	63.55	94.33	104.54			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	62.84	20.30	56.97	105.45	122.85			N/A	N/A
	2 - Grovehurst Road	99.76	58.57	96.73	135.90	148.64			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.03	0.30	1.20	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.95	0.03	0.28	4.95	8.54			N/A	N/A
	3 - A249 offslip (SB)	183.64	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	21.10	0.37	11.54	52.95	72.33			N/A	N/A
	5 - Grovehurst Road	127.89	83.88	125.23	165.55	178.38			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	36.38	10.66	32.45	62.13	72.90			N/A	N/A
	2 - Grovehurst Road	107.43	60.64	103.84	149.01	163.81			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	5.04	0.05	0.49	14.42	24.92			N/A	N/A
	3 - A249 offslip (SB)	232.07	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	5.19	0.05	0.48	14.82	26.03			N/A	N/A
	5 - Grovehurst Road	136.07	86.26	132.92	179.16	193.95			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.23	0.03	0.32	4.93	16.34			N/A	N/A
	2 - Grovehurst Road	64.83	26.04	60.34	101.88	116.32			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.80	0.15	2.39	11.47	15.64			N/A	N/A
	3 - A249 offslip (SB)	254.15	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	2.20	0.03	0.31	3.56	11.22			N/A	N/A
	5 - Grovehurst Road	81.55	39.23	77.52	120.52	135.04			N/A	N/A

2031 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	334.56	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	783.13	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1203	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	529	100.000
	4 - Swale Way		ONE HOUR	✓	1398	100.000

5 - Grovehurst Road	ONE HOUR	✓	613	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	430	0	773
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	277	561	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	187	0	0	534	402
		3 - A249 offslip (SB)	1	39	0	202	287
		4 - Swale Way	801	436	0	0	161
		5 - Grovehurst Road	150	356	0	107	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	0	0	20
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	1	0	0	29	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	18	3	0	0	3
		5 - Grovehurst Road	0	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.31	604.66	181.1	200.0	F	1104	1656
	2 - Grovehurst Road	0.51	8.67	1.0	2.4	A	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.41	3.52	0.7	1.5	A	652	978
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.55	4.29	1.2	2.0	A	968	1452
	3 - A249 offslip (SB)	0.67	12.49	2.0	6.0	B	485	728
	4 - Swale Way	1.76	1961.49	536.7	179.2	F	1283	1924
	5 - Grovehurst Road	0.84	26.39	4.7	23.9	D	562	844

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	906	226	596	1098	0.825	889	0	0.0	4.2	16.077	C
	2 - Grovehurst Road	293	73	970	968	0.302	291	515	0.0	0.4	5.304	A
	3 - A249 onslip (NB)			837				425				
	4 - B2005 - link	598	150	0	1730	0.346	596	837	0.0	0.5	3.171	A
2 - South	1 - A249 onslip (SB)			676				806				
	2 - B2005 - link	832	208	80	1888	0.441	829	596	0.0	0.8	3.390	A
	3 - A249 offslip (SB)	398	100	908	1081	0.369	396	0	0.0	0.6	5.240	A
	4 - Swale Way	1052	263	679	1017	1.035	970	625	0.0	20.7	51.068	F
	5 - Grovehurst Road	461	115	1026	774	0.596	456	623	0.0	1.4	11.123	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1081	270	647	1060	1.020	1020	0	4.2	19.6	54.831	F
	2 - Grovehurst Road	350	87	1088	870	0.402	349	578	0.4	0.7	6.893	A
	3 - A249 onslip (NB)			974				463				
	4 - B2005 - link	647	162	0	1730	0.374	647	974	0.5	0.6	3.323	A
2 - South	1 - A249 onslip (SB)			741				832				
	2 - B2005 - link	967	242	96	1878	0.515	965	645	0.8	1.1	3.939	A
	3 - A249 offslip (SB)	476	119	1061	943	0.504	474	0	0.6	1.0	7.649	A
	4 - Swale Way	1257	314	799	938	1.339	937	736	20.7	100.7	247.762	F
	5 - Grovehurst Road	551	138	1026	776	0.710	548	711	1.4	2.3	15.480	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1325	331	704	1017	1.302	1015	0	19.6	96.9	216.374	F
	2 - Grovehurst Road	428	107	1123	844	0.507	427	595	0.7	1.0	8.594	A
	3 - A249 onslip (NB)			1042				508				
	4 - B2005 - link	704	176	0	1730	0.407	704	1042	0.6	0.7	3.508	A
2 - South	1 - A249 onslip (SB)			819				836				
	2 - B2005 - link	1026	256	116	1866	0.550	1025	703	1.1	1.2	4.278	A
	3 - A249 offslip (SB)	582	146	1141	872	0.668	579	0	1.0	1.9	12.139	B
	4 - Swale Way	1539	385	895	875	1.759	875	825	100.7	266.7	762.029	F
	5 - Grovehurst Road	675	169	989	807	0.837	666	782	2.3	4.4	24.219	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1325	331	708	1014	1.307	1014	0	96.9	174.6	482.091	F
	2 - Grovehurst Road	428	107	1125	843	0.508	428	596	1.0	1.0	8.673	A
	3 - A249 onslip (NB)			1042				511				
	4 - B2005 - link	708	177	0	1730	0.409	708	1042	0.7	0.7	3.522	A
2 - South	1 - A249 onslip (SB)			824				837				
	2 - B2005 - link	1026	256	118	1865	0.550	1025	707	1.2	1.2	4.288	A
	3 - A249 offslip (SB)	582	146	1143	870	0.669	582	0	1.9	2.0	12.492	B
	4 - Swale Way	1539	385	898	874	1.762	874	828	266.7	433.1	1447.399	F
	5 - Grovehurst Road	675	169	988	808	0.836	674	784	4.4	4.7	26.390	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1081	270	652	1057	1.024	1056	0	174.6	181.1	604.660	F
	2 - Grovehurst Road	350	87	1114	848	0.412	351	593	1.0	0.7	7.264	A
	3 - A249 onslip (NB)			999				467				
	4 - B2005 - link	651	163	0	1730	0.376	652	999	0.7	0.6	3.341	A

2 - South	1 - A249 onslip (SB)			747				834				
	2 - B2005 - link	992	248	98	1877	0.529	993	649	1.2	1.1	4.073	A
	3 - A249 offslip (SB)	476	119	1090	917	0.519	479	0	2.0	1.1	8.296	A
	4 - Swale Way	1257	314	817	927	1.356	927	753	433.1	515.6	1806.952	F
	5 - Grovehurst Road	551	138	1022	780	0.707	560	722	4.7	2.5	16.947	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	906	226	604	1093	0.829	1087	0	181.1	135.9	525.808	F
	2 - Grovehurst Road	293	73	1102	854	0.343	294	588	0.7	0.5	6.428	A
	3 - A249 onslip (NB)			966				430				
	4 - B2005 - link	604	151	0	1730	0.349	604	966	0.6	0.5	3.199	A
2 - South	1 - A249 onslip (SB)			683				830				
	2 - B2005 - link	967	242	81	1887	0.513	968	602	1.1	1.1	3.919	A
	3 - A249 offslip (SB)	398	100	1049	953	0.418	400	0	1.1	0.7	6.528	A
	4 - Swale Way	1052	263	755	968	1.087	968	694	515.6	536.7	1961.495	F
	5 - Grovehurst Road	461	115	1048	759	0.608	465	675	2.5	1.6	12.427	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.24	0.04	0.35	9.60	23.04			N/A	N/A
	2 - Grovehurst Road	0.43	0.00	0.00	0.43	0.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.78	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.58	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	20.70	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.43	0.55	1.00	1.43	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	19.57	0.49	11.56	47.51	63.84			N/A	N/A
	2 - Grovehurst Road	0.66	0.14	0.90	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.05	0.11	0.99	1.69	1.98			N/A	N/A
	3 - A249 offslip (SB)	1.00	0.08	0.89	1.73	2.21			N/A	N/A
	4 - Swale Way	100.68	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.32	0.09	1.35	5.42	7.56			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	96.89	51.47	93.08	137.80	152.62			N/A	N/A
	2 - Grovehurst Road	1.01	0.03	0.26	1.01	1.01			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.68	0.03	0.25	0.68	0.68			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.21	0.03	0.26	1.21	1.21			N/A	N/A
	3 - A249 offslip (SB)	1.94	0.03	0.28	1.94	6.03			N/A	N/A
	4 - Swale Way	266.71	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.44	0.04	0.39	11.50	23.93			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	174.64	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.02	0.03	0.27	1.02	2.41			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.69	0.03	0.27	0.69	1.54			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.22	0.03	0.26	1.22	1.22			N/A	N/A
	3 - A249 offslip (SB)	1.98	0.03	0.28	1.98	4.28			N/A	N/A
	4 - Swale Way	433.13	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.71	0.03	0.31	6.17	22.91			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	181.12	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.71	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.13	0.55	1.07	1.27	1.64			N/A	N/A
	3 - A249 offslip (SB)	1.10	0.07	0.90	1.97	2.75			N/A	N/A
	4 - Swale Way	515.57	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.54	0.04	0.44	6.98	12.13			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	135.86	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.53	0.05	0.50	1.30	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.54	1.04	1.33	1.33			N/A	N/A
	3 - A249 offslip (SB)	0.73	0.04	0.45	1.47	2.04			N/A	N/A
	4 - Swale Way	536.73	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.60	0.04	0.37	4.06	8.00			N/A	N/A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Dumbbell_Mitigation_Sensitivity.j9

Path: P:\JNY9290 - Kemsley K5\Transport\Arcady\WKN DCO\North and South Dumbell Roundabouts

Report generation date: 18/03/2019 10:10:05

»2017, AM
 »2017, PM
 »2024, AM
 »2024, PM
 »2024 + Cumulative Development, AM
 »2024 + Cumulative Development, PM
 »2024 + K3 Operational, AM
 »2024 + K3 Operational, PM
 »2024 + WKN Operational, AM
 »2024 + WKN Operational, PM
 »2024 + K3 and WKN Operational, AM
 »2024 + K3 and WKN Operational, PM
 »2024 + K3 Operational + Cumulative Development, AM
 »2024 + K3 Operational + Cumulative Development, PM
 »2024 + WKN Operational + Cumulative Development, AM
 »2024 + WKN Operational + Cumulative Development, PM
 »2024 + K3 and WKN Operational + Cumulative Development, AM
 »2024 + K3 and WKN Operational + Cumulative Development, PM
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 »2031 + K3 Operational, AM
 »2031 + K3 Operational, PM
 »2031 + WKN Operational, AM
 »2031 + WKN Operational, PM
 »2031 + K3 and WKN Operational, AM
 »2031 + K3 and WKN Operational, PM
 »2031 + K3 Operational + Cumulative Development, AM
 »2031 + K3 Operational + Cumulative Development, PM
 »2031 + WKN Operational + Cumulative Development, AM
 »2031 + WKN Operational + Cumulative Development, PM
 »2031 + K3 and WKN Operational + Cumulative Development, AM
 »2031 + K3 and WKN Operational + Cumulative Development, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2017						
1 - North - 1 - A249 offslip (NB)	1.7	8.43	0.63	4.7	21.72	0.84
1 - North - 2 - Grovehurst Road	0.9	7.71	0.48	0.4	5.88	0.29
1 - North - 4 - B2005 - link	0.4	3.00	0.29	0.8	3.67	0.43
2 - South - 2 - B2005 - link	1.3	4.38	0.57	0.8	3.37	0.44
2 - South - 3 - A249 offslip (SB)	2.2	14.29	0.69	0.8	6.19	0.45
2 - South - 4 - Swale Way	1.5	8.84	0.60	34.1	106.63	1.04
2 - South - 5 - Grovehurst Road	1.7	9.94	0.64	2.3	14.92	0.71

2024						
1 - North - 1 - A249 offslip (NB)	5.9	23.46	0.87	11.5	48.69	0.94
1 - North - 2 - Grovehurst Road	2.2	17.12	0.70	0.5	6.87	0.32
1 - North - 4 - B2005 - link	0.5	3.15	0.31	0.7	3.63	0.42
2 - South - 2 - B2005 - link	2.7	7.34	0.74	1.0	3.96	0.50
2 - South - 3 - A249 offslip (SB)	57.3	292.82	1.22	1.1	7.94	0.52
2 - South - 4 - Swale Way	3.2	15.85	0.77	224.0	703.33	1.37
2 - South - 5 - Grovehurst Road	3.8	21.06	0.80	2.6	16.62	0.73
2024 + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	9.9	38.08	0.93	27.3	97.38	1.02
1 - North - 2 - Grovehurst Road	3.2	24.32	0.77	0.5	7.68	0.36
1 - North - 4 - B2005 - link	0.5	3.23	0.34	0.7	3.60	0.42
2 - South - 2 - B2005 - link	3.0	8.00	0.76	1.1	4.21	0.54
2 - South - 3 - A249 offslip (SB)	84.1	432.09	1.36	1.4	9.89	0.59
2 - South - 4 - Swale Way	3.8	18.81	0.80	297.3	994.73	1.48
2 - South - 5 - Grovehurst Road	13.7	63.48	0.97	3.2	18.18	0.77
2024 + K3 Operational						
1 - North - 1 - A249 offslip (NB)	6.0	23.91	0.87	12.5	52.38	0.95
1 - North - 2 - Grovehurst Road	2.3	17.33	0.70	0.5	6.94	0.33
1 - North - 4 - B2005 - link	0.5	3.15	0.31	0.7	3.62	0.42
2 - South - 2 - B2005 - link	2.7	7.39	0.74	1.0	3.99	0.51
2 - South - 3 - A249 offslip (SB)	58.5	299.63	1.23	1.1	8.08	0.52
2 - South - 4 - Swale Way	3.4	16.38	0.78	233.1	732.25	1.38
2 - South - 5 - Grovehurst Road	3.9	21.80	0.81	2.6	16.62	0.73
2024 + WKN Operational						
1 - North - 1 - A249 offslip (NB)	6.7	26.49	0.88	13.4	55.28	0.96
1 - North - 2 - Grovehurst Road	2.4	18.37	0.71	0.5	7.00	0.33
1 - North - 4 - B2005 - link	0.5	3.15	0.31	0.7	3.61	0.42
2 - South - 2 - B2005 - link	2.9	7.68	0.75	1.0	4.05	0.51
2 - South - 3 - A249 offslip (SB)	64.5	332.36	1.26	1.1	8.24	0.53
2 - South - 4 - Swale Way	3.5	17.16	0.79	249.8	778.45	1.40
2 - South - 5 - Grovehurst Road	4.1	23.13	0.82	2.7	16.80	0.74
2024 + K3 and WKN Operational						
1 - North - 1 - A249 offslip (NB)	6.8	27.05	0.89	14.5	59.50	0.97
1 - North - 2 - Grovehurst Road	2.4	18.61	0.72	0.5	7.06	0.33
1 - North - 4 - B2005 - link	0.5	3.15	0.31	0.7	3.58	0.42
2 - South - 2 - B2005 - link	2.9	7.74	0.75	1.1	4.11	0.52
2 - South - 3 - A249 offslip (SB)	65.8	339.52	1.27	1.1	8.36	0.53
2 - South - 4 - Swale Way	3.7	17.79	0.79	257.9	804.56	1.41
2 - South - 5 - Grovehurst Road	4.3	24.03	0.82	2.7	16.85	0.74
2024 + K3 Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	10.0	38.67	0.93	28.0	99.19	1.02
1 - North - 2 - Grovehurst Road	3.2	24.54	0.78	0.5	7.70	0.36
1 - North - 4 - B2005 - link	0.5	3.23	0.34	0.7	3.59	0.42
2 - South - 2 - B2005 - link	3.1	8.03	0.76	1.1	4.24	0.54
2 - South - 3 - A249 offslip (SB)	84.8	436.71	1.36	1.4	9.95	0.60
2 - South - 4 - Swale Way	3.9	19.12	0.80	303.7	1016.81	1.49
2 - South - 5 - Grovehurst Road	14.2	65.49	0.97	3.2	18.33	0.77
2024 + WKN Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	11.6	44.27	0.94	31.8	110.14	1.03
1 - North - 2 - Grovehurst Road	3.4	26.39	0.79	0.6	7.78	0.36
1 - North - 4 - B2005 - link	0.5	3.23	0.33	0.7	3.58	0.42
2 - South - 2 - B2005 - link	3.2	8.35	0.77	1.2	4.30	0.54
2 - South - 3 - A249 offslip (SB)	90.5	473.50	1.40	1.5	10.18	0.60
2 - South - 4 - Swale Way	4.2	20.33	0.82	322.9	1075.07	1.51
2 - South - 5 - Grovehurst Road	16.2	73.59	0.98	3.3	18.52	0.78
2024 + K3 and WKN Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	11.9	45.25	0.95	32.7	112.40	1.04
1 - North - 2 - Grovehurst Road	3.5	26.73	0.79	0.6	7.79	0.36
1 - North - 4 - B2005 - link	0.5	3.23	0.33	0.7	3.57	0.42
2 - South - 2 - B2005 - link	3.2	8.40	0.77	1.2	4.31	0.54
2 - South - 3 - A249 offslip (SB)	91.5	480.33	1.41	1.5	10.21	0.60
2 - South - 4 - Swale Way	4.4	21.13	0.82	330.6	1102.57	1.52
2 - South - 5 - Grovehurst Road	17.4	78.32	0.99	3.3	18.61	0.78

	2031					
1 - North - 1 - A249 offslip (NB)	5.9	23.46	0.87	11.5	48.69	0.94
1 - North - 2 - Grovehurst Road	2.2	17.12	0.70	0.5	6.87	0.32
1 - North - 4 - B2005 - link	0.5	3.15	0.31	0.7	3.63	0.42
2 - South - 2 - B2005 - link	2.7	7.34	0.74	1.0	3.96	0.50
2 - South - 3 - A249 offslip (SB)	57.3	292.82	1.22	1.1	7.94	0.52
2 - South - 4 - Swale Way	3.2	15.85	0.77	224.0	703.33	1.37
2 - South - 5 - Grovehurst Road	3.8	21.06	0.80	2.6	16.62	0.73
2031 + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	54.4	147.69	1.07	166.8	560.89	1.29
1 - North - 2 - Grovehurst Road	104.0	544.11	1.30	1.0	8.58	0.51
1 - North - 4 - B2005 - link	0.4	3.10	0.31	0.7	3.54	0.41
2 - South - 2 - B2005 - link	5.0	11.50	0.84	1.2	4.21	0.55
2 - South - 3 - A249 offslip (SB)	244.5	2154.65	1.83	1.9	12.20	0.66
2 - South - 4 - Swale Way	17.6	77.33	0.99	503.2	1842.62	1.73
2 - South - 5 - Grovehurst Road	124.1	612.87	1.38	4.6	25.78	0.83
2031 + K3 Operational						
1 - North - 1 - A249 offslip (NB)	6.0	23.91	0.87	12.5	52.38	0.95
1 - North - 2 - Grovehurst Road	2.3	17.33	0.70	0.5	6.94	0.33
1 - North - 4 - B2005 - link	0.5	3.15	0.31	0.7	3.62	0.42
2 - South - 2 - B2005 - link	2.7	7.39	0.74	1.0	3.99	0.51
2 - South - 3 - A249 offslip (SB)	58.5	299.63	1.23	1.1	8.08	0.52
2 - South - 4 - Swale Way	3.4	16.38	0.78	233.1	732.25	1.38
2 - South - 5 - Grovehurst Road	3.9	21.80	0.81	2.6	16.62	0.73
2031 + WKN Operational						
1 - North - 1 - A249 offslip (NB)	6.7	26.49	0.88	13.4	55.28	0.96
1 - North - 2 - Grovehurst Road	2.4	18.37	0.71	0.5	7.00	0.33
1 - North - 4 - B2005 - link	0.5	3.15	0.31	0.7	3.61	0.42
2 - South - 2 - B2005 - link	2.9	7.68	0.75	1.0	4.05	0.51
2 - South - 3 - A249 offslip (SB)	64.5	332.36	1.26	1.1	8.24	0.53
2 - South - 4 - Swale Way	3.5	17.16	0.79	249.8	778.45	1.40
2 - South - 5 - Grovehurst Road	4.1	23.13	0.82	2.7	16.80	0.74
2031 + K3 and WKN Operational						
1 - North - 1 - A249 offslip (NB)	6.8	27.05	0.89	14.5	59.50	0.97
1 - North - 2 - Grovehurst Road	2.4	18.61	0.72	0.5	7.06	0.33
1 - North - 4 - B2005 - link	0.5	3.15	0.31	0.7	3.58	0.42
2 - South - 2 - B2005 - link	2.9	7.74	0.75	1.1	4.11	0.52
2 - South - 3 - A249 offslip (SB)	65.8	339.52	1.27	1.1	8.36	0.53
2 - South - 4 - Swale Way	3.7	17.79	0.79	257.9	804.56	1.41
2 - South - 5 - Grovehurst Road	4.3	24.03	0.82	2.7	16.85	0.74
2031 + K3 Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	55.7	150.73	1.08	168.5	565.98	1.29
1 - North - 2 - Grovehurst Road	104.6	548.09	1.30	1.0	8.59	0.51
1 - North - 4 - B2005 - link	0.4	3.10	0.31	0.7	3.54	0.41
2 - South - 2 - B2005 - link	5.0	11.53	0.84	1.2	4.21	0.55
2 - South - 3 - A249 offslip (SB)	246.6	2188.77	1.83	1.9	12.22	0.66
2 - South - 4 - Swale Way	18.3	79.58	0.99	504.9	1847.29	1.73
2 - South - 5 - Grovehurst Road	124.9	616.18	1.38	4.6	25.85	0.83
2031 + WKN Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	62.3	166.78	1.09	178.2	596.14	1.30
1 - North - 2 - Grovehurst Road	107.2	568.98	1.30	1.0	8.66	0.51
1 - North - 4 - B2005 - link	0.4	3.09	0.30	0.7	3.52	0.41
2 - South - 2 - B2005 - link	5.0	11.59	0.84	1.2	4.26	0.55
2 - South - 3 - A249 offslip (SB)	253.4	2310.82	1.84	2.0	12.46	0.67
2 - South - 4 - Swale Way	21.4	90.72	1.00	535.4	1960.65	1.76
2 - South - 5 - Grovehurst Road	133.2	657.46	1.40	4.7	26.22	0.84
2031 + K3 and WKN Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	62.8	167.96	1.09	181.1	604.66	1.31
1 - North - 2 - Grovehurst Road	107.4	571.10	1.30	1.0	8.67	0.51
1 - North - 4 - B2005 - link	0.4	3.08	0.30	0.7	3.52	0.41
2 - South - 2 - B2005 - link	5.0	11.68	0.84	1.2	4.29	0.55
2 - South - 3 - A249 offslip (SB)	254.1	2323.79	1.84	2.0	12.49	0.67
2 - South - 4 - Swale Way	21.1	89.28	1.00	536.7	1961.49	1.76
2 - South - 5 - Grovehurst Road	136.1	671.35	1.41	4.7	26.39	0.84

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	26/01/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Ben.Dance
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓			0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D15	2024 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D16	2024 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓

D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D25	2031 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D26	2031 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D31	2031 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D32	2031 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	6.71	A
2	South	Standard Roundabout	1, 2, 3, 4, 5	8.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description
1 - North	1	A249 offslip (NB)	
	2	Grovehurst Road	
	3	A249 onslip (NB)	
	4	B2005 - link	
2 - South	1	A249 onslip (SB)	
	2	B2005 - link	
	3	A249 offslip (SB)	
	4	Swale Way	
	5	Grovehurst Road	

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - North	1 - A249 offslip (NB)	7.93	9.50	56.8	13.3	45.0	27.0	
	2 - Grovehurst Road	3.66	9.50	25.3	50.9	45.0	34.0	
	3 - A249 onslip (NB)							✓
	4 - B2005 - link	4.01	8.00	13.3	20.6	45.0	41.0	
2 - South	1 - A249 onslip (SB)							✓
	2 - B2005 - link	3.66	7.00	13.1	260.8	36.3	35.0	
	3 - A249 offslip (SB)	8.26	9.50	36.8	24.9	39.2	44.0	
	4 - Swale Way	4.86	9.50	34.2	12.6	39.2	51.0	
	5 - Grovehurst Road	3.65	9.50	27.9	22.1	44.6	34.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

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Junction	Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - North	1 - A249 offslip (NB)	Direct		-1050
	2 - Grovehurst Road	Direct		-400
	3 - A249 onslip (NB)			
	4 - B2005 - link	None		
2 - South	1 - A249 onslip (SB)			
	2 - B2005 - link	Direct		500
	3 - A249 offslip (SB)	Direct		-730
	4 - Swale Way	Direct		-575
	5 - Grovehurst Road	Direct		-550

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1 - North	1 - A249 offslip (NB)	0.838	1749
	2 - Grovehurst Road	0.722	1760
	3 - A249 onslip (NB)		
	4 - B2005 - link	0.630	1765
2 - South	1 - A249 onslip (SB)		
	2 - B2005 - link	0.660	2213
	3 - A249 offslip (SB)	0.838	2001
	4 - Swale Way	0.714	1629
	5 - Grovehurst Road	0.714	1597

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	669	100.000
	2 - Grovehurst Road		ONE HOUR	✓	398	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	518	100.000
	4 - Swale Way		ONE HOUR	✓	544	100.000
	5 - Grovehurst Road		ONE HOUR	✓	573	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From 1 - A249 offslip (NB)	0	42	0	627
	From 2 - Grovehurst Road	0	0	25	373
	From 3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	136	305	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	141	0	0	674	183
	3 - A249 offslip (SB)	1	18	0	325	174
	4 - Swale Way	285	194	0	0	65
	5 - Grovehurst Road	206	233	0	134	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	7	0	14
	2 - Grovehurst Road	0	0	8	3
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	3	5	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	13	6
	3 - A249 offslip (SB)	0	6	0	5	4
	4 - Swale Way	32	7	0	0	6
	5 - Grovehurst Road	1	2	0	3	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.63	8.43	1.7	2.0	A	614	921
	2 - Grovehurst Road	0.48	7.71	0.9	3.5	A	365	548
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.29	3.00	0.4	1.5	A	408	612
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.57	4.38	1.3	1.8	A	917	1376
	3 - A249 offslip (SB)	0.69	14.29	2.2	7.9	B	475	713
	4 - Swale Way	0.60	8.84	1.5	2.2	A	499	749
	5 - Grovehurst Road	0.64	9.94	1.7	3.1	A	526	789

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	504	126	332	1285	0.392	501	0	0.0	0.6	4.580	A
	2 - Grovehurst Road	300	75	699	1161	0.258	298	134	0.0	0.3	4.166	A

	3 - A249 onslip (NB)			749				248				
	4 - B2005 - link	333	83	0	1690	0.197	332	749	0.0	0.2	2.649	A
2 - South	1 - A249 onslip (SB)			434				474				
	2 - B2005 - link	749	187	100	1952	0.384	747	333	0.0	0.6	2.981	A
	3 - A249 offslip (SB)	390	97	847	1172	0.333	388	0	0.0	0.5	4.583	A
	4 - Swale Way	410	102	387	1119	0.366	407	848	0.0	0.6	5.043	A
	5 - Grovehurst Road	431	108	478	1177	0.367	429	316	0.0	0.6	4.801	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	601	150	399	1233	0.488	600	0	0.6	0.9	5.676	A
	2 - Grovehurst Road	358	89	838	1053	0.340	357	161	0.3	0.5	5.169	A
	3 - A249 onslip (NB)			897				298				
	4 - B2005 - link	399	100	0	1690	0.236	399	897	0.2	0.3	2.786	A
2 - South	1 - A249 onslip (SB)			519				568				
	2 - B2005 - link	897	224	120	1939	0.463	896	399	0.6	0.9	3.449	A
	3 - A249 offslip (SB)	466	116	1017	1024	0.455	464	0	0.5	0.8	6.421	A
	4 - Swale Way	489	122	464	1071	0.457	488	1017	0.6	0.8	6.160	A
	5 - Grovehurst Road	515	129	573	1099	0.469	514	379	0.6	0.9	6.140	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	737	184	487	1165	0.632	734	0	0.9	1.7	8.284	A
	2 - Grovehurst Road	438	110	1024	909	0.482	437	196	0.5	0.9	7.602	A
	3 - A249 onslip (NB)			1097				364				
	4 - B2005 - link	487	122	0	1690	0.288	487	1097	0.3	0.4	2.991	A
2 - South	1 - A249 onslip (SB)			634				694				
	2 - B2005 - link	1097	274	147	1923	0.570	1095	488	0.9	1.3	4.339	A
	3 - A249 offslip (SB)	570	143	1242	827	0.690	565	0	0.8	2.1	13.495	B
	4 - Swale Way	599	150	566	1008	0.594	597	1241	0.8	1.4	8.691	A
	5 - Grovehurst Road	631	158	701	995	0.634	628	462	0.9	1.7	9.713	A

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	737	184	490	1163	0.633	736	0	1.7	1.7	8.430	A
	2 - Grovehurst Road	438	110	1029	905	0.484	438	197	0.9	0.9	7.709	A
	3 - A249 onslip (NB)			1101				366				
	4 - B2005 - link	490	122	0	1690	0.290	490	1101	0.4	0.4	2.997	A
2 - South	1 - A249 onslip (SB)			637				697				
	2 - B2005 - link	1101	275	148	1922	0.573	1101	490	1.3	1.3	4.382	A
	3 - A249 offslip (SB)	570	143	1248	821	0.695	570	0	2.1	2.2	14.292	B
	4 - Swale Way	599	150	570	1006	0.595	599	1249	1.4	1.5	8.840	A
	5 - Grovehurst Road	631	158	704	993	0.636	631	465	1.7	1.7	9.940	A

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	601	150	403	1230	0.489	604	0	1.7	1.0	5.779	A
	2 - Grovehurst Road	358	89	845	1048	0.341	359	162	0.9	0.5	5.242	A
	3 - A249 onslip (NB)			903				301				
	4 - B2005 - link	402	101	0	1690	0.238	403	903	0.4	0.3	2.797	A
2 - South	1 - A249 onslip (SB)			524				573				
	2 - B2005 - link	903	226	121	1939	0.466	905	402	1.3	0.9	3.488	A
	3 - A249 offslip (SB)	466	116	1026	1015	0.459	471	0	2.2	0.9	6.683	A
	4 - Swale Way	489	122	469	1068	0.458	491	1028	1.5	0.9	6.268	A
	5 - Grovehurst Road	515	129	578	1095	0.470	518	383	1.7	0.9	6.272	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	504	126	336	1282	0.393	505	0	1.0	0.7	4.644	A

1 - North	2 - Grovehurst Road	300	75	706	1156	0.259	300	135	0.5	0.4	4.211	A
	3 - A249 onslip (NB)			755				251				
	4 - B2005 - link	336	84	0	1690	0.199	336	755	0.3	0.2	2.658	A
	1 - A249 onslip (SB)			437				478				
2 - South	2 - B2005 - link	755	189	101	1951	0.387	756	336	0.9	0.6	3.013	A
	3 - A249 offslip (SB)	390	97	857	1163	0.335	391	0	0.9	0.5	4.673	A
	4 - Swale Way	410	102	391	1116	0.367	411	857	0.9	0.6	5.111	A
	5 - Grovehurst Road	431	108	483	1173	0.368	433	319	0.9	0.6	4.871	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	0.64	0.55	1.00	1.40	1.45			N/A	N/A
	2 - Grovehurst Road	0.35	0.00	0.00	0.35	0.35			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.24	0.00	0.00	0.24	0.24			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.62	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.50	0.00	0.00	0.50	0.50			N/A	N/A
	4 - Swale Way	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.57	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	0.94	0.08	0.85	1.60	1.96			N/A	N/A
	2 - Grovehurst Road	0.51	0.05	0.54	1.31	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.86	0.08	0.82	1.32	1.75			N/A	N/A
	3 - A249 offslip (SB)	0.82	0.06	0.70	1.44	1.88			N/A	N/A
	4 - Swale Way	0.83	0.09	0.86	1.49	1.50			N/A	N/A
	5 - Grovehurst Road	0.87	0.08	0.83	1.38	1.79			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.68	0.03	0.27	1.68	1.73			N/A	N/A
	2 - Grovehurst Road	0.92	0.03	0.26	0.92	0.92			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.31	0.03	0.26	1.31	1.31			N/A	N/A
	3 - A249 offslip (SB)	2.12	0.03	0.29	2.12	7.89			N/A	N/A
	4 - Swale Way	1.43	0.03	0.27	1.43	1.43			N/A	N/A
	5 - Grovehurst Road	1.68	0.03	0.27	1.68	2.69			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.70	0.03	0.27	1.70	1.79			N/A	N/A
	2 - Grovehurst Road	0.93	0.03	0.28	0.93	3.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.03	0.32	1.32	1.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.33	0.03	0.26	1.33	1.33			N/A	N/A
	3 - A249 offslip (SB)	2.21	0.03	0.28	2.21	7.57			N/A	N/A
	4 - Swale Way	1.45	0.03	0.27	1.45	2.17			N/A	N/A
	5 - Grovehurst Road	1.72	0.03	0.27	1.72	3.05			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	0.97	0.10	0.94	1.51	1.85			N/A	N/A
	2 - Grovehurst Road	0.52	0.06	0.62	1.32	1.41			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.31	0.00	0.00	0.31	0.31			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.88	0.52	0.99	1.41	1.46			N/A	N/A
	3 - A249 offslip (SB)	0.86	0.06	0.68	1.59	2.00			N/A	N/A
	4 - Swale Way	0.86	0.10	0.89	1.49	1.51			N/A	N/A
	5 - Grovehurst Road	0.90	0.08	0.87	1.41	1.80			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	0.65	0.05	0.50	1.46	1.49			N/A	N/A
	2 - Grovehurst Road	0.35	0.03	0.27	0.48	0.78			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.25	0.00	0.00	0.25	0.25			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.63	0.09	0.79	1.36	1.43			N/A	N/A
	3 - A249 offslip (SB)	0.51	0.04	0.36	1.44	1.63			N/A	N/A
	4 - Swale Way	0.58	0.05	0.49	1.36	1.48			N/A	N/A
	5 - Grovehurst Road	0.59	0.04	0.44	1.39	1.39			N/A	N/A

2017, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	12.50	B
2	South	Standard Roundabout	1, 2, 3, 4, 5	43.78	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	749	100.000
	2 - Grovehurst Road		ONE HOUR	✓	222	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	431	100.000
	4 - Swale Way		ONE HOUR	✓	989	100.000
	5 - Grovehurst Road		ONE HOUR	✓	528	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	569
		2 - Grovehurst Road	0	0	27	195
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	234	470	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	396	322
		3 - A249 offslip (SB)	1	27	0	187	216
		4 - Swale Way	509	351	0	0	129
		5 - Grovehurst Road	110	318	0	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	16
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	22	1
		3 - A249 offslip (SB)	0	11	0	7	4
		4 - Swale Way	14	2	0	0	2
		5 - Grovehurst Road	0	2	0	3	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.84	21.72	4.7	23.6	C	687	1031
	2 - Grovehurst Road	0.29	5.88	0.4	1.3	A	204	306
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.43	3.67	0.8	2.1	A	640	960
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.44	3.37	0.8	2.1	A	702	1052
	3 - A249 offslip (SB)	0.45	6.19	0.8	3.3	A	395	593
	4 - Swale Way	1.04	106.63	34.1	91.4	F	908	1361
	5 - Grovehurst Road	0.71	14.92	2.3	8.6	B	485	727

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	564	141	520	1161	0.486	560	0	0.0	0.9	5.957	A
	2 - Grovehurst Road	167	42	773	1135	0.147	166	308	0.0	0.2	3.714	A
	3 - A249 onslip (NB)			572				368				
	4 - B2005 - link	522	130	0	1730	0.302	520	572	0.0	0.4	2.972	A
2 - South	1 - A249 onslip (SB)			595				494				
	2 - B2005 - link	573	143	75	1930	0.297	571	520	0.0	0.4	2.645	A
	3 - A249 offslip (SB)	324	81	646	1325	0.245	323	0	0.0	0.3	3.590	A
	4 - Swale Way	745	186	456	1197	0.622	738	513	0.0	1.6	7.747	A
	5 - Grovehurst Road	398	99	694	1039	0.383	395	500	0.0	0.6	5.570	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	673	168	624	1082	0.622	671	0	0.9	1.6	8.694	A
	2 - Grovehurst Road	200	50	926	1015	0.197	199	369	0.2	0.2	4.414	A
	3 - A249 onslip (NB)			685				441				
	4 - B2005 - link	624	156	0	1730	0.361	624	685	0.4	0.6	3.252	A
2 - South	1 - A249 onslip (SB)			712				591				
	2 - B2005 - link	686	171	90	1921	0.357	685	622	0.4	0.6	2.910	A
	3 - A249 offslip (SB)	387	97	775	1211	0.320	387	0	0.3	0.5	4.364	A
	4 - Swale Way	889	222	547	1135	0.783	882	614	1.6	3.4	13.833	B
	5 - Grovehurst Road	475	119	830	935	0.507	473	599	0.6	1.0	7.759	A

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	825	206	740	994	0.830	814	0	1.6	4.3	18.942	C
	2 - Grovehurst Road	244	61	1112	867	0.282	244	441	0.2	0.4	5.770	A
	3 - A249 onslip (NB)			832				523				
	4 - B2005 - link	740	185	0	1730	0.428	740	832	0.6	0.7	3.634	A
2 - South	1 - A249 onslip (SB)			847				691				
	2 - B2005 - link	833	208	109	1909	0.437	833	738	0.6	0.8	3.340	A
	3 - A249 offslip (SB)	475	119	942	1064	0.446	473	0	0.5	0.8	6.078	A
	4 - Swale Way	1089	272	667	1054	1.033	1017	748	3.4	21.4	56.760	F
	5 - Grovehurst Road	581	145	961	836	0.696	577	723	1.0	2.2	13.662	B

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	825	206	750	986	0.837	823	0	4.3	4.7	21.724	C
	2 - Grovehurst Road	244	61	1126	856	0.286	244	447	0.4	0.4	5.885	A
	3 - A249 onslip (NB)			840				531				
	4 - B2005 - link	751	188	0	1730	0.434	750	840	0.7	0.8	3.675	A
2 - South	1 - A249 onslip (SB)			858				703				
	2 - B2005 - link	841	210	110	1909	0.441	841	748	0.8	0.8	3.371	A
	3 - A249 offslip (SB)	475	119	951	1056	0.449	474	0	0.8	0.8	6.191	A
	4 - Swale Way	1089	272	671	1051	1.036	1038	754	21.4	34.1	106.632	F
	5 - Grovehurst Road	581	145	980	821	0.708	581	730	2.2	2.3	14.919	B

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	673	168	673	1044	0.645	685	0	4.7	1.9	10.316	B
	2 - Grovehurst Road	200	50	970	981	0.203	200	388	0.4	0.3	4.613	A
	3 - A249 onslip (NB)			696				474				
	4 - B2005 - link	673	168	0	1730	0.389	673	696	0.8	0.6	3.410	A
	1 - A249 onslip (SB)			761				658				

2 - South	2 - B2005 - link	697	174	91	1921	0.363	698	671	0.8	0.6	2.946	A
	3 - A249 offslip (SB)	387	97	789	1199	0.323	389	0	0.8	0.5	4.453	A
	4 - Swale Way	889	222	554	1130	0.787	1009	623	34.1	4.1	46.441	E
	5 - Grovehurst Road	475	119	941	851	0.558	479	622	2.3	1.3	9.791	A

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	564	141	532	1152	0.489	567	0	1.9	1.0	6.194	A
	2 - Grovehurst Road	167	42	786	1125	0.149	167	313	0.3	0.2	3.762	A
	3 - A249 onslip (NB)			578				375				
	4 - B2005 - link	531	133	0	1730	0.307	532	578	0.6	0.4	3.008	A
2 - South	1 - A249 onslip (SB)			605				504				
	2 - B2005 - link	579	145	76	1930	0.300	580	529	0.6	0.4	2.669	A
	3 - A249 offslip (SB)	324	81	656	1316	0.247	325	0	0.5	0.3	3.637	A
	4 - Swale Way	745	186	462	1193	0.624	754	519	4.1	1.7	8.380	A
	5 - Grovehurst Road	398	99	709	1028	0.387	400	507	1.3	0.6	5.759	A

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	0.93	0.55	1.00	1.40	1.45			N/A	N/A
	2 - Grovehurst Road	0.17	0.00	0.00	0.17	0.17			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.42	0.00	0.00	0.42	0.42			N/A	N/A
	3 - A249 offslip (SB)	0.32	0.00	0.00	0.32	0.32			N/A	N/A
	4 - Swale Way	1.61	0.26	1.40	2.62	3.15			N/A	N/A
	5 - Grovehurst Road	0.61	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.61	0.05	0.66	3.98	6.02			N/A	N/A
	2 - Grovehurst Road	0.24	0.00	0.00	0.24	0.24			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.56	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.55	0.08	0.75	1.35	1.43			N/A	N/A
	3 - A249 offslip (SB)	0.47	0.00	0.00	0.47	0.47			N/A	N/A
	4 - Swale Way	3.38	0.06	0.92	9.34	14.65			N/A	N/A
	5 - Grovehurst Road	1.01	0.07	0.84	1.83	2.49			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.34	0.04	0.36	10.03	23.62			N/A	N/A
	2 - Grovehurst Road	0.39	0.03	0.25	0.46	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.74	0.03	0.25	0.74	0.74			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.77	0.03	0.25	0.77	0.77			N/A	N/A
	3 - A249 offslip (SB)	0.80	0.03	0.26	0.80	0.80			N/A	N/A
	4 - Swale Way	21.40	1.44	15.74	45.68	57.99			N/A	N/A
	5 - Grovehurst Road	2.18	0.03	0.29	2.18	8.56			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	4.74	0.03	0.31	5.41	22.27			N/A	N/A
	2 - Grovehurst Road	0.40	0.03	0.33	1.25	1.25			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.76	0.03	0.27	0.76	2.05			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.78	0.03	0.27	0.78	2.13			N/A	N/A
	3 - A249 offslip (SB)	0.81	0.03	0.28	1.06	3.32			N/A	N/A
	4 - Swale Way	34.05	2.82	25.62	72.31	91.41			N/A	N/A
	5 - Grovehurst Road	2.34	0.03	0.28	2.34	7.28			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.87	0.05	0.50	4.91	7.75			N/A	N/A
	2 - Grovehurst Road	0.26	0.00	0.00	0.26	0.26			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.48	0.00	0.00	0.48	0.48			N/A	N/A
	4 - Swale Way	4.15	0.04	0.41	11.30	21.73			N/A	N/A
	5 - Grovehurst Road	1.29	0.09	1.05	2.42	3.14			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	0.97	0.03	0.33	2.11	4.82			N/A	N/A
	2 - Grovehurst Road	0.18	0.00	0.00	0.18	0.18			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
	3 - A249 offslip (SB)	0.33	0.00	0.00	0.33	0.33			N/A	N/A
	4 - Swale Way	1.70	0.03	0.29	1.70	6.48			N/A	N/A
	5 - Grovehurst Road	0.64	0.04	0.38	1.40	2.21			N/A	N/A

2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	16.79	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	61.90	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	861	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	689	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	819
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	908	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	386	226	0	0	77
	5 - Grovehurst Road	206	233	0	172	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	18
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	38	10	0	0	9
	5 - Grovehurst Road	1	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.87	23.46	5.9	29.6	C	790	1185
	2 - Grovehurst Road	0.70	17.12	2.2	9.0	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.74	7.34	2.7	5.4	A	1134	1701
	3 - A249 offslip (SB)	1.22	292.82	57.3	97.2	F	523	785
	4 - Swale Way	0.77	15.85	3.2	15.4	C	632	948
	5 - Grovehurst Road	0.80	21.06	3.8	18.9	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	648	162	355	1221	0.531	644	0	0.0	1.1	6.196	A
	2 - Grovehurst Road	331	83	857	1016	0.326	329	142	0.0	0.5	5.230	A
	3 - A249 onslip (NB)			923				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	923	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				549				
	2 - B2005 - link	925	231	129	1885	0.491	921	357	0.0	1.0	3.719	A
	3 - A249 offslip (SB)	429	107	1050	949	0.452	426	0	0.0	0.8	6.842	A
	4 - Swale Way	519	130	386	1069	0.485	515	1089	0.0	0.9	6.454	A
	5 - Grovehurst Road	460	115	577	1070	0.430	457	324	0.0	0.7	5.844	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	774	194	426	1167	0.663	771	0	1.1	1.9	9.022	A
	2 - Grovehurst Road	396	99	1027	879	0.450	394	170	0.5	0.8	7.405	A
	3 - A249 onslip (NB)			1105				317				
	4 - B2005 - link	427	107	0	1664	0.256	426	1105	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				658				
	2 - B2005 - link	1108	277	154	1870	0.592	1106	427	1.0	1.4	4.702	A
	3 - A249 offslip (SB)	512	128	1260	766	0.669	508	0	0.8	1.9	13.725	B
	4 - Swale Way	619	155	463	1024	0.605	617	1305	0.9	1.5	8.792	A
	5 - Grovehurst Road	549	137	692	972	0.565	547	388	0.7	1.3	8.423	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	948	237	515	1099	0.862	934	0	1.9	5.4	20.277	C
	2 - Grovehurst Road	484	121	1244	705	0.687	479	205	0.8	2.1	15.612	C
	3 - A249 onslip (NB)			1341				383				
	4 - B2005 - link	516	129	0	1664	0.310	515	1341	0.3	0.4	3.135	A
2 - South	1 - A249 onslip (SB)			703				799				
	2 - B2005 - link	1344	336	187	1850	0.726	1339	516	1.4	2.6	6.989	A
	3 - A249 offslip (SB)	628	157	1526	534	1.175	521	0	1.9	28.7	124.073	F
	4 - Swale Way	759	190	528	986	0.770	752	1518	1.5	3.1	15.000	C
	5 - Grovehurst Road	673	168	839	847	0.795	664	442	1.3	3.5	18.830	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	948	237	520	1095	0.865	946	0	5.4	5.9	23.458	C
	2 - Grovehurst Road	484	121	1259	693	0.699	484	208	2.1	2.2	17.124	C
	3 - A249 onslip (NB)			1356				386				
	4 - B2005 - link	520	130	0	1664	0.313	520	1356	0.4	0.5	3.148	A
2 - South	1 - A249 onslip (SB)			710				808				
	2 - B2005 - link	1360	340	189	1848	0.736	1359	521	2.6	2.7	7.344	A
	3 - A249 offslip (SB)	628	157	1548	515	1.220	513	0	28.7	57.3	292.817	F
	4 - Swale Way	759	190	531	984	0.771	758	1530	3.1	3.2	15.848	C
	5 - Grovehurst Road	673	168	846	840	0.800	672	443	3.5	3.8	21.057	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	774	194	441	1156	0.670	789	0	5.9	2.1	10.198	B
	2 - Grovehurst Road	396	99	1055	857	0.461	401	175	2.2	0.9	7.981	A
	3 - A249 onslip (NB)			1129				327				
	4 - B2005 - link	440	110	0	1664	0.265	441	1129	0.5	0.4	2.944	A
	1 - A249 onslip (SB)			598				670				

2 - South	2 - B2005 - link	1132	283	157	1868	0.606	1136	441	2.7	1.6	4.955	A
	3 - A249 offslip (SB)	512	128	1294	736	0.696	724	0	57.3	4.4	161.524	F
	4 - Swale Way	619	155	544	976	0.634	625	1474	3.2	1.8	10.418	B
	5 - Grovehurst Road	549	137	710	958	0.573	559	460	3.8	1.4	9.219	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	648	162	361	1216	0.533	652	0	2.1	1.2	6.425	A
	2 - Grovehurst Road	331	83	869	1006	0.329	333	144	0.9	0.5	5.358	A
	3 - A249 onslip (NB)			934				268				
	4 - B2005 - link	361	90	0	1664	0.217	361	934	0.4	0.3	2.764	A
2 - South	1 - A249 onslip (SB)			492				557				
	2 - B2005 - link	936	234	130	1884	0.497	939	362	1.6	1.0	3.817	A
	3 - A249 offslip (SB)	429	107	1069	932	0.460	443	0	4.4	0.9	7.566	A
	4 - Swale Way	519	130	397	1063	0.488	522	1115	1.8	1.0	6.691	A
	5 - Grovehurst Road	460	115	586	1063	0.433	462	333	1.4	0.8	6.019	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.12	0.55	1.02	1.44	1.49			N/A	N/A
	2 - Grovehurst Road	0.48	0.00	0.00	0.48	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.96	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.81	0.05	0.59	1.55	2.00			N/A	N/A
	4 - Swale Way	0.93	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.75	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.92	0.05	0.63	4.97	7.71			N/A	N/A
	2 - Grovehurst Road	0.81	0.06	0.73	1.29	1.76			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.44	0.05	0.56	3.55	5.37			N/A	N/A
	3 - A249 offslip (SB)	1.93	0.04	0.39	5.13	9.57			N/A	N/A
	4 - Swale Way	1.49	0.06	0.89	3.43	4.86			N/A	N/A
	5 - Grovehurst Road	1.27	0.06	0.68	2.89	4.24			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.39	0.04	0.40	14.02	29.14			N/A	N/A
	2 - Grovehurst Road	2.08	0.03	0.29	2.08	8.62			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.58	0.03	0.27	2.58	4.65			N/A	N/A
	3 - A249 offslip (SB)	28.70	9.41	25.90	47.32	54.97			N/A	N/A
	4 - Swale Way	3.12	0.03	0.31	4.28	15.35			N/A	N/A
	5 - Grovehurst Road	3.51	0.03	0.34	7.17	18.88			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	5.85	0.03	0.32	8.82	29.63			N/A	N/A
	2 - Grovehurst Road	2.23	0.03	0.29	2.23	9.00			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.72	0.03	0.27	2.72	2.72			N/A	N/A
	3 - A249 offslip (SB)	57.28	25.95	53.99	86.24	97.22			N/A	N/A
	4 - Swale Way	3.24	0.03	0.28	3.24	9.84			N/A	N/A
	5 - Grovehurst Road	3.77	0.03	0.30	3.77	16.88			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.09	0.04	0.44	5.71	9.63			N/A	N/A
	2 - Grovehurst Road	0.87	0.06	0.67	1.64	2.15			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.56	0.10	1.19	3.00	4.02			N/A	N/A
	3 - A249 offslip (SB)	4.38	0.05	0.50	12.50	21.20			N/A	N/A
	4 - Swale Way	1.79	0.06	0.92	4.33	6.31			N/A	N/A
	5 - Grovehurst Road	1.37	0.05	0.47	3.46	5.37			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.16	0.03	0.32	2.42	5.88			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.35	1.44	1.65			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.05	0.50	2.15	3.18			N/A	N/A
	3 - A249 offslip (SB)	0.87	0.03	0.26	0.87	0.87			N/A	N/A
	4 - Swale Way	0.97	0.04	0.37	2.39	4.30			N/A	N/A
	5 - Grovehurst Road	0.77	0.03	0.33	1.74	3.63			N/A	N/A

2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	26.30	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	296.86	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	825	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	443	100.000
	4 - Swale Way		ONE HOUR	✓	1276	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	645
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	522	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	477	322
		3 - A249 offslip (SB)	1	27	0	199	216
		4 - Swale Way	685	432	0	0	159
		5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	21
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	28	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	18	3	0	0	3
		5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.94	48.69	11.5	57.5	E	757	1136
	2 - Grovehurst Road	0.32	6.87	0.5	1.9	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.63	0.7	1.5	A	674	1011
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.50	3.96	1.0	1.5	A	774	1161
	3 - A249 offslip (SB)	0.52	7.94	1.1	3.7	A	407	610
	4 - Swale Way	1.37	703.33	224.0	224.0	F	1171	1756
	5 - Grovehurst Road	0.73	16.62	2.6	12.4	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	621	155	576	1075	0.578	616	0	0.0	1.3	7.756	A
	2 - Grovehurst Road	171	43	865	1042	0.164	170	327	0.0	0.2	4.125	A
	3 - A249 onslip (NB)			631				404				
	4 - B2005 - link	578	145	0	1719	0.336	576	631	0.0	0.5	3.146	A
2 - South	1 - A249 onslip (SB)			656				621				
	2 - B2005 - link	631	158	79	1855	0.340	629	577	0.0	0.5	2.931	A
	3 - A249 offslip (SB)	334	83	708	1242	0.269	332	0	0.0	0.4	3.950	A
	4 - Swale Way	961	240	455	1167	0.823	944	585	0.0	4.2	15.169	C
	5 - Grovehurst Road	402	101	878	878	0.458	399	520	0.0	0.8	7.458	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	742	185	672	1004	0.739	736	0	1.3	2.7	13.189	B
	2 - Grovehurst Road	204	51	1023	913	0.224	204	385	0.2	0.3	5.074	A
	3 - A249 onslip (NB)			755				472				
	4 - B2005 - link	673	168	0	1719	0.391	672	755	0.5	0.6	3.438	A
2 - South	1 - A249 onslip (SB)			766				712				
	2 - B2005 - link	754	189	95	1846	0.409	754	671	0.5	0.7	3.295	A
	3 - A249 offslip (SB)	398	100	848	1114	0.357	398	0	0.4	0.6	5.018	A
	4 - Swale Way	1147	287	545	1107	1.036	1072	701	4.2	23.0	58.576	F
	5 - Grovehurst Road	480	120	1001	782	0.614	477	616	0.8	1.5	11.691	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	908	227	727	963	0.943	881	0	2.7	9.5	35.451	E
	2 - Grovehurst Road	250	62	1173	788	0.317	249	435	0.3	0.5	6.677	A
	3 - A249 onslip (NB)			908				514				
	4 - B2005 - link	727	182	0	1719	0.423	727	908	0.6	0.7	3.630	A
2 - South	1 - A249 onslip (SB)			842				720				
	2 - B2005 - link	907	227	116	1833	0.495	906	726	0.7	1.0	3.876	A
	3 - A249 offslip (SB)	488	122	1021	957	0.510	486	0	0.6	1.0	7.607	A
	4 - Swale Way	1405	351	660	1032	1.362	1030	848	23.0	116.6	253.022	F
	5 - Grovehurst Road	588	147	978	801	0.734	584	712	1.5	2.6	16.228	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	908	227	728	962	0.944	900	0	9.5	11.5	48.690	E
	2 - Grovehurst Road	250	62	1189	774	0.323	250	440	0.5	0.5	6.870	A
	3 - A249 onslip (NB)			924				515				
	4 - B2005 - link	728	182	0	1719	0.424	728	924	0.7	0.7	3.634	A
2 - South	1 - A249 onslip (SB)			844				719				
	2 - B2005 - link	923	231	117	1833	0.504	923	727	1.0	1.0	3.957	A
	3 - A249 offslip (SB)	488	122	1040	941	0.519	488	0	1.0	1.1	7.942	A
	4 - Swale Way	1405	351	668	1026	1.369	1026	859	116.6	211.3	566.743	F
	5 - Grovehurst Road	588	147	975	804	0.732	588	719	2.6	2.6	16.624	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	742	185	685	994	0.746	775	0	11.5	3.1	18.591	C
	2 - Grovehurst Road	204	51	1062	880	0.232	205	398	0.5	0.3	5.337	A
	3 - A249 onslip (NB)			786				481				
	4 - B2005 - link	685	171	0	1719	0.398	685	786	0.7	0.7	3.482	A
	1 - A249 onslip (SB)			780				728				

2 - South	2 - B2005 - link	787	197	96	1845	0.427	788	684	1.0	0.7	3.408	A
	3 - A249 offslip (SB)	398	100	884	1082	0.368	400	0	1.1	0.6	5.296	A
	4 - Swale Way	1147	287	561	1097	1.046	1096	723	211.3	224.0	703.325	F
	5 - Grovehurst Road	480	120	1024	764	0.628	484	633	2.6	1.7	12.983	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	621	155	654	1017	0.611	627	0	3.1	1.6	9.369	A
	2 - Grovehurst Road	171	43	926	996	0.172	171	355	0.3	0.2	4.369	A
	3 - A249 onslip (NB)			641				456				
	4 - B2005 - link	654	164	0	1719	0.381	654	641	0.7	0.6	3.384	A
2 - South	1 - A249 onslip (SB)			733				737				
	2 - B2005 - link	641	160	80	1854	0.346	642	653	0.7	0.5	2.973	A
	3 - A249 offslip (SB)	334	83	722	1229	0.271	334	0	0.6	0.4	4.028	A
	4 - Swale Way	961	240	462	1162	0.827	1157	594	224.0	175.0	621.329	F
	5 - Grovehurst Road	402	101	1066	731	0.550	404	553	1.7	1.3	11.073	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.34	0.55	1.25	1.77	1.93			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.23	0.03	0.32	6.32	21.34			N/A	N/A
	5 - Grovehurst Road	0.83	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.68	0.06	0.98	7.13	10.83			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.69	0.10	0.84	1.37	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.55	0.06	0.69	1.34	1.42			N/A	N/A
	4 - Swale Way	22.97	0.59	13.71	55.76	74.83			N/A	N/A
	5 - Grovehurst Road	1.54	0.09	1.14	3.07	4.16			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	9.54	0.09	2.39	26.93	40.78			N/A	N/A
	2 - Grovehurst Road	0.46	0.03	0.25	0.46	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.73	0.03	0.25	0.73	0.73			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.97	0.03	0.25	0.97	0.97			N/A	N/A
	3 - A249 offslip (SB)	1.02	0.03	0.26	1.02	1.02			N/A	N/A
	4 - Swale Way	116.58	65.58	112.68	162.06	178.27			N/A	N/A
	5 - Grovehurst Road	2.59	0.03	0.31	3.16	12.36			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	11.52	0.06	1.23	33.69	57.50			N/A	N/A
	2 - Grovehurst Road	0.47	0.03	0.32	1.43	1.89			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.73	0.03	0.27	0.73	1.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.01	0.03	0.27	1.01	1.50			N/A	N/A
	3 - A249 offslip (SB)	1.06	0.03	0.28	1.06	3.69			N/A	N/A
	4 - Swale Way	211.29	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.65	0.03	0.28	2.65	6.82			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.12	0.04	0.41	8.56	15.86			N/A	N/A
	2 - Grovehurst Road	0.30	0.00	0.00	0.30	0.30			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.67	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.75	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.59	0.09	0.82	1.36	1.43			N/A	N/A
	4 - Swale Way	224.03	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.75	0.05	0.70	4.42	6.67			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.61	0.03	0.31	2.64	8.17			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.62	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.03	0.30	0.85	1.17			N/A	N/A
	4 - Swale Way	174.95	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.25	0.05	0.46	3.08	4.85			N/A	N/A

2024 + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	25.77	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	94.74	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	904	100.000
	2 - Grovehurst Road		ONE HOUR	✓	446	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	593	100.000
	4 - Swale Way		ONE HOUR	✓	690	100.000
	5 - Grovehurst Road		ONE HOUR	✓	736	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	45	0	859
		2 - Grovehurst Road	0	0	25	421
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	151	366	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	144	0	0	908	225
		3 - A249 offslip (SB)	1	18	0	377	197
		4 - Swale Way	387	226	0	0	77
		5 - Grovehurst Road	287	277	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	13	0	17
		2 - Grovehurst Road	0	0	8	4
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	6	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	16	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	39	10	0	0	9
		5 - Grovehurst Road	1	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.93	38.08	9.9	53.0	E	830	1244
	2 - Grovehurst Road	0.77	24.32	3.2	15.6	C	409	614
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.34	3.23	0.5	2.3	A	476	714
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.76	8.00	3.0	6.6	A	1174	1761
	3 - A249 offslip (SB)	1.36	432.09	84.1	124.7	F	544	816
	4 - Swale Way	0.80	18.81	3.8	19.6	C	633	950
	5 - Grovehurst Road	0.97	63.48	13.7	60.3	F	675	1013

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	681	170	387	1205	0.565	675	0	0.0	1.3	6.732	A
	2 - Grovehurst Road	336	84	916	967	0.347	334	147	0.0	0.5	5.663	A
	3 - A249 onslip (NB)			957				293				
	4 - B2005 - link	388	97	0	1674	0.232	387	957	0.0	0.3	2.794	A
2 - South	1 - A249 onslip (SB)			518				612				
	2 - B2005 - link	957	239	129	1886	0.508	953	389	0.0	1.0	3.844	A
	3 - A249 offslip (SB)	446	112	1082	922	0.484	443	0	0.0	0.9	7.454	A
	4 - Swale Way	519	130	437	1033	0.503	515	1088	0.0	1.0	6.901	A
	5 - Grovehurst Road	554	139	580	1070	0.518	550	373	0.0	1.1	6.866	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	813	203	464	1147	0.709	808	0	1.3	2.3	10.505	B
	2 - Grovehurst Road	401	100	1097	825	0.486	399	176	0.5	0.9	8.431	A
	3 - A249 onslip (NB)			1145				351				
	4 - B2005 - link	464	116	0	1674	0.277	464	1145	0.3	0.4	2.975	A
2 - South	1 - A249 onslip (SB)			619				733				
	2 - B2005 - link	1146	286	154	1870	0.613	1144	466	1.0	1.6	4.939	A
	3 - A249 offslip (SB)	533	133	1297	734	0.726	527	0	0.9	2.5	16.897	C
	4 - Swale Way	620	155	522	983	0.631	618	1302	1.0	1.7	9.787	A
	5 - Grovehurst Road	662	165	695	971	0.681	658	445	1.1	2.1	11.341	B

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	995	249	552	1080	0.922	972	0	2.3	8.3	28.483	D
	2 - Grovehurst Road	491	123	1314	653	0.752	484	210	0.9	2.8	20.421	C
	3 - A249 onslip (NB)			1380				418				
	4 - B2005 - link	553	138	0	1674	0.330	552	1380	0.4	0.5	3.209	A
2 - South	1 - A249 onslip (SB)			736				881				
	2 - B2005 - link	1380	345	182	1853	0.745	1375	554	1.6	2.8	7.450	A
	3 - A249 offslip (SB)	653	163	1557	507	1.287	500	0	2.5	40.8	174.701	F
	4 - Swale Way	760	190	579	949	0.801	752	1477	1.7	3.7	17.559	C
	5 - Grovehurst Road	810	203	839	846	0.958	778	492	2.1	10.3	40.961	E

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	995	249	561	1073	0.927	989	0	8.3	9.9	38.084	E
	2 - Grovehurst Road	491	123	1337	635	0.773	490	213	2.8	3.2	24.318	C
	3 - A249 onslip (NB)			1402				425				
	4 - B2005 - link	561	140	0	1674	0.335	561	1402	0.5	0.5	3.234	A
2 - South	1 - A249 onslip (SB)			749				895				
	2 - B2005 - link	1403	351	186	1850	0.758	1402	563	2.8	3.0	7.996	A
	3 - A249 offslip (SB)	653	163	1588	480	1.359	480	0	40.8	84.1	432.093	F
	4 - Swale Way	760	190	580	949	0.801	759	1488	3.7	3.8	18.813	C
	5 - Grovehurst Road	810	203	848	838	0.967	797	491	10.3	13.7	63.477	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	813	203	490	1127	0.721	841	0	9.9	2.7	13.756	B
	2 - Grovehurst Road	401	100	1147	786	0.510	409	185	3.2	1.1	9.768	A
	3 - A249 onslip (NB)			1186				370				
	4 - B2005 - link	490	123	0	1674	0.293	490	1186	0.5	0.4	3.042	A
	1 - A249 onslip (SB)			657				763				

2 - South	2 - B2005 - link	1187	297	165	1863	0.637	1192	492	3.0	1.8	5.403	A
	3 - A249 offslip (SB)	533	133	1357	682	0.782	674	0	84.1	48.8	345.623	F
	4 - Swale Way	620	155	590	943	0.658	628	1441	3.8	2.0	11.674	B
	5 - Grovehurst Road	662	165	714	956	0.692	707	504	13.7	2.4	16.956	C

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	681	170	400	1195	0.570	686	0	2.7	1.3	7.148	A
	2 - Grovehurst Road	336	84	935	952	0.353	338	151	1.1	0.6	5.880	A
	3 - A249 onslip (NB)			971				302				
	4 - B2005 - link	400	100	0	1674	0.239	400	971	0.4	0.3	2.826	A
2 - South	1 - A249 onslip (SB)			532				622				
	2 - B2005 - link	971	243	131	1884	0.516	974	401	1.8	1.1	3.969	A
	3 - A249 offslip (SB)	446	112	1105	902	0.495	638	0	48.8	1.0	30.534	D
	4 - Swale Way	519	130	514	988	0.526	523	1229	2.0	1.1	7.800	A
	5 - Grovehurst Road	554	139	595	1058	0.524	559	442	2.4	1.1	7.289	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.28	0.56	1.18	1.64	1.83			N/A	N/A
	2 - Grovehurst Road	0.53	0.53	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.02	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.92	0.04	0.42	2.15	3.45			N/A	N/A
	4 - Swale Way	1.00	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	1.06	0.51	1.05	1.21	1.61			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.34	0.05	0.67	6.31	9.88			N/A	N/A
	2 - Grovehurst Road	0.93	0.06	0.69	1.79	2.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.56	0.05	0.53	3.93	6.05			N/A	N/A
	3 - A249 offslip (SB)	2.48	0.04	0.40	6.73	12.48			N/A	N/A
	4 - Swale Way	1.66	0.06	0.91	3.93	5.72			N/A	N/A
	5 - Grovehurst Road	2.06	0.05	0.49	5.53	8.79			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.27	0.06	1.36	24.03	39.22			N/A	N/A
	2 - Grovehurst Road	2.78	0.03	0.32	5.01	14.58			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.49	0.03	0.25	0.49	0.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.83	0.03	0.28	2.83	6.61			N/A	N/A
	3 - A249 offslip (SB)	40.81	18.73	38.41	60.85	68.50			N/A	N/A
	4 - Swale Way	3.67	0.03	0.33	7.15	19.61			N/A	N/A
	5 - Grovehurst Road	10.26	0.13	3.83	27.69	40.00			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	9.85	0.05	0.46	27.39	52.96			N/A	N/A
	2 - Grovehurst Road	3.16	0.03	0.31	4.36	15.56			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.03	0.30	1.38	2.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.05	0.03	0.27	3.05	3.05			N/A	N/A
	3 - A249 offslip (SB)	84.08	49.64	81.50	114.11	124.72			N/A	N/A
	4 - Swale Way	3.83	0.03	0.29	3.83	14.75			N/A	N/A
	5 - Grovehurst Road	13.71	0.09	3.25	39.35	60.28			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.71	0.04	0.43	7.48	13.34			N/A	N/A
	2 - Grovehurst Road	1.06	0.05	0.55	2.37	3.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.78	0.10	1.27	3.71	4.94			N/A	N/A
	3 - A249 offslip (SB)	48.85	28.76	47.16	65.94	72.03			N/A	N/A
	4 - Swale Way	1.99	0.05	0.71	5.16	7.90			N/A	N/A
	5 - Grovehurst Road	2.36	0.04	0.38	6.21	12.09			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.35	0.03	0.31	2.01	6.71			N/A	N/A
	2 - Grovehurst Road	0.55	0.03	0.33	1.14	2.34			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.07	0.05	0.47	2.52	3.80			N/A	N/A
	3 - A249 offslip (SB)	1.01	0.03	0.26	1.01	1.01			N/A	N/A
	4 - Swale Way	1.13	0.04	0.36	2.82	5.33			N/A	N/A
	5 - Grovehurst Road	1.12	0.03	0.29	1.32	4.69			N/A	N/A

2024 + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	52.11	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	397.33	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	896	100.000
	2 - Grovehurst Road		ONE HOUR	✓	235	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	482	100.000
	4 - Swale Way		ONE HOUR	✓	1276	100.000
	5 - Grovehurst Road		ONE HOUR	✓	595	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From				
	1 - A249 offslip (NB)	0	183	0	713
	2 - Grovehurst Road	0	0	27	208
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	264	541	0

Demand (Veh/hr)

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
2 - South	From					
	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	45	0	0	479	393
	3 - A249 offslip (SB)	1	27	0	199	255
	4 - Swale Way	685	432	0	0	159
	5 - Grovehurst Road	150	339	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From				
	1 - A249 offslip (NB)	0	2	0	20
	2 - Grovehurst Road	0	0	0	2
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
2 - South	From					
	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	9	0	0	28	2
	3 - A249 offslip (SB)	0	11	0	8	3
	4 - Swale Way	18	3	0	0	3
	5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.02	97.38	27.3	82.4	F	822	1233
	2 - Grovehurst Road	0.36	7.68	0.5	2.5	A	216	323
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.60	0.7	1.5	A	678	1017
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.54	4.21	1.1	1.5	A	844	1266
	3 - A249 offslip (SB)	0.59	9.89	1.4	4.1	A	442	663
	4 - Swale Way	1.48	994.73	297.3	297.3	F	1171	1756
	5 - Grovehurst Road	0.77	18.18	3.2	16.3	C	546	819

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	675	169	594	1068	0.632	668	0	0.0	1.7	8.867	A
	2 - Grovehurst Road	177	44	930	985	0.180	176	331	0.0	0.2	4.443	A
	3 - A249 onslip (NB)			687				419				
	4 - B2005 - link	596	149	0	1730	0.344	594	687	0.0	0.5	3.164	A
2 - South	1 - A249 onslip (SB)			670				650				
	2 - B2005 - link	687	172	79	1862	0.369	685	591	0.0	0.6	3.052	A
	3 - A249 offslip (SB)	363	91	764	1201	0.302	361	0	0.0	0.4	4.280	A
	4 - Swale Way	961	240	539	1109	0.866	939	586	0.0	5.5	19.167	C
	5 - Grovehurst Road	448	112	876	877	0.510	444	602	0.0	1.0	8.226	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	805	201	678	1005	0.801	797	0	1.7	3.7	16.679	C
	2 - Grovehurst Road	211	53	1090	856	0.247	211	385	0.2	0.3	5.575	A
	3 - A249 onslip (NB)			821				480				
	4 - B2005 - link	679	170	0	1730	0.392	678	821	0.5	0.6	3.421	A
2 - South	1 - A249 onslip (SB)			768				724				
	2 - B2005 - link	821	205	95	1853	0.443	820	673	0.6	0.8	3.483	A
	3 - A249 offslip (SB)	433	108	915	1063	0.408	432	0	0.4	0.7	5.698	A
	4 - Swale Way	1147	287	646	1039	1.104	1022	702	5.5	36.8	88.155	F
	5 - Grovehurst Road	535	134	960	812	0.659	532	708	1.0	1.9	12.688	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	987	247	729	968	1.019	928	0	3.7	18.3	55.886	F
	2 - Grovehurst Road	259	65	1228	743	0.348	258	429	0.3	0.5	7.417	A
	3 - A249 onslip (NB)			967				519				
	4 - B2005 - link	729	182	0	1730	0.421	729	967	0.6	0.7	3.596	A
2 - South	1 - A249 onslip (SB)			839				725				
	2 - B2005 - link	965	241	116	1840	0.525	964	723	0.8	1.1	4.104	A
	3 - A249 offslip (SB)	531	133	1080	913	0.581	528	0	0.7	1.4	9.289	A
	4 - Swale Way	1405	351	771	956	1.470	955	837	36.8	149.2	359.321	F
	5 - Grovehurst Road	655	164	914	848	0.772	650	812	1.9	3.1	17.678	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	987	247	730	968	1.020	950	0	18.3	27.3	97.382	F
	2 - Grovehurst Road	259	65	1247	727	0.356	259	433	0.5	0.5	7.682	A
	3 - A249 onslip (NB)			985				520				
	4 - B2005 - link	730	182	0	1730	0.422	730	985	0.7	0.7	3.598	A
2 - South	1 - A249 onslip (SB)			841				724				
	2 - B2005 - link	984	246	117	1840	0.535	984	724	1.1	1.1	4.207	A
	3 - A249 offslip (SB)	531	133	1101	894	0.594	530	0	1.4	1.4	9.890	A
	4 - Swale Way	1405	351	781	949	1.481	949	850	149.2	263.2	765.089	F
	5 - Grovehurst Road	655	164	909	852	0.769	655	821	3.1	3.2	18.177	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	805	201	680	1004	0.802	896	0	27.3	4.6	46.897	E
	2 - Grovehurst Road	211	53	1170	788	0.268	212	406	0.5	0.4	6.254	A
	3 - A249 onslip (NB)			901				481				
	4 - B2005 - link	680	170	0	1730	0.393	680	901	0.7	0.7	3.429	A
	1 - A249 onslip (SB)			770				724				

2 - South	2 - B2005 - link	903	226	96	1852	0.488	904	674	1.1	1.0	3.800	A
	3 - A249 offslip (SB)	433	108	1000	985	0.440	436	0	1.4	0.8	6.589	A
	4 - Swale Way	1147	287	688	1011	1.135	1011	748	263.2	297.3	994.728	F
	5 - Grovehurst Road	535	134	955	816	0.655	540	744	3.2	2.0	13.246	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	675	169	654	1023	0.659	685	0	4.6	2.0	10.969	B
	2 - Grovehurst Road	177	44	985	944	0.187	177	354	0.4	0.2	4.700	A
	3 - A249 onslip (NB)			702				460				
	4 - B2005 - link	654	164	0	1730	0.378	654	702	0.7	0.6	3.347	A
2 - South	1 - A249 onslip (SB)			729				738				
	2 - B2005 - link	703	176	80	1861	0.378	704	649	1.0	0.6	3.114	A
	3 - A249 offslip (SB)	363	91	784	1182	0.307	364	0	0.8	0.4	4.411	A
	4 - Swale Way	961	240	550	1102	0.872	1098	598	297.3	262.9	918.437	F
	5 - Grovehurst Road	448	112	1017	767	0.584	450	631	2.0	1.4	11.436	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.67	0.33	1.47	2.67	3.20			N/A	N/A
	2 - Grovehurst Road	0.22	0.00	0.00	0.22	0.22			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.58	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.43	0.00	0.00	0.43	0.43			N/A	N/A
	4 - Swale Way	5.50	0.03	0.28	5.50	14.81			N/A	N/A
	5 - Grovehurst Road	1.02	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.69	0.07	1.35	9.91	14.82			N/A	N/A
	2 - Grovehurst Road	0.33	0.00	0.00	0.33	0.33			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.22	0.94	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.79	0.10	0.86	1.15	1.15			N/A	N/A
	3 - A249 offslip (SB)	0.68	0.08	0.77	1.38	1.45			N/A	N/A
	4 - Swale Way	36.76	0.87	21.86	90.16	121.30			N/A	N/A
	5 - Grovehurst Road	1.86	0.09	1.22	4.04	5.61			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	18.26	1.08	12.46	41.00	53.20			N/A	N/A
	2 - Grovehurst Road	0.53	0.03	0.25	0.53	0.53			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.25	0.72	0.72			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.09	0.03	0.26	1.09	1.09			N/A	N/A
	3 - A249 offslip (SB)	1.36	0.03	0.27	1.36	1.36			N/A	N/A
	4 - Swale Way	149.16	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.14	0.03	0.32	5.37	16.34			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	27.31	1.30	18.19	62.94	82.37			N/A	N/A
	2 - Grovehurst Road	0.55	0.03	0.31	1.00	2.51			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.73	0.03	0.27	0.73	1.47			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.14	0.03	0.26	1.14	1.14			N/A	N/A
	3 - A249 offslip (SB)	1.43	0.03	0.28	1.43	4.12			N/A	N/A
	4 - Swale Way	263.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.22	0.03	0.28	3.22	10.04			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.65	0.04	0.44	12.93	23.97			N/A	N/A
	2 - Grovehurst Road	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.65	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.96	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.80	0.14	0.91	1.41	1.48			N/A	N/A
	4 - Swale Way	297.32	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.97	0.05	0.47	5.32	8.67			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.00	0.03	0.30	2.19	9.28			N/A	N/A
	2 - Grovehurst Road	0.23	0.00	0.00	0.23	0.23			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.61	0.11	0.85	1.37	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.45	0.04	0.38	1.23	1.37			N/A	N/A
	4 - Swale Way	262.90	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.44	0.04	0.42	3.77	6.28			N/A	N/A

2024 + K3 Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	17.09	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	63.21	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	864	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	692	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	822
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	911	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	389	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	18
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	39	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.87	23.91	6.0	30.7	C	793	1189
	2 - Grovehurst Road	0.70	17.33	2.3	9.2	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.74	7.39	2.7	5.4	A	1137	1705
	3 - A249 offslip (SB)	1.23	299.63	58.5	98.5	F	523	785
	4 - Swale Way	0.78	16.38	3.4	16.3	C	635	952
	5 - Grovehurst Road	0.81	21.80	3.9	19.5	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	650	163	355	1221	0.533	646	0	0.0	1.1	6.218	A
	2 - Grovehurst Road	331	83	860	1014	0.327	329	142	0.0	0.5	5.244	A
	3 - A249 onslip (NB)			925				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	925	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				551				
	2 - B2005 - link	927	232	129	1885	0.492	924	357	0.0	1.0	3.729	A
	3 - A249 offslip (SB)	429	107	1052	947	0.453	426	0	0.0	0.8	6.869	A
	4 - Swale Way	521	130	386	1064	0.490	517	1092	0.0	0.9	6.540	A
	5 - Grovehurst Road	460	115	579	1066	0.432	457	324	0.0	0.8	5.884	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	426	1167	0.666	773	0	1.1	1.9	9.080	A
	2 - Grovehurst Road	396	99	1030	877	0.451	394	170	0.5	0.8	7.440	A
	3 - A249 onslip (NB)			1108				316				
	4 - B2005 - link	427	107	0	1664	0.256	426	1108	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				660				
	2 - B2005 - link	1110	278	154	1870	0.594	1108	427	1.0	1.4	4.717	A
	3 - A249 offslip (SB)	512	128	1262	763	0.671	508	0	0.8	2.0	13.846	B
	4 - Swale Way	622	156	463	1019	0.610	620	1308	0.9	1.5	8.956	A
	5 - Grovehurst Road	549	137	694	967	0.568	547	388	0.8	1.3	8.520	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	515	1100	0.865	937	0	1.9	5.5	20.571	C
	2 - Grovehurst Road	484	121	1247	703	0.689	479	205	0.8	2.1	15.761	C
	3 - A249 onslip (NB)			1344				382				
	4 - B2005 - link	515	129	0	1664	0.310	515	1344	0.3	0.4	3.134	A
2 - South	1 - A249 onslip (SB)			703				802				
	2 - B2005 - link	1347	337	187	1850	0.728	1342	516	1.4	2.6	7.028	A
	3 - A249 offslip (SB)	628	157	1529	531	1.181	518	0	2.0	29.3	126.540	F
	4 - Swale Way	762	190	528	981	0.776	755	1520	1.5	3.2	15.455	C
	5 - Grovehurst Road	673	168	842	841	0.800	663	441	1.3	3.6	19.356	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	520	1096	0.868	949	0	5.5	6.0	23.913	C
	2 - Grovehurst Road	484	121	1262	690	0.702	484	207	2.1	2.3	17.332	C
	3 - A249 onslip (NB)			1359				386				
	4 - B2005 - link	520	130	0	1664	0.313	520	1359	0.4	0.5	3.148	A
2 - South	1 - A249 onslip (SB)			710				811				
	2 - B2005 - link	1363	341	189	1848	0.737	1362	521	2.6	2.7	7.392	A
	3 - A249 offslip (SB)	628	157	1551	512	1.227	510	0	29.3	58.5	299.629	F
	4 - Swale Way	762	190	530	980	0.778	761	1532	3.2	3.4	16.381	C
	5 - Grovehurst Road	673	168	849	834	0.806	672	442	3.6	3.9	21.797	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	441	1156	0.672	792	0	6.0	2.1	10.303	B
	2 - Grovehurst Road	396	99	1058	855	0.463	401	175	2.3	0.9	8.031	A
	3 - A249 onslip (NB)			1132				327				
	4 - B2005 - link	441	110	0	1664	0.265	441	1132	0.5	0.4	2.947	A
	1 - A249 onslip (SB)			599				673				

2 - South	2 - B2005 - link	1135	284	157	1867	0.608	1140	441	2.7	1.6	4.979	A
	3 - A249 offslip (SB)	512	128	1297	733	0.699	721	0	58.5	6.4	169.516	F
	4 - Swale Way	622	156	543	972	0.640	628	1475	3.4	1.8	10.648	B
	5 - Grovehurst Road	549	137	712	953	0.576	559	459	3.9	1.4	9.365	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	650	163	362	1215	0.535	654	0	2.1	1.2	6.458	A
	2 - Grovehurst Road	331	83	872	1004	0.330	333	144	0.9	0.5	5.375	A
	3 - A249 onslip (NB)			936				268				
	4 - B2005 - link	361	90	0	1664	0.217	362	936	0.4	0.3	2.767	A
2 - South	1 - A249 onslip (SB)			492				559				
	2 - B2005 - link	939	235	130	1884	0.498	941	362	1.6	1.0	3.825	A
	3 - A249 offslip (SB)	429	107	1071	930	0.461	451	0	6.4	0.9	7.860	A
	4 - Swale Way	521	130	400	1056	0.493	524	1123	1.8	1.0	6.811	A
	5 - Grovehurst Road	460	115	588	1058	0.435	462	336	1.4	0.8	6.066	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.12	0.55	1.03	1.12	1.12			N/A	N/A
	2 - Grovehurst Road	0.48	0.00	0.00	0.48	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.96	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.82	0.05	0.57	1.58	2.08			N/A	N/A
	4 - Swale Way	0.95	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.75	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.94	0.05	0.63	5.03	7.80			N/A	N/A
	2 - Grovehurst Road	0.81	0.06	0.73	1.31	1.77			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.44	0.05	0.56	3.58	5.42			N/A	N/A
	3 - A249 offslip (SB)	1.95	0.04	0.39	5.18	9.67			N/A	N/A
	4 - Swale Way	1.53	0.06	0.89	3.54	5.02			N/A	N/A
	5 - Grovehurst Road	1.29	0.06	0.67	2.94	4.36			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.49	0.04	0.40	14.47	29.66			N/A	N/A
	2 - Grovehurst Road	2.10	0.03	0.29	2.10	8.82			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.60	0.03	0.28	2.60	4.81			N/A	N/A
	3 - A249 offslip (SB)	29.26	9.84	26.49	47.90	55.52			N/A	N/A
	4 - Swale Way	3.23	0.03	0.32	4.83	16.27			N/A	N/A
	5 - Grovehurst Road	3.61	0.03	0.34	7.70	19.53			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	5.98	0.03	0.33	9.43	30.65			N/A	N/A
	2 - Grovehurst Road	2.26	0.03	0.29	2.26	9.19			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.75	0.03	0.27	2.75	2.75			N/A	N/A
	3 - A249 offslip (SB)	58.55	27.05	55.31	87.55	98.51			N/A	N/A
	4 - Swale Way	3.36	0.03	0.29	3.36	10.77			N/A	N/A
	5 - Grovehurst Road	3.89	0.03	0.30	4.07	17.89			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.12	0.04	0.44	5.78	9.78			N/A	N/A
	2 - Grovehurst Road	0.88	0.06	0.67	1.65	2.19			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.57	0.10	1.19	3.07	4.11			N/A	N/A
	3 - A249 offslip (SB)	6.42	0.10	2.06	17.31	25.30			N/A	N/A
	4 - Swale Way	1.83	0.06	0.90	4.52	6.62			N/A	N/A
	5 - Grovehurst Road	1.39	0.05	0.47	3.53	5.54			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.17	0.03	0.32	2.42	5.94			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.35	1.45	1.68			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.05	0.50	2.18	3.24			N/A	N/A
	3 - A249 offslip (SB)	0.87	0.03	0.26	0.87	0.87			N/A	N/A
	4 - Swale Way	0.99	0.04	0.36	2.45	4.49			N/A	N/A
	5 - Grovehurst Road	0.78	0.03	0.33	1.74	3.70			N/A	N/A

2024 + K3 Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	28.29	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	309.29	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	828	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	443	100.000
	4 - Swale Way		ONE HOUR	✓	1279	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	648
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	522	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	480	322
		3 - A249 offslip (SB)	1	27	0	199	216
		4 - Swale Way	688	432	0	0	159
	5 - Grovehurst Road	110	318	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	22
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	28	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	19	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.95	52.38	12.5	60.4	F	760	1140
	2 - Grovehurst Road	0.33	6.94	0.5	1.9	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.62	0.7	1.5	A	672	1008
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.51	3.99	1.0	1.5	A	781	1172
	3 - A249 offslip (SB)	0.52	8.08	1.1	3.7	A	407	610
	4 - Swale Way	1.38	732.25	233.1	233.1	F	1174	1760
	5 - Grovehurst Road	0.73	16.62	2.6	12.4	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	623	156	576	1068	0.584	618	0	0.0	1.4	7.912	A
	2 - Grovehurst Road	171	43	867	1037	0.165	170	327	0.0	0.2	4.150	A
	3 - A249 onslip (NB)			633				404				
	4 - B2005 - link	578	145	0	1719	0.336	576	633	0.0	0.5	3.145	A
2 - South	1 - A249 onslip (SB)			656				623				
	2 - B2005 - link	637	159	79	1854	0.343	635	577	0.0	0.5	2.947	A
	3 - A249 offslip (SB)	334	83	714	1236	0.270	332	0	0.0	0.4	3.976	A
	4 - Swale Way	963	241	457	1160	0.830	945	589	0.0	4.4	15.697	C
	5 - Grovehurst Road	402	101	880	873	0.460	399	522	0.0	0.8	7.535	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	670	999	0.745	739	0	1.4	2.8	13.568	B
	2 - Grovehurst Road	204	51	1024	908	0.225	204	385	0.2	0.3	5.112	A
	3 - A249 onslip (NB)			758				470				
	4 - B2005 - link	671	168	0	1719	0.390	670	758	0.5	0.6	3.431	A
2 - South	1 - A249 onslip (SB)			764				712				
	2 - B2005 - link	762	190	95	1845	0.413	761	669	0.5	0.7	3.320	A
	3 - A249 offslip (SB)	398	100	856	1107	0.360	397	0	0.4	0.6	5.067	A
	4 - Swale Way	1150	287	547	1100	1.045	1069	706	4.4	24.7	62.026	F
	5 - Grovehurst Road	480	120	999	780	0.615	477	617	0.8	1.5	11.774	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	724	959	0.951	882	0	2.8	10.2	37.265	E
	2 - Grovehurst Road	250	62	1172	783	0.319	249	434	0.3	0.5	6.739	A
	3 - A249 onslip (NB)			910				512				
	4 - B2005 - link	725	181	0	1719	0.422	724	910	0.6	0.7	3.620	A
2 - South	1 - A249 onslip (SB)			839				718				
	2 - B2005 - link	914	229	116	1832	0.499	913	723	0.7	1.0	3.910	A
	3 - A249 offslip (SB)	488	122	1029	950	0.513	486	0	0.6	1.0	7.719	A
	4 - Swale Way	1408	352	661	1025	1.373	1024	853	24.7	120.6	264.476	F
	5 - Grovehurst Road	588	147	973	801	0.734	584	713	1.5	2.6	16.243	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	725	958	0.951	902	0	10.2	12.5	52.384	F
	2 - Grovehurst Road	250	62	1189	768	0.325	250	439	0.5	0.5	6.943	A
	3 - A249 onslip (NB)			926				513				
	4 - B2005 - link	725	181	0	1719	0.422	725	926	0.7	0.7	3.623	A
2 - South	1 - A249 onslip (SB)			841				717				
	2 - B2005 - link	931	233	117	1832	0.508	931	724	1.0	1.0	3.994	A
	3 - A249 offslip (SB)	488	122	1048	933	0.523	488	0	1.0	1.1	8.078	A
	4 - Swale Way	1408	352	670	1020	1.381	1020	865	120.6	217.8	588.082	F
	5 - Grovehurst Road	588	147	970	804	0.732	588	720	2.6	2.6	16.621	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	682	990	0.752	781	0	12.5	3.2	19.834	C
	2 - Grovehurst Road	204	51	1065	873	0.234	205	398	0.5	0.3	5.394	A
	3 - A249 onslip (NB)			792				478				
	4 - B2005 - link	681	170	0	1719	0.396	682	792	0.7	0.7	3.471	A
2 - South	1 - A249 onslip (SB)			776				726				

2 - South	2 - B2005 - link	797	199	96	1844	0.432	798	680	1.0	0.8	3.445	A
	3 - A249 offslip (SB)	398	100	894	1072	0.372	400	0	1.1	0.6	5.375	A
	4 - Swale Way	1150	287	565	1089	1.056	1089	730	217.8	233.1	732.247	F
	5 - Grovehurst Road	480	120	1018	765	0.628	484	635	2.6	1.7	12.963	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	623	156	651	1013	0.616	630	0	3.2	1.6	9.551	A
	2 - Grovehurst Road	171	43	926	992	0.172	171	354	0.3	0.2	4.391	A
	3 - A249 onslip (NB)			644				454				
	4 - B2005 - link	651	163	0	1719	0.379	651	644	0.7	0.6	3.374	A
2 - South	1 - A249 onslip (SB)			730				735				
	2 - B2005 - link	647	162	80	1853	0.349	648	649	0.8	0.5	2.991	A
	3 - A249 offslip (SB)	334	83	729	1223	0.273	334	0	0.6	0.4	4.056	A
	4 - Swale Way	963	241	464	1155	0.834	1150	599	233.1	186.2	656.726	F
	5 - Grovehurst Road	402	101	1061	731	0.550	404	553	1.7	1.3	11.081	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.37	0.54	1.28	1.81	1.97			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.41	0.03	0.31	5.60	21.27			N/A	N/A
	5 - Grovehurst Road	0.84	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.77	0.06	1.02	7.38	11.18			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.70	0.10	0.84	1.38	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.56	0.07	0.70	1.34	1.42			N/A	N/A
	4 - Swale Way	24.67	0.67	14.86	59.72	80.00			N/A	N/A
	5 - Grovehurst Road	1.55	0.09	1.15	3.10	4.20			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	10.16	0.10	3.04	28.26	41.97			N/A	N/A
	2 - Grovehurst Road	0.46	0.03	0.25	0.46	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.25	0.72	0.72			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.99	0.03	0.26	0.99	0.99			N/A	N/A
	3 - A249 offslip (SB)	1.04	0.03	0.26	1.04	1.04			N/A	N/A
	4 - Swale Way	120.62	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.59	0.03	0.31	3.17	12.37			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	12.49	0.07	1.35	36.69	60.37			N/A	N/A
	2 - Grovehurst Road	0.48	0.03	0.32	1.44	1.92			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.73	0.03	0.27	0.73	1.02			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.03	0.27	1.03	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.08	0.03	0.28	1.08	3.73			N/A	N/A
	4 - Swale Way	217.77	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.65	0.03	0.28	2.65	6.79			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.24	0.04	0.41	8.85	16.50			N/A	N/A
	2 - Grovehurst Road	0.31	0.00	0.00	0.31	0.31			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.66	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.77	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.60	0.10	0.83	1.37	1.43			N/A	N/A
	4 - Swale Way	233.06	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.74	0.05	0.69	4.43	6.69			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.64	0.03	0.31	2.59	8.29			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.38	0.03	0.30	0.90	1.20			N/A	N/A
	4 - Swale Way	186.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.25	0.05	0.46	3.09	4.87			N/A	N/A

2024 + WKN Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	18.72	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	68.98	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	871	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	699	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	829
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	918	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	396	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	19
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	17	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	40	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.88	26.49	6.7	35.7	D	799	1199
	2 - Grovehurst Road	0.71	18.37	2.4	10.1	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.75	7.68	2.9	5.7	A	1143	1714
	3 - A249 offslip (SB)	1.26	332.36	64.5	104.3	F	523	785
	4 - Swale Way	0.79	17.16	3.5	17.6	C	641	962
	5 - Grovehurst Road	0.82	23.13	4.1	20.6	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	656	164	355	1211	0.542	651	0	0.0	1.2	6.382	A
	2 - Grovehurst Road	331	83	865	1005	0.330	329	142	0.0	0.5	5.311	A
	3 - A249 onslip (NB)			930				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	930	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				556				
	2 - B2005 - link	932	233	129	1872	0.498	928	357	0.0	1.0	3.797	A
	3 - A249 offslip (SB)	429	107	1057	937	0.458	426	0	0.0	0.8	6.994	A
	4 - Swale Way	526	132	386	1058	0.497	522	1096	0.0	1.0	6.669	A
	5 - Grovehurst Road	460	115	584	1059	0.434	457	324	0.0	0.8	5.951	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	783	196	426	1157	0.677	780	0	1.2	2.0	9.443	A
	2 - Grovehurst Road	396	99	1036	867	0.456	394	170	0.5	0.8	7.596	A
	3 - A249 onslip (NB)			1114				316				
	4 - B2005 - link	427	107	0	1664	0.256	426	1114	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				666				
	2 - B2005 - link	1116	279	154	1857	0.601	1114	427	1.0	1.5	4.832	A
	3 - A249 offslip (SB)	512	128	1268	752	0.681	508	0	0.8	2.0	14.445	B
	4 - Swale Way	628	157	462	1014	0.620	626	1313	1.0	1.6	9.219	A
	5 - Grovehurst Road	549	137	700	959	0.573	547	388	0.8	1.3	8.691	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	959	240	514	1091	0.879	943	0	2.0	6.0	22.240	C
	2 - Grovehurst Road	484	121	1252	692	0.700	479	205	0.8	2.2	16.503	C
	3 - A249 onslip (NB)			1349				382				
	4 - B2005 - link	515	129	0	1664	0.309	514	1349	0.3	0.4	3.132	A
2 - South	1 - A249 onslip (SB)			702				809				
	2 - B2005 - link	1352	338	187	1837	0.736	1347	515	1.5	2.7	7.265	A
	3 - A249 offslip (SB)	628	157	1533	519	1.208	508	0	2.0	31.9	138.519	F
	4 - Swale Way	770	192	523	978	0.787	762	1518	1.6	3.4	16.128	C
	5 - Grovehurst Road	673	168	848	831	0.809	663	438	1.3	3.8	20.286	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	959	240	520	1087	0.882	956	0	6.0	6.7	26.492	D
	2 - Grovehurst Road	484	121	1269	678	0.714	484	207	2.2	2.4	18.370	C
	3 - A249 onslip (NB)			1367				386				
	4 - B2005 - link	520	130	0	1664	0.312	520	1367	0.4	0.5	3.146	A
2 - South	1 - A249 onslip (SB)			709				818				
	2 - B2005 - link	1369	342	189	1836	0.746	1368	520	2.7	2.9	7.684	A
	3 - A249 offslip (SB)	628	157	1557	498	1.260	497	0	31.9	64.5	332.358	F
	4 - Swale Way	770	192	525	977	0.787	769	1529	3.4	3.5	17.164	C
	5 - Grovehurst Road	673	168	856	824	0.816	671	438	3.8	4.1	23.131	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	783	196	441	1146	0.683	801	0	6.7	2.2	10.918	B
	2 - Grovehurst Road	396	99	1066	842	0.470	401	175	2.4	0.9	8.272	A
	3 - A249 onslip (NB)			1141				327				
	4 - B2005 - link	441	110	0	1664	0.265	441	1141	0.5	0.4	2.944	A
	1 - A249 onslip (SB)			599				680				

2 - South	2 - B2005 - link	1143	286	158	1855	0.616	1148	441	2.9	1.6	5.128	A
	3 - A249 offslip (SB)	512	128	1306	719	0.713	708	0	64.5	15.6	208.263	F
	4 - Swale Way	628	157	539	969	0.649	635	1474	3.5	1.9	10.979	B
	5 - Grovehurst Road	549	137	719	944	0.582	560	455	4.1	1.4	9.622	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	656	164	363	1205	0.544	660	0	2.2	1.2	6.656	A
	2 - Grovehurst Road	331	83	878	994	0.333	333	144	0.9	0.5	5.454	A
	3 - A249 onslip (NB)			942				269				
	4 - B2005 - link	363	91	0	1664	0.218	363	942	0.4	0.3	2.770	A
2 - South	1 - A249 onslip (SB)			493				564				
	2 - B2005 - link	944	236	130	1871	0.504	946	363	1.6	1.0	3.901	A
	3 - A249 offslip (SB)	429	107	1076	920	0.466	488	0	15.6	0.9	9.541	A
	4 - Swale Way	526	132	412	1043	0.504	530	1152	1.9	1.0	7.059	A
	5 - Grovehurst Road	460	115	595	1050	0.438	463	347	1.4	0.8	6.153	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.16	0.56	1.01	1.16	1.51			N/A	N/A
	2 - Grovehurst Road	0.49	0.00	0.00	0.49	0.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.98	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.83	0.05	0.49	1.70	2.43			N/A	N/A
	4 - Swale Way	0.97	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.76	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.03	0.05	0.64	5.35	8.29			N/A	N/A
	2 - Grovehurst Road	0.83	0.06	0.72	1.41	1.84			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.49	0.05	0.54	3.71	5.65			N/A	N/A
	3 - A249 offslip (SB)	2.04	0.04	0.39	5.41	10.14			N/A	N/A
	4 - Swale Way	1.59	0.06	0.89	3.73	5.37			N/A	N/A
	5 - Grovehurst Road	1.31	0.05	0.66	3.02	4.53			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.02	0.04	0.43	16.63	31.90			N/A	N/A
	2 - Grovehurst Road	2.20	0.03	0.30	2.20	9.78			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.70	0.03	0.28	2.70	5.67			N/A	N/A
	3 - A249 offslip (SB)	31.90	11.89	29.26	50.76	58.30			N/A	N/A
	4 - Swale Way	3.41	0.03	0.32	5.70	17.65			N/A	N/A
	5 - Grovehurst Road	3.80	0.04	0.35	8.60	20.58			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	6.65	0.03	0.34	12.76	35.74			N/A	N/A
	2 - Grovehurst Road	2.39	0.03	0.29	2.39	10.10			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.86	0.03	0.27	2.86	2.86			N/A	N/A
	3 - A249 offslip (SB)	64.50	32.31	61.47	93.57	104.30			N/A	N/A
	4 - Swale Way	3.55	0.03	0.29	3.55	12.21			N/A	N/A
	5 - Grovehurst Road	4.12	0.03	0.31	4.99	19.67			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.23	0.04	0.43	6.09	10.53			N/A	N/A
	2 - Grovehurst Road	0.90	0.06	0.65	1.75	2.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.63	0.09	1.20	3.32	4.47			N/A	N/A
	3 - A249 offslip (SB)	15.64	2.64	12.88	29.20	35.43			N/A	N/A
	4 - Swale Way	1.90	0.06	0.85	4.79	7.12			N/A	N/A
	5 - Grovehurst Road	1.42	0.05	0.46	3.66	5.80			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.21	0.03	0.32	2.37	6.21			N/A	N/A
	2 - Grovehurst Road	0.50	0.03	0.35	1.47	1.77			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.05	0.48	2.33	3.48			N/A	N/A
	3 - A249 offslip (SB)	0.89	0.03	0.26	0.89	0.89			N/A	N/A
	4 - Swale Way	1.03	0.04	0.36	2.57	4.80			N/A	N/A
	5 - Grovehurst Road	0.79	0.03	0.32	1.72	3.80			N/A	N/A

2024 + WKN Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	29.92	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	330.33	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	836	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	444	100.000
	4 - Swale Way		ONE HOUR	✓	1297	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From				
	1 - A249 offslip (NB)	0	180	0	656
	2 - Grovehurst Road	0	0	27	200
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	262	522	0

Demand (Veh/hr)

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
2 - South	From					
	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	42	0	0	488	322
	3 - A249 offslip (SB)	1	27	0	200	216
	4 - Swale Way	706	432	0	0	159
5 - Grovehurst Road	110	318	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From				
	1 - A249 offslip (NB)	0	1	0	22
	2 - Grovehurst Road	0	0	0	1
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
2 - South	From					
	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	29	1
	3 - A249 offslip (SB)	0	11	0	8	4
	4 - Swale Way	19	3	0	0	3
5 - Grovehurst Road	0	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.96	55.28	13.4	62.5	F	767	1151
	2 - Grovehurst Road	0.33	7.00	0.5	1.9	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.61	0.7	1.5	A	668	1002
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.51	4.05	1.0	1.5	A	785	1177
	3 - A249 offslip (SB)	0.53	8.24	1.1	3.8	A	407	611
	4 - Swale Way	1.40	778.45	249.8	249.8	F	1190	1785
	5 - Grovehurst Road	0.74	16.80	2.7	12.6	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	629	157	576	1067	0.590	624	0	0.0	1.4	8.017	A
	2 - Grovehurst Road	171	43	873	1032	0.166	170	327	0.0	0.2	4.174	A
	3 - A249 onslip (NB)			639				404				
	4 - B2005 - link	578	144	0	1719	0.336	576	639	0.0	0.5	3.144	A
2 - South	1 - A249 onslip (SB)			656				635				
	2 - B2005 - link	639	160	79	1843	0.347	637	577	0.0	0.5	2.979	A
	3 - A249 offslip (SB)	334	84	716	1230	0.272	333	0	0.0	0.4	4.005	A
	4 - Swale Way	976	244	455	1160	0.842	958	594	0.0	4.7	16.526	C
	5 - Grovehurst Road	402	101	893	863	0.466	399	520	0.0	0.9	7.696	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	752	188	667	1001	0.751	746	0	1.4	2.8	13.815	B
	2 - Grovehurst Road	204	51	1029	903	0.226	204	383	0.2	0.3	5.145	A
	3 - A249 onslip (NB)			765				468				
	4 - B2005 - link	667	167	0	1719	0.388	667	765	0.5	0.6	3.420	A
2 - South	1 - A249 onslip (SB)			761				721				
	2 - B2005 - link	765	191	95	1834	0.417	764	666	0.5	0.7	3.362	A
	3 - A249 offslip (SB)	399	100	859	1100	0.363	398	0	0.4	0.6	5.123	A
	4 - Swale Way	1166	291	545	1101	1.059	1074	712	4.7	27.8	67.710	F
	5 - Grovehurst Road	480	120	1005	775	0.620	477	614	0.9	1.6	11.983	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	920	230	720	962	0.957	889	0	2.8	10.7	38.617	E
	2 - Grovehurst Road	250	62	1177	779	0.321	249	432	0.3	0.5	6.791	A
	3 - A249 onslip (NB)			917				509				
	4 - B2005 - link	720	180	0	1719	0.419	720	917	0.6	0.7	3.603	A
2 - South	1 - A249 onslip (SB)			835				725				
	2 - B2005 - link	916	229	116	1822	0.503	915	719	0.7	1.0	3.966	A
	3 - A249 offslip (SB)	489	122	1031	943	0.518	487	0	0.6	1.1	7.854	A
	4 - Swale Way	1428	357	659	1026	1.391	1025	859	27.8	128.5	283.218	F
	5 - Grovehurst Road	588	147	976	799	0.736	584	708	1.6	2.6	16.426	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	920	230	721	961	0.958	910	0	10.7	13.4	55.278	F
	2 - Grovehurst Road	250	62	1194	764	0.327	250	437	0.5	0.5	7.004	A
	3 - A249 onslip (NB)			934				510				
	4 - B2005 - link	721	180	0	1719	0.419	721	934	0.7	0.7	3.606	A
2 - South	1 - A249 onslip (SB)			836				724				
	2 - B2005 - link	934	233	117	1821	0.513	934	720	1.0	1.0	4.054	A
	3 - A249 offslip (SB)	489	122	1050	925	0.528	489	0	1.1	1.1	8.237	A
	4 - Swale Way	1428	357	667	1021	1.399	1020	872	128.5	230.4	622.227	F
	5 - Grovehurst Road	588	147	972	801	0.734	588	716	2.6	2.7	16.801	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	752	188	677	994	0.756	792	0	13.4	3.3	20.806	C
	2 - Grovehurst Road	204	51	1072	867	0.235	205	397	0.5	0.3	5.442	A
	3 - A249 onslip (NB)			802				475				
	4 - B2005 - link	676	169	0	1719	0.393	677	802	0.7	0.7	3.456	A
	1 - A249 onslip (SB)			771				733				

2 - South	2 - B2005 - link	803	201	96	1833	0.438	804	675	1.0	0.8	3.499	A
	3 - A249 offslip (SB)	399	100	900	1062	0.376	401	0	1.1	0.6	5.460	A
	4 - Swale Way	1166	291	564	1089	1.071	1088	737	230.4	249.8	778.446	F
	5 - Grovehurst Road	480	120	1020	763	0.629	484	632	2.7	1.8	13.055	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	629	157	646	1016	0.619	636	0	3.3	1.7	9.629	A
	2 - Grovehurst Road	171	43	929	989	0.173	171	353	0.3	0.2	4.405	A
	3 - A249 onslip (NB)			650				450				
	4 - B2005 - link	645	161	0	1719	0.376	646	650	0.7	0.6	3.357	A
2 - South	1 - A249 onslip (SB)			724				742				
	2 - B2005 - link	650	163	80	1843	0.353	651	644	0.8	0.5	3.025	A
	3 - A249 offslip (SB)	334	84	731	1216	0.275	335	0	0.6	0.4	4.088	A
	4 - Swale Way	976	244	462	1155	0.845	1150	604	249.8	206.3	714.080	F
	5 - Grovehurst Road	402	101	1063	729	0.552	404	550	1.8	1.3	11.160	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.41	0.54	1.30	1.85	2.02			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.74	0.03	0.30	4.74	21.09			N/A	N/A
	5 - Grovehurst Road	0.86	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.85	0.06	1.04	7.61	11.52			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.71	0.10	0.84	1.38	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.56	0.07	0.71	1.34	1.42			N/A	N/A
	4 - Swale Way	27.80	0.78	16.91	67.13	89.75			N/A	N/A
	5 - Grovehurst Road	1.58	0.09	1.16	3.18	4.30			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	10.72	0.12	3.65	29.41	43.04			N/A	N/A
	2 - Grovehurst Road	0.47	0.03	0.25	0.47	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.25	0.72	0.72			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.03	0.26	1.00	1.00			N/A	N/A
	3 - A249 offslip (SB)	1.06	0.03	0.26	1.06	1.06			N/A	N/A
	4 - Swale Way	128.45	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.62	0.03	0.31	3.31	12.60			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	13.37	0.08	2.00	39.09	62.53			N/A	N/A
	2 - Grovehurst Road	0.48	0.03	0.32	1.45	1.95			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.27	0.72	1.08			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.04	0.03	0.27	1.04	1.40			N/A	N/A
	3 - A249 offslip (SB)	1.10	0.03	0.28	1.10	3.76			N/A	N/A
	4 - Swale Way	230.35	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.68	0.03	0.28	2.68	6.96			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.33	0.04	0.41	9.08	17.01			N/A	N/A
	2 - Grovehurst Road	0.31	0.00	0.00	0.31	0.31			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.65	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.78	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.61	0.10	0.83	1.37	1.43			N/A	N/A
	4 - Swale Way	249.78	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.76	0.05	0.65	4.50	6.84			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.67	0.03	0.31	2.54	8.36			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.55	0.08	0.76	1.35	1.43			N/A	N/A
	3 - A249 offslip (SB)	0.38	0.03	0.31	0.96	1.23			N/A	N/A
	4 - Swale Way	206.30	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.26	0.05	0.45	3.14	4.97			N/A	N/A

2024 + K3 and WKN Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	19.08	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	70.37	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	874	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	702	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	832
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	921	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	399	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	19
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	17	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	41	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.89	27.05	6.8	36.8	D	802	1203
	2 - Grovehurst Road	0.72	18.61	2.4	10.3	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.75	7.74	2.9	5.8	A	1145	1718
	3 - A249 offslip (SB)	1.27	339.52	65.8	105.6	F	523	785
	4 - Swale Way	0.79	17.79	3.7	18.6	C	644	966
	5 - Grovehurst Road	0.82	24.03	4.3	21.2	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	658	164	355	1211	0.543	653	0	0.0	1.2	6.405	A
	2 - Grovehurst Road	331	83	867	1003	0.330	329	142	0.0	0.5	5.325	A
	3 - A249 onslip (NB)			932				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	932	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				558				
	2 - B2005 - link	934	234	129	1872	0.499	930	357	0.0	1.0	3.806	A
	3 - A249 offslip (SB)	429	107	1059	935	0.459	426	0	0.0	0.8	7.022	A
	4 - Swale Way	529	132	386	1053	0.502	525	1098	0.0	1.0	6.761	A
	5 - Grovehurst Road	460	115	587	1055	0.436	457	324	0.0	0.8	5.993	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	426	1157	0.679	782	0	1.2	2.0	9.508	A
	2 - Grovehurst Road	396	99	1039	865	0.458	394	170	0.5	0.8	7.632	A
	3 - A249 onslip (NB)			1116				316				
	4 - B2005 - link	426	107	0	1664	0.256	426	1116	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				669				
	2 - B2005 - link	1118	280	154	1857	0.602	1116	427	1.0	1.5	4.848	A
	3 - A249 offslip (SB)	512	128	1270	750	0.683	508	0	0.8	2.1	14.578	B
	4 - Swale Way	631	158	462	1009	0.625	629	1316	1.0	1.6	9.399	A
	5 - Grovehurst Road	549	137	703	954	0.576	547	388	0.8	1.3	8.796	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	514	1091	0.882	946	0	2.0	6.1	22.577	C
	2 - Grovehurst Road	484	121	1255	690	0.703	479	205	0.8	2.2	16.666	C
	3 - A249 onslip (NB)			1352				382				
	4 - B2005 - link	514	129	0	1664	0.309	514	1352	0.3	0.4	3.131	A
2 - South	1 - A249 onslip (SB)			701				812				
	2 - B2005 - link	1354	339	186	1837	0.737	1350	515	1.5	2.7	7.306	A
	3 - A249 offslip (SB)	628	157	1536	517	1.214	506	0	2.1	32.5	141.159	F
	4 - Swale Way	773	193	523	974	0.793	765	1519	1.6	3.5	16.645	C
	5 - Grovehurst Road	673	168	851	825	0.815	662	437	1.3	3.9	20.894	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	520	1087	0.885	960	0	6.1	6.8	27.054	D
	2 - Grovehurst Road	484	121	1272	676	0.717	484	207	2.2	2.4	18.606	C
	3 - A249 onslip (NB)			1370				386				
	4 - B2005 - link	520	130	0	1664	0.312	520	1370	0.4	0.5	3.146	A
2 - South	1 - A249 onslip (SB)			709				822				
	2 - B2005 - link	1372	343	189	1836	0.748	1372	520	2.7	2.9	7.738	A
	3 - A249 offslip (SB)	628	157	1561	495	1.267	494	0	32.5	65.8	339.516	F
	4 - Swale Way	773	193	524	973	0.794	772	1531	3.5	3.7	17.787	C
	5 - Grovehurst Road	673	168	859	818	0.822	671	437	3.9	4.3	24.030	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	441	1146	0.686	804	0	6.8	2.3	11.046	B
	2 - Grovehurst Road	396	99	1070	840	0.471	402	175	2.4	0.9	8.327	A
	3 - A249 onslip (NB)			1144				327				
	4 - B2005 - link	441	110	0	1664	0.265	441	1144	0.5	0.4	2.945	A
	1 - A249 onslip (SB)			599				683				

2 - South	2 - B2005 - link	1147	287	158	1855	0.618	1152	441	2.9	1.6	5.155	A
	3 - A249 offslip (SB)	512	128	1309	716	0.716	705	0	65.8	17.7	216.862	F
	4 - Swale Way	631	158	538	965	0.654	638	1476	3.7	2.0	11.240	B
	5 - Grovehurst Road	549	137	722	939	0.585	561	454	4.3	1.4	9.788	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	658	164	363	1205	0.546	662	0	2.3	1.2	6.686	A
	2 - Grovehurst Road	331	83	881	992	0.334	333	144	0.9	0.5	5.474	A
	3 - A249 onslip (NB)			944				270				
	4 - B2005 - link	363	91	0	1664	0.218	363	944	0.4	0.3	2.768	A
2 - South	1 - A249 onslip (SB)			494				567				
	2 - B2005 - link	946	237	130	1871	0.506	949	363	1.6	1.0	3.912	A
	3 - A249 offslip (SB)	429	107	1079	918	0.468	496	0	17.7	0.9	10.002	B
	4 - Swale Way	529	132	415	1036	0.510	532	1160	2.0	1.1	7.185	A
	5 - Grovehurst Road	460	115	598	1045	0.440	463	349	1.4	0.8	6.203	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.17	0.56	1.06	1.17	1.56			N/A	N/A
	2 - Grovehurst Road	0.49	0.00	0.00	0.49	0.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.99	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.84	0.05	0.49	1.73	2.50			N/A	N/A
	4 - Swale Way	0.99	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.76	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.05	0.05	0.64	5.42	8.41			N/A	N/A
	2 - Grovehurst Road	0.83	0.06	0.72	1.43	1.86			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.49	0.05	0.54	3.74	5.71			N/A	N/A
	3 - A249 offslip (SB)	2.06	0.04	0.39	5.46	10.26			N/A	N/A
	4 - Swale Way	1.63	0.06	0.89	3.83	5.56			N/A	N/A
	5 - Grovehurst Road	1.33	0.05	0.65	3.10	4.63			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.14	0.04	0.44	17.07	32.35			N/A	N/A
	2 - Grovehurst Road	2.22	0.03	0.30	2.22	9.98			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.72	0.03	0.28	2.72	5.84			N/A	N/A
	3 - A249 offslip (SB)	32.47	12.32	29.85	51.41	58.96			N/A	N/A
	4 - Swale Way	3.53	0.03	0.33	6.34	18.60			N/A	N/A
	5 - Grovehurst Road	3.92	0.04	0.36	9.17	21.20			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	6.81	0.03	0.35	13.53	36.84			N/A	N/A
	2 - Grovehurst Road	2.42	0.03	0.29	2.42	10.32			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.89	0.03	0.27	2.89	2.89			N/A	N/A
	3 - A249 offslip (SB)	65.77	33.45	62.79	94.89	105.62			N/A	N/A
	4 - Swale Way	3.69	0.03	0.29	3.69	13.36			N/A	N/A
	5 - Grovehurst Road	4.27	0.03	0.31	5.66	20.82			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.26	0.04	0.43	6.17	10.69			N/A	N/A
	2 - Grovehurst Road	0.91	0.06	0.64	1.77	2.47			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.64	0.09	1.20	3.37	4.54			N/A	N/A
	3 - A249 offslip (SB)	17.65	3.94	15.07	31.43	37.50			N/A	N/A
	4 - Swale Way	1.95	0.06	0.82	4.96	7.48			N/A	N/A
	5 - Grovehurst Road	1.44	0.05	0.45	3.73	5.94			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.22	0.03	0.32	2.36	6.27			N/A	N/A
	2 - Grovehurst Road	0.51	0.03	0.35	1.47	1.79			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.05	0.48	2.36	3.54			N/A	N/A
	3 - A249 offslip (SB)	0.89	0.03	0.26	0.89	0.89			N/A	N/A
	4 - Swale Way	1.06	0.04	0.36	2.62	4.95			N/A	N/A
	5 - Grovehurst Road	0.80	0.03	0.32	1.70	3.85			N/A	N/A

2024 + K3 and WKN Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	32.18	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	341.81	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	838	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	444	100.000
	4 - Swale Way		ONE HOUR	✓	1300	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	658
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	523	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	490	322
		3 - A249 offslip (SB)	1	27	0	200	216
		4 - Swale Way	708	433	0	0	159
		5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	23
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	30	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	20	3	0	0	3
		5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.97	59.50	14.5	64.9	F	769	1153
	2 - Grovehurst Road	0.33	7.06	0.5	2.0	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.58	0.7	1.4	A	671	1006
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.52	4.11	1.1	1.5	A	787	1181
	3 - A249 offslip (SB)	0.53	8.36	1.1	3.8	A	407	611
	4 - Swale Way	1.41	804.56	257.9	257.9	F	1193	1789
	5 - Grovehurst Road	0.74	16.85	2.7	12.7	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	580	1060	0.595	625	0	0.0	1.4	8.178	A
	2 - Grovehurst Road	171	43	877	1028	0.166	170	328	0.0	0.2	4.194	A
	3 - A249 onslip (NB)			641				407				
	4 - B2005 - link	582	145	0	1730	0.336	580	641	0.0	0.5	3.125	A
2 - South	1 - A249 onslip (SB)			656				637				
	2 - B2005 - link	642	160	79	1834	0.350	639	577	0.0	0.5	3.009	A
	3 - A249 offslip (SB)	334	84	719	1225	0.273	333	0	0.0	0.4	4.028	A
	4 - Swale Way	979	245	455	1154	0.848	959	596	0.0	4.9	17.071	C
	5 - Grovehurst Road	402	101	894	858	0.469	399	520	0.0	0.9	7.779	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	670	995	0.757	747	0	1.4	2.9	14.214	B
	2 - Grovehurst Road	204	51	1033	899	0.227	204	384	0.2	0.3	5.176	A
	3 - A249 onslip (NB)			766				471				
	4 - B2005 - link	671	168	0	1730	0.388	670	766	0.5	0.6	3.394	A
2 - South	1 - A249 onslip (SB)			760				720				
	2 - B2005 - link	767	192	95	1825	0.421	767	665	0.5	0.7	3.400	A
	3 - A249 offslip (SB)	399	100	861	1094	0.365	398	0	0.4	0.6	5.168	A
	4 - Swale Way	1169	292	546	1095	1.067	1070	714	4.9	29.5	71.101	F
	5 - Grovehurst Road	480	120	1002	773	0.621	477	614	0.9	1.6	12.065	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	723	957	0.965	889	0	2.9	11.4	40.584	E
	2 - Grovehurst Road	250	62	1179	775	0.322	249	432	0.3	0.5	6.835	A
	3 - A249 onslip (NB)			917				511				
	4 - B2005 - link	723	181	0	1730	0.418	723	917	0.6	0.7	3.574	A
2 - South	1 - A249 onslip (SB)			833				722				
	2 - B2005 - link	918	229	116	1812	0.506	917	717	0.7	1.0	4.014	A
	3 - A249 offslip (SB)	489	122	1033	937	0.521	487	0	0.6	1.1	7.953	A
	4 - Swale Way	1431	358	658	1021	1.401	1021	861	29.5	132.2	293.937	F
	5 - Grovehurst Road	588	147	972	798	0.737	584	707	1.6	2.6	16.488	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	724	956	0.965	910	0	11.4	14.5	59.498	F
	2 - Grovehurst Road	250	62	1197	760	0.329	250	437	0.5	0.5	7.060	A
	3 - A249 onslip (NB)			935				512				
	4 - B2005 - link	724	181	0	1730	0.418	724	935	0.7	0.7	3.577	A
2 - South	1 - A249 onslip (SB)			835				721				
	2 - B2005 - link	936	234	117	1812	0.517	936	718	1.0	1.1	4.107	A
	3 - A249 offslip (SB)	489	122	1052	919	0.532	489	0	1.1	1.1	8.356	A
	4 - Swale Way	1431	358	667	1016	1.409	1015	874	132.2	236.1	641.497	F
	5 - Grovehurst Road	588	147	968	801	0.734	588	715	2.6	2.7	16.854	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	679	988	0.762	798	0	14.5	3.5	22.452	C
	2 - Grovehurst Road	204	51	1078	860	0.237	205	398	0.5	0.3	5.500	A
	3 - A249 onslip (NB)			807				477				
	4 - B2005 - link	678	170	0	1730	0.392	679	807	0.7	0.6	3.424	A
	1 - A249 onslip (SB)			769				730				

2 - South	2 - B2005 - link	809	202	96	1824	0.444	810	673	1.1	0.8	3.557	A
	3 - A249 offslip (SB)	399	100	906	1052	0.379	401	0	1.1	0.6	5.543	A
	4 - Swale Way	1169	292	566	1082	1.080	1082	742	236.1	257.9	804.559	F
	5 - Grovehurst Road	480	120	1015	763	0.629	484	633	2.7	1.8	13.058	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	648	1011	0.624	638	0	3.5	1.7	9.828	A
	2 - Grovehurst Road	171	43	933	985	0.173	171	353	0.3	0.2	4.425	A
	3 - A249 onslip (NB)			652				452				
	4 - B2005 - link	648	162	0	1730	0.374	648	652	0.6	0.6	3.326	A
2 - South	1 - A249 onslip (SB)			722				739				
	2 - B2005 - link	653	163	80	1833	0.356	654	642	0.8	0.6	3.056	A
	3 - A249 offslip (SB)	334	84	734	1211	0.276	335	0	0.6	0.4	4.115	A
	4 - Swale Way	979	245	463	1149	0.852	1145	606	257.9	216.4	746.281	F
	5 - Grovehurst Road	402	101	1058	728	0.552	404	550	1.8	1.3	11.179	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.44	0.53	1.33	1.90	2.26			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.92	0.03	0.30	4.92	20.76			N/A	N/A
	5 - Grovehurst Road	0.87	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.94	0.06	1.08	7.84	11.86			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.72	0.10	0.84	1.39	1.46			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.07	0.72	1.34	1.42			N/A	N/A
	4 - Swale Way	29.49	0.82	17.95	71.29	95.34			N/A	N/A
	5 - Grovehurst Road	1.59	0.09	1.17	3.21	4.34			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	11.40	0.14	4.45	30.67	44.10			N/A	N/A
	2 - Grovehurst Road	0.47	0.03	0.25	0.47	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.71	0.03	0.25	0.71	0.71			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.02	0.03	0.26	1.02	1.02			N/A	N/A
	3 - A249 offslip (SB)	1.07	0.03	0.26	1.07	1.07			N/A	N/A
	4 - Swale Way	132.15	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.63	0.03	0.31	3.36	12.68			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	14.51	0.09	3.09	41.90	64.87			N/A	N/A
	2 - Grovehurst Road	0.49	0.03	0.32	1.45	1.97			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.27	0.72	1.09			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.03	0.27	1.06	1.36			N/A	N/A
	3 - A249 offslip (SB)	1.12	0.03	0.28	1.12	3.80			N/A	N/A
	4 - Swale Way	236.12	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.69	0.03	0.28	2.69	7.00			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.45	0.04	0.41	9.42	17.69			N/A	N/A
	2 - Grovehurst Road	0.31	0.00	0.00	0.31	0.31			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.65	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.80	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.62	0.10	0.84	1.37	1.43			N/A	N/A
	4 - Swale Way	257.86	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.76	0.05	0.63	4.51	6.88			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.71	0.03	0.31	2.49	8.47			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.56	0.08	0.78	1.36	1.43			N/A	N/A
	3 - A249 offslip (SB)	0.38	0.03	0.31	0.99	1.25			N/A	N/A
	4 - Swale Way	216.41	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.26	0.05	0.45	3.16	5.00			N/A	N/A

2024 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	26.13	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	95.88	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	906	100.000
	2 - Grovehurst Road		ONE HOUR	✓	446	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	593	100.000
	4 - Swale Way		ONE HOUR	✓	693	100.000

5 - Grovehurst Road	ONE HOUR	✓	736	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	45	0	861
		2 - Grovehurst Road	0	0	25	421
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	151	366	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	144	0	0	911	225
		3 - A249 offslip (SB)	1	18	0	377	197
		4 - Swale Way	390	226	0	0	77
	5 - Grovehurst Road	287	277	0	172	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	13	0	17
		2 - Grovehurst Road	0	0	8	4
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	16	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	39	10	0	0	9
	5 - Grovehurst Road	1	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.93	38.67	10.0	53.6	E	831	1247
	2 - Grovehurst Road	0.78	24.54	3.2	15.8	C	409	614
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.34	3.23	0.5	2.3	A	476	714
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.76	8.03	3.1	6.7	A	1176	1764
	3 - A249 offslip (SB)	1.36	436.71	84.8	125.4	F	544	816
	4 - Swale Way	0.80	19.12	3.9	20.1	C	636	954
	5 - Grovehurst Road	0.97	65.49	14.2	61.0	F	675	1013

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	682	171	387	1205	0.566	677	0	0.0	1.3	6.752	A
	2 - Grovehurst Road	336	84	917	966	0.348	334	147	0.0	0.5	5.674	A
	3 - A249 onslip (NB)			958				293				
	4 - B2005 - link	388	97	0	1674	0.232	387	958	0.0	0.3	2.794	A
2 - South	1 - A249 onslip (SB)			518				614				
	2 - B2005 - link	959	240	128	1886	0.509	955	389	0.0	1.0	3.851	A
	3 - A249 offslip (SB)	446	112	1083	921	0.485	443	0	0.0	0.9	7.475	A
	4 - Swale Way	522	130	436	1033	0.505	518	1089	0.0	1.0	6.933	A
	5 - Grovehurst Road	554	139	582	1068	0.519	550	372	0.0	1.1	6.894	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	814	204	464	1147	0.710	810	0	1.3	2.4	10.560	B
	2 - Grovehurst Road	401	100	1098	823	0.487	399	176	0.5	0.9	8.457	A
	3 - A249 onslip (NB)			1147				351				
	4 - B2005 - link	464	116	0	1674	0.277	464	1147	0.3	0.4	2.975	A
2 - South	1 - A249 onslip (SB)			619				735				
	2 - B2005 - link	1147	287	154	1870	0.614	1145	466	1.0	1.6	4.951	A
	3 - A249 offslip (SB)	533	133	1299	732	0.728	527	0	0.9	2.5	17.014	C
	4 - Swale Way	623	156	522	982	0.634	620	1304	1.0	1.7	9.864	A
	5 - Grovehurst Road	662	165	697	969	0.683	658	445	1.1	2.1	11.429	B

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	552	1080	0.923	973	0	2.4	8.4	28.775	D
	2 - Grovehurst Road	491	123	1316	652	0.753	484	209	0.9	2.8	20.555	C
	3 - A249 onslip (NB)			1382				418				
	4 - B2005 - link	552	138	0	1674	0.330	552	1382	0.4	0.5	3.208	A
2 - South	1 - A249 onslip (SB)			735				883				
	2 - B2005 - link	1382	346	181	1853	0.746	1377	554	1.6	2.8	7.478	A
	3 - A249 offslip (SB)	653	163	1558	506	1.291	498	0	2.5	41.1	176.441	F
	4 - Swale Way	763	191	578	949	0.804	755	1478	1.7	3.7	17.805	C
	5 - Grovehurst Road	810	203	842	843	0.961	777	491	2.1	10.5	41.790	E

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	561	1073	0.929	991	0	8.4	10.0	38.670	E
	2 - Grovehurst Road	491	123	1339	634	0.775	489	213	2.8	3.2	24.535	C
	3 - A249 onslip (NB)			1404				424				
	4 - B2005 - link	561	140	0	1674	0.335	561	1404	0.5	0.5	3.233	A
2 - South	1 - A249 onslip (SB)			749				898				
	2 - B2005 - link	1404	351	186	1850	0.759	1404	563	2.8	3.1	8.029	A
	3 - A249 offslip (SB)	653	163	1590	479	1.364	478	0	41.1	84.8	436.708	F
	4 - Swale Way	763	191	579	949	0.804	762	1489	3.7	3.9	19.116	C
	5 - Grovehurst Road	810	203	851	835	0.970	796	490	10.5	14.2	65.488	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	814	204	491	1126	0.723	844	0	10.0	2.7	13.927	B
	2 - Grovehurst Road	401	100	1149	783	0.512	409	185	3.2	1.1	9.832	A
	3 - A249 onslip (NB)			1188				371				
	4 - B2005 - link	491	123	0	1674	0.293	491	1188	0.5	0.4	3.046	A

2 - South	1 - A249 onslip (SB)			658				767				
	2 - B2005 - link	1189	297	166	1863	0.638	1194	493	3.1	1.8	5.427	A
	3 - A249 offslip (SB)	533	133	1360	679	0.785	672	0	84.8	50.2	351.697	F
	4 - Swale Way	623	156	589	943	0.661	631	1443	3.9	2.0	11.784	B
	5 - Grovehurst Road	662	165	716	953	0.694	709	503	14.2	2.4	17.425	C

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	682	171	400	1195	0.571	688	0	2.7	1.4	7.171	A
	2 - Grovehurst Road	336	84	937	951	0.353	338	151	1.1	0.6	5.894	A
	3 - A249 onslip (NB)			972				302				
	4 - B2005 - link	400	100	0	1674	0.239	400	972	0.4	0.3	2.829	A
2 - South	1 - A249 onslip (SB)			532				624				
	2 - B2005 - link	973	243	131	1884	0.516	976	401	1.8	1.1	3.976	A
	3 - A249 offslip (SB)	446	112	1106	900	0.496	643	0	50.2	1.0	32.763	D
	4 - Swale Way	522	130	516	986	0.529	525	1234	2.0	1.1	7.864	A
	5 - Grovehurst Road	554	139	597	1056	0.525	559	444	2.4	1.1	7.325	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.28	0.56	1.18	1.65	1.84			N/A	N/A
	2 - Grovehurst Road	0.53	0.53	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.93	0.04	0.42	2.16	3.48			N/A	N/A
	4 - Swale Way	1.00	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	1.06	0.50	1.05	1.25	1.64			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.36	0.05	0.67	6.36	9.95			N/A	N/A
	2 - Grovehurst Road	0.93	0.06	0.69	1.80	2.51			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.57	0.05	0.52	3.95	6.10			N/A	N/A
	3 - A249 offslip (SB)	2.50	0.04	0.40	6.78	12.58			N/A	N/A
	4 - Swale Way	1.68	0.06	0.91	3.98	5.82			N/A	N/A
	5 - Grovehurst Road	2.07	0.05	0.49	5.58	8.87			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.38	0.06	1.43	24.34	39.48			N/A	N/A
	2 - Grovehurst Road	2.79	0.03	0.32	5.12	14.72			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.49	0.03	0.25	0.49	0.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.84	0.03	0.28	2.84	6.72			N/A	N/A
	3 - A249 offslip (SB)	41.15	19.02	38.76	61.21	68.83			N/A	N/A
	4 - Swale Way	3.73	0.03	0.34	7.49	20.05			N/A	N/A
	5 - Grovehurst Road	10.52	0.14	4.14	28.15	40.39			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	10.03	0.05	0.46	28.06	53.63			N/A	N/A
	2 - Grovehurst Road	3.19	0.03	0.31	4.47	15.77			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.03	0.30	1.38	2.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.06	0.03	0.27	3.06	3.06			N/A	N/A
	3 - A249 offslip (SB)	84.81	50.32	82.25	114.85	125.43			N/A	N/A
	4 - Swale Way	3.90	0.03	0.29	3.90	15.36			N/A	N/A
	5 - Grovehurst Road	14.20	0.10	3.78	40.36	61.01			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.73	0.04	0.43	7.57	13.49			N/A	N/A
	2 - Grovehurst Road	1.07	0.05	0.55	2.40	3.51			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.79	0.10	1.28	3.74	4.98			N/A	N/A
	3 - A249 offslip (SB)	50.21	29.92	48.53	67.45	73.59			N/A	N/A
	4 - Swale Way	2.01	0.05	0.70	5.26	8.07			N/A	N/A
	5 - Grovehurst Road	2.38	0.04	0.38	6.27	12.25			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.35	0.03	0.31	2.00	6.73			N/A	N/A
	2 - Grovehurst Road	0.55	0.03	0.33	1.14	2.36			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.08	0.05	0.47	2.54	3.83			N/A	N/A
	3 - A249 offslip (SB)	1.01	0.03	0.26	1.01	1.01			N/A	N/A
	4 - Swale Way	1.14	0.04	0.36	2.85	5.43			N/A	N/A
	5 - Grovehurst Road	1.12	0.03	0.29	1.29	4.66			N/A	N/A

2024 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	53.17	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	407.43	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	899	100.000
	2 - Grovehurst Road		ONE HOUR	✓	235	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	482	100.000
	4 - Swale Way		ONE HOUR	✓	1279	100.000

5 - Grovehurst Road	ONE HOUR	✓	595	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	183	0	716
		2 - Grovehurst Road	0	0	27	208
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	264	541	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	45	0	0	482	393
		3 - A249 offslip (SB)	1	27	0	199	255
		4 - Swale Way	688	432	0	0	159
	5 - Grovehurst Road	150	339	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	20
		2 - Grovehurst Road	0	0	0	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	9	0	0	29	2
		3 - A249 offslip (SB)	0	11	0	8	3
		4 - Swale Way	19	3	0	0	3
	5 - Grovehurst Road	1	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.02	99.19	28.0	83.2	F	825	1237
	2 - Grovehurst Road	0.36	7.70	0.5	2.5	A	216	323
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.59	0.7	1.5	A	676	1014
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.54	4.24	1.1	1.5	A	843	1264
	3 - A249 offslip (SB)	0.60	9.95	1.4	4.1	A	442	663
	4 - Swale Way	1.49	1016.81	303.7	303.7	F	1174	1760
	5 - Grovehurst Road	0.77	18.33	3.2	16.5	C	546	819

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	677	169	593	1068	0.634	670	0	0.0	1.7	8.912	A
	2 - Grovehurst Road	177	44	932	984	0.180	176	331	0.0	0.2	4.453	A
	3 - A249 onslip (NB)			689				419				
	4 - B2005 - link	595	149	0	1730	0.344	593	689	0.0	0.5	3.163	A
2 - South	1 - A249 onslip (SB)			670				652				
	2 - B2005 - link	686	172	79	1853	0.370	684	591	0.0	0.6	3.073	A
	3 - A249 offslip (SB)	363	91	763	1198	0.303	361	0	0.0	0.4	4.291	A
	4 - Swale Way	963	241	538	1105	0.872	940	586	0.0	5.7	19.744	C
	5 - Grovehurst Road	448	112	878	873	0.513	444	600	0.0	1.0	8.314	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	808	202	676	1007	0.803	800	0	1.7	3.7	16.783	C
	2 - Grovehurst Road	211	53	1092	855	0.247	211	385	0.2	0.3	5.587	A
	3 - A249 onslip (NB)			824				479				
	4 - B2005 - link	677	169	0	1730	0.391	676	824	0.5	0.6	3.415	A
2 - South	1 - A249 onslip (SB)			766				723				
	2 - B2005 - link	820	205	95	1844	0.445	819	671	0.6	0.8	3.509	A
	3 - A249 offslip (SB)	433	108	914	1060	0.409	432	0	0.4	0.7	5.721	A
	4 - Swale Way	1150	287	644	1035	1.111	1019	702	5.7	38.3	91.493	F
	5 - Grovehurst Road	535	134	958	810	0.661	532	705	1.0	1.9	12.781	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	990	247	727	969	1.021	930	0	3.7	18.6	56.558	F
	2 - Grovehurst Road	259	65	1229	741	0.349	258	428	0.3	0.5	7.433	A
	3 - A249 onslip (NB)			969				518				
	4 - B2005 - link	727	182	0	1730	0.420	727	969	0.6	0.7	3.590	A
2 - South	1 - A249 onslip (SB)			837				724				
	2 - B2005 - link	963	241	116	1831	0.526	962	722	0.8	1.1	4.135	A
	3 - A249 offslip (SB)	531	133	1078	911	0.583	528	0	0.7	1.4	9.340	A
	4 - Swale Way	1408	352	768	953	1.478	952	838	38.3	152.3	369.252	F
	5 - Grovehurst Road	655	164	912	846	0.774	650	809	1.9	3.2	17.827	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	990	247	728	969	1.022	952	0	18.6	28.0	99.192	F
	2 - Grovehurst Road	259	65	1248	726	0.356	259	433	0.5	0.5	7.698	A
	3 - A249 onslip (NB)			987				519				
	4 - B2005 - link	728	182	0	1730	0.421	728	987	0.7	0.7	3.592	A
2 - South	1 - A249 onslip (SB)			839				723				
	2 - B2005 - link	982	245	117	1831	0.536	982	722	1.1	1.1	4.238	A
	3 - A249 offslip (SB)	531	133	1098	892	0.595	530	0	1.4	1.4	9.947	A
	4 - Swale Way	1408	352	779	946	1.489	946	850	152.3	267.9	781.866	F
	5 - Grovehurst Road	655	164	907	850	0.771	655	817	3.2	3.2	18.328	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	808	202	678	1006	0.804	901	0	28.0	4.7	48.609	E
	2 - Grovehurst Road	211	53	1173	785	0.269	212	406	0.5	0.4	6.286	A
	3 - A249 onslip (NB)			905				480				
	4 - B2005 - link	677	169	0	1730	0.392	678	905	0.7	0.6	3.425	A

2 - South	1 - A249 onslip (SB)			768				723				
	2 - B2005 - link	904	226	96	1843	0.490		904	672	1.1	1.0	3.841 A
	3 - A249 offslip (SB)	433	108	1001	980	0.442		436	0	1.4	0.8	6.647 A
	4 - Swale Way	1150	287	687	1007	1.142		1007	750	267.9	303.7	1016.808 F
	5 - Grovehurst Road	535	134	951	815	0.656		540	742	3.2	2.0	13.304 B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	677	169	652	1025	0.661	688	0	4.7	2.0	11.001	B
	2 - Grovehurst Road	177	44	986	943	0.188	177	354	0.4	0.2	4.705	A
	3 - A249 onslip (NB)			705				458				
	4 - B2005 - link	652	163	0	1730	0.377	652	705	0.6	0.6	3.339	A
2 - South	1 - A249 onslip (SB)			726				737				
	2 - B2005 - link	702	175	80	1852	0.379	703	646	1.0	0.6	3.136	A
	3 - A249 offslip (SB)	363	91	783	1180	0.308	364	0	0.8	0.4	4.424	A
	4 - Swale Way	963	241	549	1097	0.877	1094	599	303.7	271.0	945.996	F
	5 - Grovehurst Road	448	112	1013	766	0.585	450	629	2.0	1.4	11.487	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.69	0.32	1.48	2.70	3.27			N/A	N/A
	2 - Grovehurst Road	0.22	0.00	0.00	0.22	0.22			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.59	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.43	0.00	0.00	0.43	0.43			N/A	N/A
	4 - Swale Way	5.71	0.03	0.28	5.71	14.07			N/A	N/A
	5 - Grovehurst Road	1.03	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.73	0.07	1.37	10.00	14.94			N/A	N/A
	2 - Grovehurst Road	0.33	0.00	0.00	0.33	0.33			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.22	0.94	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.80	0.10	0.86	1.19	1.19			N/A	N/A
	3 - A249 offslip (SB)	0.68	0.08	0.77	1.38	1.46			N/A	N/A
	4 - Swale Way	38.33	0.84	22.53	94.54	127.56			N/A	N/A
	5 - Grovehurst Road	1.87	0.09	1.23	4.08	5.66			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	18.61	1.18	12.85	41.44	53.57			N/A	N/A
	2 - Grovehurst Road	0.53	0.03	0.25	0.53	0.53			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.25	0.72	0.72			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.10	0.03	0.26	1.10	1.10			N/A	N/A
	3 - A249 offslip (SB)	1.36	0.03	0.27	1.36	1.36			N/A	N/A
	4 - Swale Way	152.30	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.17	0.03	0.32	5.49	16.52			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	28.00	1.48	19.02	63.87	83.23			N/A	N/A
	2 - Grovehurst Road	0.55	0.03	0.31	1.00	2.51			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.27	0.72	1.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.15	0.03	0.26	1.15	1.15			N/A	N/A
	3 - A249 offslip (SB)	1.44	0.03	0.28	1.44	4.14			N/A	N/A
	4 - Swale Way	267.93	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.24	0.03	0.29	3.24	10.26			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.71	0.04	0.44	13.13	24.29			N/A	N/A
	2 - Grovehurst Road	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.65	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.97	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.80	0.14	0.91	1.42	1.48			N/A	N/A
	4 - Swale Way	303.75	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.98	0.05	0.47	5.35	8.74			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.01	0.03	0.30	2.17	9.30			N/A	N/A
	2 - Grovehurst Road	0.23	0.00	0.00	0.23	0.23			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.61	0.11	0.86	1.37	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.45	0.04	0.38	1.23	1.38			N/A	N/A
	4 - Swale Way	271.00	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.45	0.04	0.42	3.79	6.34			N/A	N/A

2024 + WKN Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	29.54	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	103.45	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2024 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	914	100.000
	2 - Grovehurst Road		ONE HOUR	✓	446	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	593	100.000
	4 - Swale Way		ONE HOUR	✓	701	100.000

5 - Grovehurst Road	ONE HOUR	✓	736	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	45	0	869
		2 - Grovehurst Road	0	0	25	421
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	151	366	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	144	0	0	916	225
		3 - A249 offslip (SB)	1	18	0	377	197
		4 - Swale Way	398	226	0	0	77
	5 - Grovehurst Road	287	277	0	172	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	13	0	18
		2 - Grovehurst Road	0	0	8	4
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	17	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	40	10	0	0	9
	5 - Grovehurst Road	1	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.94	44.27	11.6	59.4	E	839	1258
	2 - Grovehurst Road	0.79	26.39	3.4	17.5	D	409	614
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.33	3.23	0.5	2.3	A	476	714
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.77	8.35	3.2	7.7	A	1183	1774
	3 - A249 offslip (SB)	1.40	473.50	90.5	131.2	F	544	816
	4 - Swale Way	0.82	20.33	4.2	21.6	C	643	965
	5 - Grovehurst Road	0.98	73.59	16.2	64.1	F	675	1013

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	688	172	387	1195	0.576	683	0	0.0	1.3	6.953	A
	2 - Grovehurst Road	336	84	923	957	0.351	334	147	0.0	0.5	5.756	A
	3 - A249 onslip (NB)			964				292				
	4 - B2005 - link	388	97	0	1674	0.232	387	964	0.0	0.3	2.794	A
2 - South	1 - A249 onslip (SB)			518				620				
	2 - B2005 - link	964	241	128	1873	0.515	960	389	0.0	1.1	3.924	A
	3 - A249 offslip (SB)	446	112	1089	911	0.490	443	0	0.0	0.9	7.635	A
	4 - Swale Way	528	132	437	1027	0.514	524	1094	0.0	1.0	7.096	A
	5 - Grovehurst Road	554	139	588	1060	0.523	550	373	0.0	1.1	6.997	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	822	205	464	1138	0.722	817	0	1.3	2.5	11.069	B
	2 - Grovehurst Road	401	100	1105	812	0.494	399	176	0.5	1.0	8.678	A
	3 - A249 onslip (NB)			1154				351				
	4 - B2005 - link	464	116	0	1674	0.277	464	1154	0.3	0.4	2.975	A
2 - South	1 - A249 onslip (SB)			619				742				
	2 - B2005 - link	1154	289	154	1858	0.621	1152	466	1.1	1.6	5.079	A
	3 - A249 offslip (SB)	533	133	1305	720	0.740	526	0	0.9	2.6	17.970	C
	4 - Swale Way	630	158	522	977	0.645	627	1309	1.0	1.8	10.216	B
	5 - Grovehurst Road	662	165	704	959	0.690	657	445	1.1	2.1	11.771	B

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1006	252	550	1073	0.938	979	0	2.5	9.4	31.562	D
	2 - Grovehurst Road	491	123	1320	642	0.765	483	209	1.0	2.9	21.653	C
	3 - A249 onslip (NB)			1386				416				
	4 - B2005 - link	550	138	0	1674	0.329	550	1386	0.4	0.5	3.203	A
2 - South	1 - A249 onslip (SB)			732				890				
	2 - B2005 - link	1386	347	181	1842	0.753	1381	552	1.6	2.9	7.723	A
	3 - A249 offslip (SB)	653	163	1562	495	1.319	488	0	2.6	43.8	190.369	F
	4 - Swale Way	772	193	575	946	0.816	763	1476	1.8	4.0	18.783	C
	5 - Grovehurst Road	810	203	850	832	0.974	773	488	2.1	11.5	45.038	E

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1006	252	559	1066	0.944	998	0	9.4	11.6	44.273	E
	2 - Grovehurst Road	491	123	1344	623	0.789	489	212	2.9	3.4	26.391	D
	3 - A249 onslip (NB)			1410				423				
	4 - B2005 - link	559	140	0	1674	0.334	559	1410	0.5	0.5	3.228	A
2 - South	1 - A249 onslip (SB)			746				905				
	2 - B2005 - link	1410	353	185	1839	0.767	1409	561	2.9	3.2	8.346	A
	3 - A249 offslip (SB)	653	163	1594	466	1.400	466	0	43.8	90.5	473.500	F
	4 - Swale Way	772	193	574	946	0.816	771	1486	4.0	4.2	20.325	C
	5 - Grovehurst Road	810	203	859	824	0.984	792	486	11.5	16.2	73.591	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	822	205	493	1115	0.737	856	0	11.6	2.9	15.565	C
	2 - Grovehurst Road	401	100	1164	766	0.523	410	186	3.4	1.1	10.352	B
	3 - A249 onslip (NB)			1201				372				
	4 - B2005 - link	493	123	0	1674	0.295	493	1201	0.5	0.4	3.049	A

2 - South	1 - A249 onslip (SB)			663				778				
	2 - B2005 - link	1202	301	167	1850	0.650	1208	495	3.2	1.9	5.649	A
	3 - A249 offslip (SB)	533	133	1375	659	0.808	652	0	90.5	60.7	399.436	F
	4 - Swale Way	630	158	584	940	0.670	638	1443	4.2	2.1	12.233	B
	5 - Grovehurst Road	662	165	725	943	0.702	717	498	16.2	2.5	19.550	C

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	688	172	402	1184	0.581	694	0	2.9	1.4	7.439	A
	2 - Grovehurst Road	336	84	945	940	0.357	338	152	1.1	0.6	5.999	A
	3 - A249 onslip (NB)			979				303				
	4 - B2005 - link	401	100	0	1674	0.240	402	979	0.4	0.3	2.832	A
2 - South	1 - A249 onslip (SB)			533				631				
	2 - B2005 - link	980	245	131	1872	0.523	983	403	1.9	1.1	4.062	A
	3 - A249 offslip (SB)	446	112	1113	889	0.502	685	0	60.7	1.0	57.674	F
	4 - Swale Way	528	132	532	971	0.543	531	1267	2.1	1.2	8.246	A
	5 - Grovehurst Road	554	139	605	1046	0.530	559	458	2.5	1.1	7.473	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.33	0.55	1.23	1.74	1.90			N/A	N/A
	2 - Grovehurst Road	0.54	0.54	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.05	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.95	0.04	0.40	2.29	3.77			N/A	N/A
	4 - Swale Way	1.04	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	1.08	0.42	1.06	1.38	1.71			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.49	0.05	0.71	6.75	10.58			N/A	N/A
	2 - Grovehurst Road	0.96	0.06	0.68	1.87	2.66			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.62	0.05	0.52	4.11	6.38			N/A	N/A
	3 - A249 offslip (SB)	2.65	0.04	0.41	7.21	13.31			N/A	N/A
	4 - Swale Way	1.76	0.06	0.91	4.27	6.21			N/A	N/A
	5 - Grovehurst Road	2.14	0.05	0.49	5.76	9.21			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	9.42	0.08	1.85	27.00	41.90			N/A	N/A
	2 - Grovehurst Road	2.95	0.03	0.33	5.95	15.77			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.49	0.03	0.25	0.49	0.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.94	0.03	0.28	2.94	7.67			N/A	N/A
	3 - A249 offslip (SB)	43.77	21.15	41.44	64.05	71.66			N/A	N/A
	4 - Swale Way	3.99	0.03	0.35	8.70	21.64			N/A	N/A
	5 - Grovehurst Road	11.54	0.19	5.39	29.83	41.73			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	11.63	0.06	1.01	33.93	59.38			N/A	N/A
	2 - Grovehurst Road	3.42	0.03	0.32	5.44	17.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.03	0.30	1.38	2.26			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.19	0.03	0.27	3.19	3.19			N/A	N/A
	3 - A249 offslip (SB)	90.53	55.63	88.08	120.68	131.19			N/A	N/A
	4 - Swale Way	4.18	0.03	0.30	4.18	17.66			N/A	N/A
	5 - Grovehurst Road	16.21	0.15	6.12	44.26	64.10			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.95	0.04	0.43	8.16	14.68			N/A	N/A
	2 - Grovehurst Road	1.12	0.05	0.54	2.58	3.79			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.89	0.10	1.31	3.97	5.42			N/A	N/A
	3 - A249 offslip (SB)	60.73	38.83	59.13	79.09	85.48			N/A	N/A
	4 - Swale Way	2.11	0.05	0.60	5.62	8.79			N/A	N/A
	5 - Grovehurst Road	2.48	0.04	0.38	6.52	12.86			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.41	0.03	0.30	1.91	6.88			N/A	N/A
	2 - Grovehurst Road	0.56	0.03	0.32	1.15	2.47			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.11	0.05	0.46	2.66	4.04			N/A	N/A
	3 - A249 offslip (SB)	1.05	0.03	0.26	1.05	1.05			N/A	N/A
	4 - Swale Way	1.21	0.04	0.36	2.99	5.83			N/A	N/A
	5 - Grovehurst Road	1.14	0.03	0.29	1.19	4.56			N/A	N/A

2024 + WKN Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	59.31	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	432.37	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2024 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	906	100.000
	2 - Grovehurst Road		ONE HOUR	✓	235	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	483	100.000
	4 - Swale Way		ONE HOUR	✓	1297	100.000

5 - Grovehurst Road	ONE HOUR	✓	595	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	183	0	723
		2 - Grovehurst Road	0	0	27	208
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	264	542	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	45	0	0	489	393
		3 - A249 offslip (SB)	1	27	0	200	255
		4 - Swale Way	706	432	0	0	159
	5 - Grovehurst Road	150	339	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	21
		2 - Grovehurst Road	0	0	0	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	9	0	0	30	2
		3 - A249 offslip (SB)	0	11	0	8	3
		4 - Swale Way	19	3	0	0	3
	5 - Grovehurst Road	1	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.03	110.14	31.8	86.9	F	831	1247
	2 - Grovehurst Road	0.36	7.78	0.6	2.6	A	216	323
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.58	0.7	1.5	A	672	1008
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.54	4.30	1.2	1.5	A	850	1276
	3 - A249 offslip (SB)	0.60	10.18	1.5	4.2	B	443	665
	4 - Swale Way	1.51	1075.07	322.9	322.9	F	1190	1785
	5 - Grovehurst Road	0.78	18.52	3.3	16.7	C	546	819

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	682	171	593	1061	0.643	675	0	0.0	1.8	9.179	A
	2 - Grovehurst Road	177	44	937	976	0.181	176	330	0.0	0.2	4.497	A
	3 - A249 onslip (NB)			695				419				
	4 - B2005 - link	595	149	0	1730	0.344	593	695	0.0	0.5	3.161	A
2 - South	1 - A249 onslip (SB)			669				664				
	2 - B2005 - link	692	173	79	1843	0.376	690	590	0.0	0.6	3.115	A
	3 - A249 offslip (SB)	364	91	769	1189	0.306	362	0	0.0	0.4	4.342	A
	4 - Swale Way	976	244	538	1103	0.885	951	593	0.0	6.3	21.086	C
	5 - Grovehurst Road	448	112	889	863	0.519	444	600	0.0	1.1	8.502	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	814	204	672	1003	0.812	806	0	1.8	3.9	17.536	C
	2 - Grovehurst Road	211	53	1095	847	0.249	211	383	0.2	0.3	5.654	A
	3 - A249 onslip (NB)			830				476				
	4 - B2005 - link	672	168	0	1730	0.389	672	830	0.5	0.6	3.401	A
2 - South	1 - A249 onslip (SB)			762				731				
	2 - B2005 - link	827	207	95	1834	0.451	826	667	0.6	0.8	3.568	A
	3 - A249 offslip (SB)	434	109	921	1050	0.414	433	0	0.4	0.7	5.829	A
	4 - Swale Way	1166	291	644	1034	1.128	1021	710	6.3	42.6	99.813	F
	5 - Grovehurst Road	535	134	961	807	0.663	532	704	1.1	1.9	12.918	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	722	966	1.033	931	0	3.9	20.5	60.756	F
	2 - Grovehurst Road	259	65	1229	736	0.351	258	425	0.3	0.5	7.515	A
	3 - A249 onslip (NB)			971				515				
	4 - B2005 - link	723	181	0	1730	0.418	722	971	0.6	0.7	3.574	A
2 - South	1 - A249 onslip (SB)			833				730				
	2 - B2005 - link	967	242	116	1821	0.531	965	717	0.8	1.1	4.200	A
	3 - A249 offslip (SB)	532	133	1081	903	0.589	529	0	0.7	1.4	9.564	A
	4 - Swale Way	1428	357	766	953	1.498	953	844	42.6	161.4	394.168	F
	5 - Grovehurst Road	655	164	913	844	0.776	650	805	1.9	3.2	17.999	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	724	965	1.034	952	0	20.5	31.8	110.141	F
	2 - Grovehurst Road	259	65	1246	721	0.359	259	429	0.5	0.6	7.777	A
	3 - A249 onslip (NB)			989				516				
	4 - B2005 - link	724	181	0	1730	0.418	724	989	0.7	0.7	3.577	A
2 - South	1 - A249 onslip (SB)			835				729				
	2 - B2005 - link	984	246	117	1821	0.541	984	718	1.1	1.2	4.301	A
	3 - A249 offslip (SB)	532	133	1101	884	0.601	531	0	1.4	1.5	10.182	B
	4 - Swale Way	1428	357	776	946	1.509	946	856	161.4	281.8	824.706	F
	5 - Grovehurst Road	655	164	909	848	0.772	655	814	3.2	3.3	18.522	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	814	204	671	1003	0.812	921	0	31.8	5.1	60.122	F
	2 - Grovehurst Road	211	53	1187	768	0.275	212	406	0.6	0.4	6.482	A
	3 - A249 onslip (NB)			923				476				
	4 - B2005 - link	671	168	0	1730	0.388	671	923	0.7	0.6	3.404	A

2 - South	1 - A249 onslip (SB)			762				727				
	2 - B2005 - link	923	231	96	1833	0.504		924	666	1.2	1.0	3.961 A
	3 - A249 offslip (SB)	434	109	1020	958	0.453		437	0	1.5	0.8	6.945 A
	4 - Swale Way	1166	291	692	1002	1.164		1002	764	281.8	322.9	1075.075 F
	5 - Grovehurst Road	535	134	949	816	0.655		540	745	3.3	2.0	13.277 B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	682	171	646	1022	0.668	694	0	5.1	2.1	11.382	B
	2 - Grovehurst Road	177	44	989	936	0.189	178	352	0.4	0.2	4.748	A
	3 - A249 onslip (NB)			711				455				
	4 - B2005 - link	646	161	0	1730	0.373	646	711	0.6	0.6	3.324	A
2 - South	1 - A249 onslip (SB)			721				743				
	2 - B2005 - link	709	177	80	1842	0.385	711	641	1.0	0.6	3.185	A
	3 - A249 offslip (SB)	364	91	791	1169	0.311	365	0	0.8	0.5	4.488	A
	4 - Swale Way	976	244	550	1096	0.891	1092	606	322.9	293.9	1016.590	F
	5 - Grovehurst Road	448	112	1014	765	0.586	450	628	2.0	1.5	11.524	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.75	0.29	1.02	2.85	3.57			N/A	N/A
	2 - Grovehurst Road	0.22	0.00	0.00	0.22	0.22			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.44	0.00	0.00	0.44	0.44			N/A	N/A
	4 - Swale Way	6.26	0.03	0.28	6.26	11.76			N/A	N/A
	5 - Grovehurst Road	1.06	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.93	0.07	1.46	10.53	15.64			N/A	N/A
	2 - Grovehurst Road	0.33	0.00	0.00	0.33	0.33			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.10	0.87	1.36	1.36			N/A	N/A
	3 - A249 offslip (SB)	0.70	0.08	0.77	1.39	1.47			N/A	N/A
	4 - Swale Way	42.58	0.74	24.09	106.80	145.29			N/A	N/A
	5 - Grovehurst Road	1.89	0.09	1.24	4.14	5.72			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	20.48	1.35	15.03	43.75	55.58			N/A	N/A
	2 - Grovehurst Road	0.54	0.03	0.25	0.54	0.54			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.71	0.03	0.25	0.71	0.71			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.12	0.03	0.26	1.12	1.12			N/A	N/A
	3 - A249 offslip (SB)	1.40	0.03	0.27	1.40	1.48			N/A	N/A
	4 - Swale Way	161.41	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.20	0.03	0.32	5.65	16.74			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	31.84	2.35	23.61	68.38	86.86			N/A	N/A
	2 - Grovehurst Road	0.55	0.03	0.31	1.00	2.56			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.27	0.72	1.06			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.17	0.03	0.26	1.17	1.17			N/A	N/A
	3 - A249 offslip (SB)	1.48	0.03	0.28	1.48	4.21			N/A	N/A
	4 - Swale Way	281.84	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.27	0.03	0.29	3.27	10.54			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.13	0.05	0.46	14.50	26.32			N/A	N/A
	2 - Grovehurst Road	0.38	0.00	0.00	0.38	0.38			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.02	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.84	0.15	0.93	1.01	1.01			N/A	N/A
	4 - Swale Way	322.87	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.98	0.05	0.46	5.33	8.78			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.08	0.03	0.30	2.12	9.50			N/A	N/A
	2 - Grovehurst Road	0.23	0.00	0.00	0.23	0.23			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.63	0.12	0.87	1.37	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.45	0.04	0.39	1.24	1.39			N/A	N/A
	4 - Swale Way	293.91	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.45	0.04	0.42	3.81	6.42			N/A	N/A

2024 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	30.15	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	105.49	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	917	100.000
	2 - Grovehurst Road		ONE HOUR	✓	446	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	593	100.000
	4 - Swale Way		ONE HOUR	✓	704	100.000

5 - Grovehurst Road	ONE HOUR	✓	736	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	45	0	872
		2 - Grovehurst Road	0	0	25	421
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	151	366	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	144	0	0	921	225
		3 - A249 offslip (SB)	1	18	0	377	197
		4 - Swale Way	401	226	0	0	77
		5 - Grovehurst Road	287	277	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	13	0	18
		2 - Grovehurst Road	0	0	8	4
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	6	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	17	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	41	10	0	0	9
		5 - Grovehurst Road	1	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.95	45.25	11.9	60.3	E	841	1262
	2 - Grovehurst Road	0.79	26.73	3.5	17.8	D	409	614
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.33	3.23	0.5	2.3	A	476	714
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.77	8.40	3.2	7.8	A	1186	1778
	3 - A249 offslip (SB)	1.41	480.33	91.5	132.1	F	544	816
	4 - Swale Way	0.82	21.13	4.4	22.5	C	646	969
	5 - Grovehurst Road	0.99	78.32	17.4	65.8	F	675	1013

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	690	173	387	1195	0.577	685	0	0.0	1.3	6.981	A
	2 - Grovehurst Road	336	84	925	955	0.352	334	147	0.0	0.5	5.773	A
	3 - A249 onslip (NB)			966				292				
	4 - B2005 - link	388	97	0	1674	0.232	387	966	0.0	0.3	2.794	A
2 - South	1 - A249 onslip (SB)			518				622				
	2 - B2005 - link	967	242	128	1873	0.516	962	389	0.0	1.1	3.934	A
	3 - A249 offslip (SB)	446	112	1091	909	0.491	443	0	0.0	1.0	7.667	A
	4 - Swale Way	530	133	437	1022	0.519	526	1097	0.0	1.1	7.194	A
	5 - Grovehurst Road	554	139	590	1056	0.525	550	372	0.0	1.1	7.055	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	824	206	464	1138	0.725	820	0	1.3	2.5	11.154	B
	2 - Grovehurst Road	401	100	1108	810	0.495	399	176	0.5	1.0	8.721	A
	3 - A249 onslip (NB)			1156				351				
	4 - B2005 - link	464	116	0	1674	0.277	464	1156	0.3	0.4	2.975	A
2 - South	1 - A249 onslip (SB)			619				745				
	2 - B2005 - link	1157	289	154	1858	0.622	1154	466	1.1	1.6	5.099	A
	3 - A249 offslip (SB)	533	133	1308	718	0.743	526	0	1.0	2.7	18.169	C
	4 - Swale Way	633	158	522	972	0.651	630	1312	1.1	1.8	10.422	B
	5 - Grovehurst Road	662	165	707	954	0.693	657	445	1.1	2.2	11.956	B

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1010	252	549	1074	0.940	981	0	2.5	9.6	32.023	D
	2 - Grovehurst Road	491	123	1322	640	0.767	483	208	1.0	3.0	21.849	C
	3 - A249 onslip (NB)			1389				416				
	4 - B2005 - link	549	137	0	1674	0.328	549	1389	0.4	0.5	3.200	A
2 - South	1 - A249 onslip (SB)			731				892				
	2 - B2005 - link	1389	347	180	1842	0.754	1384	551	1.6	3.0	7.763	A
	3 - A249 offslip (SB)	653	163	1564	493	1.324	487	0	2.7	44.2	192.952	F
	4 - Swale Way	775	194	573	942	0.823	766	1477	1.8	4.1	19.417	C
	5 - Grovehurst Road	810	203	852	826	0.981	771	487	2.2	12.1	46.872	E

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1010	252	558	1067	0.946	1000	0	9.6	11.9	45.251	E
	2 - Grovehurst Road	491	123	1346	621	0.791	489	212	3.0	3.5	26.725	D
	3 - A249 onslip (NB)			1413				422				
	4 - B2005 - link	558	140	0	1674	0.333	558	1413	0.5	0.5	3.225	A
2 - South	1 - A249 onslip (SB)			744				907				
	2 - B2005 - link	1413	353	184	1839	0.768	1412	560	3.0	3.2	8.397	A
	3 - A249 offslip (SB)	653	163	1597	464	1.407	464	0	44.2	91.5	480.326	F
	4 - Swale Way	775	194	573	942	0.823	774	1488	4.1	4.4	21.132	C
	5 - Grovehurst Road	810	203	862	818	0.991	789	485	12.1	17.4	78.317	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	824	206	495	1114	0.740	860	0	11.9	3.0	15.944	C
	2 - Grovehurst Road	401	100	1168	763	0.526	410	187	3.5	1.1	10.473	B
	3 - A249 onslip (NB)			1205				373				
	4 - B2005 - link	495	124	0	1674	0.296	495	1205	0.5	0.4	3.054	A

2 - South	1 - A249 onslip (SB)			666				783				
	2 - B2005 - link	1206	302	169	1849	0.652	1211	497	3.2	1.9	5.691	A
	3 - A249 offslip (SB)	533	133	1380	655	0.814	648	0	91.5	62.8	408.849	F
	4 - Swale Way	633	158	583	937	0.676	642	1445	4.4	2.2	12.537	B
	5 - Grovehurst Road	662	165	727	937	0.706	721	497	17.4	2.5	20.960	C

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	690	173	402	1184	0.583	697	0	3.0	1.4	7.483	A
	2 - Grovehurst Road	336	84	947	938	0.358	338	152	1.1	0.6	6.022	A
	3 - A249 onslip (NB)			982				304				
	4 - B2005 - link	402	100	0	1674	0.240	402	982	0.4	0.3	2.831	A
2 - South	1 - A249 onslip (SB)			534				633				
	2 - B2005 - link	982	245	131	1872	0.525	985	403	1.9	1.1	4.074	A
	3 - A249 offslip (SB)	446	112	1116	886	0.504	693	0	62.8	1.1	64.179	F
	4 - Swale Way	530	133	534	965	0.549	534	1275	2.2	1.2	8.416	A
	5 - Grovehurst Road	554	139	607	1042	0.532	560	461	2.5	1.2	7.552	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.34	0.55	1.24	1.75	1.91			N/A	N/A
	2 - Grovehurst Road	0.54	0.54	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.95	0.04	0.40	2.32	3.83			N/A	N/A
	4 - Swale Way	1.06	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	1.09	0.37	1.07	1.44	1.74			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.52	0.05	0.72	6.83	10.70			N/A	N/A
	2 - Grovehurst Road	0.96	0.06	0.68	1.88	2.69			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.63	0.05	0.52	4.14	6.44			N/A	N/A
	3 - A249 offslip (SB)	2.68	0.04	0.41	7.30	13.46			N/A	N/A
	4 - Swale Way	1.81	0.06	0.92	4.41	6.42			N/A	N/A
	5 - Grovehurst Road	2.17	0.05	0.49	5.86	9.40			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	9.62	0.08	2.01	27.52	42.43			N/A	N/A
	2 - Grovehurst Road	2.98	0.03	0.33	6.10	15.95			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.49	0.03	0.25	0.49	0.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.97	0.03	0.28	2.97	7.84			N/A	N/A
	3 - A249 offslip (SB)	44.25	21.54	41.94	64.63	72.29			N/A	N/A
	4 - Swale Way	4.15	0.04	0.35	9.44	22.53			N/A	N/A
	5 - Grovehurst Road	12.13	0.23	6.11	30.72	42.43			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	11.93	0.06	1.16	34.91	60.27			N/A	N/A
	2 - Grovehurst Road	3.46	0.03	0.32	5.61	17.79			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.03	0.30	1.38	2.25			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.22	0.03	0.27	3.22	3.22			N/A	N/A
	3 - A249 offslip (SB)	91.53	56.56	89.09	121.66	132.12			N/A	N/A
	4 - Swale Way	4.36	0.03	0.30	4.36	19.13			N/A	N/A
	5 - Grovehurst Road	17.42	0.19	7.61	46.35	65.76			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.00	0.04	0.43	8.33	14.94			N/A	N/A
	2 - Grovehurst Road	1.13	0.05	0.54	2.61	3.83			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.42	0.00	0.00	0.42	0.42			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.91	0.10	1.31	4.02	5.50			N/A	N/A
	3 - A249 offslip (SB)	62.79	40.59	61.20	81.36	87.78			N/A	N/A
	4 - Swale Way	2.16	0.05	0.55	5.79	9.15			N/A	N/A
	5 - Grovehurst Road	2.54	0.04	0.38	6.66	13.20			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.43	0.03	0.30	1.90	6.91			N/A	N/A
	2 - Grovehurst Road	0.56	0.03	0.32	1.14	2.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.32	0.00	0.00	0.32	0.32			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.11	0.05	0.46	2.69	4.11			N/A	N/A
	3 - A249 offslip (SB)	1.06	0.03	0.26	1.06	1.06			N/A	N/A
	4 - Swale Way	1.24	0.04	0.36	3.05	6.01			N/A	N/A
	5 - Grovehurst Road	1.16	0.03	0.28	1.16	4.48			N/A	N/A

2024 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	60.62	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	444.89	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	909	100.000
	2 - Grovehurst Road		ONE HOUR	✓	235	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	482	100.000
	4 - Swale Way		ONE HOUR	✓	1300	100.000

5 - Grovehurst Road	ONE HOUR	✓	595	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	183	0	726
		2 - Grovehurst Road	0	0	27	208
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	264	542	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	45	0	0	492	393
		3 - A249 offslip (SB)	1	27	0	199	255
		4 - Swale Way	708	433	0	0	159
	5 - Grovehurst Road	150	339	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	21
		2 - Grovehurst Road	0	0	0	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	9	0	0	30	2
		3 - A249 offslip (SB)	0	11	0	8	3
		4 - Swale Way	20	3	0	0	3
	5 - Grovehurst Road	1	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.04	112.40	32.7	87.7	F	834	1251
	2 - Grovehurst Road	0.36	7.79	0.6	2.6	A	216	323
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.57	0.7	1.5	A	671	1006
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.54	4.31	1.2	1.5	A	853	1279
	3 - A249 offslip (SB)	0.60	10.21	1.5	4.2	B	442	663
	4 - Swale Way	1.52	1102.57	330.6	330.6	F	1193	1789
	5 - Grovehurst Road	0.78	18.61	3.3	16.8	C	546	819

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	684	171	593	1060	0.645	677	0	0.0	1.8	9.240	A
	2 - Grovehurst Road	177	44	940	974	0.182	176	331	0.0	0.2	4.509	A
	3 - A249 onslip (NB)			697				419				
	4 - B2005 - link	595	149	0	1730	0.344	593	697	0.0	0.5	3.162	A
2 - South	1 - A249 onslip (SB)			669				665				
	2 - B2005 - link	694	174	79	1842	0.377	692	590	0.0	0.6	3.122	A
	3 - A249 offslip (SB)	363	91	771	1187	0.306	361	0	0.0	0.4	4.349	A
	4 - Swale Way	979	245	538	1098	0.891	953	594	0.0	6.5	21.851	C
	5 - Grovehurst Road	448	112	890	858	0.522	444	600	0.0	1.1	8.595	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	817	204	671	1004	0.814	808	0	1.8	4.0	17.679	C
	2 - Grovehurst Road	211	53	1097	846	0.250	211	382	0.2	0.3	5.668	A
	3 - A249 onslip (NB)			832				475				
	4 - B2005 - link	671	168	0	1730	0.388	671	832	0.5	0.6	3.397	A
2 - South	1 - A249 onslip (SB)			760				729				
	2 - B2005 - link	829	207	95	1833	0.452	828	666	0.6	0.8	3.579	A
	3 - A249 offslip (SB)	433	108	923	1047	0.414	432	0	0.4	0.7	5.843	A
	4 - Swale Way	1169	292	644	1029	1.136	1017	711	6.5	44.5	104.080	F
	5 - Grovehurst Road	535	134	958	805	0.664	532	703	1.1	1.9	12.985	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1001	250	721	967	1.035	933	0	4.0	20.9	61.593	F
	2 - Grovehurst Road	259	65	1230	735	0.352	258	424	0.3	0.5	7.531	A
	3 - A249 onslip (NB)			974				514				
	4 - B2005 - link	721	180	0	1730	0.417	721	974	0.6	0.7	3.569	A
2 - South	1 - A249 onslip (SB)			832				728				
	2 - B2005 - link	968	242	116	1821	0.532	967	716	0.8	1.1	4.211	A
	3 - A249 offslip (SB)	531	133	1083	901	0.589	528	0	0.7	1.4	9.585	A
	4 - Swale Way	1431	358	765	949	1.508	949	845	44.5	165.2	406.738	F
	5 - Grovehurst Road	655	164	910	844	0.777	650	804	1.9	3.2	18.074	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1001	250	722	966	1.036	954	0	20.9	32.7	112.403	F
	2 - Grovehurst Road	259	65	1247	721	0.359	259	429	0.5	0.6	7.792	A
	3 - A249 onslip (NB)			991				515				
	4 - B2005 - link	722	181	0	1730	0.418	722	991	0.7	0.7	3.572	A
2 - South	1 - A249 onslip (SB)			833				727				
	2 - B2005 - link	986	247	117	1820	0.542	986	717	1.1	1.2	4.313	A
	3 - A249 offslip (SB)	531	133	1102	883	0.601	530	0	1.4	1.5	10.208	B
	4 - Swale Way	1431	358	776	942	1.519	942	857	165.2	287.5	845.742	F
	5 - Grovehurst Road	655	164	905	847	0.773	655	812	3.2	3.3	18.606	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	817	204	670	1004	0.814	927	0	32.7	5.2	62.703	F
	2 - Grovehurst Road	211	53	1191	765	0.276	212	406	0.6	0.4	6.524	A
	3 - A249 onslip (NB)			928				475				
	4 - B2005 - link	669	167	0	1730	0.387	670	928	0.7	0.6	3.399	A

2 - South	1 - A249 onslip (SB)			760				725				
	2 - B2005 - link	928	232	96	1832	0.507	929	664	1.2	1.0	3.987	A
	3 - A249 offslip (SB)	433	108	1025	953	0.455	436	0	1.5	0.8	6.996	A
	4 - Swale Way	1169	292	693	996	1.173	996	767	287.5	330.6	1102.575	F
	5 - Grovehurst Road	535	134	945	816	0.656	540	745	3.3	2.0	13.295	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	684	171	644	1023	0.669	697	0	5.2	2.1	11.444	B
	2 - Grovehurst Road	177	44	990	935	0.189	178	351	0.4	0.2	4.758	A
	3 - A249 onslip (NB)			714				454				
	4 - B2005 - link	644	161	0	1730	0.372	644	714	0.6	0.6	3.319	A
2 - South	1 - A249 onslip (SB)			719				741				
	2 - B2005 - link	712	178	80	1842	0.386	713	639	1.0	0.6	3.194	A
	3 - A249 offslip (SB)	363	91	793	1167	0.311	364	0	0.8	0.5	4.498	A
	4 - Swale Way	979	245	550	1090	0.898	1087	608	330.6	303.5	1050.242	F
	5 - Grovehurst Road	448	112	1010	764	0.586	450	627	2.0	1.5	11.552	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.77	0.29	1.03	2.88	3.62			N/A	N/A
	2 - Grovehurst Road	0.22	0.00	0.00	0.22	0.22			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.44	0.00	0.00	0.44	0.44			N/A	N/A
	4 - Swale Way	6.54	0.03	0.28	6.54	10.69			N/A	N/A
	5 - Grovehurst Road	1.07	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.98	0.08	1.47	10.65	15.80			N/A	N/A
	2 - Grovehurst Road	0.33	0.00	0.00	0.33	0.33			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.10	0.87	1.39	1.39			N/A	N/A
	3 - A249 offslip (SB)	0.70	0.08	0.77	1.39	1.47			N/A	N/A
	4 - Swale Way	44.51	0.65	24.52	112.81	154.33			N/A	N/A
	5 - Grovehurst Road	1.90	0.09	1.24	4.17	5.75			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	20.91	1.51	15.52	44.30	56.10			N/A	N/A
	2 - Grovehurst Road	0.54	0.03	0.25	0.54	0.54			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.71	0.03	0.25	0.71	0.71			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.13	0.03	0.26	1.13	1.13			N/A	N/A
	3 - A249 offslip (SB)	1.40	0.03	0.27	1.40	1.49			N/A	N/A
	4 - Swale Way	165.22	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.21	0.03	0.32	5.71	16.83			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	32.70	2.71	24.62	69.39	87.72			N/A	N/A
	2 - Grovehurst Road	0.55	0.03	0.31	1.50	2.56			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.71	0.03	0.27	0.71	1.08			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.17	0.03	0.26	1.17	1.17			N/A	N/A
	3 - A249 offslip (SB)	1.48	0.03	0.28	1.48	4.21			N/A	N/A
	4 - Swale Way	287.51	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.29	0.03	0.29	3.29	10.66			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.23	0.05	0.46	14.82	26.78			N/A	N/A
	2 - Grovehurst Road	0.39	0.00	0.00	0.39	0.39			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.04	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.85	0.16	0.93	1.04	1.04			N/A	N/A
	4 - Swale Way	330.60	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.98	0.05	0.46	5.34	8.81			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.09	0.03	0.30	2.10	9.53			N/A	N/A
	2 - Grovehurst Road	0.23	0.00	0.00	0.23	0.23			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.63	0.12	0.87	1.37	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.45	0.04	0.39	1.24	1.39			N/A	N/A
	4 - Swale Way	303.52	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.46	0.04	0.42	3.82	6.46			N/A	N/A

2031, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	16.79	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	61.90	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	861	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	689	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	819
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	908	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	386	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	18
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	38	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.87	23.46	5.9	29.6	C	790	1185
	2 - Grovehurst Road	0.70	17.12	2.2	9.0	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.74	7.34	2.7	5.4	A	1134	1701
	3 - A249 offslip (SB)	1.22	292.82	57.3	97.2	F	523	785
	4 - Swale Way	0.77	15.85	3.2	15.4	C	632	948
	5 - Grovehurst Road	0.80	21.06	3.8	18.9	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	648	162	355	1221	0.531	644	0	0.0	1.1	6.196	A
	2 - Grovehurst Road	331	83	857	1016	0.326	329	142	0.0	0.5	5.230	A
	3 - A249 onslip (NB)			923				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	923	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				549				
	2 - B2005 - link	925	231	129	1885	0.491	921	357	0.0	1.0	3.719	A
	3 - A249 offslip (SB)	429	107	1050	949	0.452	426	0	0.0	0.8	6.842	A
	4 - Swale Way	519	130	386	1069	0.485	515	1089	0.0	0.9	6.454	A
	5 - Grovehurst Road	460	115	577	1070	0.430	457	324	0.0	0.7	5.844	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	774	194	426	1167	0.663	771	0	1.1	1.9	9.022	A
	2 - Grovehurst Road	396	99	1027	879	0.450	394	170	0.5	0.8	7.405	A
	3 - A249 onslip (NB)			1105				317				
	4 - B2005 - link	427	107	0	1664	0.256	426	1105	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				658				
	2 - B2005 - link	1108	277	154	1870	0.592	1106	427	1.0	1.4	4.702	A
	3 - A249 offslip (SB)	512	128	1260	766	0.669	508	0	0.8	1.9	13.725	B
	4 - Swale Way	619	155	463	1024	0.605	617	1305	0.9	1.5	8.792	A
	5 - Grovehurst Road	549	137	692	972	0.565	547	388	0.7	1.3	8.423	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	948	237	515	1099	0.862	934	0	1.9	5.4	20.277	C
	2 - Grovehurst Road	484	121	1244	705	0.687	479	205	0.8	2.1	15.612	C
	3 - A249 onslip (NB)			1341				383				
	4 - B2005 - link	516	129	0	1664	0.310	515	1341	0.3	0.4	3.135	A
2 - South	1 - A249 onslip (SB)			703				799				
	2 - B2005 - link	1344	336	187	1850	0.726	1339	516	1.4	2.6	6.989	A
	3 - A249 offslip (SB)	628	157	1526	534	1.175	521	0	1.9	28.7	124.073	F
	4 - Swale Way	759	190	528	986	0.770	752	1518	1.5	3.1	15.000	C
	5 - Grovehurst Road	673	168	839	847	0.795	664	442	1.3	3.5	18.830	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	948	237	520	1095	0.865	946	0	5.4	5.9	23.458	C
	2 - Grovehurst Road	484	121	1259	693	0.699	484	208	2.1	2.2	17.124	C
	3 - A249 onslip (NB)			1356				386				
	4 - B2005 - link	520	130	0	1664	0.313	520	1356	0.4	0.5	3.148	A
2 - South	1 - A249 onslip (SB)			710				808				
	2 - B2005 - link	1360	340	189	1848	0.736	1359	521	2.6	2.7	7.344	A
	3 - A249 offslip (SB)	628	157	1548	515	1.220	513	0	28.7	57.3	292.817	F
	4 - Swale Way	759	190	531	984	0.771	758	1530	3.1	3.2	15.848	C
	5 - Grovehurst Road	673	168	846	840	0.800	672	443	3.5	3.8	21.057	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	774	194	441	1156	0.670	789	0	5.9	2.1	10.198	B
	2 - Grovehurst Road	396	99	1055	857	0.461	401	175	2.2	0.9	7.981	A
	3 - A249 onslip (NB)			1129				327				
	4 - B2005 - link	440	110	0	1664	0.265	441	1129	0.5	0.4	2.944	A
	1 - A249 onslip (SB)			598				670				

2 - South	2 - B2005 - link	1132	283	157	1868	0.606	1136	441	2.7	1.6	4.955	A
	3 - A249 offslip (SB)	512	128	1294	736	0.696	724	0	57.3	4.4	161.524	F
	4 - Swale Way	619	155	544	976	0.634	625	1474	3.2	1.8	10.418	B
	5 - Grovehurst Road	549	137	710	958	0.573	559	460	3.8	1.4	9.219	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	648	162	361	1216	0.533	652	0	2.1	1.2	6.425	A
	2 - Grovehurst Road	331	83	869	1006	0.329	333	144	0.9	0.5	5.358	A
	3 - A249 onslip (NB)			934				268				
	4 - B2005 - link	361	90	0	1664	0.217	361	934	0.4	0.3	2.764	A
2 - South	1 - A249 onslip (SB)			492				557				
	2 - B2005 - link	936	234	130	1884	0.497	939	362	1.6	1.0	3.817	A
	3 - A249 offslip (SB)	429	107	1069	932	0.460	443	0	4.4	0.9	7.566	A
	4 - Swale Way	519	130	397	1063	0.488	522	1115	1.8	1.0	6.691	A
	5 - Grovehurst Road	460	115	586	1063	0.433	462	333	1.4	0.8	6.019	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.12	0.55	1.02	1.44	1.49			N/A	N/A
	2 - Grovehurst Road	0.48	0.00	0.00	0.48	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.96	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.81	0.05	0.59	1.55	2.00			N/A	N/A
	4 - Swale Way	0.93	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.75	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.92	0.05	0.63	4.97	7.71			N/A	N/A
	2 - Grovehurst Road	0.81	0.06	0.73	1.29	1.76			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.44	0.05	0.56	3.55	5.37			N/A	N/A
	3 - A249 offslip (SB)	1.93	0.04	0.39	5.13	9.57			N/A	N/A
	4 - Swale Way	1.49	0.06	0.89	3.43	4.86			N/A	N/A
	5 - Grovehurst Road	1.27	0.06	0.68	2.89	4.24			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.39	0.04	0.40	14.02	29.14			N/A	N/A
	2 - Grovehurst Road	2.08	0.03	0.29	2.08	8.62			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.58	0.03	0.27	2.58	4.65			N/A	N/A
	3 - A249 offslip (SB)	28.70	9.41	25.90	47.32	54.97			N/A	N/A
	4 - Swale Way	3.12	0.03	0.31	4.28	15.35			N/A	N/A
	5 - Grovehurst Road	3.51	0.03	0.34	7.17	18.88			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	5.85	0.03	0.32	8.82	29.63			N/A	N/A
	2 - Grovehurst Road	2.23	0.03	0.29	2.23	9.00			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.72	0.03	0.27	2.72	2.72			N/A	N/A
	3 - A249 offslip (SB)	57.28	25.95	53.99	86.24	97.22			N/A	N/A
	4 - Swale Way	3.24	0.03	0.28	3.24	9.84			N/A	N/A
	5 - Grovehurst Road	3.77	0.03	0.30	3.77	16.88			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.09	0.04	0.44	5.71	9.63			N/A	N/A
	2 - Grovehurst Road	0.87	0.06	0.67	1.64	2.15			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.56	0.10	1.19	3.00	4.02			N/A	N/A
	3 - A249 offslip (SB)	4.38	0.05	0.50	12.50	21.20			N/A	N/A
	4 - Swale Way	1.79	0.06	0.92	4.33	6.31			N/A	N/A
	5 - Grovehurst Road	1.37	0.05	0.47	3.46	5.37			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.16	0.03	0.32	2.42	5.88			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.35	1.44	1.65			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.05	0.50	2.15	3.18			N/A	N/A
	3 - A249 offslip (SB)	0.87	0.03	0.26	0.87	0.87			N/A	N/A
	4 - Swale Way	0.97	0.04	0.37	2.39	4.30			N/A	N/A
	5 - Grovehurst Road	0.77	0.03	0.33	1.74	3.63			N/A	N/A

2031, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	26.30	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	296.86	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	825	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	443	100.000
	4 - Swale Way		ONE HOUR	✓	1276	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	645
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	522	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	477	322
		3 - A249 offslip (SB)	1	27	0	199	216
		4 - Swale Way	685	432	0	0	159
	5 - Grovehurst Road	110	318	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	21
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	28	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	18	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.94	48.69	11.5	57.5	E	757	1136
	2 - Grovehurst Road	0.32	6.87	0.5	1.9	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.63	0.7	1.5	A	674	1011
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.50	3.96	1.0	1.5	A	774	1161
	3 - A249 offslip (SB)	0.52	7.94	1.1	3.7	A	407	610
	4 - Swale Way	1.37	703.33	224.0	224.0	F	1171	1756
	5 - Grovehurst Road	0.73	16.62	2.6	12.4	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	621	155	576	1075	0.578	616	0	0.0	1.3	7.756	A
	2 - Grovehurst Road	171	43	865	1042	0.164	170	327	0.0	0.2	4.125	A
	3 - A249 onslip (NB)			631				404				
	4 - B2005 - link	578	145	0	1719	0.336	576	631	0.0	0.5	3.146	A
2 - South	1 - A249 onslip (SB)			656				621				
	2 - B2005 - link	631	158	79	1855	0.340	629	577	0.0	0.5	2.931	A
	3 - A249 offslip (SB)	334	83	708	1242	0.269	332	0	0.0	0.4	3.950	A
	4 - Swale Way	961	240	455	1167	0.823	944	585	0.0	4.2	15.169	C
	5 - Grovehurst Road	402	101	878	878	0.458	399	520	0.0	0.8	7.458	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	742	185	672	1004	0.739	736	0	1.3	2.7	13.189	B
	2 - Grovehurst Road	204	51	1023	913	0.224	204	385	0.2	0.3	5.074	A
	3 - A249 onslip (NB)			755				472				
	4 - B2005 - link	673	168	0	1719	0.391	672	755	0.5	0.6	3.438	A
2 - South	1 - A249 onslip (SB)			766				712				
	2 - B2005 - link	754	189	95	1846	0.409	754	671	0.5	0.7	3.295	A
	3 - A249 offslip (SB)	398	100	848	1114	0.357	398	0	0.4	0.6	5.018	A
	4 - Swale Way	1147	287	545	1107	1.036	1072	701	4.2	23.0	58.576	F
	5 - Grovehurst Road	480	120	1001	782	0.614	477	616	0.8	1.5	11.691	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	908	227	727	963	0.943	881	0	2.7	9.5	35.451	E
	2 - Grovehurst Road	250	62	1173	788	0.317	249	435	0.3	0.5	6.677	A
	3 - A249 onslip (NB)			908				514				
	4 - B2005 - link	727	182	0	1719	0.423	727	908	0.6	0.7	3.630	A
2 - South	1 - A249 onslip (SB)			842				720				
	2 - B2005 - link	907	227	116	1833	0.495	906	726	0.7	1.0	3.876	A
	3 - A249 offslip (SB)	488	122	1021	957	0.510	486	0	0.6	1.0	7.607	A
	4 - Swale Way	1405	351	660	1032	1.362	1030	848	23.0	116.6	253.022	F
	5 - Grovehurst Road	588	147	978	801	0.734	584	712	1.5	2.6	16.228	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	908	227	728	962	0.944	900	0	9.5	11.5	48.690	E
	2 - Grovehurst Road	250	62	1189	774	0.323	250	440	0.5	0.5	6.870	A
	3 - A249 onslip (NB)			924				515				
	4 - B2005 - link	728	182	0	1719	0.424	728	924	0.7	0.7	3.634	A
2 - South	1 - A249 onslip (SB)			844				719				
	2 - B2005 - link	923	231	117	1833	0.504	923	727	1.0	1.0	3.957	A
	3 - A249 offslip (SB)	488	122	1040	941	0.519	488	0	1.0	1.1	7.942	A
	4 - Swale Way	1405	351	668	1026	1.369	1026	859	116.6	211.3	566.743	F
	5 - Grovehurst Road	588	147	975	804	0.732	588	719	2.6	2.6	16.624	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	742	185	685	994	0.746	775	0	11.5	3.1	18.591	C
	2 - Grovehurst Road	204	51	1062	880	0.232	205	398	0.5	0.3	5.337	A
	3 - A249 onslip (NB)			786				481				
	4 - B2005 - link	685	171	0	1719	0.398	685	786	0.7	0.7	3.482	A
	1 - A249 onslip (SB)			780				728				

2 - South	2 - B2005 - link	787	197	96	1845	0.427	788	684	1.0	0.7	3.408	A
	3 - A249 offslip (SB)	398	100	884	1082	0.368	400	0	1.1	0.6	5.296	A
	4 - Swale Way	1147	287	561	1097	1.046	1096	723	211.3	224.0	703.325	F
	5 - Grovehurst Road	480	120	1024	764	0.628	484	633	2.6	1.7	12.983	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	621	155	654	1017	0.611	627	0	3.1	1.6	9.369	A
	2 - Grovehurst Road	171	43	926	996	0.172	171	355	0.3	0.2	4.369	A
	3 - A249 onslip (NB)			641				456				
	4 - B2005 - link	654	164	0	1719	0.381	654	641	0.7	0.6	3.384	A
2 - South	1 - A249 onslip (SB)			733				737				
	2 - B2005 - link	641	160	80	1854	0.346	642	653	0.7	0.5	2.973	A
	3 - A249 offslip (SB)	334	83	722	1229	0.271	334	0	0.6	0.4	4.028	A
	4 - Swale Way	961	240	462	1162	0.827	1157	594	224.0	175.0	621.329	F
	5 - Grovehurst Road	402	101	1066	731	0.550	404	553	1.7	1.3	11.073	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.34	0.55	1.25	1.77	1.93			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.23	0.03	0.32	6.32	21.34			N/A	N/A
	5 - Grovehurst Road	0.83	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.68	0.06	0.98	7.13	10.83			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.69	0.10	0.84	1.37	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.55	0.06	0.69	1.34	1.42			N/A	N/A
	4 - Swale Way	22.97	0.59	13.71	55.76	74.83			N/A	N/A
	5 - Grovehurst Road	1.54	0.09	1.14	3.07	4.16			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	9.54	0.09	2.39	26.93	40.78			N/A	N/A
	2 - Grovehurst Road	0.46	0.03	0.25	0.46	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.73	0.03	0.25	0.73	0.73			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.97	0.03	0.25	0.97	0.97			N/A	N/A
	3 - A249 offslip (SB)	1.02	0.03	0.26	1.02	1.02			N/A	N/A
	4 - Swale Way	116.58	65.58	112.68	162.06	178.27			N/A	N/A
	5 - Grovehurst Road	2.59	0.03	0.31	3.16	12.36			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	11.52	0.06	1.23	33.69	57.50			N/A	N/A
	2 - Grovehurst Road	0.47	0.03	0.32	1.43	1.89			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.73	0.03	0.27	0.73	1.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.01	0.03	0.27	1.01	1.50			N/A	N/A
	3 - A249 offslip (SB)	1.06	0.03	0.28	1.06	3.69			N/A	N/A
	4 - Swale Way	211.29	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.65	0.03	0.28	2.65	6.82			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.12	0.04	0.41	8.56	15.86			N/A	N/A
	2 - Grovehurst Road	0.30	0.00	0.00	0.30	0.30			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.67	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.75	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.59	0.09	0.82	1.36	1.43			N/A	N/A
	4 - Swale Way	224.03	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.75	0.05	0.70	4.42	6.67			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.61	0.03	0.31	2.64	8.17			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.62	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.03	0.30	0.85	1.17			N/A	N/A
	4 - Swale Way	174.95	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.25	0.05	0.46	3.08	4.85			N/A	N/A

2031 + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	231.61	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	474.02	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1107	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	620	100.000
	4 - Swale Way		ONE HOUR	✓	766	100.000
	5 - Grovehurst Road		ONE HOUR	✓	774	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	123	0	984
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	159	403	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	419	0	0	1031	231
		3 - A249 offslip (SB)	1	22	0	381	216
		4 - Swale Way	459	229	0	0	78
	5 - Grovehurst Road	289	313	0	172	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	16
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	6	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	36	10	0	0	9
	5 - Grovehurst Road	1	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.07	147.69	54.4	114.5	F	1016	1524
	2 - Grovehurst Road	1.30	544.11	104.0	156.9	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.10	0.4	1.9	A	491	737
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.84	11.50	5.0	23.4	B	1509	2263
	3 - A249 offslip (SB)	1.83	2154.65	244.5	187.3	F	569	853
	4 - Swale Way	0.99	77.33	17.6	67.9	F	703	1054
	5 - Grovehurst Road	1.38	612.87	124.1	180.3	F	710	1065

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	833	208	416	1208	0.690	825	0	0.0	2.2	9.207	A
	2 - Grovehurst Road	555	139	1031	898	0.618	549	209	0.0	1.6	10.118	B
	3 - A249 onslip (NB)			1253				326				
	4 - B2005 - link	417	104	0	1674	0.249	416	1253	0.0	0.3	2.859	A
2 - South	1 - A249 onslip (SB)			547				867				
	2 - B2005 - link	1250	312	128	1923	0.650	1243	419	0.0	1.8	5.237	A
	3 - A249 offslip (SB)	467	117	1370	692	0.675	459	0	0.0	2.0	14.991	B
	4 - Swale Way	577	144	657	916	0.630	570	1172	0.0	1.6	10.223	B
	5 - Grovehurst Road	583	146	839	883	0.660	575	389	0.0	1.9	11.446	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	995	249	489	1151	0.865	982	0	2.2	5.5	19.843	C
	2 - Grovehurst Road	663	166	1223	745	0.890	645	247	1.6	6.1	31.630	D
	3 - A249 onslip (NB)			1484				384				
	4 - B2005 - link	489	122	0	1674	0.292	489	1484	0.3	0.4	3.038	A
2 - South	1 - A249 onslip (SB)			641				1027				
	2 - B2005 - link	1480	370	149	1909	0.775	1474	492	1.8	3.3	8.163	A
	3 - A249 offslip (SB)	557	139	1624	473	1.178	460	0	2.0	26.3	134.242	F
	4 - Swale Way	689	172	748	864	0.797	681	1337	1.6	3.6	18.916	C
	5 - Grovehurst Road	696	174	996	753	0.924	673	432	1.9	7.7	37.235	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1219	305	510	1135	1.074	1113	0	5.5	32.0	73.289	F
	2 - Grovehurst Road	811	203	1354	638	1.272	633	268	6.1	50.7	177.300	F
	3 - A249 onslip (NB)			1589				398				
	4 - B2005 - link	510	127	0	1674	0.305	510	1589	0.4	0.4	3.092	A
2 - South	1 - A249 onslip (SB)			651				1115				
	2 - B2005 - link	1592	398	140	1915	0.831	1587	510	3.3	4.6	10.777	B
	3 - A249 offslip (SB)	683	171	1728	383	1.784	382	0	26.3	101.3	623.139	F
	4 - Swale Way	843	211	761	856	0.985	806	1349	3.6	13.0	50.182	F
	5 - Grovehurst Road	852	213	1133	635	1.341	632	433	7.7	62.7	216.036	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1219	305	510	1135	1.074	1130	0	32.0	54.4	147.692	F
	2 - Grovehurst Road	811	203	1370	626	1.297	625	270	50.7	97.3	434.716	F
	3 - A249 onslip (NB)			1597				398				
	4 - B2005 - link	510	127	0	1674	0.305	510	1597	0.4	0.4	3.092	A
2 - South	1 - A249 onslip (SB)			647				1124				
	2 - B2005 - link	1601	400	137	1917	0.835	1600	510	4.6	4.9	11.294	B
	3 - A249 offslip (SB)	683	171	1738	374	1.827	374	0	101.3	178.6	1360.846	F
	4 - Swale Way	843	211	763	855	0.986	825	1348	13.0	17.6	77.327	F
	5 - Grovehurst Road	852	213	1154	618	1.380	617	434	62.7	121.4	525.973	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	995	249	509	1135	0.877	1115	0	54.4	24.4	130.910	F
	2 - Grovehurst Road	663	166	1356	637	1.041	636	268	97.3	104.0	544.111	F
	3 - A249 onslip (NB)			1594				398				
	4 - B2005 - link	509	127	0	1674	0.304	509	1594	0.4	0.4	3.091	A
2 - South	1 - A249 onslip (SB)			664				1098				

2 - South	2 - B2005 - link	1597	399	152	1908	0.837	1596	511	4.9	5.0	11.505	B
	3 - A249 offslip (SB)	557	139	1748	365	1.527	365	0	178.6	226.7	1924.559	F
	4 - Swale Way	689	172	758	858	0.803	741	1356	17.6	4.6	38.370	E
	5 - Grovehurst Road	696	174	1077	686	1.014	685	422	121.4	124.1	612.872	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	833	208	512	1133	0.735	919	0	24.4	3.0	23.269	C
	2 - Grovehurst Road	555	139	1184	778	0.714	770	247	104.0	50.2	363.131	F
	3 - A249 onslip (NB)			1548				407				
	4 - B2005 - link	512	128	0	1674	0.306	512	1548	0.4	0.4	3.098	A
2 - South	1 - A249 onslip (SB)			699				1038				
	2 - B2005 - link	1532	383	181	1890	0.811	1534	518	5.0	4.5	10.201	B
	3 - A249 offslip (SB)	467	117	1715	396	1.180	396	0	226.7	244.5	2154.654	F
	4 - Swale Way	577	144	746	865	0.667	587	1365	4.6	2.1	13.372	B
	5 - Grovehurst Road	583	146	924	820	0.711	813	408	124.1	66.4	423.492	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.15	0.18	1.19	4.11	5.35			N/A	N/A
	2 - Grovehurst Road	1.57	0.04	0.36	3.89	7.95			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.83	0.66	1.34	2.20	2.63			N/A	N/A
	3 - A249 offslip (SB)	1.97	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	1.65	0.53	1.02	2.39	2.83			N/A	N/A
	5 - Grovehurst Road	1.87	0.03	0.34	4.32	9.77			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.50	0.10	1.88	14.56	21.05			N/A	N/A
	2 - Grovehurst Road	6.06	0.08	1.38	16.86	25.58			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.32	0.06	1.12	8.99	13.72			N/A	N/A
	3 - A249 offslip (SB)	26.26	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.57	0.08	1.11	9.20	13.30			N/A	N/A
	5 - Grovehurst Road	7.67	0.10	2.29	21.05	31.13			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	32.04	6.46	27.19	59.39	71.59			N/A	N/A
	2 - Grovehurst Road	50.71	23.66	47.90	75.40	84.72			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.64	0.03	0.31	4.91	21.39			N/A	N/A
	3 - A249 offslip (SB)	101.33	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	13.03	0.26	6.84	32.66	44.79			N/A	N/A
	5 - Grovehurst Road	62.66	32.66	59.95	89.45	99.25			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	54.37	14.01	47.83	96.53	114.52			N/A	N/A
	2 - Grovehurst Road	97.28	57.14	94.33	132.56	145.02			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.29	1.20	1.92			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.87	0.03	0.28	4.87	7.96			N/A	N/A
	3 - A249 offslip (SB)	178.57	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	17.60	0.18	7.28	47.42	67.87			N/A	N/A
	5 - Grovehurst Road	121.36	78.38	118.68	158.27	170.91			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	24.45	3.46	19.76	47.85	58.82			N/A	N/A
	2 - Grovehurst Road	104.04	59.84	100.71	143.07	156.90			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.97	0.06	0.87	14.24	23.38			N/A	N/A
	3 - A249 offslip (SB)	226.66	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	4.61	0.05	0.46	13.03	23.37			N/A	N/A
	5 - Grovehurst Road	124.07	76.19	120.86	165.80	180.28			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.96	0.03	0.31	4.32	14.79			N/A	N/A
	2 - Grovehurst Road	50.20	23.36	47.40	74.69	83.92			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.47	0.14	2.13	10.70	14.66			N/A	N/A
	3 - A249 offslip (SB)	244.46	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	2.08	0.03	0.31	3.49	10.69			N/A	N/A
	5 - Grovehurst Road	66.38	31.39	62.91	98.55	110.62			N/A	N/A

2031 + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	307.50	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	728.07	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1190	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	529	100.000
	4 - Swale Way		ONE HOUR	✓	1374	100.000
	5 - Grovehurst Road		ONE HOUR	✓	613	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	430	0	760
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	277	560	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	187	0	0	521	402
		3 - A249 offslip (SB)	1	39	0	202	287
		4 - Swale Way	778	435	0	0	161
		5 - Grovehurst Road	150	356	0	107	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	0	0	19
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	1	0	0	27	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	17	3	0	0	3
		5 - Grovehurst Road	0	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.29	560.89	166.8	200.0	F	1092	1638
	2 - Grovehurst Road	0.51	8.58	1.0	2.5	A	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.41	3.54	0.7	1.5	A	657	985
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.55	4.21	1.2	1.9	A	968	1451
	3 - A249 offslip (SB)	0.66	12.20	1.9	5.5	B	485	728
	4 - Swale Way	1.73	1842.62	503.2	180.3	F	1261	1891
	5 - Grovehurst Road	0.83	25.78	4.6	23.5	D	562	844

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	896	224	600	1103	0.812	880	0	0.0	4.0	15.233	C
	2 - Grovehurst Road	293	73	963	979	0.299	291	516	0.0	0.4	5.224	A
	3 - A249 onslip (NB)			828				427				
	4 - B2005 - link	602	150	0	1730	0.348	600	828	0.0	0.5	3.180	A
2 - South	1 - A249 onslip (SB)			679				798				
	2 - B2005 - link	826	206	80	1906	0.433	823	600	0.0	0.8	3.312	A
	3 - A249 offslip (SB)	398	100	902	1094	0.364	396	0	0.0	0.6	5.145	A
	4 - Swale Way	1034	259	681	1021	1.013	965	617	0.0	17.2	44.885	E
	5 - Grovehurst Road	461	115	1021	782	0.590	456	626	0.0	1.4	10.848	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1070	267	652	1063	1.006	1016	0	4.0	17.3	50.138	F
	2 - Grovehurst Road	350	87	1085	878	0.398	349	583	0.4	0.7	6.793	A
	3 - A249 onslip (NB)			967				467				
	4 - B2005 - link	652	163	0	1730	0.377	652	967	0.5	0.6	3.339	A
2 - South	1 - A249 onslip (SB)			746				829				
	2 - B2005 - link	963	241	96	1897	0.508	962	650	0.8	1.0	3.850	A
	3 - A249 offslip (SB)	476	119	1058	954	0.498	474	0	0.6	1.0	7.470	A
	4 - Swale Way	1235	309	804	941	1.312	939	728	17.2	91.2	222.321	F
	5 - Grovehurst Road	551	138	1027	780	0.707	548	716	1.4	2.3	15.269	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1310	328	708	1020	1.284	1018	0	17.3	90.4	200.685	F
	2 - Grovehurst Road	428	107	1124	849	0.504	427	602	0.7	1.0	8.501	A
	3 - A249 onslip (NB)			1040				511				
	4 - B2005 - link	708	177	0	1730	0.410	708	1040	0.6	0.7	3.523	A
2 - South	1 - A249 onslip (SB)			823				833				
	2 - B2005 - link	1028	257	116	1884	0.545	1027	707	1.0	1.2	4.196	A
	3 - A249 offslip (SB)	582	146	1143	879	0.663	579	0	1.0	1.9	11.853	B
	4 - Swale Way	1513	378	903	876	1.728	876	819	91.2	250.5	709.552	F
	5 - Grovehurst Road	675	169	990	810	0.833	667	789	2.3	4.4	23.743	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1310	328	712	1017	1.288	1017	0	90.4	163.8	450.850	F
	2 - Grovehurst Road	428	107	1126	848	0.505	428	603	1.0	1.0	8.582	A
	3 - A249 onslip (NB)			1040				514				
	4 - B2005 - link	712	178	0	1730	0.412	712	1040	0.7	0.7	3.537	A
2 - South	1 - A249 onslip (SB)			829				834				
	2 - B2005 - link	1028	257	118	1883	0.546	1028	711	1.2	1.2	4.208	A
	3 - A249 offslip (SB)	582	146	1145	877	0.664	582	0	1.9	1.9	12.196	B
	4 - Swale Way	1513	378	905	874	1.731	874	822	250.5	410.3	1366.481	F
	5 - Grovehurst Road	675	169	989	811	0.832	674	791	4.4	4.6	25.777	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1070	267	656	1060	1.009	1058	0	163.8	166.8	560.889	F
	2 - Grovehurst Road	350	87	1115	853	0.410	351	599	1.0	0.7	7.189	A
	3 - A249 onslip (NB)			996				470				
	4 - B2005 - link	656	164	0	1730	0.379	656	996	0.7	0.6	3.353	A
1 - A249 onslip (SB)			752				831					

2 - South	2 - B2005 - link	993	248	98	1895	0.524	993	654	1.2	1.1	3.995	A
	3 - A249 offslip (SB)	476	119	1091	924	0.514	479	0	1.9	1.1	8.144	A
	4 - Swale Way	1235	309	823	928	1.331	928	747	410.3	487.0	1708.629	F
	5 - Grovehurst Road	551	138	1023	783	0.704	559	728	4.6	2.5	16.651	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	896	224	609	1096	0.818	1089	0	166.8	118.4	472.188	F
	2 - Grovehurst Road	293	73	1103	859	0.341	294	595	0.7	0.5	6.372	A
	3 - A249 onslip (NB)			964				433				
	4 - B2005 - link	609	152	0	1730	0.352	609	964	0.6	0.5	3.211	A
2 - South	1 - A249 onslip (SB)			688				827				
	2 - B2005 - link	968	242	81	1905	0.508	968	607	1.1	1.0	3.842	A
	3 - A249 offslip (SB)	398	100	1049	961	0.414	400	0	1.1	0.7	6.433	A
	4 - Swale Way	1034	259	761	970	1.067	970	688	487.0	503.2	1842.621	F
	5 - Grovehurst Road	461	115	1049	762	0.606	465	681	2.5	1.6	12.277	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.95	0.04	0.38	9.94	21.25			N/A	N/A
	2 - Grovehurst Road	0.42	0.00	0.00	0.42	0.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.76	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	17.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.40	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	17.33	0.42	10.08	42.18	56.81			N/A	N/A
	2 - Grovehurst Road	0.65	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.02	0.11	0.97	1.63	1.93			N/A	N/A
	3 - A249 offslip (SB)	0.98	0.08	0.88	1.68	2.04			N/A	N/A
	4 - Swale Way	91.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.29	0.09	1.34	5.33	7.44			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	90.40	47.80	86.79	128.78	142.72			N/A	N/A
	2 - Grovehurst Road	1.00	0.03	0.26	1.00	1.00			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.69	0.03	0.25	0.69	0.69			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.19	0.03	0.26	1.19	1.19			N/A	N/A
	3 - A249 offslip (SB)	1.89	0.03	0.28	1.89	5.55			N/A	N/A
	4 - Swale Way	250.55	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.36	0.04	0.38	11.09	23.48			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	163.79	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.01	0.03	0.27	1.01	2.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.70	0.03	0.27	0.70	1.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.20	0.03	0.26	1.20	1.20			N/A	N/A
	3 - A249 offslip (SB)	1.94	0.03	0.28	1.94	4.09			N/A	N/A
	4 - Swale Way	410.27	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.61	0.03	0.31	5.69	22.08			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	166.76	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.70	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.11	0.55	1.06	1.11	1.54			N/A	N/A
	3 - A249 offslip (SB)	1.08	0.08	0.91	1.91	2.62			N/A	N/A
	4 - Swale Way	486.99	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.50	0.04	0.44	6.89	11.90			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	118.42	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.52	0.05	0.50	1.30	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.55	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.04	0.55	1.02	1.06	1.06			N/A	N/A
	3 - A249 offslip (SB)	0.72	0.05	0.46	1.41	1.95			N/A	N/A
	4 - Swale Way	503.19	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.58	0.04	0.37	4.02	7.88			N/A	N/A

2031 + K3 Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	17.09	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	63.21	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	864	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	692	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	822
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	911	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	389	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	18
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	39	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.87	23.91	6.0	30.7	C	793	1189
	2 - Grovehurst Road	0.70	17.33	2.3	9.2	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.74	7.39	2.7	5.4	A	1137	1705
	3 - A249 offslip (SB)	1.23	299.63	58.5	98.5	F	523	785
	4 - Swale Way	0.78	16.38	3.4	16.3	C	635	952
	5 - Grovehurst Road	0.81	21.80	3.9	19.5	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	650	163	355	1221	0.533	646	0	0.0	1.1	6.218	A
	2 - Grovehurst Road	331	83	860	1014	0.327	329	142	0.0	0.5	5.244	A
	3 - A249 onslip (NB)			925				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	925	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				551				
	2 - B2005 - link	927	232	129	1885	0.492	924	357	0.0	1.0	3.729	A
	3 - A249 offslip (SB)	429	107	1052	947	0.453	426	0	0.0	0.8	6.869	A
	4 - Swale Way	521	130	386	1064	0.490	517	1092	0.0	0.9	6.540	A
	5 - Grovehurst Road	460	115	579	1066	0.432	457	324	0.0	0.8	5.884	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	426	1167	0.666	773	0	1.1	1.9	9.080	A
	2 - Grovehurst Road	396	99	1030	877	0.451	394	170	0.5	0.8	7.440	A
	3 - A249 onslip (NB)			1108				316				
	4 - B2005 - link	427	107	0	1664	0.256	426	1108	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				660				
	2 - B2005 - link	1110	278	154	1870	0.594	1108	427	1.0	1.4	4.717	A
	3 - A249 offslip (SB)	512	128	1262	763	0.671	508	0	0.8	2.0	13.846	B
	4 - Swale Way	622	156	463	1019	0.610	620	1308	0.9	1.5	8.956	A
	5 - Grovehurst Road	549	137	694	967	0.568	547	388	0.8	1.3	8.520	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	515	1100	0.865	937	0	1.9	5.5	20.571	C
	2 - Grovehurst Road	484	121	1247	703	0.689	479	205	0.8	2.1	15.761	C
	3 - A249 onslip (NB)			1344				382				
	4 - B2005 - link	515	129	0	1664	0.310	515	1344	0.3	0.4	3.134	A
2 - South	1 - A249 onslip (SB)			703				802				
	2 - B2005 - link	1347	337	187	1850	0.728	1342	516	1.4	2.6	7.028	A
	3 - A249 offslip (SB)	628	157	1529	531	1.181	518	0	2.0	29.3	126.540	F
	4 - Swale Way	762	190	528	981	0.776	755	1520	1.5	3.2	15.455	C
	5 - Grovehurst Road	673	168	842	841	0.800	663	441	1.3	3.6	19.356	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	520	1096	0.868	949	0	5.5	6.0	23.913	C
	2 - Grovehurst Road	484	121	1262	690	0.702	484	207	2.1	2.3	17.332	C
	3 - A249 onslip (NB)			1359				386				
	4 - B2005 - link	520	130	0	1664	0.313	520	1359	0.4	0.5	3.148	A
2 - South	1 - A249 onslip (SB)			710				811				
	2 - B2005 - link	1363	341	189	1848	0.737	1362	521	2.6	2.7	7.392	A
	3 - A249 offslip (SB)	628	157	1551	512	1.227	510	0	29.3	58.5	299.629	F
	4 - Swale Way	762	190	530	980	0.778	761	1532	3.2	3.4	16.381	C
	5 - Grovehurst Road	673	168	849	834	0.806	672	442	3.6	3.9	21.797	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	441	1156	0.672	792	0	6.0	2.1	10.303	B
	2 - Grovehurst Road	396	99	1058	855	0.463	401	175	2.3	0.9	8.031	A
	3 - A249 onslip (NB)			1132				327				
	4 - B2005 - link	441	110	0	1664	0.265	441	1132	0.5	0.4	2.947	A
	1 - A249 onslip (SB)			599				673				

2 - South	2 - B2005 - link	1135	284	157	1867	0.608	1140	441	2.7	1.6	4.979	A
	3 - A249 offslip (SB)	512	128	1297	733	0.699	721	0	58.5	6.4	169.516	F
	4 - Swale Way	622	156	543	972	0.640	628	1475	3.4	1.8	10.648	B
	5 - Grovehurst Road	549	137	712	953	0.576	559	459	3.9	1.4	9.365	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	650	163	362	1215	0.535	654	0	2.1	1.2	6.458	A
	2 - Grovehurst Road	331	83	872	1004	0.330	333	144	0.9	0.5	5.375	A
	3 - A249 onslip (NB)			936				268				
	4 - B2005 - link	361	90	0	1664	0.217	362	936	0.4	0.3	2.767	A
2 - South	1 - A249 onslip (SB)			492				559				
	2 - B2005 - link	939	235	130	1884	0.498	941	362	1.6	1.0	3.825	A
	3 - A249 offslip (SB)	429	107	1071	930	0.461	451	0	6.4	0.9	7.860	A
	4 - Swale Way	521	130	400	1056	0.493	524	1123	1.8	1.0	6.811	A
	5 - Grovehurst Road	460	115	588	1058	0.435	462	336	1.4	0.8	6.066	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.12	0.55	1.03	1.12	1.12			N/A	N/A
	2 - Grovehurst Road	0.48	0.00	0.00	0.48	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.96	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.82	0.05	0.57	1.58	2.08			N/A	N/A
	4 - Swale Way	0.95	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.75	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.94	0.05	0.63	5.03	7.80			N/A	N/A
	2 - Grovehurst Road	0.81	0.06	0.73	1.31	1.77			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.44	0.05	0.56	3.58	5.42			N/A	N/A
	3 - A249 offslip (SB)	1.95	0.04	0.39	5.18	9.67			N/A	N/A
	4 - Swale Way	1.53	0.06	0.89	3.54	5.02			N/A	N/A
	5 - Grovehurst Road	1.29	0.06	0.67	2.94	4.36			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.49	0.04	0.40	14.47	29.66			N/A	N/A
	2 - Grovehurst Road	2.10	0.03	0.29	2.10	8.82			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.60	0.03	0.28	2.60	4.81			N/A	N/A
	3 - A249 offslip (SB)	29.26	9.84	26.49	47.90	55.52			N/A	N/A
	4 - Swale Way	3.23	0.03	0.32	4.83	16.27			N/A	N/A
	5 - Grovehurst Road	3.61	0.03	0.34	7.70	19.53			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	5.98	0.03	0.33	9.43	30.65			N/A	N/A
	2 - Grovehurst Road	2.26	0.03	0.29	2.26	9.19			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.75	0.03	0.27	2.75	2.75			N/A	N/A
	3 - A249 offslip (SB)	58.55	27.05	55.31	87.55	98.51			N/A	N/A
	4 - Swale Way	3.36	0.03	0.29	3.36	10.77			N/A	N/A
	5 - Grovehurst Road	3.89	0.03	0.30	4.07	17.89			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.12	0.04	0.44	5.78	9.78			N/A	N/A
	2 - Grovehurst Road	0.88	0.06	0.67	1.65	2.19			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.57	0.10	1.19	3.07	4.11			N/A	N/A
	3 - A249 offslip (SB)	6.42	0.10	2.06	17.31	25.30			N/A	N/A
	4 - Swale Way	1.83	0.06	0.90	4.52	6.62			N/A	N/A
	5 - Grovehurst Road	1.39	0.05	0.47	3.53	5.54			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.17	0.03	0.32	2.42	5.94			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.35	1.45	1.68			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.05	0.50	2.18	3.24			N/A	N/A
	3 - A249 offslip (SB)	0.87	0.03	0.26	0.87	0.87			N/A	N/A
	4 - Swale Way	0.99	0.04	0.36	2.45	4.49			N/A	N/A
	5 - Grovehurst Road	0.78	0.03	0.33	1.74	3.70			N/A	N/A

2031 + K3 Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	28.29	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	309.29	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	828	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	443	100.000
	4 - Swale Way		ONE HOUR	✓	1279	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	648
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	522	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	480	322
		3 - A249 offslip (SB)	1	27	0	199	216
		4 - Swale Way	688	432	0	0	159
	5 - Grovehurst Road	110	318	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	22
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	28	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	19	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.95	52.38	12.5	60.4	F	760	1140
	2 - Grovehurst Road	0.33	6.94	0.5	1.9	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.62	0.7	1.5	A	672	1008
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.51	3.99	1.0	1.5	A	781	1172
	3 - A249 offslip (SB)	0.52	8.08	1.1	3.7	A	407	610
	4 - Swale Way	1.38	732.25	233.1	233.1	F	1174	1760
	5 - Grovehurst Road	0.73	16.62	2.6	12.4	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	623	156	576	1068	0.584	618	0	0.0	1.4	7.912	A
	2 - Grovehurst Road	171	43	867	1037	0.165	170	327	0.0	0.2	4.150	A
	3 - A249 onslip (NB)			633				404				
	4 - B2005 - link	578	145	0	1719	0.336	576	633	0.0	0.5	3.145	A
2 - South	1 - A249 onslip (SB)			656				623				
	2 - B2005 - link	637	159	79	1854	0.343	635	577	0.0	0.5	2.947	A
	3 - A249 offslip (SB)	334	83	714	1236	0.270	332	0	0.0	0.4	3.976	A
	4 - Swale Way	963	241	457	1160	0.830	945	589	0.0	4.4	15.697	C
	5 - Grovehurst Road	402	101	880	873	0.460	399	522	0.0	0.8	7.535	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	670	999	0.745	739	0	1.4	2.8	13.568	B
	2 - Grovehurst Road	204	51	1024	908	0.225	204	385	0.2	0.3	5.112	A
	3 - A249 onslip (NB)			758				470				
	4 - B2005 - link	671	168	0	1719	0.390	670	758	0.5	0.6	3.431	A
2 - South	1 - A249 onslip (SB)			764				712				
	2 - B2005 - link	762	190	95	1845	0.413	761	669	0.5	0.7	3.320	A
	3 - A249 offslip (SB)	398	100	856	1107	0.360	397	0	0.4	0.6	5.067	A
	4 - Swale Way	1150	287	547	1100	1.045	1069	706	4.4	24.7	62.026	F
	5 - Grovehurst Road	480	120	999	780	0.615	477	617	0.8	1.5	11.774	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	724	959	0.951	882	0	2.8	10.2	37.265	E
	2 - Grovehurst Road	250	62	1172	783	0.319	249	434	0.3	0.5	6.739	A
	3 - A249 onslip (NB)			910				512				
	4 - B2005 - link	725	181	0	1719	0.422	724	910	0.6	0.7	3.620	A
2 - South	1 - A249 onslip (SB)			839				718				
	2 - B2005 - link	914	229	116	1832	0.499	913	723	0.7	1.0	3.910	A
	3 - A249 offslip (SB)	488	122	1029	950	0.513	486	0	0.6	1.0	7.719	A
	4 - Swale Way	1408	352	661	1025	1.373	1024	853	24.7	120.6	264.476	F
	5 - Grovehurst Road	588	147	973	801	0.734	584	713	1.5	2.6	16.243	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	725	958	0.951	902	0	10.2	12.5	52.384	F
	2 - Grovehurst Road	250	62	1189	768	0.325	250	439	0.5	0.5	6.943	A
	3 - A249 onslip (NB)			926				513				
	4 - B2005 - link	725	181	0	1719	0.422	725	926	0.7	0.7	3.623	A
2 - South	1 - A249 onslip (SB)			841				717				
	2 - B2005 - link	931	233	117	1832	0.508	931	724	1.0	1.0	3.994	A
	3 - A249 offslip (SB)	488	122	1048	933	0.523	488	0	1.0	1.1	8.078	A
	4 - Swale Way	1408	352	670	1020	1.381	1020	865	120.6	217.8	588.082	F
	5 - Grovehurst Road	588	147	970	804	0.732	588	720	2.6	2.6	16.621	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	682	990	0.752	781	0	12.5	3.2	19.834	C
	2 - Grovehurst Road	204	51	1065	873	0.234	205	398	0.5	0.3	5.394	A
	3 - A249 onslip (NB)			792				478				
	4 - B2005 - link	681	170	0	1719	0.396	682	792	0.7	0.7	3.471	A
	1 - A249 onslip (SB)			776				726				

2 - South	2 - B2005 - link	797	199	96	1844	0.432	798	680	1.0	0.8	3.445	A
	3 - A249 offslip (SB)	398	100	894	1072	0.372	400	0	1.1	0.6	5.375	A
	4 - Swale Way	1150	287	565	1089	1.056	1089	730	217.8	233.1	732.247	F
	5 - Grovehurst Road	480	120	1018	765	0.628	484	635	2.6	1.7	12.963	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	623	156	651	1013	0.616	630	0	3.2	1.6	9.551	A
	2 - Grovehurst Road	171	43	926	992	0.172	171	354	0.3	0.2	4.391	A
	3 - A249 onslip (NB)			644				454				
	4 - B2005 - link	651	163	0	1719	0.379	651	644	0.7	0.6	3.374	A
2 - South	1 - A249 onslip (SB)			730				735				
	2 - B2005 - link	647	162	80	1853	0.349	648	649	0.8	0.5	2.991	A
	3 - A249 offslip (SB)	334	83	729	1223	0.273	334	0	0.6	0.4	4.056	A
	4 - Swale Way	963	241	464	1155	0.834	1150	599	233.1	186.2	656.726	F
	5 - Grovehurst Road	402	101	1061	731	0.550	404	553	1.7	1.3	11.081	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.37	0.54	1.28	1.81	1.97			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.41	0.03	0.31	5.60	21.27			N/A	N/A
	5 - Grovehurst Road	0.84	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.77	0.06	1.02	7.38	11.18			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.64	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.70	0.10	0.84	1.38	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.56	0.07	0.70	1.34	1.42			N/A	N/A
	4 - Swale Way	24.67	0.67	14.86	59.72	80.00			N/A	N/A
	5 - Grovehurst Road	1.55	0.09	1.15	3.10	4.20			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	10.16	0.10	3.04	28.26	41.97			N/A	N/A
	2 - Grovehurst Road	0.46	0.03	0.25	0.46	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.25	0.72	0.72			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.99	0.03	0.26	0.99	0.99			N/A	N/A
	3 - A249 offslip (SB)	1.04	0.03	0.26	1.04	1.04			N/A	N/A
	4 - Swale Way	120.62	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.59	0.03	0.31	3.17	12.37			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	12.49	0.07	1.35	36.69	60.37			N/A	N/A
	2 - Grovehurst Road	0.48	0.03	0.32	1.44	1.92			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.73	0.03	0.27	0.73	1.02			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.03	0.27	1.03	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.08	0.03	0.28	1.08	3.73			N/A	N/A
	4 - Swale Way	217.77	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.65	0.03	0.28	2.65	6.79			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.24	0.04	0.41	8.85	16.50			N/A	N/A
	2 - Grovehurst Road	0.31	0.00	0.00	0.31	0.31			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.66	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.77	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.60	0.10	0.83	1.37	1.43			N/A	N/A
	4 - Swale Way	233.06	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.74	0.05	0.69	4.43	6.69			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.64	0.03	0.31	2.59	8.29			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.38	0.03	0.30	0.90	1.20			N/A	N/A
	4 - Swale Way	186.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.25	0.05	0.46	3.09	4.87			N/A	N/A

2031 + WKN Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	18.72	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	68.98	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D25	2031 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	871	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	699	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	829
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	918	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	396	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	19
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	17	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	40	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.88	26.49	6.7	35.7	D	799	1199
	2 - Grovehurst Road	0.71	18.37	2.4	10.1	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.75	7.68	2.9	5.7	A	1143	1714
	3 - A249 offslip (SB)	1.26	332.36	64.5	104.3	F	523	785
	4 - Swale Way	0.79	17.16	3.5	17.6	C	641	962
	5 - Grovehurst Road	0.82	23.13	4.1	20.6	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	656	164	355	1211	0.542	651	0	0.0	1.2	6.382	A
	2 - Grovehurst Road	331	83	865	1005	0.330	329	142	0.0	0.5	5.311	A
	3 - A249 onslip (NB)			930				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	930	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				556				
	2 - B2005 - link	932	233	129	1872	0.498	928	357	0.0	1.0	3.797	A
	3 - A249 offslip (SB)	429	107	1057	937	0.458	426	0	0.0	0.8	6.994	A
	4 - Swale Way	526	132	386	1058	0.497	522	1096	0.0	1.0	6.669	A
	5 - Grovehurst Road	460	115	584	1059	0.434	457	324	0.0	0.8	5.951	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	783	196	426	1157	0.677	780	0	1.2	2.0	9.443	A
	2 - Grovehurst Road	396	99	1036	867	0.456	394	170	0.5	0.8	7.596	A
	3 - A249 onslip (NB)			1114				316				
	4 - B2005 - link	427	107	0	1664	0.256	426	1114	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				666				
	2 - B2005 - link	1116	279	154	1857	0.601	1114	427	1.0	1.5	4.832	A
	3 - A249 offslip (SB)	512	128	1268	752	0.681	508	0	0.8	2.0	14.445	B
	4 - Swale Way	628	157	462	1014	0.620	626	1313	1.0	1.6	9.219	A
	5 - Grovehurst Road	549	137	700	959	0.573	547	388	0.8	1.3	8.691	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	959	240	514	1091	0.879	943	0	2.0	6.0	22.240	C
	2 - Grovehurst Road	484	121	1252	692	0.700	479	205	0.8	2.2	16.503	C
	3 - A249 onslip (NB)			1349				382				
	4 - B2005 - link	515	129	0	1664	0.309	514	1349	0.3	0.4	3.132	A
2 - South	1 - A249 onslip (SB)			702				809				
	2 - B2005 - link	1352	338	187	1837	0.736	1347	515	1.5	2.7	7.265	A
	3 - A249 offslip (SB)	628	157	1533	519	1.208	508	0	2.0	31.9	138.519	F
	4 - Swale Way	770	192	523	978	0.787	762	1518	1.6	3.4	16.128	C
	5 - Grovehurst Road	673	168	848	831	0.809	663	438	1.3	3.8	20.286	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	959	240	520	1087	0.882	956	0	6.0	6.7	26.492	D
	2 - Grovehurst Road	484	121	1269	678	0.714	484	207	2.2	2.4	18.370	C
	3 - A249 onslip (NB)			1367				386				
	4 - B2005 - link	520	130	0	1664	0.312	520	1367	0.4	0.5	3.146	A
2 - South	1 - A249 onslip (SB)			709				818				
	2 - B2005 - link	1369	342	189	1836	0.746	1368	520	2.7	2.9	7.684	A
	3 - A249 offslip (SB)	628	157	1557	498	1.260	497	0	31.9	64.5	332.358	F
	4 - Swale Way	770	192	525	977	0.787	769	1529	3.4	3.5	17.164	C
	5 - Grovehurst Road	673	168	856	824	0.816	671	438	3.8	4.1	23.131	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	783	196	441	1146	0.683	801	0	6.7	2.2	10.918	B
	2 - Grovehurst Road	396	99	1066	842	0.470	401	175	2.4	0.9	8.272	A
	3 - A249 onslip (NB)			1141				327				
	4 - B2005 - link	441	110	0	1664	0.265	441	1141	0.5	0.4	2.944	A
	1 - A249 onslip (SB)			599				680				

2 - South	2 - B2005 - link	1143	286	158	1855	0.616	1148	441	2.9	1.6	5.128	A
	3 - A249 offslip (SB)	512	128	1306	719	0.713	708	0	64.5	15.6	208.263	F
	4 - Swale Way	628	157	539	969	0.649	635	1474	3.5	1.9	10.979	B
	5 - Grovehurst Road	549	137	719	944	0.582	560	455	4.1	1.4	9.622	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	656	164	363	1205	0.544	660	0	2.2	1.2	6.656	A
	2 - Grovehurst Road	331	83	878	994	0.333	333	144	0.9	0.5	5.454	A
	3 - A249 onslip (NB)			942				269				
	4 - B2005 - link	363	91	0	1664	0.218	363	942	0.4	0.3	2.770	A
2 - South	1 - A249 onslip (SB)			493				564				
	2 - B2005 - link	944	236	130	1871	0.504	946	363	1.6	1.0	3.901	A
	3 - A249 offslip (SB)	429	107	1076	920	0.466	488	0	15.6	0.9	9.541	A
	4 - Swale Way	526	132	412	1043	0.504	530	1152	1.9	1.0	7.059	A
	5 - Grovehurst Road	460	115	595	1050	0.438	463	347	1.4	0.8	6.153	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.16	0.56	1.01	1.16	1.51			N/A	N/A
	2 - Grovehurst Road	0.49	0.00	0.00	0.49	0.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.98	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.83	0.05	0.49	1.70	2.43			N/A	N/A
	4 - Swale Way	0.97	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.76	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.03	0.05	0.64	5.35	8.29			N/A	N/A
	2 - Grovehurst Road	0.83	0.06	0.72	1.41	1.84			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.49	0.05	0.54	3.71	5.65			N/A	N/A
	3 - A249 offslip (SB)	2.04	0.04	0.39	5.41	10.14			N/A	N/A
	4 - Swale Way	1.59	0.06	0.89	3.73	5.37			N/A	N/A
	5 - Grovehurst Road	1.31	0.05	0.66	3.02	4.53			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.02	0.04	0.43	16.63	31.90			N/A	N/A
	2 - Grovehurst Road	2.20	0.03	0.30	2.20	9.78			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.70	0.03	0.28	2.70	5.67			N/A	N/A
	3 - A249 offslip (SB)	31.90	11.89	29.26	50.76	58.30			N/A	N/A
	4 - Swale Way	3.41	0.03	0.32	5.70	17.65			N/A	N/A
	5 - Grovehurst Road	3.80	0.04	0.35	8.60	20.58			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	6.65	0.03	0.34	12.76	35.74			N/A	N/A
	2 - Grovehurst Road	2.39	0.03	0.29	2.39	10.10			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.86	0.03	0.27	2.86	2.86			N/A	N/A
	3 - A249 offslip (SB)	64.50	32.31	61.47	93.57	104.30			N/A	N/A
	4 - Swale Way	3.55	0.03	0.29	3.55	12.21			N/A	N/A
	5 - Grovehurst Road	4.12	0.03	0.31	4.99	19.67			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.23	0.04	0.43	6.09	10.53			N/A	N/A
	2 - Grovehurst Road	0.90	0.06	0.65	1.75	2.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.63	0.09	1.20	3.32	4.47			N/A	N/A
	3 - A249 offslip (SB)	15.64	2.64	12.88	29.20	35.43			N/A	N/A
	4 - Swale Way	1.90	0.06	0.85	4.79	7.12			N/A	N/A
	5 - Grovehurst Road	1.42	0.05	0.46	3.66	5.80			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.21	0.03	0.32	2.37	6.21			N/A	N/A
	2 - Grovehurst Road	0.50	0.03	0.35	1.47	1.77			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.05	0.48	2.33	3.48			N/A	N/A
	3 - A249 offslip (SB)	0.89	0.03	0.26	0.89	0.89			N/A	N/A
	4 - Swale Way	1.03	0.04	0.36	2.57	4.80			N/A	N/A
	5 - Grovehurst Road	0.79	0.03	0.32	1.72	3.80			N/A	N/A

2031 + WKN Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	29.92	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	330.33	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D26	2031 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	836	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	444	100.000
	4 - Swale Way		ONE HOUR	✓	1297	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	656
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	522	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	488	322
		3 - A249 offslip (SB)	1	27	0	200	216
		4 - Swale Way	706	432	0	0	159
	5 - Grovehurst Road	110	318	0	106	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	1	0	22
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	29	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	19	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.96	55.28	13.4	62.5	F	767	1151
	2 - Grovehurst Road	0.33	7.00	0.5	1.9	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.61	0.7	1.5	A	668	1002
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.51	4.05	1.0	1.5	A	785	1177
	3 - A249 offslip (SB)	0.53	8.24	1.1	3.8	A	407	611
	4 - Swale Way	1.40	778.45	249.8	249.8	F	1190	1785
	5 - Grovehurst Road	0.74	16.80	2.7	12.6	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	629	157	576	1067	0.590	624	0	0.0	1.4	8.017	A
	2 - Grovehurst Road	171	43	873	1032	0.166	170	327	0.0	0.2	4.174	A
	3 - A249 onslip (NB)			639				404				
	4 - B2005 - link	578	144	0	1719	0.336	576	639	0.0	0.5	3.144	A
2 - South	1 - A249 onslip (SB)			656				635				
	2 - B2005 - link	639	160	79	1843	0.347	637	577	0.0	0.5	2.979	A
	3 - A249 offslip (SB)	334	84	716	1230	0.272	333	0	0.0	0.4	4.005	A
	4 - Swale Way	976	244	455	1160	0.842	958	594	0.0	4.7	16.526	C
	5 - Grovehurst Road	402	101	893	863	0.466	399	520	0.0	0.9	7.696	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	752	188	667	1001	0.751	746	0	1.4	2.8	13.815	B
	2 - Grovehurst Road	204	51	1029	903	0.226	204	383	0.2	0.3	5.145	A
	3 - A249 onslip (NB)			765				468				
	4 - B2005 - link	667	167	0	1719	0.388	667	765	0.5	0.6	3.420	A
2 - South	1 - A249 onslip (SB)			761				721				
	2 - B2005 - link	765	191	95	1834	0.417	764	666	0.5	0.7	3.362	A
	3 - A249 offslip (SB)	399	100	859	1100	0.363	398	0	0.4	0.6	5.123	A
	4 - Swale Way	1166	291	545	1101	1.059	1074	712	4.7	27.8	67.710	F
	5 - Grovehurst Road	480	120	1005	775	0.620	477	614	0.9	1.6	11.983	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	920	230	720	962	0.957	889	0	2.8	10.7	38.617	E
	2 - Grovehurst Road	250	62	1177	779	0.321	249	432	0.3	0.5	6.791	A
	3 - A249 onslip (NB)			917				509				
	4 - B2005 - link	720	180	0	1719	0.419	720	917	0.6	0.7	3.603	A
2 - South	1 - A249 onslip (SB)			835				725				
	2 - B2005 - link	916	229	116	1822	0.503	915	719	0.7	1.0	3.966	A
	3 - A249 offslip (SB)	489	122	1031	943	0.518	487	0	0.6	1.1	7.854	A
	4 - Swale Way	1428	357	659	1026	1.391	1025	859	27.8	128.5	283.218	F
	5 - Grovehurst Road	588	147	976	799	0.736	584	708	1.6	2.6	16.426	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	920	230	721	961	0.958	910	0	10.7	13.4	55.278	F
	2 - Grovehurst Road	250	62	1194	764	0.327	250	437	0.5	0.5	7.004	A
	3 - A249 onslip (NB)			934				510				
	4 - B2005 - link	721	180	0	1719	0.419	721	934	0.7	0.7	3.606	A
2 - South	1 - A249 onslip (SB)			836				724				
	2 - B2005 - link	934	233	117	1821	0.513	934	720	1.0	1.0	4.054	A
	3 - A249 offslip (SB)	489	122	1050	925	0.528	489	0	1.1	1.1	8.237	A
	4 - Swale Way	1428	357	667	1021	1.399	1020	872	128.5	230.4	622.227	F
	5 - Grovehurst Road	588	147	972	801	0.734	588	716	2.6	2.7	16.801	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	752	188	677	994	0.756	792	0	13.4	3.3	20.806	C
	2 - Grovehurst Road	204	51	1072	867	0.235	205	397	0.5	0.3	5.442	A
	3 - A249 onslip (NB)			802				475				
	4 - B2005 - link	676	169	0	1719	0.393	677	802	0.7	0.7	3.456	A
	1 - A249 onslip (SB)			771				733				

2 - South	2 - B2005 - link	803	201	96	1833	0.438	804	675	1.0	0.8	3.499	A
	3 - A249 offslip (SB)	399	100	900	1062	0.376	401	0	1.1	0.6	5.460	A
	4 - Swale Way	1166	291	564	1089	1.071	1088	737	230.4	249.8	778.446	F
	5 - Grovehurst Road	480	120	1020	763	0.629	484	632	2.7	1.8	13.055	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	629	157	646	1016	0.619	636	0	3.3	1.7	9.629	A
	2 - Grovehurst Road	171	43	929	989	0.173	171	353	0.3	0.2	4.405	A
	3 - A249 onslip (NB)			650				450				
	4 - B2005 - link	645	161	0	1719	0.376	646	650	0.7	0.6	3.357	A
2 - South	1 - A249 onslip (SB)			724				742				
	2 - B2005 - link	650	163	80	1843	0.353	651	644	0.8	0.5	3.025	A
	3 - A249 offslip (SB)	334	84	731	1216	0.275	335	0	0.6	0.4	4.088	A
	4 - Swale Way	976	244	462	1155	0.845	1150	604	249.8	206.3	714.080	F
	5 - Grovehurst Road	402	101	1063	729	0.552	404	550	1.8	1.3	11.160	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.41	0.54	1.30	1.85	2.02			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.74	0.03	0.30	4.74	21.09			N/A	N/A
	5 - Grovehurst Road	0.86	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.85	0.06	1.04	7.61	11.52			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.71	0.10	0.84	1.38	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.56	0.07	0.71	1.34	1.42			N/A	N/A
	4 - Swale Way	27.80	0.78	16.91	67.13	89.75			N/A	N/A
	5 - Grovehurst Road	1.58	0.09	1.16	3.18	4.30			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	10.72	0.12	3.65	29.41	43.04			N/A	N/A
	2 - Grovehurst Road	0.47	0.03	0.25	0.47	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.25	0.72	0.72			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.03	0.26	1.00	1.00			N/A	N/A
	3 - A249 offslip (SB)	1.06	0.03	0.26	1.06	1.06			N/A	N/A
	4 - Swale Way	128.45	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.62	0.03	0.31	3.31	12.60			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	13.37	0.08	2.00	39.09	62.53			N/A	N/A
	2 - Grovehurst Road	0.48	0.03	0.32	1.45	1.95			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.27	0.72	1.08			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.04	0.03	0.27	1.04	1.40			N/A	N/A
	3 - A249 offslip (SB)	1.10	0.03	0.28	1.10	3.76			N/A	N/A
	4 - Swale Way	230.35	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.68	0.03	0.28	2.68	6.96			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.33	0.04	0.41	9.08	17.01			N/A	N/A
	2 - Grovehurst Road	0.31	0.00	0.00	0.31	0.31			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.65	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.78	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.61	0.10	0.83	1.37	1.43			N/A	N/A
	4 - Swale Way	249.78	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.76	0.05	0.65	4.50	6.84			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.67	0.03	0.31	2.54	8.36			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.55	0.08	0.76	1.35	1.43			N/A	N/A
	3 - A249 offslip (SB)	0.38	0.03	0.31	0.96	1.23			N/A	N/A
	4 - Swale Way	206.30	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.26	0.05	0.45	3.14	4.97			N/A	N/A

2031 + K3 and WKN Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	19.08	C
2	South	Standard Roundabout	1, 2, 3, 4, 5	70.37	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	874	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	702	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	832
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	147	327	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	141	0	0	921	183
		3 - A249 offslip (SB)	1	18	0	377	174
		4 - Swale Way	399	226	0	0	77
		5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	7	0	19
		2 - Grovehurst Road	0	0	8	3
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	17	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	41	10	0	0	9
		5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.89	27.05	6.8	36.8	D	802	1203
	2 - Grovehurst Road	0.72	18.61	2.4	10.3	C	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.15	0.5	1.9	A	437	655
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.75	7.74	2.9	5.8	A	1145	1718
	3 - A249 offslip (SB)	1.27	339.52	65.8	105.6	F	523	785
	4 - Swale Way	0.79	17.79	3.7	18.6	C	644	966
	5 - Grovehurst Road	0.82	24.03	4.3	21.2	C	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	658	164	355	1211	0.543	653	0	0.0	1.2	6.405	A
	2 - Grovehurst Road	331	83	867	1003	0.330	329	142	0.0	0.5	5.325	A
	3 - A249 onslip (NB)			932				264				
	4 - B2005 - link	356	89	0	1664	0.214	355	932	0.0	0.3	2.748	A
2 - South	1 - A249 onslip (SB)			485				558				
	2 - B2005 - link	934	234	129	1872	0.499	930	357	0.0	1.0	3.806	A
	3 - A249 offslip (SB)	429	107	1059	935	0.459	426	0	0.0	0.8	7.022	A
	4 - Swale Way	529	132	386	1053	0.502	525	1098	0.0	1.0	6.761	A
	5 - Grovehurst Road	460	115	587	1055	0.436	457	324	0.0	0.8	5.993	A

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	426	1157	0.679	782	0	1.2	2.0	9.508	A
	2 - Grovehurst Road	396	99	1039	865	0.458	394	170	0.5	0.8	7.632	A
	3 - A249 onslip (NB)			1116				316				
	4 - B2005 - link	426	107	0	1664	0.256	426	1116	0.3	0.3	2.909	A
2 - South	1 - A249 onslip (SB)			581				669				
	2 - B2005 - link	1118	280	154	1857	0.602	1116	427	1.0	1.5	4.848	A
	3 - A249 offslip (SB)	512	128	1270	750	0.683	508	0	0.8	2.1	14.578	B
	4 - Swale Way	631	158	462	1009	0.625	629	1316	1.0	1.6	9.399	A
	5 - Grovehurst Road	549	137	703	954	0.576	547	388	0.8	1.3	8.796	A

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	514	1091	0.882	946	0	2.0	6.1	22.577	C
	2 - Grovehurst Road	484	121	1255	690	0.703	479	205	0.8	2.2	16.666	C
	3 - A249 onslip (NB)			1352				382				
	4 - B2005 - link	514	129	0	1664	0.309	514	1352	0.3	0.4	3.131	A
2 - South	1 - A249 onslip (SB)			701				812				
	2 - B2005 - link	1354	339	186	1837	0.737	1350	515	1.5	2.7	7.306	A
	3 - A249 offslip (SB)	628	157	1536	517	1.214	506	0	2.1	32.5	141.159	F
	4 - Swale Way	773	193	523	974	0.793	765	1519	1.6	3.5	16.645	C
	5 - Grovehurst Road	673	168	851	825	0.815	662	437	1.3	3.9	20.894	C

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	520	1087	0.885	960	0	6.1	6.8	27.054	D
	2 - Grovehurst Road	484	121	1272	676	0.717	484	207	2.2	2.4	18.606	C
	3 - A249 onslip (NB)			1370				386				
	4 - B2005 - link	520	130	0	1664	0.312	520	1370	0.4	0.5	3.146	A
2 - South	1 - A249 onslip (SB)			709				822				
	2 - B2005 - link	1372	343	189	1836	0.748	1372	520	2.7	2.9	7.738	A
	3 - A249 offslip (SB)	628	157	1561	495	1.267	494	0	32.5	65.8	339.516	F
	4 - Swale Way	773	193	524	973	0.794	772	1531	3.5	3.7	17.787	C
	5 - Grovehurst Road	673	168	859	818	0.822	671	437	3.9	4.3	24.030	C

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	441	1146	0.686	804	0	6.8	2.3	11.046	B
	2 - Grovehurst Road	396	99	1070	840	0.471	402	175	2.4	0.9	8.327	A
	3 - A249 onslip (NB)			1144				327				
	4 - B2005 - link	441	110	0	1664	0.265	441	1144	0.5	0.4	2.945	A
	1 - A249 onslip (SB)			599				683				

2 - South	2 - B2005 - link	1147	287	158	1855	0.618	1152	441	2.9	1.6	5.155	A
	3 - A249 offslip (SB)	512	128	1309	716	0.716	705	0	65.8	17.7	216.862	F
	4 - Swale Way	631	158	538	965	0.654	638	1476	3.7	2.0	11.240	B
	5 - Grovehurst Road	549	137	722	939	0.585	561	454	4.3	1.4	9.788	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	658	164	363	1205	0.546	662	0	2.3	1.2	6.686	A
	2 - Grovehurst Road	331	83	881	992	0.334	333	144	0.9	0.5	5.474	A
	3 - A249 onslip (NB)			944				270				
	4 - B2005 - link	363	91	0	1664	0.218	363	944	0.4	0.3	2.768	A
2 - South	1 - A249 onslip (SB)			494				567				
	2 - B2005 - link	946	237	130	1871	0.506	949	363	1.6	1.0	3.912	A
	3 - A249 offslip (SB)	429	107	1079	918	0.468	496	0	17.7	0.9	10.002	B
	4 - Swale Way	529	132	415	1036	0.510	532	1160	2.0	1.1	7.185	A
	5 - Grovehurst Road	460	115	598	1045	0.440	463	349	1.4	0.8	6.203	A

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.17	0.56	1.06	1.17	1.56			N/A	N/A
	2 - Grovehurst Road	0.49	0.00	0.00	0.49	0.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.99	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.84	0.05	0.49	1.73	2.50			N/A	N/A
	4 - Swale Way	0.99	0.55	1.00	1.40	1.45			N/A	N/A
	5 - Grovehurst Road	0.76	0.55	1.00	1.40	1.45			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.05	0.05	0.64	5.42	8.41			N/A	N/A
	2 - Grovehurst Road	0.83	0.06	0.72	1.43	1.86			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.49	0.05	0.54	3.74	5.71			N/A	N/A
	3 - A249 offslip (SB)	2.06	0.04	0.39	5.46	10.26			N/A	N/A
	4 - Swale Way	1.63	0.06	0.89	3.83	5.56			N/A	N/A
	5 - Grovehurst Road	1.33	0.05	0.65	3.10	4.63			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.14	0.04	0.44	17.07	32.35			N/A	N/A
	2 - Grovehurst Road	2.22	0.03	0.30	2.22	9.98			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.72	0.03	0.28	2.72	5.84			N/A	N/A
	3 - A249 offslip (SB)	32.47	12.32	29.85	51.41	58.96			N/A	N/A
	4 - Swale Way	3.53	0.03	0.33	6.34	18.60			N/A	N/A
	5 - Grovehurst Road	3.92	0.04	0.36	9.17	21.20			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	6.81	0.03	0.35	13.53	36.84			N/A	N/A
	2 - Grovehurst Road	2.42	0.03	0.29	2.42	10.32			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.03	0.31	1.38	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.89	0.03	0.27	2.89	2.89			N/A	N/A
	3 - A249 offslip (SB)	65.77	33.45	62.79	94.89	105.62			N/A	N/A
	4 - Swale Way	3.69	0.03	0.29	3.69	13.36			N/A	N/A
	5 - Grovehurst Road	4.27	0.03	0.31	5.66	20.82			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.26	0.04	0.43	6.17	10.69			N/A	N/A
	2 - Grovehurst Road	0.91	0.06	0.64	1.77	2.47			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.64	0.09	1.20	3.37	4.54			N/A	N/A
	3 - A249 offslip (SB)	17.65	3.94	15.07	31.43	37.50			N/A	N/A
	4 - Swale Way	1.95	0.06	0.82	4.96	7.48			N/A	N/A
	5 - Grovehurst Road	1.44	0.05	0.45	3.73	5.94			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.22	0.03	0.32	2.36	6.27			N/A	N/A
	2 - Grovehurst Road	0.51	0.03	0.35	1.47	1.79			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.05	0.48	2.36	3.54			N/A	N/A
	3 - A249 offslip (SB)	0.89	0.03	0.26	0.89	0.89			N/A	N/A
	4 - Swale Way	1.06	0.04	0.36	2.62	4.95			N/A	N/A
	5 - Grovehurst Road	0.80	0.03	0.32	1.70	3.85			N/A	N/A

2031 + K3 and WKN Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	32.18	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	341.81	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	838	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	444	100.000
	4 - Swale Way		ONE HOUR	✓	1300	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From	1 - A249 offslip (NB)	0	180	0	658
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	262	523	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	42	0	0	490	322
		3 - A249 offslip (SB)	1	27	0	200	216
		4 - Swale Way	708	433	0	0	159
		5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From	1 - A249 offslip (NB)	0	1	0	23
		2 - Grovehurst Road	0	0	0	1
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	2	0	0	30	1
		3 - A249 offslip (SB)	0	11	0	8	4
		4 - Swale Way	20	3	0	0	3
		5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.97	59.50	14.5	64.9	F	769	1153
	2 - Grovehurst Road	0.33	7.06	0.5	2.0	A	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.42	3.58	0.7	1.4	A	671	1006
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.52	4.11	1.1	1.5	A	787	1181
	3 - A249 offslip (SB)	0.53	8.36	1.1	3.8	A	407	611
	4 - Swale Way	1.41	804.56	257.9	257.9	F	1193	1789
	5 - Grovehurst Road	0.74	16.85	2.7	12.7	C	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	580	1060	0.595	625	0	0.0	1.4	8.178	A
	2 - Grovehurst Road	171	43	877	1028	0.166	170	328	0.0	0.2	4.194	A
	3 - A249 onslip (NB)			641				407				
	4 - B2005 - link	582	145	0	1730	0.336	580	641	0.0	0.5	3.125	A
2 - South	1 - A249 onslip (SB)			656				637				
	2 - B2005 - link	642	160	79	1834	0.350	639	577	0.0	0.5	3.009	A
	3 - A249 offslip (SB)	334	84	719	1225	0.273	333	0	0.0	0.4	4.028	A
	4 - Swale Way	979	245	455	1154	0.848	959	596	0.0	4.9	17.071	C
	5 - Grovehurst Road	402	101	894	858	0.469	399	520	0.0	0.9	7.779	A

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	670	995	0.757	747	0	1.4	2.9	14.214	B
	2 - Grovehurst Road	204	51	1033	899	0.227	204	384	0.2	0.3	5.176	A
	3 - A249 onslip (NB)			766				471				
	4 - B2005 - link	671	168	0	1730	0.388	670	766	0.5	0.6	3.394	A
2 - South	1 - A249 onslip (SB)			760				720				
	2 - B2005 - link	767	192	95	1825	0.421	767	665	0.5	0.7	3.400	A
	3 - A249 offslip (SB)	399	100	861	1094	0.365	398	0	0.4	0.6	5.168	A
	4 - Swale Way	1169	292	546	1095	1.067	1070	714	4.9	29.5	71.101	F
	5 - Grovehurst Road	480	120	1002	773	0.621	477	614	0.9	1.6	12.065	B

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	723	957	0.965	889	0	2.9	11.4	40.584	E
	2 - Grovehurst Road	250	62	1179	775	0.322	249	432	0.3	0.5	6.835	A
	3 - A249 onslip (NB)			917				511				
	4 - B2005 - link	723	181	0	1730	0.418	723	917	0.6	0.7	3.574	A
2 - South	1 - A249 onslip (SB)			833				722				
	2 - B2005 - link	918	229	116	1812	0.506	917	717	0.7	1.0	4.014	A
	3 - A249 offslip (SB)	489	122	1033	937	0.521	487	0	0.6	1.1	7.953	A
	4 - Swale Way	1431	358	658	1021	1.401	1021	861	29.5	132.2	293.937	F
	5 - Grovehurst Road	588	147	972	798	0.737	584	707	1.6	2.6	16.488	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	724	956	0.965	910	0	11.4	14.5	59.498	F
	2 - Grovehurst Road	250	62	1197	760	0.329	250	437	0.5	0.5	7.060	A
	3 - A249 onslip (NB)			935				512				
	4 - B2005 - link	724	181	0	1730	0.418	724	935	0.7	0.7	3.577	A
2 - South	1 - A249 onslip (SB)			835				721				
	2 - B2005 - link	936	234	117	1812	0.517	936	718	1.0	1.1	4.107	A
	3 - A249 offslip (SB)	489	122	1052	919	0.532	489	0	1.1	1.1	8.356	A
	4 - Swale Way	1431	358	667	1016	1.409	1015	874	132.2	236.1	641.497	F
	5 - Grovehurst Road	588	147	968	801	0.734	588	715	2.6	2.7	16.854	C

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	679	988	0.762	798	0	14.5	3.5	22.452	C
	2 - Grovehurst Road	204	51	1078	860	0.237	205	398	0.5	0.3	5.500	A
	3 - A249 onslip (NB)			807				477				
	4 - B2005 - link	678	170	0	1730	0.392	679	807	0.7	0.6	3.424	A
	1 - A249 onslip (SB)			769				730				

2 - South	2 - B2005 - link	809	202	96	1824	0.444	810	673	1.1	0.8	3.557	A
	3 - A249 offslip (SB)	399	100	906	1052	0.379	401	0	1.1	0.6	5.543	A
	4 - Swale Way	1169	292	566	1082	1.080	1082	742	236.1	257.9	804.559	F
	5 - Grovehurst Road	480	120	1015	763	0.629	484	633	2.7	1.8	13.058	B

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	648	1011	0.624	638	0	3.5	1.7	9.828	A
	2 - Grovehurst Road	171	43	933	985	0.173	171	353	0.3	0.2	4.425	A
	3 - A249 onslip (NB)			652				452				
	4 - B2005 - link	648	162	0	1730	0.374	648	652	0.6	0.6	3.326	A
2 - South	1 - A249 onslip (SB)			722				739				
	2 - B2005 - link	653	163	80	1833	0.356	654	642	0.8	0.6	3.056	A
	3 - A249 offslip (SB)	334	84	734	1211	0.276	335	0	0.6	0.4	4.115	A
	4 - Swale Way	979	245	463	1149	0.852	1145	606	257.9	216.4	746.281	F
	5 - Grovehurst Road	402	101	1058	728	0.552	404	550	1.8	1.3	11.179	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.44	0.53	1.33	1.90	2.26			N/A	N/A
	2 - Grovehurst Road	0.20	0.00	0.00	0.20	0.20			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	4 - Swale Way	4.92	0.03	0.30	4.92	20.76			N/A	N/A
	5 - Grovehurst Road	0.87	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.94	0.06	1.08	7.84	11.86			N/A	N/A
	2 - Grovehurst Road	0.29	0.00	0.00	0.29	0.29			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.63	0.21	0.93	1.39	1.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.72	0.10	0.84	1.39	1.46			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.07	0.72	1.34	1.42			N/A	N/A
	4 - Swale Way	29.49	0.82	17.95	71.29	95.34			N/A	N/A
	5 - Grovehurst Road	1.59	0.09	1.17	3.21	4.34			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	11.40	0.14	4.45	30.67	44.10			N/A	N/A
	2 - Grovehurst Road	0.47	0.03	0.25	0.47	0.48			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.71	0.03	0.25	0.71	0.71			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.02	0.03	0.26	1.02	1.02			N/A	N/A
	3 - A249 offslip (SB)	1.07	0.03	0.26	1.07	1.07			N/A	N/A
	4 - Swale Way	132.15	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.63	0.03	0.31	3.36	12.68			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker

1 - North	1 - A249 offslip (NB)	14.51	0.09	3.09	41.90	64.87			N/A	N/A
	2 - Grovehurst Road	0.49	0.03	0.32	1.45	1.97			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.72	0.03	0.27	0.72	1.09			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.03	0.27	1.06	1.36			N/A	N/A
	3 - A249 offslip (SB)	1.12	0.03	0.28	1.12	3.80			N/A	N/A
	4 - Swale Way	236.12	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.69	0.03	0.28	2.69	7.00			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.45	0.04	0.41	9.42	17.69			N/A	N/A
	2 - Grovehurst Road	0.31	0.00	0.00	0.31	0.31			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.65	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.80	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.62	0.10	0.84	1.37	1.43			N/A	N/A
	4 - Swale Way	257.86	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.76	0.05	0.63	4.51	6.88			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.71	0.03	0.31	2.49	8.47			N/A	N/A
	2 - Grovehurst Road	0.21	0.00	0.00	0.21	0.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.56	0.08	0.78	1.36	1.43			N/A	N/A
	3 - A249 offslip (SB)	0.38	0.03	0.31	0.99	1.25			N/A	N/A
	4 - Swale Way	216.41	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.26	0.05	0.45	3.16	5.00			N/A	N/A

2031 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	234.18	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	479.85	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1110	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	620	100.000
	4 - Swale Way		ONE HOUR	✓	769	100.000

5 - Grovehurst Road	ONE HOUR	✓	775	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	123	0	987
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	159	403	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	419	0	0	1034	231
		3 - A249 offslip (SB)	1	22	0	381	216
		4 - Swale Way	462	229	0	0	78
	5 - Grovehurst Road	289	313	0	173	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	16
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	36	10	0	0	9
	5 - Grovehurst Road	0	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.08	150.73	55.7	115.9	F	1019	1528
	2 - Grovehurst Road	1.30	548.09	104.6	158.1	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.31	3.10	0.4	1.9	A	491	736
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.84	11.53	5.0	23.7	B	1510	2265
	3 - A249 offslip (SB)	1.83	2188.77	246.6	187.3	F	569	853
	4 - Swale Way	0.99	79.58	18.3	68.8	F	706	1058
	5 - Grovehurst Road	1.38	616.18	124.9	181.2	F	711	1067

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	836	209	416	1208	0.692	827	0	0.0	2.2	9.258	A
	2 - Grovehurst Road	555	139	1033	897	0.619	549	209	0.0	1.6	10.167	B
	3 - A249 onslip (NB)			1256				326				
	4 - B2005 - link	417	104	0	1674	0.249	416	1256	0.0	0.3	2.859	A
2 - South	1 - A249 onslip (SB)			548				869				
	2 - B2005 - link	1252	313	129	1922	0.651	1245	419	0.0	1.8	5.257	A
	3 - A249 offslip (SB)	467	117	1373	689	0.677	459	0	0.0	2.0	15.141	C
	4 - Swale Way	579	145	657	916	0.632	572	1175	0.0	1.7	10.293	B
	5 - Grovehurst Road	583	146	841	884	0.660	576	389	0.0	1.9	11.431	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	489	1151	0.867	984	0	2.2	5.6	20.081	C
	2 - Grovehurst Road	663	166	1226	743	0.892	644	247	1.6	6.1	32.040	D
	3 - A249 onslip (NB)			1486				384				
	4 - B2005 - link	489	122	0	1674	0.292	489	1486	0.3	0.4	3.038	A
2 - South	1 - A249 onslip (SB)			642				1030				
	2 - B2005 - link	1483	371	150	1909	0.777	1477	492	1.8	3.3	8.214	A
	3 - A249 offslip (SB)	557	139	1627	470	1.185	458	0	2.0	26.8	137.237	F
	4 - Swale Way	691	173	746	864	0.800	683	1338	1.7	3.6	19.126	C
	5 - Grovehurst Road	697	174	999	754	0.925	673	431	1.9	7.7	37.333	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1222	306	509	1135	1.076	1114	0	5.6	32.7	74.428	F
	2 - Grovehurst Road	811	203	1355	637	1.273	632	267	6.1	51.0	178.442	F
	3 - A249 onslip (NB)			1590				398				
	4 - B2005 - link	509	127	0	1674	0.304	509	1590	0.4	0.4	3.091	A
2 - South	1 - A249 onslip (SB)			651				1117				
	2 - B2005 - link	1593	398	141	1914	0.832	1588	510	3.3	4.7	10.817	B
	3 - A249 offslip (SB)	683	171	1729	381	1.790	381	0	26.8	102.2	631.948	F
	4 - Swale Way	847	212	760	857	0.988	808	1350	3.6	13.4	51.143	F
	5 - Grovehurst Road	853	213	1135	636	1.341	633	432	7.7	62.8	216.388	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1222	306	509	1135	1.076	1130	0	32.7	55.7	150.735	F
	2 - Grovehurst Road	811	203	1370	625	1.298	625	269	51.0	97.7	436.836	F
	3 - A249 onslip (NB)			1597				397				
	4 - B2005 - link	509	127	0	1674	0.304	509	1597	0.4	0.4	3.091	A
2 - South	1 - A249 onslip (SB)			647				1126				
	2 - B2005 - link	1602	400	138	1916	0.836	1601	509	4.7	4.9	11.331	B
	3 - A249 offslip (SB)	683	171	1739	373	1.832	373	0	102.2	179.7	1374.497	F
	4 - Swale Way	847	212	762	856	0.989	827	1350	13.4	18.3	79.580	F
	5 - Grovehurst Road	853	213	1155	618	1.380	618	433	62.8	121.7	527.345	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	509	1135	0.879	1115	0	55.7	26.3	135.747	F
	2 - Grovehurst Road	663	166	1357	636	1.042	635	268	97.7	104.6	548.089	F
	3 - A249 onslip (NB)			1594				398				
	4 - B2005 - link	509	127	0	1674	0.304	509	1594	0.4	0.4	3.090	A

2 - South	1 - A249 onslip (SB)			664				1101				
	2 - B2005 - link	1597	399	153	1907	0.837	1597	511	4.9	5.0	11.533	B
	3 - A249 offslip (SB)	557	139	1749	364	1.530	364	0	179.7	228.0	1946.151	F
	4 - Swale Way	691	173	757	859	0.805	746	1357	18.3	4.7	40.128	E
	5 - Grovehurst Road	697	174	1081	685	1.017	684	422	121.7	124.9	616.183	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	836	209	512	1133	0.737	929	0	26.3	3.0	25.233	D
	2 - Grovehurst Road	555	139	1193	771	0.720	763	248	104.6	52.5	372.857	F
	3 - A249 onslip (NB)			1550				406				
	4 - B2005 - link	512	128	0	1674	0.306	512	1550	0.4	0.4	3.098	A
2 - South	1 - A249 onslip (SB)			700				1041				
	2 - B2005 - link	1535	384	182	1889	0.813	1537	518	5.0	4.5	10.302	B
	3 - A249 offslip (SB)	467	117	1719	392	1.190	392	0	228.0	246.6	2188.768	F
	4 - Swale Way	579	145	744	866	0.669	589	1366	4.7	2.1	13.489	B
	5 - Grovehurst Road	583	146	927	821	0.711	814	407	124.9	67.2	426.884	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.17	0.17	1.20	4.19	5.44			N/A	N/A
	2 - Grovehurst Road	1.58	0.03	0.35	3.84	8.07			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.84	0.66	1.35	2.24	2.66			N/A	N/A
	3 - A249 offslip (SB)	1.99	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	1.67	0.53	1.04	2.45	2.87			N/A	N/A
	5 - Grovehurst Road	1.87	0.03	0.34	4.28	9.77			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.59	0.10	1.94	14.75	21.30			N/A	N/A
	2 - Grovehurst Road	6.14	0.08	1.38	17.16	26.07			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.35	0.06	1.13	9.06	13.82			N/A	N/A
	3 - A249 offslip (SB)	26.83	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.63	0.08	1.14	9.34	13.49			N/A	N/A
	5 - Grovehurst Road	7.70	0.10	2.31	21.15	31.28			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	32.70	6.88	27.91	60.14	72.30			N/A	N/A
	2 - Grovehurst Road	50.97	23.74	48.14	75.84	85.24			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.66	0.03	0.31	4.98	21.54			N/A	N/A
	3 - A249 offslip (SB)	102.21	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	13.39	0.29	7.26	33.20	45.26			N/A	N/A
	5 - Grovehurst Road	62.82	32.76	60.10	89.69	99.52			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	55.70	14.95	49.28	97.98	115.90			N/A	N/A
	2 - Grovehurst Road	97.66	57.37	94.69	133.02	145.52			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.03	0.29	1.20	1.92			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.88	0.03	0.28	4.88	8.06			N/A	N/A
	3 - A249 offslip (SB)	179.71	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	18.26	0.20	8.06	48.55	68.79			N/A	N/A
	5 - Grovehurst Road	121.66	78.62	118.98	158.61	171.25			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	26.30	4.46	21.78	50.07	60.94			N/A	N/A
	2 - Grovehurst Road	104.55	59.93	101.19	144.08	158.13			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.99	0.05	0.81	14.31	23.67			N/A	N/A
	3 - A249 offslip (SB)	227.98	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	4.71	0.05	0.46	13.36	23.87			N/A	N/A
	5 - Grovehurst Road	124.92	76.91	121.71	166.73	181.22			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.00	0.03	0.31	4.40	15.00			N/A	N/A
	2 - Grovehurst Road	52.46	23.68	49.40	78.98	89.06			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.52	0.14	2.18	10.82	14.82			N/A	N/A
	3 - A249 offslip (SB)	246.62	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	2.10	0.03	0.31	3.50	10.78			N/A	N/A
	5 - Grovehurst Road	67.24	31.86	63.74	99.73	111.89			N/A	N/A

2031 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	310.55	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	730.37	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1192	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	529	100.000
	4 - Swale Way		ONE HOUR	✓	1376	100.000

5 - Grovehurst Road	ONE HOUR	✓	613	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	430	0	762
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	277	560	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	187	0	0	524	402
		3 - A249 offslip (SB)	1	39	0	202	287
		4 - Swale Way	780	435	0	0	161
		5 - Grovehurst Road	150	356	0	107	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	0	0	19
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	1	0	0	27	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	17	3	0	0	3
		5 - Grovehurst Road	0	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.29	565.98	168.5	200.0	F	1094	1641
	2 - Grovehurst Road	0.51	8.59	1.0	2.4	A	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.41	3.54	0.7	1.5	A	656	984
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.55	4.21	1.2	1.9	A	968	1452
	3 - A249 offslip (SB)	0.66	12.22	1.9	5.6	B	485	728
	4 - Swale Way	1.73	1847.29	504.9	180.3	F	1263	1894
	5 - Grovehurst Road	0.83	25.85	4.6	23.5	D	562	844

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	897	224	599	1103	0.814	881	0	0.0	4.0	15.315	C
	2 - Grovehurst Road	293	73	965	978	0.300	291	516	0.0	0.4	5.232	A
	3 - A249 onslip (NB)			829				426				
	4 - B2005 - link	602	150	0	1730	0.348	599	829	0.0	0.5	3.179	A
2 - South	1 - A249 onslip (SB)			679				798				
	2 - B2005 - link	827	207	80	1906	0.434	824	599	0.0	0.8	3.317	A
	3 - A249 offslip (SB)	398	100	903	1092	0.365	396	0	0.0	0.6	5.154	A
	4 - Swale Way	1036	259	681	1022	1.014	966	619	0.0	17.4	45.187	E
	5 - Grovehurst Road	461	115	1022	782	0.590	456	625	0.0	1.4	10.867	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1072	268	651	1063	1.008	1017	0	4.0	17.6	50.652	F
	2 - Grovehurst Road	350	87	1086	877	0.399	349	583	0.4	0.7	6.801	A
	3 - A249 onslip (NB)			969				466				
	4 - B2005 - link	652	163	0	1730	0.377	651	969	0.5	0.6	3.338	A
2 - South	1 - A249 onslip (SB)			746				829				
	2 - B2005 - link	964	241	96	1896	0.509	963	650	0.8	1.0	3.856	A
	3 - A249 offslip (SB)	476	119	1059	953	0.499	474	0	0.6	1.0	7.488	A
	4 - Swale Way	1237	309	803	942	1.314	940	730	17.4	91.7	223.478	F
	5 - Grovehurst Road	551	138	1027	779	0.707	548	715	1.4	2.3	15.290	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1312	328	708	1020	1.286	1018	0	17.6	91.2	202.458	F
	2 - Grovehurst Road	428	107	1124	849	0.505	427	602	0.7	1.0	8.512	A
	3 - A249 onslip (NB)			1040				511				
	4 - B2005 - link	708	177	0	1730	0.409	708	1040	0.6	0.7	3.523	A
2 - South	1 - A249 onslip (SB)			823				834				
	2 - B2005 - link	1028	257	116	1883	0.546	1027	707	1.0	1.2	4.201	A
	3 - A249 offslip (SB)	582	146	1144	878	0.663	579	0	1.0	1.9	11.882	B
	4 - Swale Way	1515	379	901	876	1.729	876	821	91.7	251.4	711.688	F
	5 - Grovehurst Road	675	169	990	810	0.834	667	788	2.3	4.4	23.799	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1312	328	712	1017	1.291	1017	0	91.2	165.1	454.457	F
	2 - Grovehurst Road	428	107	1126	847	0.506	428	602	1.0	1.0	8.591	A
	3 - A249 onslip (NB)			1041				514				
	4 - B2005 - link	712	178	0	1730	0.412	712	1041	0.7	0.7	3.536	A
2 - South	1 - A249 onslip (SB)			828				835				
	2 - B2005 - link	1028	257	118	1883	0.546	1028	711	1.2	1.2	4.212	A
	3 - A249 offslip (SB)	582	146	1146	876	0.665	582	0	1.9	1.9	12.221	B
	4 - Swale Way	1515	379	904	875	1.732	875	824	251.4	411.5	1369.530	F
	5 - Grovehurst Road	675	169	989	811	0.833	674	790	4.4	4.6	25.850	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1072	268	656	1060	1.011	1058	0	165.1	168.5	565.975	F
	2 - Grovehurst Road	350	87	1115	852	0.410	351	599	1.0	0.7	7.199	A
	3 - A249 onslip (NB)			997				470				
	4 - B2005 - link	656	164	0	1730	0.379	656	997	0.7	0.6	3.352	A

2 - South	1 - A249 onslip (SB)			752				831				
	2 - B2005 - link	994	248	98	1895	0.524	994	654	1.2	1.1	3.999	A
	3 - A249 offslip (SB)	476	119	1092	924	0.515	479	0	1.9	1.1	8.156	A
	4 - Swale Way	1237	309	822	929	1.332	929	749	411.5	488.5	1712.460	F
	5 - Grovehurst Road	551	138	1023	783	0.704	560	728	4.6	2.5	16.687	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	897	224	609	1096	0.819	1089	0	168.5	120.5	478.385	F
	2 - Grovehurst Road	293	73	1104	859	0.341	294	594	0.7	0.5	6.380	A
	3 - A249 onslip (NB)			964				433				
	4 - B2005 - link	608	152	0	1730	0.352	609	964	0.6	0.5	3.211	A
2 - South	1 - A249 onslip (SB)			688				827				
	2 - B2005 - link	968	242	81	1905	0.508	969	606	1.1	1.0	3.848	A
	3 - A249 offslip (SB)	398	100	1050	960	0.415	400	0	1.1	0.7	6.439	A
	4 - Swale Way	1036	259	760	970	1.068	970	690	488.5	504.9	1847.292	F
	5 - Grovehurst Road	461	115	1050	762	0.606	465	680	2.5	1.6	12.294	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.98	0.04	0.37	9.89	21.43			N/A	N/A
	2 - Grovehurst Road	0.42	0.00	0.00	0.42	0.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.76	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	17.42	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.40	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	17.58	0.43	10.25	42.78	57.60			N/A	N/A
	2 - Grovehurst Road	0.66	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.03	0.11	0.97	1.63	1.93			N/A	N/A
	3 - A249 offslip (SB)	0.98	0.08	0.88	1.68	2.05			N/A	N/A
	4 - Swale Way	91.74	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.29	0.09	1.34	5.34	7.46			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	91.18	48.26	87.55	129.86	143.90			N/A	N/A
	2 - Grovehurst Road	1.00	0.03	0.26	1.00	1.00			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.69	0.03	0.25	0.69	0.69			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.19	0.03	0.26	1.19	1.19			N/A	N/A
	3 - A249 offslip (SB)	1.90	0.03	0.28	1.90	5.59			N/A	N/A
	4 - Swale Way	251.40	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.37	0.04	0.38	11.14	23.54			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching

									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	165.12	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.01	0.03	0.27	1.01	2.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.70	0.03	0.27	0.70	1.47			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.20	0.03	0.26	1.20	1.20			N/A	N/A
	3 - A249 offslip (SB)	1.94	0.03	0.28	1.94	4.11			N/A	N/A
	4 - Swale Way	411.48	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.62	0.03	0.31	5.75	22.18			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	168.49	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.70	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.11	0.55	1.06	1.11	1.55			N/A	N/A
	3 - A249 offslip (SB)	1.08	0.08	0.91	1.91	2.64			N/A	N/A
	4 - Swale Way	488.48	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.51	0.04	0.44	6.90	11.93			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	120.49	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.52	0.05	0.50	1.30	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.55	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.04	0.55	1.03	1.10	1.10			N/A	N/A
	3 - A249 offslip (SB)	0.72	0.05	0.46	1.41	1.95			N/A	N/A
	4 - Swale Way	504.89	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.59	0.04	0.37	4.02	7.89			N/A	N/A

2031 + WKN Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	247.85	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	506.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D31	2031 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1118	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	620	100.000
	4 - Swale Way		ONE HOUR	✓	777	100.000

5 - Grovehurst Road	ONE HOUR	✓	775	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	123	0	995
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	159	403	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	419	0	0	1041	231
		3 - A249 offslip (SB)	1	22	0	381	216
		4 - Swale Way	470	229	0	0	78
	5 - Grovehurst Road	289	313	0	173	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	17
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	16	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	37	10	0	0	9
	5 - Grovehurst Road	0	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.09	166.78	62.3	122.3	F	1026	1539
	2 - Grovehurst Road	1.30	568.98	107.2	163.4	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.30	3.09	0.4	1.9	A	488	732
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.84	11.59	5.0	24.7	B	1519	2279
	3 - A249 offslip (SB)	1.84	2310.82	253.4	187.3	F	569	853
	4 - Swale Way	1.00	90.72	21.4	72.5	F	713	1069
	5 - Grovehurst Road	1.40	657.46	133.2	190.8	F	711	1067

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	842	210	415	1198	0.702	833	0	0.0	2.3	9.619	A
	2 - Grovehurst Road	555	139	1039	887	0.626	548	209	0.0	1.6	10.445	B
	3 - A249 onslip (NB)			1261				326				
	4 - B2005 - link	417	104	0	1674	0.249	415	1261	0.0	0.3	2.859	A
2 - South	1 - A249 onslip (SB)			548				876				
	2 - B2005 - link	1264	316	129	1922	0.658	1257	419	0.0	1.9	5.353	A
	3 - A249 offslip (SB)	467	117	1385	679	0.688	458	0	0.0	2.1	15.804	C
	4 - Swale Way	585	146	660	909	0.643	578	1184	0.0	1.7	10.659	B
	5 - Grovehurst Road	583	146	848	875	0.667	576	389	0.0	1.9	11.759	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1005	251	487	1143	0.879	990	0	2.3	6.1	21.578	C
	2 - Grovehurst Road	663	166	1230	732	0.905	642	247	1.6	6.7	34.342	D
	3 - A249 onslip (NB)			1490				383				
	4 - B2005 - link	488	122	0	1674	0.291	487	1490	0.3	0.4	3.034	A
2 - South	1 - A249 onslip (SB)			640				1037				
	2 - B2005 - link	1495	374	150	1909	0.783	1488	490	1.9	3.5	8.437	A
	3 - A249 offslip (SB)	557	139	1638	460	1.211	449	0	2.1	29.1	149.164	F
	4 - Swale Way	699	175	745	860	0.812	690	1342	1.7	3.9	20.215	C
	5 - Grovehurst Road	697	174	1006	744	0.937	671	429	1.9	8.4	40.120	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1231	308	505	1130	1.090	1111	0	6.1	36.0	80.635	F
	2 - Grovehurst Road	811	203	1351	634	1.281	629	265	6.7	52.3	184.471	F
	3 - A249 onslip (NB)			1585				394				
	4 - B2005 - link	505	126	0	1674	0.302	505	1585	0.4	0.4	3.079	A
2 - South	1 - A249 onslip (SB)			645				1119				
	2 - B2005 - link	1597	399	140	1915	0.834	1592	505	3.5	4.7	10.958	B
	3 - A249 offslip (SB)	683	171	1732	378	1.805	378	0	29.1	105.2	661.613	F
	4 - Swale Way	855	214	758	853	1.003	811	1352	3.9	15.1	55.881	F
	5 - Grovehurst Road	853	213	1138	629	1.356	626	431	8.4	65.1	227.020	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1231	308	505	1130	1.090	1126	0	36.0	62.3	166.778	F
	2 - Grovehurst Road	811	203	1364	623	1.303	622	267	52.3	99.6	447.681	F
	3 - A249 onslip (NB)			1592				394				
	4 - B2005 - link	505	126	0	1674	0.302	505	1592	0.4	0.4	3.079	A
2 - South	1 - A249 onslip (SB)			641				1128				
	2 - B2005 - link	1605	401	136	1917	0.837	1604	505	4.7	4.9	11.444	B
	3 - A249 offslip (SB)	683	171	1741	370	1.843	370	0	105.2	183.3	1414.880	F
	4 - Swale Way	855	214	759	852	1.004	830	1352	15.1	21.4	90.724	F
	5 - Grovehurst Road	853	213	1158	612	1.395	611	432	65.1	125.6	553.040	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1005	251	505	1129	0.890	1112	0	62.3	35.6	161.044	F
	2 - Grovehurst Road	663	166	1352	633	1.047	632	265	99.6	107.2	568.979	F
	3 - A249 onslip (NB)			1589				395				
	4 - B2005 - link	505	126	0	1674	0.302	505	1589	0.4	0.4	3.080	A

2 - South	1 - A249 onslip (SB)			656				1107				
	2 - B2005 - link	1600	400	149	1909	0.838	1600	507	4.9	5.0	11.593	B
	3 - A249 offslip (SB)	557	139	1749	364	1.531	364	0	183.3	231.6	2015.489	F
	4 - Swale Way	699	175	755	854	0.818	763	1358	21.4	5.3	50.193	F
	5 - Grovehurst Road	697	174	1097	667	1.045	666	422	125.6	133.2	657.463	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	842	210	508	1127	0.747	971	0	35.6	3.2	39.391	E
	2 - Grovehurst Road	555	139	1229	735	0.755	728	251	107.2	63.8	424.703	F
	3 - A249 onslip (NB)			1555				402				
	4 - B2005 - link	508	127	0	1674	0.303	508	1555	0.4	0.4	3.087	A
2 - South	1 - A249 onslip (SB)			693				1046				
	2 - B2005 - link	1552	388	179	1890	0.821	1553	514	5.0	4.8	10.751	B
	3 - A249 offslip (SB)	467	117	1733	380	1.229	380	0	231.6	253.4	2310.818	F
	4 - Swale Way	585	146	743	861	0.679	597	1369	5.3	2.2	14.207	B
	5 - Grovehurst Road	583	146	936	810	0.721	803	404	133.2	78.2	475.380	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.28	0.16	1.23	4.55	5.90			N/A	N/A
	2 - Grovehurst Road	1.62	0.03	0.32	3.17	8.46			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.89	0.67	1.38	2.41	2.75			N/A	N/A
	3 - A249 offslip (SB)	2.08	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	1.75	0.51	1.10	2.66	3.10			N/A	N/A
	5 - Grovehurst Road	1.93	0.03	0.33	3.90	10.15			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.08	0.12	2.38	15.82	22.54			N/A	N/A
	2 - Grovehurst Road	6.65	0.07	1.32	18.83	29.01			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.47	0.07	1.19	9.40	14.27			N/A	N/A
	3 - A249 offslip (SB)	29.06	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.88	0.09	1.32	9.95	14.29			N/A	N/A
	5 - Grovehurst Road	8.39	0.10	2.65	23.01	33.88			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	36.00	9.05	31.48	63.81	75.76			N/A	N/A
	2 - Grovehurst Road	52.29	23.96	49.31	78.28	88.11			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.73	0.03	0.31	5.23	22.04			N/A	N/A
	3 - A249 offslip (SB)	105.22	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	15.09	0.51	9.28	35.62	47.32			N/A	N/A
	5 - Grovehurst Road	65.10	34.10	62.33	92.80	102.92			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	62.28	19.89	56.38	104.84	122.26			N/A	N/A
	2 - Grovehurst Road	99.55	58.46	96.53	135.63	148.36			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.03	0.30	1.20	1.89			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.94	0.03	0.28	4.94	8.37			N/A	N/A
	3 - A249 offslip (SB)	183.29	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	21.43	0.41	11.97	53.31	72.47			N/A	N/A
	5 - Grovehurst Road	125.58	81.85	122.91	163.08	175.90			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	35.64	10.19	31.69	61.23	71.97			N/A	N/A
	2 - Grovehurst Road	107.15	60.54	103.58	148.60	163.36			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	5.03	0.05	0.50	14.38	24.72			N/A	N/A
	3 - A249 offslip (SB)	231.61	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	5.26	0.05	0.49	15.03	26.32			N/A	N/A
	5 - Grovehurst Road	133.21	83.83	130.05	176.03	190.80			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.20	0.03	0.32	4.88	16.21			N/A	N/A
	2 - Grovehurst Road	63.83	25.76	59.44	100.12	114.25			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.77	0.15	2.37	11.39	15.55			N/A	N/A
	3 - A249 offslip (SB)	253.40	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	2.21	0.03	0.31	3.57	11.28			N/A	N/A
	5 - Grovehurst Road	78.20	37.34	74.26	115.83	129.87			N/A	N/A

2031 + WKN Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	329.48	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	782.00	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D32	2031 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1200	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	529	100.000
	4 - Swale Way		ONE HOUR	✓	1395	100.000

5 - Grovehurst Road	ONE HOUR	✓	613	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	430	0	770
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	277	561	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	187	0	0	531	402
		3 - A249 offslip (SB)	1	39	0	202	287
		4 - Swale Way	798	436	0	0	161
		5 - Grovehurst Road	150	356	0	107	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	0	0	20
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	1	0	0	28	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	18	3	0	0	3
		5 - Grovehurst Road	0	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.30	596.14	178.2	200.0	F	1101	1652
	2 - Grovehurst Road	0.51	8.66	1.0	2.4	A	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.41	3.52	0.7	1.5	A	652	978
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.55	4.26	1.2	2.0	A	971	1457
	3 - A249 offslip (SB)	0.67	12.46	2.0	6.0	B	485	728
	4 - Swale Way	1.76	1960.65	535.4	179.2	F	1280	1920
	5 - Grovehurst Road	0.84	26.22	4.7	23.8	D	562	844

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	903	226	596	1098	0.822	887	0	0.0	4.2	15.934	C
	2 - Grovehurst Road	293	73	968	970	0.302	291	515	0.0	0.4	5.290	A
	3 - A249 onslip (NB)			835				425				
	4 - B2005 - link	599	150	0	1730	0.346	596	835	0.0	0.5	3.171	A
2 - South	1 - A249 onslip (SB)			676				805				
	2 - B2005 - link	833	208	80	1896	0.440	830	596	0.0	0.8	3.367	A
	3 - A249 offslip (SB)	398	100	910	1083	0.368	396	0	0.0	0.6	5.227	A
	4 - Swale Way	1050	263	681	1015	1.034	968	624	0.0	20.5	50.798	F
	5 - Grovehurst Road	461	115	1025	775	0.596	456	625	0.0	1.4	11.094	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1079	270	647	1060	1.017	1019	0	4.2	19.1	53.930	F
	2 - Grovehurst Road	350	87	1087	871	0.401	349	579	0.4	0.7	6.875	A
	3 - A249 onslip (NB)			972				463				
	4 - B2005 - link	647	162	0	1730	0.374	647	972	0.5	0.6	3.323	A
2 - South	1 - A249 onslip (SB)			741				831				
	2 - B2005 - link	969	242	96	1887	0.514	968	645	0.8	1.0	3.914	A
	3 - A249 offslip (SB)	476	119	1064	944	0.504	474	0	0.6	1.0	7.623	A
	4 - Swale Way	1254	314	802	937	1.339	935	736	20.5	100.2	247.020	F
	5 - Grovehurst Road	551	138	1025	777	0.709	548	713	1.4	2.3	15.428	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1321	330	704	1017	1.299	1015	0	19.1	95.6	213.306	F
	2 - Grovehurst Road	428	107	1123	845	0.507	427	596	0.7	1.0	8.579	A
	3 - A249 onslip (NB)			1041				508				
	4 - B2005 - link	704	176	0	1730	0.407	704	1041	0.6	0.7	3.508	A
2 - South	1 - A249 onslip (SB)			819				835				
	2 - B2005 - link	1029	257	116	1874	0.549	1029	703	1.0	1.2	4.254	A
	3 - A249 offslip (SB)	582	146	1145	872	0.668	579	0	1.0	1.9	12.108	B
	4 - Swale Way	1536	384	899	873	1.759	873	825	100.2	266.0	761.429	F
	5 - Grovehurst Road	675	169	988	808	0.836	666	784	2.3	4.4	24.087	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1321	330	708	1014	1.303	1014	0	95.6	172.5	476.004	F
	2 - Grovehurst Road	428	107	1124	844	0.508	428	597	1.0	1.0	8.659	A
	3 - A249 onslip (NB)			1041				511				
	4 - B2005 - link	708	177	0	1730	0.409	708	1041	0.7	0.7	3.522	A
2 - South	1 - A249 onslip (SB)			824				836				
	2 - B2005 - link	1029	257	118	1873	0.549	1029	707	1.2	1.2	4.265	A
	3 - A249 offslip (SB)	582	146	1147	871	0.669	582	0	1.9	2.0	12.460	B
	4 - Swale Way	1536	384	901	871	1.762	871	828	266.0	432.1	1447.232	F
	5 - Grovehurst Road	675	169	987	808	0.835	674	786	4.4	4.7	26.218	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1079	270	651	1057	1.021	1056	0	172.5	178.2	596.142	F
	2 - Grovehurst Road	350	87	1114	849	0.412	351	594	1.0	0.7	7.253	A
	3 - A249 onslip (NB)			998				467				
	4 - B2005 - link	651	163	0	1730	0.376	651	998	0.7	0.6	3.338	A

2 - South	1 - A249 onslip (SB)			747				833				
	2 - B2005 - link	996	249	98	1885	0.528	996	649	1.2	1.1	4.051	A
	3 - A249 offslip (SB)	476	119	1094	917	0.518	479	0	2.0	1.1	8.279	A
	4 - Swale Way	1254	314	820	925	1.356	925	753	432.1	514.4	1806.381	F
	5 - Grovehurst Road	551	138	1021	781	0.706	560	724	4.7	2.5	16.864	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	903	226	604	1093	0.827	1087	0	178.2	132.4	515.336	F
	2 - Grovehurst Road	293	73	1102	855	0.342	294	589	0.7	0.5	6.421	A
	3 - A249 onslip (NB)			965				430				
	4 - B2005 - link	604	151	0	1730	0.349	604	965	0.6	0.5	3.199	A
2 - South	1 - A249 onslip (SB)			683				829				
	2 - B2005 - link	971	243	81	1895	0.512	971	602	1.1	1.1	3.897	A
	3 - A249 offslip (SB)	398	100	1052	954	0.418	400	0	1.1	0.7	6.515	A
	4 - Swale Way	1050	263	758	966	1.087	966	694	514.4	535.4	1960.649	F
	5 - Grovehurst Road	461	115	1047	759	0.608	465	677	2.5	1.6	12.387	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.19	0.04	0.36	9.72	22.73			N/A	N/A
	2 - Grovehurst Road	0.43	0.00	0.00	0.43	0.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.78	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.58	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	20.51	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.43	0.55	1.00	1.43	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	19.12	0.47	11.27	46.43	62.41			N/A	N/A
	2 - Grovehurst Road	0.66	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.05	0.11	0.98	1.68	1.97			N/A	N/A
	3 - A249 offslip (SB)	1.00	0.08	0.88	1.73	2.19			N/A	N/A
	4 - Swale Way	100.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.31	0.09	1.35	5.40	7.53			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	95.59	50.76	91.83	135.99	150.65			N/A	N/A
	2 - Grovehurst Road	1.01	0.03	0.26	1.01	1.01			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.68	0.03	0.25	0.68	0.68			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.21	0.03	0.26	1.21	1.21			N/A	N/A
	3 - A249 offslip (SB)	1.93	0.03	0.28	1.93	5.97			N/A	N/A
	4 - Swale Way	265.96	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.42	0.04	0.39	11.39	23.81			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	172.47	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.02	0.03	0.27	1.02	2.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.69	0.03	0.27	0.69	1.54			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.21	0.03	0.26	1.21	1.21			N/A	N/A
	3 - A249 offslip (SB)	1.98	0.03	0.28	1.98	4.26			N/A	N/A
	4 - Swale Way	432.08	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.68	0.03	0.31	6.02	22.68			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	178.24	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.71	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.13	0.55	1.07	1.24	1.62			N/A	N/A
	3 - A249 offslip (SB)	1.10	0.07	0.90	1.96	2.74			N/A	N/A
	4 - Swale Way	514.35	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.53	0.04	0.44	6.96	12.07			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	132.41	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.53	0.05	0.50	1.30	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.55	1.03	1.30	1.30			N/A	N/A
	3 - A249 offslip (SB)	0.73	0.05	0.45	1.47	2.02			N/A	N/A
	4 - Swale Way	535.42	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.60	0.04	0.37	4.05	7.97			N/A	N/A

2031 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	249.08	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	510.32	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1120	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	620	100.000
	4 - Swale Way		ONE HOUR	✓	779	100.000

5 - Grovehurst Road	ONE HOUR	✓	775	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	123	0	997
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	159	403	0	

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	419	0	0	1044	231
		3 - A249 offslip (SB)	1	22	0	381	216
		4 - Swale Way	472	229	0	0	78
	5 - Grovehurst Road	289	313	0	173	0	

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	2	0	17
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0	

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	0	0	0	17	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	38	10	0	0	1
	5 - Grovehurst Road	0	1	0	4	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.09	167.96	62.8	122.8	F	1028	1542
	2 - Grovehurst Road	1.30	571.10	107.4	163.8	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.30	3.08	0.4	1.9	A	487	731
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.84	11.68	5.0	24.9	B	1512	2268
	3 - A249 offslip (SB)	1.84	2323.79	254.1	187.3	F	569	853
	4 - Swale Way	1.00	89.28	21.1	72.3	F	715	1072
	5 - Grovehurst Road	1.41	671.35	136.1	194.0	F	711	1067

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	843	211	415	1198	0.704	834	0	0.0	2.3	9.654	A
	2 - Grovehurst Road	555	139	1040	886	0.626	548	209	0.0	1.6	10.481	B
	3 - A249 onslip (NB)			1263				326				
	4 - B2005 - link	417	104	0	1674	0.249	415	1263	0.0	0.3	2.859	A
2 - South	1 - A249 onslip (SB)			548				876				
	2 - B2005 - link	1259	315	129	1911	0.659	1251	419	0.0	1.9	5.394	A
	3 - A249 offslip (SB)	467	117	1380	677	0.689	458	0	0.0	2.1	15.885	C
	4 - Swale Way	586	147	657	912	0.643	580	1181	0.0	1.7	10.610	B
	5 - Grovehurst Road	583	146	848	872	0.669	576	388	0.0	1.9	11.854	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1007	252	487	1143	0.881	991	0	2.3	6.1	21.742	C
	2 - Grovehurst Road	663	166	1232	731	0.906	642	247	1.6	6.7	34.622	D
	3 - A249 onslip (NB)			1492				382				
	4 - B2005 - link	487	122	0	1674	0.291	487	1492	0.3	0.4	3.033	A
2 - South	1 - A249 onslip (SB)			639				1036				
	2 - B2005 - link	1488	372	150	1898	0.784	1482	490	1.9	3.5	8.511	A
	3 - A249 offslip (SB)	557	139	1631	459	1.214	449	0	2.1	29.3	150.514	F
	4 - Swale Way	700	175	741	863	0.811	692	1338	1.7	3.9	20.044	C
	5 - Grovehurst Road	697	174	1006	740	0.941	670	428	1.9	8.6	41.023	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1233	308	504	1131	1.091	1113	0	6.1	36.3	81.126	F
	2 - Grovehurst Road	811	203	1351	633	1.282	629	265	6.7	52.4	185.148	F
	3 - A249 onslip (NB)			1587				393				
	4 - B2005 - link	504	126	0	1674	0.301	504	1587	0.4	0.4	3.076	A
2 - South	1 - A249 onslip (SB)			643				1117				
	2 - B2005 - link	1589	397	139	1905	0.835	1584	504	3.5	4.7	11.040	B
	3 - A249 offslip (SB)	683	171	1723	378	1.806	378	0	29.3	105.5	664.625	F
	4 - Swale Way	858	214	754	857	1.001	813	1348	3.9	14.9	55.236	F
	5 - Grovehurst Road	853	213	1138	625	1.365	622	429	8.6	66.3	232.662	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1233	308	503	1131	1.090	1127	0	36.3	62.8	167.958	F
	2 - Grovehurst Road	811	203	1364	623	1.303	622	266	52.4	99.8	448.871	F
	3 - A249 onslip (NB)			1593				393				
	4 - B2005 - link	503	126	0	1674	0.301	503	1593	0.4	0.4	3.075	A
2 - South	1 - A249 onslip (SB)			639				1127				
	2 - B2005 - link	1597	399	136	1907	0.838	1597	503	4.7	5.0	11.526	B
	3 - A249 offslip (SB)	683	171	1732	370	1.844	370	0	105.5	183.6	1418.681	F
	4 - Swale Way	858	214	755	856	1.002	833	1347	14.9	21.1	89.279	F
	5 - Grovehurst Road	853	213	1158	607	1.405	607	430	66.3	127.9	565.901	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1007	252	504	1130	0.891	1113	0	62.8	36.4	162.944	F
	2 - Grovehurst Road	663	166	1352	633	1.047	632	265	99.8	107.4	571.104	F
	3 - A249 onslip (NB)			1590				394				
	4 - B2005 - link	504	126	0	1674	0.301	504	1590	0.4	0.4	3.077	A

2 - South	1 - A249 onslip (SB)			654				1105				
	2 - B2005 - link	1592	398	148	1899	0.839	1592	506	5.0	5.0	11.684	B
	3 - A249 offslip (SB)	557	139	1740	364	1.533	364	0	183.6	232.1	2023.846	F
	4 - Swale Way	700	175	751	858	0.816	764	1353	21.1	5.2	48.743	E
	5 - Grovehurst Road	697	174	1095	665	1.048	664	420	127.9	136.1	671.345	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	843	211	507	1128	0.747	976	0	36.4	3.2	40.814	E
	2 - Grovehurst Road	555	139	1232	732	0.758	725	251	107.4	64.8	429.511	F
	3 - A249 onslip (NB)			1557				401				
	4 - B2005 - link	507	127	0	1674	0.303	507	1557	0.4	0.4	3.085	A
2 - South	1 - A249 onslip (SB)			692				1045				
	2 - B2005 - link	1545	386	179	1880	0.822	1546	513	5.0	4.8	10.861	B
	3 - A249 offslip (SB)	467	117	1725	378	1.233	378	0	232.1	254.1	2323.791	F
	4 - Swale Way	586	147	739	865	0.678	598	1365	5.2	2.2	14.070	B
	5 - Grovehurst Road	583	146	935	807	0.723	802	403	136.1	81.5	490.403	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.29	0.16	1.24	4.59	5.94			N/A	N/A
	2 - Grovehurst Road	1.63	0.03	0.32	3.08	8.47			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.90	0.67	1.39	2.43	2.77			N/A	N/A
	3 - A249 offslip (SB)	2.09	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	1.74	0.52	1.10	2.65	3.05			N/A	N/A
	5 - Grovehurst Road	1.94	0.03	0.32	3.73	10.19			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.14	0.12	2.43	15.94	22.68			N/A	N/A
	2 - Grovehurst Road	6.72	0.07	1.32	19.01	29.33			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	3.48	0.07	1.20	9.44	14.30			N/A	N/A
	3 - A249 offslip (SB)	29.31	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.86	0.09	1.30	9.89	14.22			N/A	N/A
	5 - Grovehurst Road	8.62	0.10	2.75	23.64	34.78			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	36.30	9.23	31.79	64.14	76.05			N/A	N/A
	2 - Grovehurst Road	52.44	23.99	49.44	78.58	88.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.74	0.03	0.31	5.33	22.17			N/A	N/A
	3 - A249 offslip (SB)	105.53	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	14.92	0.47	9.06	35.44	47.22			N/A	N/A
	5 - Grovehurst Road	66.33	34.96	63.55	94.33	104.54			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	62.84	20.30	56.97	105.45	122.85			N/A	N/A
	2 - Grovehurst Road	99.76	58.57	96.73	135.90	148.64			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.03	0.30	1.20	1.88			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.95	0.03	0.28	4.95	8.54			N/A	N/A
	3 - A249 offslip (SB)	183.64	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	21.10	0.37	11.54	52.95	72.33			N/A	N/A
	5 - Grovehurst Road	127.89	83.88	125.23	165.55	178.38			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	36.38	10.66	32.45	62.13	72.90			N/A	N/A
	2 - Grovehurst Road	107.43	60.64	103.84	149.01	163.81			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	5.04	0.05	0.49	14.42	24.92			N/A	N/A
	3 - A249 offslip (SB)	232.07	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	5.19	0.05	0.48	14.82	26.03			N/A	N/A
	5 - Grovehurst Road	136.07	86.26	132.92	179.16	193.95			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.23	0.03	0.32	4.93	16.34			N/A	N/A
	2 - Grovehurst Road	64.83	26.04	60.34	101.88	116.32			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	4.80	0.15	2.39	11.47	15.64			N/A	N/A
	3 - A249 offslip (SB)	254.15	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	2.20	0.03	0.31	3.56	11.22			N/A	N/A
	5 - Grovehurst Road	81.55	39.23	77.52	120.52	135.04			N/A	N/A

2031 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - North - 1 - A249 offslip (NB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 3 - A249 offslip (SB) - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - South - 4 - Swale Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	334.56	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	783.13	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1203	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	529	100.000
	4 - Swale Way		ONE HOUR	✓	1398	100.000

5 - Grovehurst Road	ONE HOUR	✓	613	100.000
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Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	430	0	773
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	277	561	0

Demand (Veh/hr)

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	187	0	0	534	402
		3 - A249 offslip (SB)	1	39	0	202	287
		4 - Swale Way	801	436	0	0	161
		5 - Grovehurst Road	150	356	0	107	0

Vehicle Mix

Heavy Vehicle Percentages

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	0	0	20
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

		To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road	
2 - South	From						
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	
		2 - B2005 - link	1	0	0	29	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	18	3	0	0	3
		5 - Grovehurst Road	0	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.31	604.66	181.1	200.0	F	1104	1656
	2 - Grovehurst Road	0.51	8.67	1.0	2.4	A	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.41	3.52	0.7	1.5	A	652	978
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.55	4.29	1.2	2.0	A	968	1452
	3 - A249 offslip (SB)	0.67	12.49	2.0	6.0	B	485	728
	4 - Swale Way	1.76	1961.49	536.7	179.2	F	1283	1924
	5 - Grovehurst Road	0.84	26.39	4.7	23.9	D	562	844

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	906	226	596	1098	0.825	889	0	0.0	4.2	16.077	C
	2 - Grovehurst Road	293	73	970	968	0.302	291	515	0.0	0.4	5.304	A
	3 - A249 onslip (NB)			837				425				
	4 - B2005 - link	598	150	0	1730	0.346	596	837	0.0	0.5	3.171	A
2 - South	1 - A249 onslip (SB)			676				806				
	2 - B2005 - link	832	208	80	1888	0.441	829	596	0.0	0.8	3.390	A
	3 - A249 offslip (SB)	398	100	908	1081	0.369	396	0	0.0	0.6	5.240	A
	4 - Swale Way	1052	263	679	1017	1.035	970	625	0.0	20.7	51.068	F
	5 - Grovehurst Road	461	115	1026	774	0.596	456	623	0.0	1.4	11.123	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1081	270	647	1060	1.020	1020	0	4.2	19.6	54.831	F
	2 - Grovehurst Road	350	87	1088	870	0.402	349	578	0.4	0.7	6.893	A
	3 - A249 onslip (NB)			974				463				
	4 - B2005 - link	647	162	0	1730	0.374	647	974	0.5	0.6	3.323	A
2 - South	1 - A249 onslip (SB)			741				832				
	2 - B2005 - link	967	242	96	1878	0.515	965	645	0.8	1.1	3.939	A
	3 - A249 offslip (SB)	476	119	1061	943	0.504	474	0	0.6	1.0	7.649	A
	4 - Swale Way	1257	314	799	938	1.339	937	736	20.7	100.7	247.762	F
	5 - Grovehurst Road	551	138	1026	776	0.710	548	711	1.4	2.3	15.480	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1325	331	704	1017	1.302	1015	0	19.6	96.9	216.374	F
	2 - Grovehurst Road	428	107	1123	844	0.507	427	595	0.7	1.0	8.594	A
	3 - A249 onslip (NB)			1042				508				
	4 - B2005 - link	704	176	0	1730	0.407	704	1042	0.6	0.7	3.508	A
2 - South	1 - A249 onslip (SB)			819				836				
	2 - B2005 - link	1026	256	116	1866	0.550	1025	703	1.1	1.2	4.278	A
	3 - A249 offslip (SB)	582	146	1141	872	0.668	579	0	1.0	1.9	12.139	B
	4 - Swale Way	1539	385	895	875	1.759	875	825	100.7	266.7	762.029	F
	5 - Grovehurst Road	675	169	989	807	0.837	666	782	2.3	4.4	24.219	C

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1325	331	708	1014	1.307	1014	0	96.9	174.6	482.091	F
	2 - Grovehurst Road	428	107	1125	843	0.508	428	596	1.0	1.0	8.673	A
	3 - A249 onslip (NB)			1042				511				
	4 - B2005 - link	708	177	0	1730	0.409	708	1042	0.7	0.7	3.522	A
2 - South	1 - A249 onslip (SB)			824				837				
	2 - B2005 - link	1026	256	118	1865	0.550	1025	707	1.2	1.2	4.288	A
	3 - A249 offslip (SB)	582	146	1143	870	0.669	582	0	1.9	2.0	12.492	B
	4 - Swale Way	1539	385	898	874	1.762	874	828	266.7	433.1	1447.399	F
	5 - Grovehurst Road	675	169	988	808	0.836	674	784	4.4	4.7	26.390	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1081	270	652	1057	1.024	1056	0	174.6	181.1	604.660	F
	2 - Grovehurst Road	350	87	1114	848	0.412	351	593	1.0	0.7	7.264	A
	3 - A249 onslip (NB)			999				467				
	4 - B2005 - link	651	163	0	1730	0.376	652	999	0.7	0.6	3.341	A

2 - South	1 - A249 onslip (SB)			747				834				
	2 - B2005 - link	992	248	98	1877	0.529	993	649	1.2	1.1	4.073	A
	3 - A249 offslip (SB)	476	119	1090	917	0.519	479	0	2.0	1.1	8.296	A
	4 - Swale Way	1257	314	817	927	1.356	927	753	433.1	515.6	1806.952	F
	5 - Grovehurst Road	551	138	1022	780	0.707	560	722	4.7	2.5	16.947	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	906	226	604	1093	0.829	1087	0	181.1	135.9	525.808	F
	2 - Grovehurst Road	293	73	1102	854	0.343	294	588	0.7	0.5	6.428	A
	3 - A249 onslip (NB)			966				430				
	4 - B2005 - link	604	151	0	1730	0.349	604	966	0.6	0.5	3.199	A
2 - South	1 - A249 onslip (SB)			683				830				
	2 - B2005 - link	967	242	81	1887	0.513	968	602	1.1	1.1	3.919	A
	3 - A249 offslip (SB)	398	100	1049	953	0.418	400	0	1.1	0.7	6.528	A
	4 - Swale Way	1052	263	755	968	1.087	968	694	515.6	536.7	1961.495	F
	5 - Grovehurst Road	461	115	1048	759	0.608	465	675	2.5	1.6	12.427	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.24	0.04	0.35	9.60	23.04			N/A	N/A
	2 - Grovehurst Road	0.43	0.00	0.00	0.43	0.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.78	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.58	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	20.70	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.43	0.55	1.00	1.43	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	19.57	0.49	11.56	47.51	63.84			N/A	N/A
	2 - Grovehurst Road	0.66	0.14	0.90	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.05	0.11	0.99	1.69	1.98			N/A	N/A
	3 - A249 offslip (SB)	1.00	0.08	0.89	1.73	2.21			N/A	N/A
	4 - Swale Way	100.68	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.32	0.09	1.35	5.42	7.56			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	96.89	51.47	93.08	137.80	152.62			N/A	N/A
	2 - Grovehurst Road	1.01	0.03	0.26	1.01	1.01			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.68	0.03	0.25	0.68	0.68			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.21	0.03	0.26	1.21	1.21			N/A	N/A
	3 - A249 offslip (SB)	1.94	0.03	0.28	1.94	6.03			N/A	N/A
	4 - Swale Way	266.71	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.44	0.04	0.39	11.50	23.93			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or	Probability of exactly reaching
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									exceeding marker	marker
1 - North	1 - A249 offslip (NB)	174.64	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.02	0.03	0.27	1.02	2.41			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.69	0.03	0.27	0.69	1.54			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.22	0.03	0.26	1.22	1.22			N/A	N/A
	3 - A249 offslip (SB)	1.98	0.03	0.28	1.98	4.28			N/A	N/A
	4 - Swale Way	433.13	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.71	0.03	0.31	6.17	22.91			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	181.12	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.71	0.14	0.89	1.38	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.55	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.13	0.55	1.07	1.27	1.64			N/A	N/A
	3 - A249 offslip (SB)	1.10	0.07	0.90	1.97	2.75			N/A	N/A
	4 - Swale Way	515.57	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.54	0.04	0.44	6.98	12.13			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	135.86	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.53	0.05	0.50	1.30	1.40			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.54	1.04	1.33	1.33			N/A	N/A
	3 - A249 offslip (SB)	0.73	0.04	0.45	1.47	2.04			N/A	N/A
	4 - Swale Way	536.73	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.60	0.04	0.37	4.06	8.00			N/A	N/A

<h1>Junctions 9</h1>
<h2>ARCADY 9 - Roundabout Module</h2>
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Filename: Dumbbell_Sensitivity_FULLLK3.j9

Path: P:\JNY9290 - Kemsley K5\Transport\Arcady\WKN DCO\North and South Dumbell Roundabouts

Report generation date: 08/07/2019 17:03:38

- »2017, AM
- »2017, PM
- »2024, AM
- »2024, PM
- »2024 + Cumulative Development, AM
- »2024 + Cumulative Development, PM
- »2024 + K3 Operational, AM
- »2024 + K3 Operational, PM
- »2024 + K3 and WKN Operational, AM
- »2024 + K3 and WKN Operational, PM
- »2024 + K3 Operational + Cumulative Development, AM
- »2024 + K3 Operational + Cumulative Development, PM
- »2024 + K3 and WKN Operational + Cumulative Development, AM
- »2024 + K3 and WKN Operational + Cumulative Development, PM
- »2031, AM
- »2031, PM
- »2031 + Cumulative, AM
- »2031 + Cumulative, PM
- »2031 + K3 Operational, AM
- »2031 + K3 Operational, PM
- »2031 + K3 and WKN Operational, AM
- »2031 + K3 and WKN Operational, PM
- »2031 + K3 Operational + Cumulative Development, AM
- »2031 + K3 Operational + Cumulative Development, PM
- »2031 + K3 and WKN Operational + Cumulative Development, AM
- »2031 + K3 and WKN Operational + Cumulative Development, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2017						
1 - North - 1 - A249 offslip (NB)	6.5	33.77	0.88	43.4	176.66	1.09
1 - North - 2 - Grovehurst Road	6.5	57.68	0.90	0.8	12.71	0.46
1 - North - 4 - B2005 - link	0.4	3.33	0.30	0.6	3.65	0.38
2 - South - 2 - B2005 - link	1.5	4.97	0.60	0.8	3.54	0.44
2 - South - 3 - A249 offslip (SB)	23.4	138.98	1.06	1.5	11.60	0.61
2 - South - 4 - Swale Way	14.6	90.60	0.98	362.8	1810.92	1.74
2 - South - 5 - Grovehurst Road	17.8	101.37	1.01	4.4	28.52	0.83
2024						
1 - North - 1 - A249 offslip (NB)	57.4	220.97	1.12	87.6	388.10	1.21
1 - North - 2 - Grovehurst Road	37.3	298.50	1.15	0.9	13.57	0.49
1 - North - 4 - B2005 - link	0.4	3.30	0.29	0.6	3.63	0.38
2 - South - 2 - B2005 - link	2.0	6.11	0.67	0.8	3.76	0.45
2 - South - 3 - A249 offslip (SB)	128.6	1034.84	1.48	1.8	13.50	0.65
2 - South - 4 - Swale Way	65.6	365.54	1.17	727.1	3677.22	2.19
2 - South - 5 - Grovehurst Road	50.0	284.68	1.14	5.0	32.51	0.85

2024 + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	77.8	320.57	1.16	134.7	610.53	1.31
1 - North - 2 - Grovehurst Road	45.2	387.15	1.19	1.0	14.70	0.51
1 - North - 4 - B2005 - link	0.4	3.28	0.29	0.6	3.64	0.38
2 - South - 2 - B2005 - link	1.9	5.99	0.66	0.9	3.81	0.46
2 - South - 3 - A249 offslip (SB)	141.4	1143.80	1.48	2.4	16.53	0.71
2 - South - 4 - Swale Way	84.1	504.35	1.23	798.5	4298.91	2.38
2 - South - 5 - Grovehurst Road	131.6	746.08	1.33	8.0	46.89	0.91
2024 + K3 Operational						
1 - North - 1 - A249 offslip (NB)	73.4	303.59	1.15	101.2	466.35	1.25
1 - North - 2 - Grovehurst Road	39.2	322.36	1.16	0.9	13.78	0.49
1 - North - 4 - B2005 - link	0.4	3.30	0.29	0.6	3.64	0.37
2 - South - 2 - B2005 - link	2.0	6.20	0.67	0.8	3.83	0.46
2 - South - 3 - A249 offslip (SB)	134.6	1135.42	1.49	1.8	13.85	0.65
2 - South - 4 - Swale Way	79.9	464.80	1.21	773.9	3942.99	2.25
2 - South - 5 - Grovehurst Road	52.2	303.51	1.15	5.2	33.48	0.85
2024 + K3 and WKN Operational						
1 - North - 1 - A249 offslip (NB)	81.4	346.24	1.17	109.4	512.52	1.27
1 - North - 2 - Grovehurst Road	39.9	330.47	1.16	0.9	13.84	0.49
1 - North - 4 - B2005 - link	0.4	3.29	0.28	0.6	3.60	0.37
2 - South - 2 - B2005 - link	2.0	6.27	0.67	0.8	3.90	0.46
2 - South - 3 - A249 offslip (SB)	138.2	1171.97	1.50	1.9	14.11	0.66
2 - South - 4 - Swale Way	89.3	516.79	1.23	804.9	4103.27	2.29
2 - South - 5 - Grovehurst Road	53.2	314.07	1.15	5.3	34.20	0.86
2024 + K3 Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	95.2	410.42	1.20	156.1	702.26	1.35
1 - North - 2 - Grovehurst Road	46.7	404.76	1.19	1.1	14.88	0.52
1 - North - 4 - B2005 - link	0.4	3.26	0.28	0.6	3.63	0.38
2 - South - 2 - B2005 - link	2.0	6.06	0.67	0.9	3.89	0.47
2 - South - 3 - A249 offslip (SB)	147.6	1201.20	1.49	2.4	16.99	0.72
2 - South - 4 - Swale Way	101.3	598.86	1.27	842.4	4558.67	2.44
2 - South - 5 - Grovehurst Road	135.8	772.84	1.34	8.3	48.91	0.91
2024 + K3 and WKN Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	104.3	457.43	1.22	168.5	754.23	1.37
1 - North - 2 - Grovehurst Road	47.5	415.27	1.19	1.1	14.98	0.52
1 - North - 4 - B2005 - link	0.4	3.25	0.28	0.6	3.62	0.38
2 - South - 2 - B2005 - link	2.0	6.14	0.67	0.9	3.93	0.47
2 - South - 3 - A249 offslip (SB)	151.0	1235.42	1.50	2.5	17.27	0.72
2 - South - 4 - Swale Way	115.3	676.35	1.29	873.9	4736.84	2.48
2 - South - 5 - Grovehurst Road	138.4	792.25	1.34	8.5	50.01	0.92
2031						
1 - North - 1 - A249 offslip (NB)	57.4	220.97	1.12	87.6	388.10	1.21
1 - North - 2 - Grovehurst Road	37.3	298.50	1.15	0.9	13.57	0.49
1 - North - 4 - B2005 - link	0.4	3.30	0.29	0.6	3.63	0.38
2 - South - 2 - B2005 - link	2.0	6.11	0.67	0.8	3.76	0.45
2 - South - 3 - A249 offslip (SB)	128.6	1034.84	1.48	1.8	13.50	0.65
2 - South - 4 - Swale Way	65.6	365.54	1.17	727.1	3677.22	2.19
2 - South - 5 - Grovehurst Road	50.0	284.68	1.14	5.0	32.51	0.85
2031 + Cumulative						
1 - North - 1 - A249 offslip (NB)	209.5	822.84	1.35	418.6	1773.43	1.68
1 - North - 2 - Grovehurst Road	329.5	2534.43	1.81	2.6	22.53	0.73
1 - North - 4 - B2005 - link	0.3	3.13	0.26	0.6	3.60	0.37
2 - South - 2 - B2005 - link	2.0	5.88	0.67	0.9	3.87	0.48
2 - South - 3 - A249 offslip (SB)	182.4	1454.61	1.52	3.9	25.47	0.81
2 - South - 4 - Swale Way	226.3	1484.99	1.52	1014.9	5790.74	2.87
2 - South - 5 - Grovehurst Road	254.9	1663.71	1.57	15.3	84.86	0.98
2031 + K3 Operational						
1 - North - 1 - A249 offslip (NB)	73.4	303.59	1.15	101.2	466.35	1.25
1 - North - 2 - Grovehurst Road	39.2	322.36	1.16	0.9	13.78	0.49
1 - North - 4 - B2005 - link	0.4	3.30	0.29	0.6	3.64	0.37
2 - South - 2 - B2005 - link	2.0	6.20	0.67	0.8	3.83	0.46
2 - South - 3 - A249 offslip (SB)	134.6	1135.42	1.49	1.8	13.85	0.65
2 - South - 4 - Swale Way	79.9	464.80	1.21	773.9	3942.99	2.25
2 - South - 5 - Grovehurst Road	52.2	303.51	1.15	5.2	33.48	0.85

2031 + K3 and WKN Operational						
1 - North - 1 - A249 offslip (NB)	81.4	346.24	1.17	109.4	512.52	1.27
1 - North - 2 - Grovehurst Road	39.9	330.47	1.16	0.9	13.84	0.49
1 - North - 4 - B2005 - link	0.4	3.29	0.28	0.6	3.60	0.37
2 - South - 2 - B2005 - link	2.0	6.27	0.67	0.8	3.90	0.46
2 - South - 3 - A249 offslip (SB)	138.2	1171.97	1.50	1.9	14.11	0.66
2 - South - 4 - Swale Way	89.3	516.79	1.23	804.9	4103.27	2.29
2 - South - 5 - Grovehurst Road	53.2	314.07	1.15	5.3	34.20	0.86
2031 + K3 Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	241.8	973.55	1.39	442.7	1877.99	1.71
1 - North - 2 - Grovehurst Road	335.6	2596.30	1.82	2.6	22.96	0.73
1 - North - 4 - B2005 - link	0.3	3.15	0.26	0.6	3.60	0.37
2 - South - 2 - B2005 - link	2.0	5.93	0.67	0.9	3.93	0.48
2 - South - 3 - A249 offslip (SB)	186.7	1492.71	1.53	4.1	26.42	0.81
2 - South - 4 - Swale Way	250.3	1638.33	1.56	1052.3	6015.44	2.93
2 - South - 5 - Grovehurst Road	254.3	1657.85	1.57	15.7	87.19	0.98
2031 + K3 and WKN Operational + Cumulative Development						
1 - North - 1 - A249 offslip (NB)	256.8	1046.20	1.41	461.8	1961.86	1.73
1 - North - 2 - Grovehurst Road	338.1	2621.17	1.82	2.7	23.31	0.74
1 - North - 4 - B2005 - link	0.3	3.14	0.25	0.6	3.59	0.37
2 - South - 2 - B2005 - link	2.0	5.99	0.67	0.9	3.99	0.49
2 - South - 3 - A249 offslip (SB)	189.4	1519.28	1.54	4.2	27.16	0.82
2 - South - 4 - Swale Way	263.4	1718.64	1.58	1083.4	6198.73	2.97
2 - South - 5 - Grovehurst Road	259.1	1696.85	1.58	16.1	88.97	0.99

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

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	26/01/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\Ben.Dance
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75	✓			0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓
D21	2031 + Cumulative	AM	ONE HOUR	07:15	08:45	15	✓
D22	2031 + Cumulative	PM	ONE HOUR	16:15	17:45	15	✓
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	31.15	D
2	South	Standard Roundabout	1, 2, 3, 4, 5	69.23	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description
1 - North	1	A249 offslip (NB)	
	2	Grovehurst Road	
	3	A249 onslip (NB)	
	4	B2005 - link	
2 - South	1	A249 onslip (SB)	
	2	B2005 - link	
	3	A249 offslip (SB)	
	4	Swale Way	
	5	Grovehurst Road	

Roundabout Geometry

Junction	Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - North	1 - A249 offslip (NB)	7.90	8.10	5.8	14.0	37.0	32.0	
	2 - Grovehurst Road	3.71	6.74	20.2	10.1	37.0	45.0	
	3 - A249 onslip (NB)							✓
	4 - B2005 - link	3.75	7.64	13.4	11.9	37.0	41.0	
2 - South	1 - A249 onslip (SB)							✓
	2 - B2005 - link	3.66	6.17	14.7	27.2	36.3	36.0	
	3 - A249 offslip (SB)	8.03	8.04	0.1	10.1	39.2	32.0	
	4 - Swale Way	3.50	7.96	21.2	12.1	39.2	55.0	
	5 - Grovehurst Road	3.73	7.17	15.3	19.5	44.6	39.0	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Junction	Arm	Type	Reason	Direct intercept adjustment (PCU/hr)
1 - North	1 - A249 offslip (NB)	Direct		-1050
	2 - Grovehurst Road	Direct		-400
	3 - A249 onslip (NB)			
	4 - B2005 - link	None		
2 - South	1 - A249 onslip (SB)			
	2 - B2005 - link	Direct		500
	3 - A249 offslip (SB)	Direct		-730
	4 - Swale Way	Direct		-575

5 - Grovehurst Road	Direct	-550
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Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1 - North	1 - A249 offslip (NB)	0.777	1330
	2 - Grovehurst Road	0.591	1170
	3 - A249 onslip (NB)		
	4 - B2005 - link	0.611	1622
2 - South	1 - A249 onslip (SB)		
	2 - B2005 - link	0.624	2088
	3 - A249 offslip (SB)	0.748	1572
	4 - Swale Way	0.597	1071
	5 - Grovehurst Road	0.616	1130

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	669	100.000
	2 - Grovehurst Road		ONE HOUR	✓	398	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	518	100.000
	4 - Swale Way		ONE HOUR	✓	544	100.000
	5 - Grovehurst Road		ONE HOUR	✓	573	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	627
		2 - Grovehurst Road	0	0	25	373
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	136	305	0

Demand (Veh/hr)

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
2 - South	From					
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only

From	2 - B2005 - link	141	0	0	674	183
	3 - A249 offslip (SB)	1	18	0	325	174
	4 - Swale Way	285	194	0	0	65
	5 - Grovehurst Road	206	233	0	134	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

From	To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
	1 - A249 offslip (NB)	0	7	0	14
	2 - Grovehurst Road	0	0	8	3
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	3	5	0	

Heavy Vehicle Percentages

2 - South

From	To					
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	13	6
	3 - A249 offslip (SB)	0	6	0	5	4
	4 - Swale Way	32	7	0	0	6
5 - Grovehurst Road	1	2	0	3	0	

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	0.88	33.77	6.5	35.5	D	614	921
	2 - Grovehurst Road	0.90	57.68	6.5	33.7	F	365	548
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.30	3.33	0.4	1.8	A	407	611
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.60	4.97	1.5	2.0	A	917	1375
	3 - A249 offslip (SB)	1.06	138.98	23.4	62.7	F	475	713
	4 - Swale Way	0.98	90.60	14.6	55.6	F	499	749
	5 - Grovehurst Road	1.01	101.37	17.8	60.1	F	526	789

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	504	126	330	936	0.538	499	0	0.0	1.1	8.161	A
	2 - Grovehurst Road	300	75	696	690	0.434	297	133	0.0	0.8	9.080	A
	3 - A249 onslip (NB)			746				247				
	4 - B2005 - link	331	83	0	1554	0.213	330	746	0.0	0.3	2.937	A
2 - South	1 - A249 onslip (SB)			431				471				
	2 - B2005 - link	746	186	100	1842	0.405	743	331	0.0	0.7	3.267	A
	3 - A249 offslip (SB)	390	97	843	845	0.462	387	0	0.0	0.8	7.800	A
	4 - Swale Way	410	102	385	694	0.590	404	844	0.0	1.4	12.182	B
	5 - Grovehurst Road	431	108	475	775	0.557	426	314	0.0	1.2	10.202	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	601	150	396	889	0.677	598	0	1.1	2.0	12.230	B
	2 - Grovehurst Road	358	89	834	602	0.594	355	160	0.8	1.4	14.410	B
	3 - A249 onslip (NB)			893				296				
	4 - B2005 - link	396	99	0	1554	0.255	396	893	0.3	0.3	3.106	A
2 - South	1 - A249 onslip (SB)			515				564				
	2 - B2005 - link	893	223	119	1831	0.488	892	396	0.7	0.9	3.833	A
	3 - A249 offslip (SB)	466	116	1012	713	0.653	462	0	0.8	1.8	14.096	B
	4 - Swale Way	489	122	462	655	0.747	484	1012	1.4	2.7	20.417	C
	5 - Grovehurst Road	515	129	569	709	0.727	510	377	1.2	2.5	17.694	C

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	737	184	462	841	0.875	722	0	2.0	5.7	27.311	D
	2 - Grovehurst Road	438	110	996	499	0.878	423	188	1.4	5.2	41.282	E
	3 - A249 onslip (NB)			1073				346				
	4 - B2005 - link	462	116	0	1554	0.297	462	1073	0.3	0.4	3.295	A
2 - South	1 - A249 onslip (SB)			601				664				
	2 - B2005 - link	1074	268	139	1819	0.590	1072	462	0.9	1.4	4.805	A
	3 - A249 offslip (SB)	570	143	1211	558	1.022	524	0	1.8	13.3	69.759	F
	4 - Swale Way	599	150	543	613	0.978	568	1192	2.7	10.5	57.631	F
	5 - Grovehurst Road	631	158	671	637	0.990	594	441	2.5	11.6	58.638	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	737	184	472	834	0.883	733	0	5.7	6.5	33.775	D
	2 - Grovehurst Road	438	110	1014	488	0.899	433	192	5.2	6.5	57.680	F
	3 - A249 onslip (NB)			1093				354				
	4 - B2005 - link	473	118	0	1554	0.304	472	1093	0.4	0.4	3.327	A
2 - South	1 - A249 onslip (SB)			614				679				
	2 - B2005 - link	1093	273	142	1817	0.602	1093	473	1.4	1.5	4.966	A
	3 - A249 offslip (SB)	570	143	1235	540	1.057	530	0	13.3	23.4	138.977	F
	4 - Swale Way	599	150	552	608	0.985	583	1212	10.5	14.6	90.596	F
	5 - Grovehurst Road	631	158	687	626	1.008	606	448	11.6	17.8	101.371	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	601	150	441	856	0.702	617	0	6.5	2.5	15.965	C
	2 - Grovehurst Road	358	89	884	572	0.626	377	175	6.5	1.8	20.107	C
	3 - A249 onslip (NB)			932				329				
	4 - B2005 - link	441	110	0	1554	0.284	441	932	0.4	0.4	3.235	A
2 - South	1 - A249 onslip (SB)			575				617				
	2 - B2005 - link	931	233	134	1822	0.511	933	441	1.5	1.1	4.057	A
	3 - A249 offslip (SB)	466	116	1067	671	0.694	550	0	23.4	2.5	46.022	E
	4 - Swale Way	489	122	508	631	0.775	532	1109	14.6	3.9	44.947	E
	5 - Grovehurst Road	515	129	620	672	0.767	571	419	17.8	3.7	47.063	E

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	504	126	343	926	0.544	509	0	2.5	1.2	8.722	A
	2 - Grovehurst Road	300	75	714	679	0.441	303	138	1.8	0.8	9.685	A
	3 - A249 onslip (NB)			761				256				
	4 - B2005 - link	342	86	0	1554	0.220	343	761	0.4	0.3	2.972	A
2 - South	1 - A249 onslip (SB)			446				487				
	2 - B2005 - link	761	190	103	1840	0.414	763	343	1.1	0.7	3.344	A
	3 - A249 offslip (SB)	390	97	866	827	0.471	396	0	2.5	0.9	8.474	A
	4 - Swale Way	410	102	395	689	0.594	419	867	3.9	1.5	13.777	B
	5 - Grovehurst Road	431	108	491	763	0.565	441	323	3.7	1.3	11.494	B

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.14	0.55	1.03	1.19	1.19			N/A	N/A
	2 - Grovehurst Road	0.75	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.27	0.00	0.00	0.27	0.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.68	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.84	0.14	0.92	1.15	1.15			N/A	N/A
	4 - Swale Way	1.39	0.56	1.29	1.80	1.94			N/A	N/A
	5 - Grovehurst Road	1.22	0.51	1.16	1.66	1.87			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.01	0.06	0.93	5.02	7.46			N/A	N/A
	2 - Grovehurst Road	1.41	0.06	0.80	3.23	4.68			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.95	0.07	0.85	1.63	1.98			N/A	N/A
	3 - A249 offslip (SB)	1.80	0.05	0.47	4.78	7.69			N/A	N/A
	4 - Swale Way	2.72	0.08	1.32	6.82	9.83			N/A	N/A
	5 - Grovehurst Road	2.49	0.06	1.05	6.46	9.62			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	5.65	0.05	0.46	16.04	29.04			N/A	N/A
	2 - Grovehurst Road	5.18	0.06	1.03	14.81	23.94			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.42	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.42	0.03	0.26	1.42	1.42			N/A	N/A
	3 - A249 offslip (SB)	13.27	0.85	9.04	29.34	37.93			N/A	N/A
	4 - Swale Way	10.54	0.22	5.42	26.35	36.20			N/A	N/A
	5 - Grovehurst Road	11.63	0.31	6.58	28.19	38.04			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.47	0.04	0.37	14.81	35.52			N/A	N/A
	2 - Grovehurst Road	6.53	0.05	0.48	18.63	33.69			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.03	0.31	1.36	1.78			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.49	0.03	0.26	1.49	1.49			N/A	N/A
	3 - A249 offslip (SB)	23.45	1.82	17.53	49.58	62.70			N/A	N/A
	4 - Swale Way	14.62	0.17	6.14	39.00	55.56			N/A	N/A
	5 - Grovehurst Road	17.80	0.36	9.87	44.18	60.08			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.48	0.05	0.47	6.83	11.33			N/A	N/A
	2 - Grovehurst Road	1.76	0.04	0.42	4.72	8.06			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.00	0.00	0.40	0.40			N/A	N/A
	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.52	1.05	1.08	1.55			N/A	N/A

2 - South	3 - A249 offslip (SB)	2.48	0.04	0.39	6.59	12.70			N/A	N/A
	4 - Swale Way	3.92	0.05	0.49	11.12	18.86			N/A	N/A
	5 - Grovehurst Road	3.73	0.05	0.49	10.58	17.85			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	1.22	0.03	0.32	2.37	6.22			N/A	N/A
	2 - Grovehurst Road	0.80	0.03	0.30	1.48	3.80			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.28	0.00	0.00	0.28	0.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.71	0.09	0.82	1.39	1.46			N/A	N/A
	3 - A249 offslip (SB)	0.91	0.03	0.27	0.91	2.18			N/A	N/A
	4 - Swale Way	1.52	0.03	0.30	1.77	7.10			N/A	N/A
	5 - Grovehurst Road	1.34	0.03	0.29	1.45	5.64			N/A	N/A

2017, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	91.44	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	672.02	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	749	100.000
	2 - Grovehurst Road		ONE HOUR	✓	222	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	431	100.000
	4 - Swale Way		ONE HOUR	✓	989	100.000
	5 - Grovehurst Road		ONE HOUR	✓	528	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	569
		2 - Grovehurst Road	0	0	27	195
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	234	470	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	42	0	0	396	322
	3 - A249 offslip (SB)	1	27	0	187	216
	4 - Swale Way	509	351	0	0	129
	5 - Grovehurst Road	110	318	0	100	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	1	0	16
	2 - Grovehurst Road	0	0	0	1
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	22	1
	3 - A249 offslip (SB)	0	11	0	7	4
	4 - Swale Way	14	2	0	0	2
	5 - Grovehurst Road	0	2	0	3	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.09	176.66	43.4	91.6	F	687	1031
	2 - Grovehurst Road	0.46	12.71	0.8	3.7	B	204	306
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.38	3.65	0.6	2.0	A	554	832
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.44	3.54	0.8	1.7	A	701	1051
	3 - A249 offslip (SB)	0.61	11.60	1.5	4.0	B	395	593
	4 - Swale Way	1.74	1810.92	362.8	184.9	F	908	1361
	5 - Grovehurst Road	0.83	28.52	4.4	22.2	D	485	727

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	564	141	500	831	0.679	556	0	0.0	2.0	12.739	B
	2 - Grovehurst Road	167	42	756	671	0.249	166	300	0.0	0.3	7.104	A

	3 - A249 onslip (NB)			568				354				
	4 - B2005 - link	502	125	0	1591	0.315	500	568	0.0	0.5	3.295	A
2 - South	1 - A249 onslip (SB)			574				467				
	2 - B2005 - link	569	142	74	1822	0.312	567	500	0.0	0.5	2.865	A
	3 - A249 offslip (SB)	324	81	641	984	0.330	323	0	0.0	0.5	5.431	A
	4 - Swale Way	745	186	454	733	1.015	686	510	0.0	14.6	53.461	F
	5 - Grovehurst Road	398	99	649	683	0.582	392	491	0.0	1.3	12.160	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	673	168	551	795	0.847	663	0	2.0	4.7	25.368	D
	2 - Grovehurst Road	200	50	871	595	0.335	199	343	0.3	0.5	9.067	A
	3 - A249 onslip (NB)			678				392				
	4 - B2005 - link	552	138	0	1591	0.347	551	678	0.5	0.5	3.464	A
2 - South	1 - A249 onslip (SB)			639				487				
	2 - B2005 - link	679	170	89	1813	0.374	678	550	0.5	0.6	3.170	A
	3 - A249 offslip (SB)	387	97	768	884	0.438	386	0	0.5	0.8	7.211	A
	4 - Swale Way	889	222	544	683	1.302	681	610	14.6	66.7	233.318	F
	5 - Grovehurst Road	475	119	654	680	0.698	471	570	1.3	2.2	16.976	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	825	206	600	760	1.085	741	0	4.7	25.5	89.210	F
	2 - Grovehurst Road	244	61	964	535	0.457	243	378	0.5	0.8	12.288	B
	3 - A249 onslip (NB)			777				430				
	4 - B2005 - link	601	150	0	1591	0.378	600	777	0.5	0.6	3.635	A
2 - South	1 - A249 onslip (SB)			707				487				
	2 - B2005 - link	776	194	109	1802	0.431	775	598	0.6	0.8	3.504	A
	3 - A249 offslip (SB)	475	119	884	794	0.598	472	0	0.8	1.4	11.098	B
	4 - Swale Way	1089	272	638	629	1.732	629	717	66.7	181.8	722.148	F
	5 - Grovehurst Road	581	145	620	703	0.827	573	647	2.2	4.1	26.309	D

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	825	206	604	758	1.088	753	0	25.5	43.4	176.655	F
	2 - Grovehurst Road	244	61	975	527	0.463	244	382	0.8	0.8	12.706	B
	3 - A249 onslip (NB)			787				433				
	4 - B2005 - link	604	151	0	1591	0.380	604	787	0.6	0.6	3.647	A
2 - South	1 - A249 onslip (SB)			711				487				
	2 - B2005 - link	786	197	110	1801	0.436	786	601	0.8	0.8	3.544	A
	3 - A249 offslip (SB)	475	119	896	784	0.605	474	0	1.4	1.5	11.604	B
	4 - Swale Way	1089	272	645	625	1.742	625	725	181.8	297.7	1388.097	F
	5 - Grovehurst Road	581	145	618	704	0.826	580	652	4.1	4.4	28.517	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	673	168	551	795	0.847	777	0	43.4	17.5	146.187	F
	2 - Grovehurst Road	200	50	958	536	0.372	201	370	0.8	0.6	10.755	B
	3 - A249 onslip (NB)			767				392				
	4 - B2005 - link	551	138	0	1591	0.346	551	767	0.6	0.5	3.462	A
2 - South	1 - A249 onslip (SB)			640				482				
	2 - B2005 - link	770	193	91	1812	0.425	770	548	0.8	0.7	3.458	A
	3 - A249 offslip (SB)	387	97	862	810	0.478	390	0	1.5	0.9	8.613	A
	4 - Swale Way	889	222	590	657	1.353	657	662	297.7	355.7	1722.510	F
	5 - Grovehurst Road	475	119	639	690	0.688	483	607	4.4	2.3	18.004	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	564	141	518	818	0.689	624	0	17.5	2.4	24.011	C

1 - North	2 - Grovehurst Road	167	42	820	628	0.266	168	322	0.6	0.4	7.836	A
	3 - A249 onslip (NB)			622				366				
	4 - B2005 - link	518	129	0	1591	0.326	518	622	0.5	0.5	3.358	A
2 - South	1 - A249 onslip (SB)			592				488				
	2 - B2005 - link	625	156	76	1821	0.343	625	516	0.7	0.5	3.012	A
	3 - A249 offslip (SB)	324	81	701	936	0.347	326	0	0.9	0.5	5.916	A
	4 - Swale Way	745	186	484	717	1.039	716	543	355.7	362.8	1810.923	F
	5 - Grovehurst Road	398	99	679	664	0.599	401	522	2.3	1.5	13.846	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.02	0.27	1.23	3.54	4.41			N/A	N/A
	2 - Grovehurst Road	0.33	0.00	0.00	0.33	0.33			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
	3 - A249 offslip (SB)	0.49	0.00	0.00	0.49	0.49			N/A	N/A
	4 - Swale Way	14.57	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.35	0.55	1.00	1.40	1.45			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.71	0.11	1.83	12.00	17.01			N/A	N/A
	2 - Grovehurst Road	0.50	0.00	0.00	0.50	0.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.60	0.12	0.87	1.37	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.77	0.09	0.84	1.02	1.02			N/A	N/A
	4 - Swale Way	66.71	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.19	0.09	1.38	4.89	6.73			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	25.53	4.99	21.53	47.32	57.09			N/A	N/A
	2 - Grovehurst Road	0.82	0.03	0.26	0.82	0.82			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.03	0.25	0.60	0.60			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.75	0.03	0.25	0.75	0.75			N/A	N/A
	3 - A249 offslip (SB)	1.44	0.03	0.27	1.44	2.10			N/A	N/A
	4 - Swale Way	181.76	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.15	0.04	0.39	10.86	22.23			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	43.45	11.01	38.08	77.14	91.56			N/A	N/A
	2 - Grovehurst Road	0.85	0.03	0.29	1.24	3.67			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.03	0.28	0.61	2.00			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.77	0.03	0.27	0.77	1.69			N/A	N/A
	3 - A249 offslip (SB)	1.50	0.03	0.28	1.50	3.98			N/A	N/A
	4 - Swale Way	297.70	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.38	0.03	0.32	5.99	21.57			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	17.50	1.14	12.85	37.15	47.16			N/A	N/A
	2 - Grovehurst Road	0.60	0.10	0.82	1.36	1.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.74	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.93	0.13	0.95	1.25	1.66			N/A	N/A
	4 - Swale Way	355.73	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.32	0.04	0.42	6.36	11.31			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.35	0.03	0.30	2.35	10.64			N/A	N/A
	2 - Grovehurst Road	0.37	0.03	0.30	0.86	1.18			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.49	0.00	0.00	0.49	0.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.54	0.04	0.43	1.35	1.48			N/A	N/A
	4 - Swale Way	362.76	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.55	0.04	0.37	3.93	7.62			N/A	N/A

2024, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	184.04	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	328.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	838	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	569	100.000
	4 - Swale Way		ONE HOUR	✓	676	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	796
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	147	326	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	141	0	0	885	183
	3 - A249 offslip (SB)	1	18	0	376	174
	4 - Swale Way	374	225	0	0	77
	5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	7	0	17
	2 - Grovehurst Road	0	0	8	3
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	15	6
	3 - A249 offslip (SB)	0	6	0	9	4
	4 - Swale Way	36	9	0	0	9
	5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.12	220.97	57.4	108.4	F	769	1153
	2 - Grovehurst Road	1.15	298.50	37.3	73.2	F	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.29	3.30	0.4	1.7	A	424	636
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	6.11	2.0	4.6	A	1108	1662
	3 - A249 offslip (SB)	1.48	1034.84	128.6	200.0	F	522	783
	4 - Swale Way	1.17	365.54	65.6	115.2	F	620	930
	5 - Grovehurst Road	1.14	284.68	50.0	93.2	F	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	351	895	0.705	622	0	0.0	2.3	12.775	B
	2 - Grovehurst Road	331	83	832	590	0.561	326	140	0.0	1.2	13.393	B

	3 - A249 onslip (NB)			898				260				
	4 - B2005 - link	352	88	0	1540	0.229	351	898	0.0	0.3	3.025	A
2 - South	1 - A249 onslip (SB)			479				533				
	2 - B2005 - link	901	225	127	1792	0.503	897	352	0.0	1.0	4.003	A
	3 - A249 offslip (SB)	428	107	1024	673	0.637	422	0	0.0	1.7	13.983	B
	4 - Swale Way	509	127	383	673	0.756	498	1063	0.0	2.8	19.440	C
	5 - Grovehurst Road	460	115	560	699	0.658	453	321	0.0	1.8	14.210	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	414	851	0.885	738	0	2.3	6.1	28.641	D
	2 - Grovehurst Road	396	99	986	490	0.807	386	166	1.2	3.5	32.227	D
	3 - A249 onslip (NB)			1066				307				
	4 - B2005 - link	414	103	0	1540	0.269	414	1066	0.3	0.4	3.197	A
2 - South	1 - A249 onslip (SB)			564				629				
	2 - B2005 - link	1069	267	151	1779	0.601	1067	414	1.0	1.5	5.041	A
	3 - A249 offslip (SB)	512	128	1217	524	0.977	480	0	1.7	9.6	59.703	F
	4 - Swale Way	608	152	449	640	0.949	584	1249	2.8	8.8	49.568	E
	5 - Grovehurst Road	549	137	658	628	0.874	535	375	1.8	5.3	34.489	D

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	444	829	1.112	816	0	6.1	32.8	100.640	F
	2 - Grovehurst Road	484	121	1081	428	1.132	415	179	3.5	20.8	127.599	F
	3 - A249 onslip (NB)			1166				330				
	4 - B2005 - link	444	111	0	1540	0.289	444	1166	0.4	0.4	3.286	A
2 - South	1 - A249 onslip (SB)			608				681				
	2 - B2005 - link	1171	293	164	1771	0.661	1169	444	1.5	1.9	5.957	A
	3 - A249 offslip (SB)	626	157	1333	435	1.441	433	0	9.6	58.0	301.133	F
	4 - Swale Way	744	186	460	635	1.172	628	1305	8.8	37.8	150.258	F
	5 - Grovehurst Road	673	168	707	592	1.136	581	381	5.3	28.3	122.229	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	448	827	1.116	824	0	32.8	57.4	208.500	F
	2 - Grovehurst Road	484	121	1091	421	1.151	418	180	20.8	37.3	267.696	F
	3 - A249 onslip (NB)			1178				332				
	4 - B2005 - link	448	112	0	1540	0.291	448	1178	0.4	0.4	3.296	A
2 - South	1 - A249 onslip (SB)			612				686				
	2 - B2005 - link	1182	295	165	1771	0.668	1182	448	1.9	2.0	6.107	A
	3 - A249 offslip (SB)	626	157	1347	424	1.478	424	0	58.0	108.7	714.975	F
	4 - Swale Way	744	186	460	635	1.173	633	1310	37.8	65.6	306.303	F
	5 - Grovehurst Road	673	168	713	588	1.144	586	381	28.3	50.0	254.342	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	444	830	0.908	816	0	57.4	41.9	220.970	F
	2 - Grovehurst Road	396	99	1081	428	0.924	417	179	37.3	32.0	298.497	F
	3 - A249 onslip (NB)			1168				330				
	4 - B2005 - link	444	111	0	1540	0.288	444	1168	0.4	0.4	3.284	A
2 - South	1 - A249 onslip (SB)			608				680				
	2 - B2005 - link	1172	293	164	1771	0.662	1172	444	2.0	2.0	6.010	A
	3 - A249 offslip (SB)	512	128	1336	432	1.184	432	0	108.7	128.6	997.300	F
	4 - Swale Way	608	152	461	635	0.958	625	1307	65.6	61.2	365.536	F
	5 - Grovehurst Road	549	137	705	594	0.925	582	381	50.0	41.7	284.680	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	631	158	444	830	0.760	783	0	41.9	4.0	98.091	F

1 - North	2 - Grovehurst Road	331	83	1049	449	0.738	436	177	32.0	5.9	167.620	F
	3 - A249 onslip (NB)			1154				331				
	4 - B2005 - link	444	111	0	1540	0.288	444	1154	0.4	0.4	3.286	A
	1 - A249 onslip (SB)			607				677				
2 - South	2 - B2005 - link	1156	289	164	1771	0.652	1156	444	2.0	1.9	5.854	A
	3 - A249 offslip (SB)	428	107	1319	445	0.963	442	0	128.6	125.3	1034.835	F
	4 - Swale Way	509	127	460	635	0.801	625	1301	61.2	32.2	272.751	F
	5 - Grovehurst Road	460	115	703	595	0.773	581	381	41.7	11.4	172.017	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.27	0.16	1.22	4.56	5.90			N/A	N/A
	2 - Grovehurst Road	1.24	0.06	0.84	2.63	3.68			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.29	0.00	0.00	0.29	0.29			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.68	0.03	0.25	1.68	1.68			N/A	N/A
	4 - Swale Way	2.84	0.07	1.12	7.48	11.16			N/A	N/A
	5 - Grovehurst Road	1.84	0.07	1.11	4.21	5.92			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.05	0.15	2.79	15.12	20.99			N/A	N/A
	2 - Grovehurst Road	3.53	0.08	1.46	9.23	13.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.37	0.00	0.00	0.37	0.37			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.48	0.07	0.96	3.26	4.60			N/A	N/A
	3 - A249 offslip (SB)	9.62	0.03	0.28	9.62	15.19			N/A	N/A
	4 - Swale Way	8.81	0.26	4.91	21.17	28.58			N/A	N/A
	5 - Grovehurst Road	5.33	0.12	2.17	13.60	19.19			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	32.82	9.10	29.04	56.73	66.83			N/A	N/A
	2 - Grovehurst Road	20.82	4.73	17.87	37.14	44.30			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.91	0.03	0.27	1.91	1.91			N/A	N/A
	3 - A249 offslip (SB)	57.99	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	37.83	13.29	34.52	61.49	71.03			N/A	N/A
	5 - Grovehurst Road	28.28	7.87	25.00	48.66	57.28			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	57.44	20.31	52.63	93.83	108.43			N/A	N/A
	2 - Grovehurst Road	37.32	11.64	33.56	62.70	73.17			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.03	0.30	1.27	1.74			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.98	0.03	0.26	1.98	1.98			N/A	N/A
	3 - A249 offslip (SB)	108.67	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	65.57	29.29	61.77	99.37	112.23			N/A	N/A
	5 - Grovehurst Road	50.02	18.16	45.93	80.90	93.24			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	41.90	14.08	38.06	69.14	80.23			N/A	N/A
	2 - Grovehurst Road	31.96	9.14	28.39	54.77	64.36			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.97	0.27	1.19	3.42	4.25			N/A	N/A
	3 - A249 offslip (SB)	128.57	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	61.24	21.89	56.21	99.80	115.24			N/A	N/A
	5 - Grovehurst Road	41.72	11.75	37.07	72.18	85.00			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.95	0.04	0.35	9.04	21.44			N/A	N/A
	2 - Grovehurst Road	5.90	0.07	1.15	16.60	25.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.90	0.53	1.26	2.88	3.54			N/A	N/A
	3 - A249 offslip (SB)	125.27	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	32.25	5.05	26.44	62.59	76.60			N/A	N/A
	5 - Grovehurst Road	11.41	0.32	6.53	27.51	37.04			N/A	N/A

2024, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	208.46	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1529.32	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	813	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	442	100.000
	4 - Swale Way		ONE HOUR	✓	1252	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	633
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	262	521	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	42	0	0	465	322
	3 - A249 offslip (SB)	1	27	0	198	216
	4 - Swale Way	662	431	0	0	159
	5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	1	0	20
	2 - Grovehurst Road	0	0	0	1
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	26	1
	3 - A249 offslip (SB)	0	11	0	8	4
	4 - Swale Way	17	2	0	0	3
	5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.21	388.10	87.6	137.8	F	746	1119
	2 - Grovehurst Road	0.49	13.57	0.9	3.5	B	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.38	3.63	0.6	2.1	A	547	820
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.45	3.76	0.8	1.5	A	749	1123
	3 - A249 offslip (SB)	0.65	13.50	1.8	5.2	B	406	608
	4 - Swale Way	2.19	3677.22	727.1	181.7	F	1149	1723
	5 - Grovehurst Road	0.85	32.51	5.0	26.6	D	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	612	153	500	806	0.759	600	0	0.0	2.9	16.654	C
	2 - Grovehurst Road	171	43	800	630	0.271	169	300	0.0	0.4	7.792	A

	3 - A249 onslip (NB)			617				353				
	4 - B2005 - link	502	125	0	1591	0.316	500	617	0.0	0.5	3.295	A
2 - South	1 - A249 onslip (SB)			579				489				
	2 - B2005 - link	619	155	79	1770	0.349	616	500	0.0	0.5	3.115	A
	3 - A249 offslip (SB)	333	83	695	923	0.360	331	0	0.0	0.6	6.052	A
	4 - Swale Way	943	236	453	721	1.307	709	572	0.0	58.3	159.833	F
	5 - Grovehurst Road	402	101	671	660	0.609	396	491	0.0	1.5	13.374	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	731	183	542	778	0.940	707	0	2.9	8.8	41.313	E
	2 - Grovehurst Road	204	51	911	555	0.368	203	338	0.4	0.6	10.213	B
	3 - A249 onslip (NB)			730				385				
	4 - B2005 - link	542	135	0	1591	0.341	542	730	0.5	0.5	3.432	A
2 - South	1 - A249 onslip (SB)			634				492				
	2 - B2005 - link	732	183	95	1761	0.415	731	540	0.5	0.7	3.492	A
	3 - A249 offslip (SB)	397	99	826	819	0.485	396	0	0.6	0.9	8.487	A
	4 - Swale Way	1126	281	539	673	1.672	673	682	58.3	171.4	642.020	F
	5 - Grovehurst Road	480	120	650	674	0.712	477	563	1.5	2.3	17.898	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	895	224	594	742	1.206	737	0	8.8	48.4	154.316	F
	2 - Grovehurst Road	250	62	969	518	0.483	249	362	0.6	0.9	13.306	B
	3 - A249 onslip (NB)			793				425				
	4 - B2005 - link	594	149	0	1591	0.374	594	793	0.5	0.6	3.611	A
2 - South	1 - A249 onslip (SB)			706				494				
	2 - B2005 - link	790	198	115	1750	0.452	790	592	0.7	0.8	3.747	A
	3 - A249 offslip (SB)	487	122	905	756	0.644	483	0	0.9	1.7	13.049	B
	4 - Swale Way	1378	345	614	632	2.182	632	774	171.4	358.1	1516.049	F
	5 - Grovehurst Road	588	147	622	693	0.848	579	623	2.3	4.7	29.145	D

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	895	224	599	739	1.211	738	0	48.4	87.6	337.970	F
	2 - Grovehurst Road	250	62	973	515	0.485	250	364	0.9	0.9	13.568	B
	3 - A249 onslip (NB)			795				428				
	4 - B2005 - link	599	150	0	1591	0.376	599	795	0.6	0.6	3.627	A
2 - South	1 - A249 onslip (SB)			712				495				
	2 - B2005 - link	793	198	116	1749	0.453	793	596	0.8	0.8	3.763	A
	3 - A249 offslip (SB)	487	122	909	753	0.647	486	0	1.7	1.8	13.500	B
	4 - Swale Way	1378	345	617	630	2.188	630	779	358.1	545.2	2489.328	F
	5 - Grovehurst Road	588	147	621	694	0.847	587	626	4.7	5.0	32.511	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	731	183	546	775	0.943	766	0	87.6	78.7	388.101	F
	2 - Grovehurst Road	204	51	960	521	0.392	205	352	0.9	0.7	11.448	B
	3 - A249 onslip (NB)			777				388				
	4 - B2005 - link	546	136	0	1591	0.343	546	777	0.6	0.5	3.448	A
2 - South	1 - A249 onslip (SB)			641				490				
	2 - B2005 - link	781	195	97	1760	0.444	781	543	0.8	0.8	3.677	A
	3 - A249 offslip (SB)	397	99	878	776	0.512	400	0	1.8	1.1	9.650	A
	4 - Swale Way	1126	281	564	660	1.706	660	715	545.2	661.6	3224.325	F
	5 - Grovehurst Road	480	120	641	680	0.706	490	583	5.0	2.5	19.765	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	612	153	499	807	0.758	797	0	78.7	32.4	254.588	F

1 - North	2 - Grovehurst Road	171	43	953	523	0.327	172	343	0.7	0.5	10.271	B
	3 - A249 onslip (NB)			772				352				
	4 - B2005 - link	498	125	0	1591	0.313	499	772	0.5	0.5	3.299	A
2 - South	1 - A249 onslip (SB)			577				484				
	2 - B2005 - link	780	195	81	1769	0.441	780	497	0.8	0.8	3.641	A
	3 - A249 offslip (SB)	333	83	861	789	0.422	334	0	1.1	0.7	7.935	A
	4 - Swale Way	943	236	527	681	1.384	681	668	661.6	727.1	3677.222	F
	5 - Grovehurst Road	402	101	655	671	0.599	406	553	2.5	1.5	13.786	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.91	0.08	1.39	7.35	10.58			N/A	N/A
	2 - Grovehurst Road	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.56	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	58.33	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.50	1.05	1.50	1.90	1.95			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.77	0.24	4.77	21.27	28.84			N/A	N/A
	2 - Grovehurst Road	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.71	0.19	0.92	1.39	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.93	0.09	0.90	1.44	1.81			N/A	N/A
	4 - Swale Way	171.42	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.32	0.09	1.42	5.30	7.30			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	48.40	20.91	45.33	73.93	83.76			N/A	N/A
	2 - Grovehurst Road	0.91	0.03	0.26	0.91	0.91			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.25	0.59	0.59			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.03	0.25	0.82	0.82			N/A	N/A
	3 - A249 offslip (SB)	1.74	0.03	0.28	1.74	5.22			N/A	N/A
	4 - Swale Way	358.13	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.67	0.04	0.43	12.87	24.30			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	87.62	46.62	84.16	124.47	137.83			N/A	N/A
	2 - Grovehurst Road	0.93	0.03	0.28	0.95	3.54			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.03	0.28	0.60	2.14			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.03	0.27	0.82	1.08			N/A	N/A
	3 - A249 offslip (SB)	1.79	0.03	0.28	1.79	4.43			N/A	N/A
	4 - Swale Way	545.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.02	0.03	0.33	9.18	26.61			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	78.75	35.89	74.42	118.72	133.82			N/A	N/A
	2 - Grovehurst Road	0.66	0.09	0.80	1.36	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.80	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.07	0.08	0.92	1.87	2.53			N/A	N/A
	4 - Swale Way	661.64	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.54	0.04	0.43	6.99	12.43			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	32.45	9.45	28.89	55.36	64.95			N/A	N/A
	2 - Grovehurst Road	0.49	0.04	0.44	1.27	1.39			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.79	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.74	0.05	0.49	1.38	1.89			N/A	N/A
	4 - Swale Way	727.07	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.55	0.04	0.35	3.78	7.90			N/A	N/A

2024 + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	257.29	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	477.81	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	881	100.000
	2 - Grovehurst Road		ONE HOUR	✓	446	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	592	100.000
	4 - Swale Way		ONE HOUR	✓	677	100.000
	5 - Grovehurst Road		ONE HOUR	✓	736	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	45	0	836
		2 - Grovehurst Road	0	0	25	421
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	151	365	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	144	0	0	885	225
	3 - A249 offslip (SB)	1	18	0	376	197
	4 - Swale Way	375	225	0	0	77
	5 - Grovehurst Road	287	277	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	13	0	16
	2 - Grovehurst Road	0	0	8	4
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	15	6
	3 - A249 offslip (SB)	0	6	0	9	4
	4 - Swale Way	37	9	0	0	9
	5 - Grovehurst Road	1	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.16	320.57	77.8	130.9	F	808	1213
	2 - Grovehurst Road	1.19	387.15	45.2	84.5	F	409	614
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.29	3.28	0.4	1.7	A	428	642
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.66	5.99	1.9	4.8	A	1123	1684
	3 - A249 offslip (SB)	1.48	1143.80	141.4	200.0	F	543	815
	4 - Swale Way	1.23	504.35	84.1	143.5	F	621	932
	5 - Grovehurst Road	1.33	746.08	131.6	200.0	F	675	1013

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	663	166	378	881	0.753	652	0	0.0	2.8	15.037	C
	2 - Grovehurst Road	336	84	886	555	0.605	330	144	0.0	1.5	15.631	C

	3 - A249 onslip (NB)			930				286				
	4 - B2005 - link	379	95	0	1539	0.246	378	930	0.0	0.3	3.097	A
2 - South	1 - A249 onslip (SB)			508				593				
	2 - B2005 - link	931	233	126	1793	0.519	926	382	0.0	1.1	4.136	A
	3 - A249 offslip (SB)	446	111	1053	651	0.684	438	0	0.0	2.0	16.264	C
	4 - Swale Way	510	127	432	644	0.791	496	1058	0.0	3.4	22.638	C
	5 - Grovehurst Road	554	139	560	700	0.792	541	368	0.0	3.4	21.128	C

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	792	198	431	844	0.939	768	0	2.8	8.9	38.615	E
	2 - Grovehurst Road	401	100	1033	460	0.872	387	165	1.5	4.9	43.213	E
	3 - A249 onslip (NB)			1094				326				
	4 - B2005 - link	431	108	0	1539	0.280	431	1094	0.3	0.4	3.248	A
2 - South	1 - A249 onslip (SB)			576				681				
	2 - B2005 - link	1095	274	142	1784	0.614	1093	434	1.1	1.6	5.196	A
	3 - A249 offslip (SB)	532	133	1235	510	1.043	483	0	2.0	14.4	81.190	F
	4 - Swale Way	609	152	498	612	0.995	574	1220	3.4	12.1	64.565	F
	5 - Grovehurst Road	662	165	650	634	1.043	608	422	3.4	16.9	77.607	F

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	970	242	440	837	1.159	829	0	8.9	44.1	129.131	F
	2 - Grovehurst Road	491	123	1098	417	1.176	409	171	4.9	25.4	155.660	F
	3 - A249 onslip (NB)			1173				334				
	4 - B2005 - link	440	110	0	1539	0.286	440	1173	0.4	0.4	3.274	A
2 - South	1 - A249 onslip (SB)			585				706				
	2 - B2005 - link	1175	294	142	1784	0.659	1173	443	1.6	1.9	5.885	A
	3 - A249 offslip (SB)	652	163	1316	447	1.457	446	0	14.4	65.8	341.757	F
	4 - Swale Way	745	186	508	606	1.229	603	1254	12.1	47.7	194.483	F
	5 - Grovehurst Road	810	203	683	610	1.329	608	428	16.9	67.5	264.260	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	970	242	440	837	1.159	835	0	44.1	77.8	272.731	F
	2 - Grovehurst Road	491	123	1104	413	1.188	412	172	25.4	45.2	325.360	F
	3 - A249 onslip (NB)			1181				335				
	4 - B2005 - link	440	110	0	1539	0.286	440	1181	0.4	0.4	3.275	A
2 - South	1 - A249 onslip (SB)			585				709				
	2 - B2005 - link	1183	296	142	1784	0.663	1183	443	1.9	1.9	5.986	A
	3 - A249 offslip (SB)	652	163	1325	440	1.481	440	0	65.8	118.7	765.986	F
	4 - Swale Way	745	186	509	606	1.230	605	1256	47.7	82.7	399.548	F
	5 - Grovehurst Road	810	203	686	607	1.334	607	428	67.5	118.3	560.553	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	792	198	440	837	0.946	826	0	77.8	69.2	320.570	F
	2 - Grovehurst Road	401	100	1095	419	0.956	419	171	45.2	40.7	387.150	F
	3 - A249 onslip (NB)			1180				335				
	4 - B2005 - link	440	110	0	1539	0.286	440	1180	0.4	0.4	3.275	A
2 - South	1 - A249 onslip (SB)			585				708				
	2 - B2005 - link	1181	295	142	1784	0.662	1181	443	1.9	1.9	5.969	A
	3 - A249 offslip (SB)	532	133	1323	442	1.205	442	0	118.7	141.4	1068.947	F
	4 - Swale Way	609	152	509	606	1.004	603	1256	82.7	84.1	504.348	F
	5 - Grovehurst Road	662	165	684	609	1.086	609	427	118.3	131.6	746.083	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	663	166	439	838	0.791	826	0	69.2	28.5	216.575	F

1 - North	2 - Grovehurst Road	336	84	1094	420	0.799	410	171	40.7	22.1	280.538	F
	3 - A249 onslip (NB)			1171				333				
	4 - B2005 - link	439	110	0	1539	0.285	439	1171	0.4	0.4	3.270	A
2 - South	1 - A249 onslip (SB)			583				704				
	2 - B2005 - link	1172	293	142	1784	0.657	1172	441	1.9	1.9	5.890	A
	3 - A249 offslip (SB)	446	111	1314	448	0.994	446	0	141.4	141.4	1143.799	F
	4 - Swale Way	510	127	508	607	0.840	599	1252	84.1	61.7	439.383	F
	5 - Grovehurst Road	554	139	680	612	0.905	607	427	131.6	118.2	740.722	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.84	0.08	1.37	7.13	10.27			N/A	N/A
	2 - Grovehurst Road	1.47	0.04	0.39	3.83	6.90			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.07	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	2.04	0.03	0.25	2.04	2.04			N/A	N/A
	4 - Swale Way	3.35	0.04	0.39	8.91	17.64			N/A	N/A
	5 - Grovehurst Road	3.40	0.03	0.27	3.40	3.73			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.92	0.25	4.92	21.52	29.08			N/A	N/A
	2 - Grovehurst Road	4.92	0.08	1.34	13.31	19.72			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.57	0.07	1.02	3.47	4.82			N/A	N/A
	3 - A249 offslip (SB)	14.37	0.03	0.30	14.37	55.70			N/A	N/A
	4 - Swale Way	12.06	0.24	6.24	30.24	41.55			N/A	N/A
	5 - Grovehurst Road	16.93	0.08	3.07	49.50	78.12			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	44.09	16.55	40.60	70.42	80.85			N/A	N/A
	2 - Grovehurst Road	25.41	6.94	22.38	43.81	51.64			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.90	0.03	0.27	1.90	1.90			N/A	N/A
	3 - A249 offslip (SB)	65.77	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	47.72	18.08	44.02	76.09	87.32			N/A	N/A
	5 - Grovehurst Road	67.50	19.88	60.50	116.22	136.46			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	77.75	36.19	73.64	116.33	130.86			N/A	N/A
	2 - Grovehurst Road	45.22	17.23	41.73	71.93	82.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.30	1.22	1.74			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.94	0.03	0.26	1.94	1.94			N/A	N/A
	3 - A249 offslip (SB)	118.72	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	82.73	42.16	79.10	119.55	133.06			N/A	N/A
	5 - Grovehurst Road	118.31	59.49	113.16	172.38	192.26			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	69.18	26.17	63.97	110.93	127.42			N/A	N/A
	2 - Grovehurst Road	40.65	10.73	35.81	71.39	84.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.95	0.21	1.11	3.51	4.44			N/A	N/A
	3 - A249 offslip (SB)	141.39	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	84.12	38.04	79.45	127.22	143.50			N/A	N/A
	5 - Grovehurst Road	131.56	>199	>199	>199	>199			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	28.48	6.70	24.64	50.96	60.74			N/A	N/A
	2 - Grovehurst Road	22.12	1.26	15.94	48.10	61.53			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.93	0.52	1.27	2.96	3.68			N/A	N/A
	3 - A249 offslip (SB)	141.40	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	61.68	17.55	55.02	107.04	126.04			N/A	N/A
	5 - Grovehurst Road	118.23	>199	>199	>199	>199			N/A	N/A

2024 + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	335.18	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1721.50	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	884	100.000
	2 - Grovehurst Road		ONE HOUR	✓	235	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	481	100.000
	4 - Swale Way		ONE HOUR	✓	1252	100.000
	5 - Grovehurst Road		ONE HOUR	✓	595	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	183	0	701
		2 - Grovehurst Road	0	0	27	208
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	264	540	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	45	0	0	467	393
	3 - A249 offslip (SB)	1	27	0	198	255
	4 - Swale Way	662	431	0	0	159
	5 - Grovehurst Road	150	339	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	2	0	18
	2 - Grovehurst Road	0	0	0	2
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	9	0	0	26	2
	3 - A249 offslip (SB)	0	11	0	8	3
	4 - Swale Way	17	2	0	0	3
	5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.31	610.53	134.7	200.0	F	811	1217
	2 - Grovehurst Road	0.51	14.70	1.0	3.6	B	216	323
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.38	3.64	0.6	2.2	A	549	824
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.46	3.81	0.9	1.5	A	777	1166
	3 - A249 offslip (SB)	0.71	16.53	2.4	10.4	C	441	662
	4 - Swale Way	2.38	4298.91	798.5	181.7	F	1149	1723
	5 - Grovehurst Road	0.91	46.89	8.0	42.5	E	546	819

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	666	166	500	814	0.818	650	0	0.0	4.0	20.307	C
	2 - Grovehurst Road	177	44	851	595	0.297	175	299	0.0	0.4	8.544	A

	3 - A249 onslip (NB)			670				356				
	4 - B2005 - link	502	126	0	1590	0.316	500	670	0.0	0.5	3.296	A
2 - South	1 - A249 onslip (SB)			579				497				
	2 - B2005 - link	668	167	79	1776	0.376	665	500	0.0	0.6	3.236	A
	3 - A249 offslip (SB)	362	91	744	891	0.406	359	0	0.0	0.7	6.739	A
	4 - Swale Way	943	236	533	675	1.396	665	570	0.0	69.3	200.556	F
	5 - Grovehurst Road	448	112	635	682	0.657	441	564	0.0	1.8	14.518	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	795	199	542	785	1.012	748	0	4.0	15.6	61.880	F
	2 - Grovehurst Road	211	53	957	525	0.403	210	333	0.4	0.7	11.409	B
	3 - A249 onslip (NB)			779				388				
	4 - B2005 - link	542	136	0	1590	0.341	542	779	0.5	0.5	3.434	A
2 - South	1 - A249 onslip (SB)			635				502				
	2 - B2005 - link	776	194	94	1767	0.439	775	540	0.6	0.8	3.629	A
	3 - A249 offslip (SB)	432	108	869	790	0.547	430	0	0.7	1.2	9.949	A
	4 - Swale Way	1126	281	628	622	1.809	622	672	69.3	195.2	802.309	F
	5 - Grovehurst Road	535	134	607	701	0.763	530	644	1.8	3.0	20.516	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	973	243	596	748	1.301	746	0	15.6	72.4	225.377	F
	2 - Grovehurst Road	259	65	992	505	0.513	257	350	0.7	1.0	14.471	B
	3 - A249 onslip (NB)			819				430				
	4 - B2005 - link	596	149	0	1590	0.375	596	819	0.5	0.6	3.619	A
2 - South	1 - A249 onslip (SB)			707				510				
	2 - B2005 - link	811	203	114	1756	0.462	810	594	0.8	0.9	3.809	A
	3 - A249 offslip (SB)	530	132	924	747	0.709	525	0	1.2	2.3	15.903	C
	4 - Swale Way	1378	345	701	581	2.372	581	748	195.2	394.5	1831.180	F
	5 - Grovehurst Road	655	164	578	720	0.910	639	704	3.0	7.0	38.160	E

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	973	243	603	743	1.310	743	0	72.4	130.1	491.912	F
	2 - Grovehurst Road	259	65	994	503	0.514	259	352	1.0	1.0	14.699	B
	3 - A249 onslip (NB)			818				435				
	4 - B2005 - link	603	151	0	1590	0.379	603	818	0.6	0.6	3.644	A
2 - South	1 - A249 onslip (SB)			716				512				
	2 - B2005 - link	809	202	116	1754	0.461	809	600	0.9	0.9	3.808	A
	3 - A249 offslip (SB)	530	132	925	746	0.710	529	0	2.3	2.4	16.533	C
	4 - Swale Way	1378	345	703	580	2.377	580	752	394.5	594.1	2913.312	F
	5 - Grovehurst Road	655	164	577	721	0.909	651	706	7.0	8.0	46.895	E

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	795	199	553	778	1.022	776	0	130.1	134.7	610.529	F
	2 - Grovehurst Road	211	53	987	505	0.418	212	342	1.0	0.7	12.349	B
	3 - A249 onslip (NB)			804				396				
	4 - B2005 - link	553	138	0	1590	0.348	553	804	0.6	0.5	3.473	A
2 - South	1 - A249 onslip (SB)			649				504				
	2 - B2005 - link	800	200	99	1764	0.454	800	551	0.9	0.8	3.734	A
	3 - A249 offslip (SB)	432	108	899	766	0.564	437	0	2.4	1.3	11.045	B
	4 - Swale Way	1126	281	644	613	1.836	613	691	594.1	722.2	3756.843	F
	5 - Grovehurst Road	535	134	600	705	0.759	553	657	8.0	3.4	25.877	D

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	666	166	501	814	0.818	808	0	134.7	99.1	521.976	F

1 - North	2 - Grovehurst Road	177	44	977	509	0.347	178	332	0.7	0.5	10.887	B
	3 - A249 onslip (NB)			798				357				
	4 - B2005 - link	500	125	0	1590	0.315	501	798	0.5	0.5	3.306	A
2 - South	1 - A249 onslip (SB)			580				492				
	2 - B2005 - link	799	200	81	1774	0.450	799	499	0.8	0.8	3.689	A
	3 - A249 offslip (SB)	362	91	880	781	0.464	364	0	1.3	0.9	8.670	A
	4 - Swale Way	943	236	601	638	1.478	638	643	722.2	798.5	4298.907	F
	5 - Grovehurst Road	448	112	618	694	0.646	454	621	3.4	1.9	15.384	C

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.95	0.04	0.39	10.25	21.19			N/A	N/A
	2 - Grovehurst Road	0.42	0.00	0.00	0.42	0.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.60	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.68	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	69.27	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.83	0.71	1.38	1.96	2.32			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	15.59	0.37	8.86	38.18	51.63			N/A	N/A
	2 - Grovehurst Road	0.66	0.22	0.94	1.39	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.78	0.21	0.94	1.39	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.18	0.08	0.97	2.14	2.88			N/A	N/A
	4 - Swale Way	195.17	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.96	0.10	1.18	7.05	9.83			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	72.45	35.41	68.94	106.29	118.87			N/A	N/A
	2 - Grovehurst Road	1.02	0.03	0.27	1.02	1.46			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.03	0.25	0.60	0.60			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.85	0.03	0.25	0.85	0.85			N/A	N/A
	3 - A249 offslip (SB)	2.30	0.03	0.30	2.30	10.40			N/A	N/A
	4 - Swale Way	394.52	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	6.97	0.07	1.44	20.07	31.95			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	130.07	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.04	0.03	0.28	1.04	3.55			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.61	0.03	0.28	0.61	2.19			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.85	0.03	0.26	0.85	0.85			N/A	N/A
	3 - A249 offslip (SB)	2.37	0.03	0.28	2.37	6.95			N/A	N/A
	4 - Swale Way	594.14	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	7.95	0.04	0.45	22.07	42.52			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	134.65	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.73	0.08	0.80	1.41	1.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.84	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.33	0.06	0.79	2.95	4.29			N/A	N/A
	4 - Swale Way	722.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.42	0.04	0.43	9.48	17.39			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	99.10	43.36	93.33	151.86	171.94			N/A	N/A
	2 - Grovehurst Road	0.54	0.05	0.47	1.31	1.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.88	0.04	0.42	1.98	3.19			N/A	N/A
	4 - Swale Way	798.47	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.90	0.03	0.34	4.30	9.96			N/A	N/A

2024 + K3 Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	233.64	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	373.36	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	864	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	692	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From				
	1 - A249 offslip (NB)	0	42	0	822
	2 - Grovehurst Road	0	0	25	415
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	147	327	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	141	0	0	911	183
	3 - A249 offslip (SB)	1	18	0	377	174
	4 - Swale Way	389	226	0	0	77
	5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	7	0	18
	2 - Grovehurst Road	0	0	8	3
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	16	6
	3 - A249 offslip (SB)	0	6	0	9	4
	4 - Swale Way	39	10	0	0	9
	5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.15	303.59	73.4	125.6	F	793	1189
	2 - Grovehurst Road	1.16	322.36	39.2	75.7	F	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.29	3.30	0.4	1.7	A	418	627
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	6.20	2.0	4.9	A	1115	1672
	3 - A249 offslip (SB)	1.49	1135.42	134.6	200.0	F	523	785
	4 - Swale Way	1.21	464.80	79.9	138.5	F	635	952
	5 - Grovehurst Road	1.15	303.51	52.2	95.5	F	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	650	163	350	887	0.734	640	0	0.0	2.6	14.059	B
	2 - Grovehurst Road	331	83	850	573	0.578	326	140	0.0	1.3	14.264	B

	3 - A249 onslip (NB)			916				260				
	4 - B2005 - link	351	88	0	1530	0.230	350	916	0.0	0.3	3.049	A
2 - South	1 - A249 onslip (SB)			479				543				
	2 - B2005 - link	919	230	127	1780	0.516	914	352	0.0	1.1	4.141	A
	3 - A249 offslip (SB)	429	107	1042	654	0.656	422	0	0.0	1.8	15.062	C
	4 - Swale Way	521	130	383	661	0.788	508	1081	0.0	3.3	21.882	C
	5 - Grovehurst Road	460	115	570	685	0.672	452	321	0.0	1.9	15.022	C

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	410	845	0.920	756	0	2.6	7.7	34.572	D
	2 - Grovehurst Road	396	99	1002	473	0.836	385	164	1.3	4.1	36.744	E
	3 - A249 onslip (NB)			1082				305				
	4 - B2005 - link	410	103	0	1530	0.268	410	1082	0.3	0.4	3.215	A
2 - South	1 - A249 onslip (SB)			561				636				
	2 - B2005 - link	1085	271	150	1766	0.614	1083	411	1.1	1.6	5.250	A
	3 - A249 offslip (SB)	512	128	1233	506	1.014	472	0	1.8	11.9	71.981	F
	4 - Swale Way	622	156	444	631	0.985	590	1261	3.3	11.4	60.430	F
	5 - Grovehurst Road	549	137	663	616	0.892	533	370	1.9	5.9	37.921	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	436	826	1.152	817	0	7.7	41.2	122.211	F
	2 - Grovehurst Road	484	121	1078	423	1.145	412	175	4.1	22.1	136.651	F
	3 - A249 onslip (NB)			1166				325				
	4 - B2005 - link	437	109	0	1530	0.285	436	1166	0.4	0.4	3.292	A
2 - South	1 - A249 onslip (SB)			600				679				
	2 - B2005 - link	1169	292	163	1759	0.665	1168	437	1.6	1.9	6.070	A
	3 - A249 offslip (SB)	628	157	1330	430	1.460	428	0	11.9	61.7	329.127	F
	4 - Swale Way	762	190	451	628	1.214	624	1307	11.4	46.0	181.554	F
	5 - Grovehurst Road	673	168	702	588	1.145	578	373	5.9	29.7	128.958	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	439	824	1.154	823	0	41.2	73.4	261.360	F
	2 - Grovehurst Road	484	121	1086	418	1.158	416	176	22.1	39.2	282.954	F
	3 - A249 onslip (NB)			1175				327				
	4 - B2005 - link	439	110	0	1530	0.287	439	1175	0.4	0.4	3.301	A
2 - South	1 - A249 onslip (SB)			604				684				
	2 - B2005 - link	1178	295	164	1758	0.670	1178	440	1.9	2.0	6.197	A
	3 - A249 offslip (SB)	628	157	1342	421	1.491	421	0	61.7	113.4	755.750	F
	4 - Swale Way	762	190	451	628	1.214	627	1311	46.0	79.7	372.652	F
	5 - Grovehurst Road	673	168	706	585	1.150	583	373	29.7	52.2	266.407	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	436	826	0.940	815	0	73.4	63.8	303.591	F
	2 - Grovehurst Road	396	99	1076	424	0.932	414	175	39.2	34.7	322.362	F
	3 - A249 onslip (NB)			1166				324				
	4 - B2005 - link	436	109	0	1530	0.285	436	1166	0.4	0.4	3.291	A
2 - South	1 - A249 onslip (SB)			600				678				
	2 - B2005 - link	1169	292	163	1759	0.665	1169	437	2.0	2.0	6.102	A
	3 - A249 offslip (SB)	512	128	1332	429	1.195	429	0	113.4	134.4	1051.459	F
	4 - Swale Way	622	156	452	628	0.991	622	1309	79.7	79.9	464.804	F
	5 - Grovehurst Road	549	137	700	589	0.933	578	373	52.2	45.0	303.509	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	650	163	435	827	0.787	814	0	63.8	22.8	195.943	F

1 - North	2 - Grovehurst Road	331	83	1075	425	0.779	414	175	34.7	14.1	219.366	F
	3 - A249 onslip (NB)			1165				324				
	4 - B2005 - link	435	109	0	1530	0.285	435	1165	0.4	0.4	3.288	A
	1 - A249 onslip (SB)			599				677				
2 - South	2 - B2005 - link	1168	292	163	1759	0.664	1168	436	2.0	2.0	6.087	A
	3 - A249 offslip (SB)	429	107	1330	430	0.998	428	0	134.4	134.6	1135.422	F
	4 - Swale Way	521	130	451	628	0.830	620	1307	79.9	55.1	393.772	F
	5 - Grovehurst Road	460	115	699	590	0.779	577	373	45.0	15.7	195.392	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.59	0.08	1.37	6.33	8.97			N/A	N/A
	2 - Grovehurst Road	1.32	0.05	0.47	3.29	5.13			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.82	0.03	0.25	1.82	1.82			N/A	N/A
	4 - Swale Way	3.31	0.04	0.44	9.25	16.43			N/A	N/A
	5 - Grovehurst Road	1.94	0.07	1.03	4.72	6.81			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	7.71	0.18	3.79	19.19	26.45			N/A	N/A
	2 - Grovehurst Road	4.07	0.08	1.03	10.87	16.08			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.57	0.07	1.00	3.51	4.88			N/A	N/A
	3 - A249 offslip (SB)	11.94	0.03	0.29	11.94	32.57			N/A	N/A
	4 - Swale Way	11.41	0.27	6.20	28.06	38.17			N/A	N/A
	5 - Grovehurst Road	5.92	0.14	2.63	14.90	20.81			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	41.25	14.73	37.74	66.80	77.04			N/A	N/A
	2 - Grovehurst Road	22.14	5.28	19.14	39.20	46.63			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.95	0.03	0.27	1.95	1.95			N/A	N/A
	3 - A249 offslip (SB)	61.72	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	45.99	17.54	42.45	73.16	83.90			N/A	N/A
	5 - Grovehurst Road	29.67	8.70	26.42	50.44	59.13			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	73.44	32.91	69.24	111.27	125.62			N/A	N/A
	2 - Grovehurst Road	39.23	12.84	35.51	65.14	75.74			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.30	1.26	1.70			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.00	0.03	0.26	2.00	2.00			N/A	N/A
	3 - A249 offslip (SB)	113.42	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	79.74	39.99	76.10	115.91	129.23			N/A	N/A
	5 - Grovehurst Road	52.15	19.79	48.15	83.22	95.49			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	63.78	23.34	58.72	103.23	118.92			N/A	N/A
	2 - Grovehurst Road	34.65	7.86	29.89	62.81	75.13			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.99	0.20	1.12	3.66	4.66			N/A	N/A
	3 - A249 offslip (SB)	134.36	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	79.88	34.85	75.13	122.30	138.49			N/A	N/A
	5 - Grovehurst Road	44.99	12.90	40.09	77.61	91.28			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	22.84	3.58	18.71	43.91	53.68			N/A	N/A
	2 - Grovehurst Road	14.08	0.89	9.61	31.24	40.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.99	0.52	1.31	3.08	3.80			N/A	N/A
	3 - A249 offslip (SB)	134.59	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	55.11	13.84	48.32	98.39	116.90			N/A	N/A
	5 - Grovehurst Road	15.67	1.39	11.36	33.42	42.53			N/A	N/A

2024 + K3 Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	254.29	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1665.61	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	828	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	443	100.000
	4 - Swale Way		ONE HOUR	✓	1279	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From				
	1 - A249 offslip (NB)	0	180	0	648
	2 - Grovehurst Road	0	0	27	200
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	262	522	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	42	0	0	480	322
	3 - A249 offslip (SB)	1	27	0	199	216
	4 - Swale Way	688	432	0	0	159
	5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	1	0	22
	2 - Grovehurst Road	0	0	0	1
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	28	1
	3 - A249 offslip (SB)	0	11	0	8	4
	4 - Swale Way	19	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.25	466.35	101.2	157.5	F	760	1140
	2 - Grovehurst Road	0.49	13.78	0.9	3.5	B	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.37	3.64	0.6	2.2	A	539	808
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.46	3.83	0.8	1.5	A	752	1128
	3 - A249 offslip (SB)	0.65	13.85	1.8	5.8	B	407	610
	4 - Swale Way	2.25	3942.99	773.9	179.2	F	1174	1760
	5 - Grovehurst Road	0.85	33.48	5.2	27.6	D	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	623	156	492	799	0.781	610	0	0.0	3.2	18.061	C
	2 - Grovehurst Road	171	43	805	619	0.276	169	297	0.0	0.4	7.989	A

	3 - A249 onslip (NB)			627				348				
	4 - B2005 - link	494	123	0	1580	0.312	492	627	0.0	0.5	3.301	A
2 - South	1 - A249 onslip (SB)			571				490				
	2 - B2005 - link	630	158	79	1750	0.360	628	493	0.0	0.6	3.201	A
	3 - A249 offslip (SB)	334	83	707	908	0.367	331	0	0.0	0.6	6.218	A
	4 - Swale Way	963	241	453	711	1.354	701	584	0.0	65.6	180.266	F
	5 - Grovehurst Road	402	101	666	657	0.612	396	488	0.0	1.5	13.504	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	533	770	0.966	714	0	3.2	10.7	48.205	E
	2 - Grovehurst Road	204	51	914	543	0.375	203	334	0.4	0.6	10.555	B
	3 - A249 onslip (NB)			738				379				
	4 - B2005 - link	533	133	0	1580	0.338	533	738	0.5	0.5	3.437	A
2 - South	1 - A249 onslip (SB)			627				494				
	2 - B2005 - link	741	185	95	1741	0.426	741	533	0.6	0.7	3.597	A
	3 - A249 offslip (SB)	398	100	835	804	0.495	397	0	0.6	1.0	8.810	A
	4 - Swale Way	1150	287	538	665	1.729	665	694	65.6	186.8	712.677	F
	5 - Grovehurst Road	480	120	644	672	0.714	477	559	1.5	2.3	18.093	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	586	735	1.241	731	0	10.7	56.0	178.451	F
	2 - Grovehurst Road	250	62	962	513	0.487	249	355	0.6	0.9	13.546	B
	3 - A249 onslip (NB)			791				420				
	4 - B2005 - link	586	147	0	1580	0.371	586	791	0.5	0.6	3.620	A
2 - South	1 - A249 onslip (SB)			700				496				
	2 - B2005 - link	789	197	115	1730	0.456	789	585	0.7	0.8	3.823	A
	3 - A249 offslip (SB)	488	122	904	749	0.651	484	0	1.0	1.8	13.418	B
	4 - Swale Way	1408	352	607	626	2.248	626	781	186.8	382.3	1641.556	F
	5 - Grovehurst Road	588	147	618	690	0.852	578	615	2.3	4.8	29.815	D

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	591	731	1.247	731	0	56.0	101.2	391.765	F
	2 - Grovehurst Road	250	62	965	511	0.489	250	356	0.9	0.9	13.781	B
	3 - A249 onslip (NB)			792				423				
	4 - B2005 - link	591	148	0	1580	0.374	591	792	0.6	0.6	3.637	A
2 - South	1 - A249 onslip (SB)			707				498				
	2 - B2005 - link	790	198	116	1729	0.457	790	590	0.8	0.8	3.834	A
	3 - A249 offslip (SB)	488	122	907	747	0.653	488	0	1.8	1.8	13.845	B
	4 - Swale Way	1408	352	609	625	2.252	625	785	382.3	578.0	2661.399	F
	5 - Grovehurst Road	588	147	618	690	0.852	586	617	4.8	5.2	33.477	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	539	767	0.971	759	0	101.2	97.5	466.350	F
	2 - Grovehurst Road	204	51	953	516	0.395	205	345	0.9	0.7	11.618	B
	3 - A249 onslip (NB)			775				383				
	4 - B2005 - link	538	135	0	1580	0.341	539	775	0.6	0.5	3.455	A
2 - South	1 - A249 onslip (SB)			635				493				
	2 - B2005 - link	780	195	97	1740	0.448	780	537	0.8	0.8	3.750	A
	3 - A249 offslip (SB)	398	100	877	770	0.517	401	0	1.8	1.1	9.846	A
	4 - Swale Way	1150	287	557	654	1.757	654	721	578.0	701.9	3447.735	F
	5 - Grovehurst Road	480	120	637	677	0.709	490	574	5.2	2.6	20.219	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	623	156	491	799	0.780	791	0	97.5	55.6	350.619	F

1 - North	2 - Grovehurst Road	171	43	946	518	0.330	172	336	0.7	0.5	10.421	B
	3 - A249 onslip (NB)			770				348				
	4 - B2005 - link	491	123	0	1580	0.311	491	770	0.5	0.5	3.305	A
	1 - A249 onslip (SB)			571				486				
2 - South	2 - B2005 - link	780	195	81	1749	0.446	780	490	0.8	0.8	3.717	A
	3 - A249 offslip (SB)	334	83	860	782	0.427	335	0	1.1	0.8	8.079	A
	4 - Swale Way	963	241	521	675	1.427	675	675	701.9	773.9	3942.986	F
	5 - Grovehurst Road	402	101	651	668	0.602	406	545	2.6	1.6	13.980	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.24	0.05	0.79	9.00	14.35			N/A	N/A
	2 - Grovehurst Road	0.38	0.00	0.00	0.38	0.38			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.56	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	65.57	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.52	1.05	1.50	1.90	1.95			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	10.73	0.28	5.94	26.13	35.40			N/A	N/A
	2 - Grovehurst Road	0.59	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.74	0.20	0.93	1.39	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.96	0.09	0.92	1.55	1.89			N/A	N/A
	4 - Swale Way	186.84	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.35	0.09	1.42	5.38	7.42			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	55.98	25.85	52.86	83.63	94.06			N/A	N/A
	2 - Grovehurst Road	0.92	0.03	0.26	0.92	0.92			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.25	0.59	0.59			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.83	0.03	0.25	0.83	0.83			N/A	N/A
	3 - A249 offslip (SB)	1.79	0.03	0.28	1.79	5.79			N/A	N/A
	4 - Swale Way	382.28	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.78	0.04	0.44	13.30	24.70			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	101.22	57.88	97.92	139.58	153.20			N/A	N/A
	2 - Grovehurst Road	0.94	0.03	0.28	0.94	3.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.28	0.65	2.19			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.84	0.03	0.26	0.84	0.86			N/A	N/A
	3 - A249 offslip (SB)	1.84	0.03	0.28	1.84	4.53			N/A	N/A
	4 - Swale Way	578.03	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.16	0.03	0.34	9.91	27.64			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	97.47	49.33	93.20	141.40	157.50			N/A	N/A
	2 - Grovehurst Road	0.67	0.08	0.79	1.37	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.10	0.07	0.90	1.95	2.72			N/A	N/A
	4 - Swale Way	701.91	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.59	0.04	0.43	7.14	12.70			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	55.61	18.26	50.48	92.76	107.90			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.45	1.28	1.39			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.81	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.76	0.05	0.48	1.48	1.99			N/A	N/A
	4 - Swale Way	773.94	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.57	0.03	0.35	3.82	8.02			N/A	N/A

2024 + K3 and WKN Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	259.05	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	394.50	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	874	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	702	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	832
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	147	327	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	141	0	0	921	183
	3 - A249 offslip (SB)	1	18	0	377	174
	4 - Swale Way	399	226	0	0	77
	5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	7	0	19
	2 - Grovehurst Road	0	0	8	3
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	17	6
	3 - A249 offslip (SB)	0	6	0	9	4
	4 - Swale Way	40	10	0	0	9
	5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.17	346.24	81.4	135.0	F	802	1203
	2 - Grovehurst Road	1.16	330.47	39.9	76.8	F	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.28	3.29	0.4	1.7	A	415	623
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	6.27	2.0	5.0	A	1114	1670
	3 - A249 offslip (SB)	1.50	1171.97	138.2	186.3	F	523	785
	4 - Swale Way	1.23	516.79	89.3	150.3	F	644	966
	5 - Grovehurst Road	1.15	314.07	53.2	96.6	F	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	658	164	350	880	0.748	647	0	0.0	2.8	14.822	B
	2 - Grovehurst Road	331	83	857	565	0.586	326	139	0.0	1.4	14.711	B

	3 - A249 onslip (NB)			923				260				
	4 - B2005 - link	351	88	0	1530	0.229	350	923	0.0	0.3	3.048	A
2 - South	1 - A249 onslip (SB)			478				550				
	2 - B2005 - link	925	231	127	1768	0.523	921	351	0.0	1.1	4.229	A
	3 - A249 offslip (SB)	429	107	1048	645	0.666	422	0	0.0	1.9	15.658	C
	4 - Swale Way	529	132	382	658	0.804	514	1087	0.0	3.6	23.214	C
	5 - Grovehurst Road	460	115	576	678	0.679	452	320	0.0	2.0	15.457	C

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	408	839	0.936	762	0	2.8	8.7	38.108	E
	2 - Grovehurst Road	396	99	1007	466	0.848	384	163	1.4	4.3	39.037	E
	3 - A249 onslip (NB)			1087				303				
	4 - B2005 - link	408	102	0	1530	0.267	408	1087	0.3	0.4	3.209	A
2 - South	1 - A249 onslip (SB)			559				641				
	2 - B2005 - link	1089	272	150	1755	0.621	1087	409	1.1	1.6	5.375	A
	3 - A249 offslip (SB)	512	128	1237	497	1.032	467	0	1.9	13.2	78.349	F
	4 - Swale Way	631	158	441	629	1.003	593	1263	3.6	13.0	66.488	F
	5 - Grovehurst Road	549	137	667	610	0.900	532	367	2.0	6.2	39.637	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	433	822	1.170	815	0	8.7	45.6	134.038	F
	2 - Grovehurst Road	484	121	1074	421	1.150	411	173	4.3	22.7	140.508	F
	3 - A249 onslip (NB)			1163				322				
	4 - B2005 - link	433	108	0	1530	0.283	433	1163	0.4	0.4	3.281	A
2 - South	1 - A249 onslip (SB)			596				681				
	2 - B2005 - link	1166	291	162	1748	0.667	1164	434	1.6	2.0	6.153	A
	3 - A249 offslip (SB)	628	157	1326	427	1.471	426	0	13.2	63.7	344.878	F
	4 - Swale Way	773	193	447	626	1.234	623	1305	13.0	50.5	198.863	F
	5 - Grovehurst Road	673	168	701	586	1.149	576	369	6.2	30.3	132.224	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	435	820	1.173	819	0	45.6	81.4	288.993	F
	2 - Grovehurst Road	484	121	1080	418	1.160	415	174	22.7	39.9	288.750	F
	3 - A249 onslip (NB)			1171				324				
	4 - B2005 - link	435	109	0	1530	0.285	435	1171	0.4	0.4	3.288	A
2 - South	1 - A249 onslip (SB)			600				685				
	2 - B2005 - link	1173	293	164	1747	0.672	1173	436	2.0	2.0	6.272	A
	3 - A249 offslip (SB)	628	157	1337	419	1.499	418	0	63.7	116.0	778.887	F
	4 - Swale Way	773	193	447	626	1.234	626	1308	50.5	87.3	407.921	F
	5 - Grovehurst Road	673	168	704	583	1.153	581	369	30.3	53.2	272.351	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	432	822	0.955	812	0	81.4	74.7	346.242	F
	2 - Grovehurst Road	396	99	1072	423	0.935	413	173	39.9	35.6	330.473	F
	3 - A249 onslip (NB)			1163				322				
	4 - B2005 - link	432	108	0	1530	0.283	432	1163	0.4	0.4	3.282	A
2 - South	1 - A249 onslip (SB)			595				681				
	2 - B2005 - link	1165	291	162	1748	0.666	1165	433	2.0	2.0	6.175	A
	3 - A249 offslip (SB)	512	128	1326	427	1.201	427	0	116.0	137.4	1080.530	F
	4 - Swale Way	631	158	448	626	1.008	623	1305	87.3	89.3	516.792	F
	5 - Grovehurst Road	549	137	701	585	0.938	574	370	53.2	46.9	314.067	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	658	164	431	823	0.800	812	0	74.7	36.2	248.929	F

1 - North	2 - Grovehurst Road	331	83	1071	424	0.782	412	173	35.6	15.4	229.602	F
	3 - A249 onslip (NB)			1162				321				
	4 - B2005 - link	431	108	0	1530	0.282	431	1162	0.4	0.4	3.277	A
2 - South	1 - A249 onslip (SB)			595				679				
	2 - B2005 - link	1164	291	162	1748	0.666	1164	432	2.0	2.0	6.168	A
	3 - A249 offslip (SB)	429	107	1326	427	1.005	426	0	137.4	138.2	1171.972	F
	4 - Swale Way	529	132	447	626	0.844	619	1305	89.3	66.6	454.629	F
	5 - Grovehurst Road	460	115	697	588	0.782	576	369	46.9	17.9	208.100	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.78	0.06	1.03	7.39	11.17			N/A	N/A
	2 - Grovehurst Road	1.36	0.05	0.45	3.48	5.53			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.09	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.89	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.58	0.04	0.39	9.50	18.98			N/A	N/A
	5 - Grovehurst Road	2.00	0.06	0.98	4.94	7.26			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.72	0.19	4.31	21.87	30.18			N/A	N/A
	2 - Grovehurst Road	4.34	0.08	1.26	11.54	16.90			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.61	0.07	1.02	3.62	5.01			N/A	N/A
	3 - A249 offslip (SB)	13.21	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	12.98	0.27	6.90	32.39	44.31			N/A	N/A
	5 - Grovehurst Road	6.21	0.15	2.85	15.58	21.66			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	45.58	17.49	42.10	72.40	83.01			N/A	N/A
	2 - Grovehurst Road	22.68	5.55	19.67	39.93	47.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.97	0.03	0.27	1.97	1.97			N/A	N/A
	3 - A249 offslip (SB)	63.71	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	50.50	19.52	46.72	80.11	91.78			N/A	N/A
	5 - Grovehurst Road	30.34	9.10	27.09	51.28	60.00			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	81.38	39.30	77.39	120.10	134.52			N/A	N/A
	2 - Grovehurst Road	39.95	13.35	36.25	65.94	76.52			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.30	1.26	1.66			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.02	0.03	0.26	2.02	2.02			N/A	N/A
	3 - A249 offslip (SB)	116.00	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	87.34	45.34	83.69	125.35	139.23			N/A	N/A
	5 - Grovehurst Road	53.17	20.57	49.21	84.36	96.64			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	74.72	29.62	69.50	118.08	135.00			N/A	N/A
	2 - Grovehurst Road	35.62	8.25	30.82	64.31	76.81			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.01	0.18	1.10	3.77	4.83			N/A	N/A
	3 - A249 offslip (SB)	137.44	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	89.28	41.54	84.61	133.69	150.35			N/A	N/A
	5 - Grovehurst Road	46.87	13.81	41.92	80.31	94.24			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	36.19	8.74	31.49	64.72	77.04			N/A	N/A
	2 - Grovehurst Road	15.40	0.98	10.55	34.20	44.24			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.01	0.48	1.31	3.21	3.91			N/A	N/A
	3 - A249 offslip (SB)	138.22	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	66.61	20.30	59.96	113.63	133.03			N/A	N/A
	5 - Grovehurst Road	17.88	1.78	13.80	36.30	45.29			N/A	N/A

2024 + K3 and WKN Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	282.17	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1750.21	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	838	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	444	100.000
	4 - Swale Way		ONE HOUR	✓	1300	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From				
	1 - A249 offslip (NB)	0	180	0	658
	2 - Grovehurst Road	0	0	27	200
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	262	523	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	42	0	0	490	322
	3 - A249 offslip (SB)	1	27	0	200	216
	4 - Swale Way	708	433	0	0	159
	5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	1	0	23
	2 - Grovehurst Road	0	0	0	1
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	30	1
	3 - A249 offslip (SB)	0	11	0	8	4
	4 - Swale Way	20	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.27	512.52	109.4	171.0	F	769	1153
	2 - Grovehurst Road	0.49	13.84	0.9	3.5	B	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.37	3.60	0.6	2.2	A	539	808
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.46	3.90	0.8	1.4	A	750	1126
	3 - A249 offslip (SB)	0.66	14.11	1.9	6.2	B	407	611
	4 - Swale Way	2.29	4103.27	804.9	178.2	F	1193	1789
	5 - Grovehurst Road	0.86	34.20	5.3	28.4	D	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	491	796	0.793	617	0	0.0	3.5	18.913	C
	2 - Grovehurst Road	171	43	811	613	0.279	169	296	0.0	0.4	8.088	A

	3 - A249 onslip (NB)			634				347					
	4 - B2005 - link	493	123	0	1591	0.310		491	634	0.0	0.4	3.267	A
2 - South	1 - A249 onslip (SB)			567				494					
	2 - B2005 - link	634	159	79	1731	0.367		632	488	0.0	0.6	3.269	A
	3 - A249 offslip (SB)	334	84	711	899	0.372		332	0	0.0	0.6	6.328	A
	4 - Swale Way	979	245	452	708	1.382		698	591	0.0	70.2	192.834	F
	5 - Grovehurst Road	402	101	665	655	0.614		396	485	0.0	1.5	13.592	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	533	768	0.981	719	0	3.5	12.1	52.722	F
	2 - Grovehurst Road	204	51	919	538	0.379	203	332	0.4	0.6	10.709	B
	3 - A249 onslip (NB)			743				379				
	4 - B2005 - link	533	133	0	1591	0.335	533	743	0.4	0.5	3.402	A
2 - South	1 - A249 onslip (SB)			623				496				
	2 - B2005 - link	744	186	95	1722	0.432	743	529	0.6	0.8	3.675	A
	3 - A249 offslip (SB)	399	100	837	795	0.502	398	0	0.6	1.0	9.016	A
	4 - Swale Way	1169	292	535	662	1.764	662	700	70.2	196.8	755.385	F
	5 - Grovehurst Road	480	120	643	670	0.716	477	554	1.5	2.4	18.255	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	586	732	1.261	728	0	12.1	60.6	193.485	F
	2 - Grovehurst Road	250	62	963	511	0.489	249	352	0.6	0.9	13.624	B
	3 - A249 onslip (NB)			791				420				
	4 - B2005 - link	587	147	0	1591	0.369	586	791	0.5	0.6	3.585	A
2 - South	1 - A249 onslip (SB)			697				500				
	2 - B2005 - link	786	196	115	1711	0.459	785	582	0.8	0.8	3.887	A
	3 - A249 offslip (SB)	489	122	900	745	0.656	485	0	1.0	1.8	13.680	B
	4 - Swale Way	1431	358	602	626	2.287	626	784	196.8	398.1	1716.863	F
	5 - Grovehurst Road	588	147	618	687	0.855	578	609	2.4	4.9	30.320	D

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	592	728	1.267	728	0	60.6	109.4	423.936	F
	2 - Grovehurst Road	250	62	966	510	0.490	250	354	0.9	0.9	13.842	B
	3 - A249 onslip (NB)			792				424				
	4 - B2005 - link	592	148	0	1591	0.372	592	792	0.6	0.6	3.602	A
2 - South	1 - A249 onslip (SB)			703				501				
	2 - B2005 - link	786	197	116	1710	0.460	786	587	0.8	0.8	3.896	A
	3 - A249 offslip (SB)	489	122	903	743	0.658	489	0	1.8	1.9	14.105	B
	4 - Swale Way	1431	358	604	625	2.291	625	788	398.1	599.8	2765.090	F
	5 - Grovehurst Road	588	147	618	688	0.855	586	611	4.9	5.3	34.205	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	539	764	0.987	756	0	109.4	108.6	512.516	F
	2 - Grovehurst Road	204	51	953	515	0.396	205	342	0.9	0.7	11.666	B
	3 - A249 onslip (NB)			775				383				
	4 - B2005 - link	539	135	0	1591	0.339	539	775	0.6	0.5	3.422	A
2 - South	1 - A249 onslip (SB)			632				496				
	2 - B2005 - link	776	194	97	1721	0.451	776	534	0.8	0.8	3.812	A
	3 - A249 offslip (SB)	399	100	873	766	0.521	402	0	1.9	1.1	9.982	A
	4 - Swale Way	1169	292	552	653	1.788	653	724	599.8	728.6	3582.405	F
	5 - Grovehurst Road	480	120	637	674	0.712	491	568	5.3	2.6	20.558	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	631	158	491	796	0.793	788	0	108.6	69.3	407.949	F

1 - North	2 - Grovehurst Road	171	43	946	516	0.331	172	333	0.7	0.5	10.474	B
	3 - A249 onslip (NB)			770				348				
	4 - B2005 - link	491	123	0	1591	0.308	491	770	0.5	0.4	3.276	A
2 - South	1 - A249 onslip (SB)			567				490				
	2 - B2005 - link	777	194	81	1730	0.449	777	487	0.8	0.8	3.779	A
	3 - A249 offslip (SB)	334	84	857	777	0.430	336	0	1.1	0.8	8.175	A
	4 - Swale Way	979	245	516	674	1.453	674	677	728.6	804.9	4103.275	F
	5 - Grovehurst Road	402	101	651	665	0.604	406	539	2.6	1.6	14.124	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.45	0.05	0.47	9.73	16.63			N/A	N/A
	2 - Grovehurst Road	0.38	0.00	0.00	0.38	0.38			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.58	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.59	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	70.18	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.53	1.05	1.50	1.90	1.95			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	12.08	0.30	6.74	29.49	39.93			N/A	N/A
	2 - Grovehurst Road	0.60	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.75	0.21	0.94	1.39	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.99	0.09	0.93	1.61	1.93			N/A	N/A
	4 - Swale Way	196.75	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.37	0.09	1.43	5.44	7.51			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	60.64	28.67	57.44	89.89	100.85			N/A	N/A
	2 - Grovehurst Road	0.93	0.03	0.26	0.93	0.93			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.58	0.03	0.25	0.58	0.58			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.84	0.03	0.25	0.84	0.84			N/A	N/A
	3 - A249 offslip (SB)	1.83	0.03	0.28	1.83	6.20			N/A	N/A
	4 - Swale Way	398.14	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.86	0.04	0.44	13.63	25.05			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	109.37	64.46	106.13	148.89	162.81			N/A	N/A
	2 - Grovehurst Road	0.95	0.03	0.28	0.95	3.46			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.28	0.71	2.23			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.85	0.03	0.26	0.85	0.85			N/A	N/A
	3 - A249 offslip (SB)	1.88	0.03	0.28	1.88	4.64			N/A	N/A
	4 - Swale Way	599.81	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.26	0.03	0.34	10.47	28.39			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	108.65	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.67	0.08	0.78	1.37	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.83	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.11	0.07	0.89	2.03	2.84			N/A	N/A
	4 - Swale Way	728.60	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.63	0.04	0.43	7.25	12.91			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	69.28	24.62	63.59	113.25	130.86			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.45	1.28	1.39			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.77	0.05	0.47	1.54	2.13			N/A	N/A
	4 - Swale Way	804.87	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.58	0.03	0.35	3.84	8.12			N/A	N/A

2024 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	310.25	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	514.90	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	906	100.000
	2 - Grovehurst Road		ONE HOUR	✓	446	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	593	100.000
	4 - Swale Way		ONE HOUR	✓	693	100.000
	5 - Grovehurst Road		ONE HOUR	✓	736	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip	2 - Grovehurst	3 - A249 onslip	4 - B2005 -

1 - North	From		(NB)	Road	(NB)	link
		1 - A249 offslip (NB)	0	45	0	861
		2 - Grovehurst Road	0	0	25	421
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	151	366	0

Demand (Veh/hr)

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	144	0	0	911	225
		3 - A249 offslip (SB)	1	18	0	377	197
		4 - Swale Way	390	226	0	0	77
5 - Grovehurst Road	287	277	0	172	0		

Vehicle Mix

Heavy Vehicle Percentages

1 - North	From	To				
			1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
		1 - A249 offslip (NB)	0	13	0	17
		2 - Grovehurst Road	0	0	8	4
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	4	6	0		

Heavy Vehicle Percentages

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	2	0	0	16	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	39	10	0	0	9
5 - Grovehurst Road	1	1	0	4	0		

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.20	410.42	95.2	157.7	F	831	1247
	2 - Grovehurst Road	1.19	404.76	46.7	87.3	F	409	614
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.28	3.26	0.4	1.7	A	425	638
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	6.06	2.0	5.0	A	1125	1688
	3 - A249 offslip (SB)	1.49	1201.20	147.6	186.5	F	544	816
	4 - Swale Way	1.27	598.86	101.3	166.2	F	636	954
	5 - Grovehurst Road	1.34	772.84	135.8	200.0	F	675	1013

Main Results for each time segment

07:15 - 07:30

Total	Junction	Circulating	Capacity	Throughput	Throughput	Start	End	Delay

Junction	Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)	RFC	(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	LOS
1 - North	1 - A249 offslip (NB)	682	171	379	873	0.781	669	0	0.0	3.3	16.710	C
	2 - Grovehurst Road	336	84	904	539	0.623	329	144	0.0	1.6	16.706	C
	3 - A249 onslip (NB)			947				287				
	4 - B2005 - link	380	95	0	1539	0.247	379	947	0.0	0.3	3.100	A
2 - South	1 - A249 onslip (SB)			507				602				
	2 - B2005 - link	947	237	126	1781	0.532	943	381	0.0	1.1	4.273	A
	3 - A249 offslip (SB)	446	112	1069	634	0.704	438	0	0.0	2.2	17.630	C
	4 - Swale Way	522	130	431	636	0.820	506	1075	0.0	3.9	25.313	D
	5 - Grovehurst Road	554	139	570	687	0.806	539	367	0.0	3.7	22.579	C

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	814	204	428	839	0.971	781	0	3.3	11.5	46.766	E
	2 - Grovehurst Road	401	100	1046	447	0.896	385	164	1.6	5.6	48.610	E
	3 - A249 onslip (NB)			1106				325				
	4 - B2005 - link	428	107	0	1539	0.278	428	1106	0.3	0.4	3.240	A
2 - South	1 - A249 onslip (SB)			570				685				
	2 - B2005 - link	1106	277	141	1772	0.624	1104	430	1.1	1.6	5.374	A
	3 - A249 offslip (SB)	533	133	1245	496	1.074	474	0	2.2	16.9	93.295	F
	4 - Swale Way	623	156	491	607	1.027	578	1228	3.9	15.1	76.310	F
	5 - Grovehurst Road	662	165	654	625	1.058	602	416	3.7	18.6	84.121	F

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	436	833	1.197	828	0	11.5	53.9	155.428	F
	2 - Grovehurst Road	491	123	1096	414	1.185	407	168	5.6	26.6	164.477	F
	3 - A249 onslip (NB)			1171				331				
	4 - B2005 - link	436	109	0	1539	0.283	436	1171	0.4	0.4	3.262	A
2 - South	1 - A249 onslip (SB)			578				706				
	2 - B2005 - link	1172	293	141	1772	0.661	1171	437	1.6	1.9	5.977	A
	3 - A249 offslip (SB)	653	163	1312	444	1.472	443	0	16.9	69.5	369.320	F
	4 - Swale Way	763	191	499	603	1.266	600	1256	15.1	55.7	227.399	F
	5 - Grovehurst Road	810	203	680	606	1.337	605	420	18.6	70.0	277.697	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	436	833	1.198	832	0	53.9	95.2	331.844	F
	2 - Grovehurst Road	491	123	1100	412	1.192	410	169	26.6	46.7	338.141	F
	3 - A249 onslip (NB)			1178				332				
	4 - B2005 - link	436	109	0	1539	0.283	436	1178	0.4	0.4	3.263	A
2 - South	1 - A249 onslip (SB)			578				708				
	2 - B2005 - link	1179	295	141	1772	0.665	1179	437	1.9	2.0	6.063	A
	3 - A249 offslip (SB)	653	163	1320	438	1.492	437	0	69.5	123.3	804.355	F
	4 - Swale Way	763	191	499	603	1.266	602	1258	55.7	96.0	464.505	F
	5 - Grovehurst Road	810	203	682	604	1.341	604	419	70.0	121.5	580.583	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	814	204	436	833	0.978	824	0	95.2	92.7	410.421	F
	2 - Grovehurst Road	401	100	1092	417	0.962	417	168	46.7	42.8	404.756	F
	3 - A249 onslip (NB)			1177				332				
	4 - B2005 - link	436	109	0	1539	0.283	436	1177	0.4	0.4	3.263	A
2 - South	1 - A249 onslip (SB)			578				707				
	2 - B2005 - link	1177	294	141	1772	0.664	1177	437	2.0	2.0	6.047	A
	3 - A249 offslip (SB)	533	133	1318	439	1.214	439	0	123.3	146.9	1116.227	F
	4 - Swale Way	623	156	499	603	1.034	601	1258	96.0	101.3	598.864	F
	5 - Grovehurst Road	662	165	681	605	1.094	605	419	121.5	135.8	772.837	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	682	171	434	834	0.818	825	0	92.7	57.0	328.540	F
	2 - Grovehurst Road	336	84	1092	417	0.805	407	168	42.8	24.9	303.092	F
	3 - A249 onslip (NB)			1169				330				
	4 - B2005 - link	434	109	0	1539	0.282	434	1169	0.4	0.4	3.258	A
2 - South	1 - A249 onslip (SB)			577				704				
	2 - B2005 - link	1169	292	141	1772	0.660	1169	435	2.0	2.0	5.974	A
	3 - A249 offslip (SB)	446	112	1311	445	1.004	444	0	146.9	147.6	1201.201	F
	4 - Swale Way	522	130	499	603	0.866	597	1256	101.3	82.6	555.542	F
	5 - Grovehurst Road	554	139	676	609	0.911	604	419	135.8	123.3	772.495	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.28	0.05	0.50	9.22	15.32			N/A	N/A
	2 - Grovehurst Road	1.57	0.04	0.38	4.05	7.70			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.13	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	2.23	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.89	0.03	0.34	7.82	20.93			N/A	N/A
	5 - Grovehurst Road	3.66	0.03	0.27	3.66	3.66			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	11.53	0.29	6.39	28.19	38.21			N/A	N/A
	2 - Grovehurst Road	5.61	0.10	1.84	14.93	21.72			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.64	0.07	1.06	3.65	5.04			N/A	N/A
	3 - A249 offslip (SB)	16.90	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	15.06	0.22	7.20	39.05	54.54			N/A	N/A
	5 - Grovehurst Road	18.56	0.09	3.65	54.16	84.91			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	53.85	22.53	50.29	83.27	94.64			N/A	N/A
	2 - Grovehurst Road	26.58	7.47	23.52	45.54	53.56			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.92	0.03	0.27	1.92	1.92			N/A	N/A
	3 - A249 offslip (SB)	69.48	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	55.73	20.69	51.35	89.65	103.11			N/A	N/A
	5 - Grovehurst Road	69.99	19.82	62.44	121.82	143.55			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	95.21	50.14	91.39	135.93	150.75			N/A	N/A
	2 - Grovehurst Road	46.75	18.31	43.29	73.74	84.36			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.03	0.30	1.22	1.71			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.96	0.03	0.26	1.96	1.96			N/A	N/A
	3 - A249 offslip (SB)	123.33	>199	>199	>199	>199			N/A	N/A

	4 - Swale Way	95.95	50.46	92.10	137.09	152.05			N/A	N/A
	5 - Grovehurst Road	121.54	>199	>199	>199	>199			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	92.75	42.29	87.71	139.92	157.69			N/A	N/A
	2 - Grovehurst Road	42.77	11.96	37.97	74.14	87.34			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.97	0.18	1.06	3.67	4.70			N/A	N/A
	3 - A249 offslip (SB)	146.87	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	101.34	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	135.80	>199	>199	>199	>199			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	56.97	15.23	50.38	100.32	118.68			N/A	N/A
	2 - Grovehurst Road	24.85	1.76	18.36	53.13	67.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.96	0.45	1.26	3.10	3.83			N/A	N/A
	3 - A249 offslip (SB)	147.56	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	82.55	30.38	76.15	133.71	153.99			N/A	N/A
	5 - Grovehurst Road	123.31	>199	>199	>199	>199			N/A	N/A

2024 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	391.25	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1856.75	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	899	100.000
	2 - Grovehurst Road		ONE HOUR	✓	235	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	482	100.000
	4 - Swale Way		ONE HOUR	✓	1279	100.000
	5 - Grovehurst Road		ONE HOUR	✓	595	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	1 - A249 offslip	2 - Grovehurst	3 - A249 onslip	4 - B2005 -

1 - North	From		(NB)	Road	(NB)	link
		1 - A249 offslip (NB)	0	183	0	716
		2 - Grovehurst Road	0	0	27	208
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	264	541	0

Demand (Veh/hr)

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	45	0	0	482	393
		3 - A249 offslip (SB)	1	27	0	199	255
		4 - Swale Way	688	432	0	0	159
5 - Grovehurst Road	150	339	0	106	0		

Vehicle Mix

Heavy Vehicle Percentages

1 - North	From	To				
			1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
		1 - A249 offslip (NB)	0	2	0	20
		2 - Grovehurst Road	0	0	0	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	0	3	0		

Heavy Vehicle Percentages

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	9	0	0	29	2
		3 - A249 offslip (SB)	0	11	0	8	3
		4 - Swale Way	19	3	0	0	3
5 - Grovehurst Road	1	2	0	4	0		

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.35	702.26	156.1	200.0	F	825	1237
	2 - Grovehurst Road	0.52	14.88	1.1	3.5	B	216	323
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.38	3.63	0.6	2.2	A	546	819
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.47	3.89	0.9	1.5	A	775	1163
	3 - A249 offslip (SB)	0.72	16.99	2.4	11.0	C	442	663
	4 - Swale Way	2.44	4558.67	842.4	179.2	F	1174	1760
	5 - Grovehurst Road	0.91	48.91	8.3	43.7	E	546	819

Main Results for each time segment

16:15 - 16:30

Total	Junction	Circulating	Capacity	Throughput	Throughput	Start	End	Delay

Junction	Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)	RFC	(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	LOS
1 - North	1 - A249 offslip (NB)	677	169	495	806	0.840	659	0	0.0	4.5	22.361	C
	2 - Grovehurst Road	177	44	858	584	0.303	175	297	0.0	0.4	8.760	A
	3 - A249 onslip (NB)			680				353				
	4 - B2005 - link	497	124	0	1590	0.313	495	680	0.0	0.5	3.282	A
2 - South	1 - A249 onslip (SB)			572				499				
	2 - B2005 - link	676	169	78	1749	0.387	674	493	0.0	0.6	3.342	A
	3 - A249 offslip (SB)	363	91	752	876	0.414	360	0	0.0	0.7	6.944	A
	4 - Swale Way	963	241	532	666	1.445	658	580	0.0	76.3	222.167	F
	5 - Grovehurst Road	448	112	630	679	0.659	441	560	0.0	1.8	14.669	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	808	202	538	777	1.041	749	0	4.5	19.3	72.755	F
	2 - Grovehurst Road	211	53	958	517	0.408	210	329	0.4	0.7	11.691	B
	3 - A249 onslip (NB)			783				386				
	4 - B2005 - link	538	135	0	1590	0.339	538	783	0.5	0.5	3.421	A
2 - South	1 - A249 onslip (SB)			629				504				
	2 - B2005 - link	777	194	94	1740	0.447	777	534	0.6	0.8	3.736	A
	3 - A249 offslip (SB)	433	108	871	779	0.556	431	0	0.7	1.2	10.289	B
	4 - Swale Way	1150	287	623	616	1.866	616	679	76.3	209.7	874.018	F
	5 - Grovehurst Road	535	134	603	698	0.766	530	637	1.8	3.0	20.854	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	990	247	592	740	1.338	738	0	19.3	82.2	259.798	F
	2 - Grovehurst Road	259	65	986	501	0.516	257	345	0.7	1.0	14.663	B
	3 - A249 onslip (NB)			816				428				
	4 - B2005 - link	593	148	0	1590	0.373	592	816	0.5	0.6	3.607	A
2 - South	1 - A249 onslip (SB)			702				512				
	2 - B2005 - link	805	201	114	1729	0.466	805	588	0.8	0.9	3.893	A
	3 - A249 offslip (SB)	531	133	919	742	0.716	526	0	1.2	2.4	16.355	C
	4 - Swale Way	1408	352	692	578	2.436	578	753	209.7	417.2	1954.936	F
	5 - Grovehurst Road	655	164	576	716	0.915	638	694	3.0	7.2	39.335	E

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	990	247	600	735	1.347	734	0	82.2	146.0	558.320	F
	2 - Grovehurst Road	259	65	988	500	0.517	259	346	1.0	1.1	14.875	B
	3 - A249 onslip (NB)			814				433				
	4 - B2005 - link	600	150	0	1590	0.377	600	814	0.6	0.6	3.633	A
2 - South	1 - A249 onslip (SB)			711				515				
	2 - B2005 - link	803	201	116	1728	0.465	803	595	0.9	0.9	3.891	A
	3 - A249 offslip (SB)	531	133	919	741	0.716	530	0	2.4	2.4	16.995	C
	4 - Swale Way	1408	352	694	577	2.440	577	756	417.2	625.0	3081.710	F
	5 - Grovehurst Road	655	164	575	717	0.914	651	695	7.2	8.3	48.908	E

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	808	202	550	768	1.052	768	0	146.0	156.1	702.265	F
	2 - Grovehurst Road	211	53	981	502	0.421	212	337	1.1	0.7	12.494	B
	3 - A249 onslip (NB)			800				394				
	4 - B2005 - link	550	138	0	1590	0.346	550	800	0.6	0.5	3.461	A
2 - South	1 - A249 onslip (SB)			645				507				
	2 - B2005 - link	795	199	99	1738	0.457	795	546	0.9	0.8	3.820	A
	3 - A249 offslip (SB)	433	108	893	761	0.569	438	0	2.4	1.4	11.275	B
	4 - Swale Way	1150	287	635	610	1.886	610	696	625.0	760.0	3975.307	F
	5 - Grovehurst Road	535	134	598	701	0.763	554	647	8.3	3.5	26.910	D

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	677	169	497	804	0.841	799	0	156.1	125.5	634.914	F
	2 - Grovehurst Road	177	44	971	506	0.350	178	326	0.7	0.5	11.005	B
	3 - A249 onslip (NB)			794				355				
	4 - B2005 - link	497	124	0	1590	0.313	497	794	0.5	0.5	3.296	A
2 - South	1 - A249 onslip (SB)			574				495				
	2 - B2005 - link	794	198	81	1747	0.454	794	493	0.8	0.8	3.773	A
	3 - A249 offslip (SB)	363	91	875	775	0.468	365	0	1.4	0.9	8.813	A
	4 - Swale Way	963	241	592	634	1.520	634	647	760.0	842.4	4558.672	F
	5 - Grovehurst Road	448	112	615	690	0.650	454	611	3.5	1.9	15.680	C

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.49	0.03	0.34	9.19	24.24			N/A	N/A
	2 - Grovehurst Road	0.43	0.00	0.00	0.43	0.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.63	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.70	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	76.28	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.85	0.71	1.39	1.98	2.44			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	19.28	0.40	10.86	47.71	64.73			N/A	N/A
	2 - Grovehurst Road	0.68	0.24	0.94	1.39	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.80	0.22	0.94	1.40	1.46			N/A	N/A
	3 - A249 offslip (SB)	1.22	0.08	0.99	2.30	2.99			N/A	N/A
	4 - Swale Way	209.67	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.01	0.10	1.21	7.19	9.99			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	82.18	39.78	78.17	121.18	135.70			N/A	N/A
	2 - Grovehurst Road	1.03	0.03	0.27	1.03	1.10			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.25	0.59	0.59			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.86	0.03	0.25	0.86	0.86			N/A	N/A
	3 - A249 offslip (SB)	2.37	0.03	0.30	2.59	10.98			N/A	N/A
	4 - Swale Way	417.21	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	7.21	0.07	1.16	20.67	32.46			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	146.02	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.05	0.03	0.28	1.05	3.52			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.03	0.28	0.66	2.22			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.87	0.03	0.26	0.87	0.87			N/A	N/A
	3 - A249 offslip (SB)	2.44	0.03	0.28	2.44	7.35			N/A	N/A

	4 - Swale Way	624.98	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	8.29	0.05	0.47	23.34	43.66			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	156.12	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.74	0.08	0.79	1.07	1.07			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.85	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.36	0.06	0.74	3.10	4.57			N/A	N/A
	4 - Swale Way	760.04	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.52	0.04	0.43	9.75	17.88			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	125.49	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.55	0.05	0.47	1.32	1.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.84	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.90	0.04	0.41	2.07	3.40			N/A	N/A
	4 - Swale Way	842.37	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.93	0.03	0.34	4.37	10.16			N/A	N/A

2024 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	339.49	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	543.28	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	917	100.000
	2 - Grovehurst Road		ONE HOUR	✓	446	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	593	100.000
	4 - Swale Way		ONE HOUR	✓	704	100.000
	5 - Grovehurst Road		ONE HOUR	✓	736	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip	2 - Grovehurst	3 - A249 onslip	4 - B2005 -

1 - North	From		(NB)	Road	(NB)	link
		1 - A249 offslip (NB)	0	45	0	872
		2 - Grovehurst Road	0	0	25	421
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	151	366	0

Demand (Veh/hr)

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	144	0	0	921	225
		3 - A249 offslip (SB)	1	18	0	377	197
		4 - Swale Way	401	226	0	0	77
5 - Grovehurst Road	287	277	0	172	0		

Vehicle Mix

Heavy Vehicle Percentages

1 - North	From	To				
			1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
		1 - A249 offslip (NB)	0	13	0	18
		2 - Grovehurst Road	0	0	8	4
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	4	6	0		

Heavy Vehicle Percentages

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	2	0	0	17	6
		3 - A249 offslip (SB)	0	6	0	9	4
		4 - Swale Way	41	10	0	0	9
5 - Grovehurst Road	1	1	0	4	0		

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.22	457.43	104.3	171.9	F	841	1262
	2 - Grovehurst Road	1.19	415.27	47.5	90.8	F	409	614
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.28	3.25	0.4	1.7	A	421	631
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	6.14	2.0	5.2	A	1124	1686
	3 - A249 offslip (SB)	1.50	1235.42	151.0	186.5	F	544	816
	4 - Swale Way	1.29	676.35	115.3	186.0	F	646	969
	5 - Grovehurst Road	1.34	792.25	138.4	200.0	F	675	1013

Main Results for each time segment

07:15 - 07:30

Total	Junction	Circulating	Capacity	Throughput	Throughput	Start	End	Delay

Junction	Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)	RFC	(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	LOS
1 - North	1 - A249 offslip (NB)	690	173	378	867	0.797	676	0	0.0	3.5	17.777	C
	2 - Grovehurst Road	336	84	911	531	0.632	329	144	0.0	1.6	17.322	C
	3 - A249 onslip (NB)			954				286				
	4 - B2005 - link	379	95	0	1539	0.246	378	954	0.0	0.3	3.098	A
2 - South	1 - A249 onslip (SB)			506				609				
	2 - B2005 - link	954	239	126	1769	0.539	949	381	0.0	1.2	4.367	A
	3 - A249 offslip (SB)	446	112	1075	624	0.716	437	0	0.0	2.3	18.460	C
	4 - Swale Way	530	133	431	630	0.842	513	1082	0.0	4.4	27.625	D
	5 - Grovehurst Road	554	139	576	678	0.817	539	367	0.0	3.9	23.739	C

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	824	206	424	835	0.988	786	0	3.5	13.2	51.680	F
	2 - Grovehurst Road	401	100	1048	442	0.908	384	162	1.6	6.0	51.366	F
	3 - A249 onslip (NB)			1109				322				
	4 - B2005 - link	424	106	0	1539	0.276	424	1109	0.3	0.4	3.228	A
2 - South	1 - A249 onslip (SB)			565				688				
	2 - B2005 - link	1110	277	140	1761	0.630	1108	426	1.2	1.7	5.490	A
	3 - A249 offslip (SB)	533	133	1247	489	1.091	469	0	2.3	18.3	100.175	F
	4 - Swale Way	633	158	488	602	1.052	579	1229	4.4	17.7	86.522	F
	5 - Grovehurst Road	662	165	655	620	1.068	598	412	3.9	19.7	88.620	F

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1010	252	431	830	1.216	826	0	13.2	59.0	170.268	F
	2 - Grovehurst Road	491	123	1090	413	1.188	406	166	6.0	27.1	168.786	F
	3 - A249 onslip (NB)			1169				328				
	4 - B2005 - link	431	108	0	1539	0.280	431	1169	0.4	0.4	3.246	A
2 - South	1 - A249 onslip (SB)			572				706				
	2 - B2005 - link	1169	292	141	1761	0.664	1168	432	1.7	1.9	6.063	A
	3 - A249 offslip (SB)	653	163	1309	440	1.483	439	0	18.3	71.7	386.544	F
	4 - Swale Way	775	194	494	599	1.295	597	1254	17.7	62.3	255.807	F
	5 - Grovehurst Road	810	203	676	604	1.342	602	415	19.7	71.6	286.645	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1010	252	431	830	1.217	829	0	59.0	104.1	363.334	F
	2 - Grovehurst Road	491	123	1094	411	1.194	410	167	27.1	47.5	344.519	F
	3 - A249 onslip (NB)			1175				328				
	4 - B2005 - link	431	108	0	1539	0.280	431	1175	0.4	0.4	3.247	A
2 - South	1 - A249 onslip (SB)			573				707				
	2 - B2005 - link	1175	294	141	1761	0.667	1175	432	1.9	2.0	6.142	A
	3 - A249 offslip (SB)	653	163	1316	435	1.502	435	0	71.7	126.3	827.057	F
	4 - Swale Way	775	194	494	599	1.295	598	1256	62.3	106.5	518.556	F
	5 - Grovehurst Road	810	203	678	603	1.345	602	415	71.6	123.6	593.488	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	824	206	431	830	0.994	824	0	104.1	104.3	457.426	F
	2 - Grovehurst Road	401	100	1088	415	0.967	408	166	47.5	45.8	415.274	F
	3 - A249 onslip (NB)			1168				328				
	4 - B2005 - link	431	108	0	1539	0.280	431	1168	0.4	0.4	3.248	A
2 - South	1 - A249 onslip (SB)			573				707				
	2 - B2005 - link	1168	292	141	1761	0.663	1168	432	2.0	2.0	6.073	A
	3 - A249 offslip (SB)	533	133	1309	440	1.211	440	0	126.3	149.5	1138.163	F
	4 - Swale Way	633	158	494	599	1.057	598	1255	106.5	115.3	676.345	F
	5 - Grovehurst Road	662	165	677	603	1.097	603	415	123.6	138.4	789.297	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	690	173	429	831	0.831	823	0	104.3	71.1	385.170	F
	2 - Grovehurst Road	336	84	1087	416	0.808	407	166	45.8	28.0	330.445	F
	3 - A249 onslip (NB)			1167				327				
	4 - B2005 - link	429	107	0	1539	0.279	429	1167	0.4	0.4	3.243	A
2 - South	1 - A249 onslip (SB)			571				704				
	2 - B2005 - link	1167	292	141	1761	0.663	1167	430	2.0	2.0	6.061	A
	3 - A249 offslip (SB)	446	112	1307	441	1.011	441	0	149.5	151.0	1235.423	F
	4 - Swale Way	530	133	494	599	0.885	594	1254	115.3	99.4	651.621	F
	5 - Grovehurst Road	554	139	673	606	0.914	602	415	138.4	126.4	792.255	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.55	0.04	0.43	9.87	17.98			N/A	N/A
	2 - Grovehurst Road	1.63	0.04	0.37	4.14	8.17			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.16	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	2.34	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	4.37	0.03	0.31	5.37	20.93			N/A	N/A
	5 - Grovehurst Road	3.87	0.03	0.27	3.87	3.87			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	13.17	0.31	7.32	32.35	43.88			N/A	N/A
	2 - Grovehurst Road	5.97	0.10	2.02	15.86	22.98			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.38	0.00	0.00	0.38	0.38			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.68	0.07	1.07	3.75	5.21			N/A	N/A
	3 - A249 offslip (SB)	18.29	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	17.73	0.19	7.53	47.45	67.59			N/A	N/A
	5 - Grovehurst Road	19.66	0.09	4.00	57.31	89.52			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	59.04	25.42	55.35	90.52	102.60			N/A	N/A
	2 - Grovehurst Road	27.14	7.65	24.02	46.50	54.68			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.94	0.03	0.27	1.94	1.94			N/A	N/A
	3 - A249 offslip (SB)	71.69	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	62.28	21.64	56.97	102.34	118.45			N/A	N/A
	5 - Grovehurst Road	71.63	19.71	63.67	125.63	148.41			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	104.15	57.10	100.39	146.29	161.43			N/A	N/A
	2 - Grovehurst Road	47.47	18.76	44.01	74.71	85.41			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.03	0.30	1.22	1.66			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.98	0.03	0.26	1.98	1.98			N/A	N/A
	3 - A249 offslip (SB)	126.27	>199	>199	>199	>199			N/A	N/A

	4 - Swale Way	106.51	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	123.65	>199	>199	>199	>199			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	104.30	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	45.80	14.05	41.17	77.63	90.80			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.98	0.16	1.03	3.78	4.86			N/A	N/A
	3 - A249 offslip (SB)	149.51	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	115.26	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	138.37	>199	>199	>199	>199			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	71.14	22.07	64.20	120.87	141.33			N/A	N/A
	2 - Grovehurst Road	28.02	2.76	21.59	57.96	72.63			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.97	0.39	1.25	3.23	3.93			N/A	N/A
	3 - A249 offslip (SB)	150.95	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	99.38	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	126.42	>199	>199	>199	>199			N/A	N/A

2024 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	424.21	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1950.03	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	909	100.000
	2 - Grovehurst Road		ONE HOUR	✓	235	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	482	100.000
	4 - Swale Way		ONE HOUR	✓	1300	100.000
	5 - Grovehurst Road		ONE HOUR	✓	595	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	1 - A249 offslip	2 - Grovehurst	3 - A249 onslip	4 - B2005 -

1 - North	From		(NB)	Road	(NB)	link
		1 - A249 offslip (NB)	0	183	0	726
		2 - Grovehurst Road	0	0	27	208
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	264	542	0

Demand (Veh/hr)

2 - South	From		To				
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	45	0	0	492	393
		3 - A249 offslip (SB)	1	27	0	199	255
		4 - Swale Way	708	433	0	0	159
5 - Grovehurst Road	150	339	0	106	0		

Vehicle Mix**Heavy Vehicle Percentages**

1 - North	From		To			
			1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
		1 - A249 offslip (NB)	0	2	0	21
		2 - Grovehurst Road	0	0	0	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	0	3	0		

Heavy Vehicle Percentages

2 - South	From		To				
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	9	0	0	30	2
		3 - A249 offslip (SB)	0	11	0	8	3
		4 - Swale Way	20	3	0	0	3
5 - Grovehurst Road	1	2	0	4	0		

Results**Results Summary for whole modelled period**

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.37	754.23	168.5	200.0	F	834	1251
	2 - Grovehurst Road	0.52	14.98	1.1	3.5	B	216	323
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.38	3.62	0.6	2.3	A	542	814
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.47	3.93	0.9	1.5	A	777	1165
	3 - A249 offslip (SB)	0.72	17.27	2.5	11.3	C	442	663
	4 - Swale Way	2.48	4736.84	873.9	178.2	F	1193	1789
	5 - Grovehurst Road	0.92	50.01	8.5	44.3	F	546	819

Main Results for each time segment**16:15 - 16:30**

	Total	Junction	Circulating	Capacity	Throughput	Throughput	Start	End	Delay

Junction	Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)	RFC	(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	LOS
1 - North	1 - A249 offslip (NB)	684	171	491	803	0.852	665	0	0.0	4.8	23.591	C
	2 - Grovehurst Road	177	44	861	578	0.306	175	295	0.0	0.4	8.889	A
	3 - A249 onslip (NB)			686				350				
	4 - B2005 - link	493	123	0	1590	0.310	491	686	0.0	0.4	3.269	A
2 - South	1 - A249 onslip (SB)			568				501				
	2 - B2005 - link	684	171	78	1739	0.393	681	489	0.0	0.6	3.394	A
	3 - A249 offslip (SB)	363	91	760	867	0.419	360	0	0.0	0.7	7.067	A
	4 - Swale Way	979	245	532	663	1.477	655	587	0.0	81.0	236.522	F
	5 - Grovehurst Road	448	112	628	678	0.661	441	558	0.0	1.9	14.749	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	817	204	535	774	1.056	750	0	4.8	21.6	79.318	F
	2 - Grovehurst Road	211	53	959	513	0.412	210	326	0.4	0.7	11.840	B
	3 - A249 onslip (NB)			785				384				
	4 - B2005 - link	535	134	0	1590	0.336	535	785	0.4	0.5	3.409	A
2 - South	1 - A249 onslip (SB)			625				507				
	2 - B2005 - link	781	195	94	1730	0.451	780	531	0.6	0.8	3.788	A
	3 - A249 offslip (SB)	433	108	875	773	0.561	431	0	0.7	1.2	10.477	B
	4 - Swale Way	1169	292	621	614	1.903	614	685	81.0	219.7	921.952	F
	5 - Grovehurst Road	535	134	602	696	0.768	530	633	1.9	3.0	21.043	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1001	250	589	737	1.359	735	0	21.6	87.9	280.225	F
	2 - Grovehurst Road	259	65	984	500	0.518	257	341	0.7	1.0	14.771	B
	3 - A249 onslip (NB)			815				426				
	4 - B2005 - link	589	147	0	1590	0.371	589	815	0.5	0.6	3.595	A
2 - South	1 - A249 onslip (SB)			699				515				
	2 - B2005 - link	805	201	114	1719	0.468	805	585	0.8	0.9	3.934	A
	3 - A249 offslip (SB)	531	133	918	738	0.719	526	0	1.2	2.4	16.620	C
	4 - Swale Way	1431	358	688	577	2.481	577	757	219.7	433.3	2038.781	F
	5 - Grovehurst Road	655	164	576	714	0.917	638	689	3.0	7.3	39.960	E

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1001	250	597	732	1.368	731	0	87.9	155.3	596.428	F
	2 - Grovehurst Road	259	65	985	499	0.519	259	343	1.0	1.1	14.980	B
	3 - A249 onslip (NB)			813				431				
	4 - B2005 - link	597	149	0	1590	0.375	597	813	0.6	0.6	3.621	A
2 - South	1 - A249 onslip (SB)			708				518				
	2 - B2005 - link	803	201	116	1718	0.467	803	592	0.9	0.9	3.931	A
	3 - A249 offslip (SB)	531	133	919	738	0.719	530	0	2.4	2.5	17.273	C
	4 - Swale Way	1431	358	689	576	2.484	576	760	433.3	647.1	3196.908	F
	5 - Grovehurst Road	655	164	575	714	0.917	651	690	7.3	8.5	50.006	F

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	817	204	547	765	1.068	764	0	155.3	168.5	754.228	F
	2 - Grovehurst Road	211	53	979	500	0.423	213	333	1.1	0.7	12.577	B
	3 - A249 onslip (NB)			799				393				
	4 - B2005 - link	547	137	0	1590	0.344	547	799	0.6	0.5	3.454	A
2 - South	1 - A249 onslip (SB)			642				510				
	2 - B2005 - link	794	199	99	1728	0.460	794	543	0.9	0.9	3.857	A
	3 - A249 offslip (SB)	433	108	893	757	0.572	438	0	2.5	1.4	11.408	B
	4 - Swale Way	1169	292	631	608	1.921	608	700	647.1	787.2	4124.984	F
	5 - Grovehurst Road	535	134	598	699	0.765	555	642	8.5	3.6	27.487	D

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	684	171	494	801	0.854	796	0	168.5	140.5	699.039	F
	2 - Grovehurst Road	177	44	968	504	0.351	178	322	0.7	0.6	11.072	B
	3 - A249 onslip (NB)			793				353				
	4 - B2005 - link	494	123	0	1590	0.310	494	793	0.5	0.5	3.286	A
2 - South	1 - A249 onslip (SB)			571				498				
	2 - B2005 - link	794	198	81	1738	0.457	794	490	0.9	0.8	3.813	A
	3 - A249 offslip (SB)	363	91	875	771	0.471	365	0	1.4	0.9	8.899	A
	4 - Swale Way	979	245	588	632	1.548	632	652	787.2	873.9	4736.842	F
	5 - Grovehurst Road	448	112	614	688	0.652	454	606	3.6	2.0	15.841	C

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	4.83	0.03	0.33	7.95	24.98			N/A	N/A
	2 - Grovehurst Road	0.43	0.00	0.00	0.43	0.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.64	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.71	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	81.05	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.86	0.71	1.40	1.99	2.48			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	21.59	0.40	11.96	53.93	73.48			N/A	N/A
	2 - Grovehurst Road	0.68	0.25	0.95	1.39	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.22	0.95	1.41	1.46			N/A	N/A
	3 - A249 offslip (SB)	1.25	0.08	1.00	2.37	3.10			N/A	N/A
	4 - Swale Way	219.72	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.04	0.10	1.22	7.26	10.09			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	87.94	41.84	83.53	130.60	146.52			N/A	N/A
	2 - Grovehurst Road	1.04	0.03	0.27	1.04	1.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.25	0.59	0.59			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.87	0.03	0.25	0.87	0.87			N/A	N/A
	3 - A249 offslip (SB)	2.41	0.03	0.30	2.77	11.31			N/A	N/A
	4 - Swale Way	433.30	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	7.34	0.07	1.30	20.95	32.66			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	155.30	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.06	0.03	0.28	1.06	3.51			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.03	0.28	0.71	2.26			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.87	0.03	0.26	0.87	0.87			N/A	N/A
	3 - A249 offslip (SB)	2.48	0.03	0.28	2.48	7.59			N/A	N/A

	4 - Swale Way	647.11	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	8.48	0.05	0.48	24.05	44.34			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	168.48	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.75	0.08	0.79	1.16	1.16			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.86	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.37	0.06	0.72	3.20	4.72			N/A	N/A
	4 - Swale Way	787.22	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	3.57	0.04	0.43	9.90	18.16			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	140.49	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.55	0.05	0.47	1.32	1.43			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.85	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.90	0.04	0.41	2.13	3.50			N/A	N/A
	4 - Swale Way	873.88	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.95	0.03	0.34	4.40	10.26			N/A	N/A

2031, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	184.04	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	328.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	838	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	569	100.000
	4 - Swale Way		ONE HOUR	✓	676	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	796
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	147	326	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	141	0	0	885	183
	3 - A249 offslip (SB)	1	18	0	376	174
	4 - Swale Way	374	225	0	0	77
	5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	7	0	17
	2 - Grovehurst Road	0	0	8	3
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	6	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	15	6
	3 - A249 offslip (SB)	0	6	0	9	4
	4 - Swale Way	36	9	0	0	9
	5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.12	220.97	57.4	108.4	F	769	1153
	2 - Grovehurst Road	1.15	298.50	37.3	73.2	F	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.29	3.30	0.4	1.7	A	424	636
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	6.11	2.0	4.6	A	1108	1662
	3 - A249 offslip (SB)	1.48	1034.84	128.6	200.0	F	522	783
	4 - Swale Way	1.17	365.54	65.6	115.2	F	620	930
	5 - Grovehurst Road	1.14	284.68	50.0	93.2	F	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	351	895	0.705	622	0	0.0	2.3	12.775	B
	2 - Grovehurst Road	331	83	832	590	0.561	326	140	0.0	1.2	13.393	B

	3 - A249 onslip (NB)			898				260				
	4 - B2005 - link	352	88	0	1540	0.229	351	898	0.0	0.3	3.025	A
2 - South	1 - A249 onslip (SB)			479				533				
	2 - B2005 - link	901	225	127	1792	0.503	897	352	0.0	1.0	4.003	A
	3 - A249 offslip (SB)	428	107	1024	673	0.637	422	0	0.0	1.7	13.983	B
	4 - Swale Way	509	127	383	673	0.756	498	1063	0.0	2.8	19.440	C
	5 - Grovehurst Road	460	115	560	699	0.658	453	321	0.0	1.8	14.210	B

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	414	851	0.885	738	0	2.3	6.1	28.641	D
	2 - Grovehurst Road	396	99	986	490	0.807	386	166	1.2	3.5	32.227	D
	3 - A249 onslip (NB)			1066				307				
	4 - B2005 - link	414	103	0	1540	0.269	414	1066	0.3	0.4	3.197	A
2 - South	1 - A249 onslip (SB)			564				629				
	2 - B2005 - link	1069	267	151	1779	0.601	1067	414	1.0	1.5	5.041	A
	3 - A249 offslip (SB)	512	128	1217	524	0.977	480	0	1.7	9.6	59.703	F
	4 - Swale Way	608	152	449	640	0.949	584	1249	2.8	8.8	49.568	E
	5 - Grovehurst Road	549	137	658	628	0.874	535	375	1.8	5.3	34.489	D

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	444	829	1.112	816	0	6.1	32.8	100.640	F
	2 - Grovehurst Road	484	121	1081	428	1.132	415	179	3.5	20.8	127.599	F
	3 - A249 onslip (NB)			1166				330				
	4 - B2005 - link	444	111	0	1540	0.289	444	1166	0.4	0.4	3.286	A
2 - South	1 - A249 onslip (SB)			608				681				
	2 - B2005 - link	1171	293	164	1771	0.661	1169	444	1.5	1.9	5.957	A
	3 - A249 offslip (SB)	626	157	1333	435	1.441	433	0	9.6	58.0	301.133	F
	4 - Swale Way	744	186	460	635	1.172	628	1305	8.8	37.8	150.258	F
	5 - Grovehurst Road	673	168	707	592	1.136	581	381	5.3	28.3	122.229	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	448	827	1.116	824	0	32.8	57.4	208.500	F
	2 - Grovehurst Road	484	121	1091	421	1.151	418	180	20.8	37.3	267.696	F
	3 - A249 onslip (NB)			1178				332				
	4 - B2005 - link	448	112	0	1540	0.291	448	1178	0.4	0.4	3.296	A
2 - South	1 - A249 onslip (SB)			612				686				
	2 - B2005 - link	1182	295	165	1771	0.668	1182	448	1.9	2.0	6.107	A
	3 - A249 offslip (SB)	626	157	1347	424	1.478	424	0	58.0	108.7	714.975	F
	4 - Swale Way	744	186	460	635	1.173	633	1310	37.8	65.6	306.303	F
	5 - Grovehurst Road	673	168	713	588	1.144	586	381	28.3	50.0	254.342	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	444	830	0.908	816	0	57.4	41.9	220.970	F
	2 - Grovehurst Road	396	99	1081	428	0.924	417	179	37.3	32.0	298.497	F
	3 - A249 onslip (NB)			1168				330				
	4 - B2005 - link	444	111	0	1540	0.288	444	1168	0.4	0.4	3.284	A
2 - South	1 - A249 onslip (SB)			608				680				
	2 - B2005 - link	1172	293	164	1771	0.662	1172	444	2.0	2.0	6.010	A
	3 - A249 offslip (SB)	512	128	1336	432	1.184	432	0	108.7	128.6	997.300	F
	4 - Swale Way	608	152	461	635	0.958	625	1307	65.6	61.2	365.536	F
	5 - Grovehurst Road	549	137	705	594	0.925	582	381	50.0	41.7	284.680	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	631	158	444	830	0.760	783	0	41.9	4.0	98.091	F

1 - North	2 - Grovehurst Road	331	83	1049	449	0.738	436	177	32.0	5.9	167.620	F
	3 - A249 onslip (NB)			1154				331				
	4 - B2005 - link	444	111	0	1540	0.288	444	1154	0.4	0.4	3.286	A
2 - South	1 - A249 onslip (SB)			607				677				
	2 - B2005 - link	1156	289	164	1771	0.652	1156	444	2.0	1.9	5.854	A
	3 - A249 offslip (SB)	428	107	1319	445	0.963	442	0	128.6	125.3	1034.835	F
	4 - Swale Way	509	127	460	635	0.801	625	1301	61.2	32.2	272.751	F
	5 - Grovehurst Road	460	115	703	595	0.773	581	381	41.7	11.4	172.017	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.27	0.16	1.22	4.56	5.90			N/A	N/A
	2 - Grovehurst Road	1.24	0.06	0.84	2.63	3.68			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.29	0.00	0.00	0.29	0.29			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.00	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.68	0.03	0.25	1.68	1.68			N/A	N/A
	4 - Swale Way	2.84	0.07	1.12	7.48	11.16			N/A	N/A
	5 - Grovehurst Road	1.84	0.07	1.11	4.21	5.92			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	6.05	0.15	2.79	15.12	20.99			N/A	N/A
	2 - Grovehurst Road	3.53	0.08	1.46	9.23	13.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.37	0.00	0.00	0.37	0.37			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.48	0.07	0.96	3.26	4.60			N/A	N/A
	3 - A249 offslip (SB)	9.62	0.03	0.28	9.62	15.19			N/A	N/A
	4 - Swale Way	8.81	0.26	4.91	21.17	28.58			N/A	N/A
	5 - Grovehurst Road	5.33	0.12	2.17	13.60	19.19			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	32.82	9.10	29.04	56.73	66.83			N/A	N/A
	2 - Grovehurst Road	20.82	4.73	17.87	37.14	44.30			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.91	0.03	0.27	1.91	1.91			N/A	N/A
	3 - A249 offslip (SB)	57.99	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	37.83	13.29	34.52	61.49	71.03			N/A	N/A
	5 - Grovehurst Road	28.28	7.87	25.00	48.66	57.28			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	57.44	20.31	52.63	93.83	108.43			N/A	N/A
	2 - Grovehurst Road	37.32	11.64	33.56	62.70	73.17			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.03	0.30	1.27	1.74			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.98	0.03	0.26	1.98	1.98			N/A	N/A
	3 - A249 offslip (SB)	108.67	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	65.57	29.29	61.77	99.37	112.23			N/A	N/A
	5 - Grovehurst Road	50.02	18.16	45.93	80.90	93.24			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	41.90	14.08	38.06	69.14	80.23			N/A	N/A
	2 - Grovehurst Road	31.96	9.14	28.39	54.77	64.36			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.97	0.27	1.19	3.42	4.25			N/A	N/A
	3 - A249 offslip (SB)	128.57	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	61.24	21.89	56.21	99.80	115.24			N/A	N/A
	5 - Grovehurst Road	41.72	11.75	37.07	72.18	85.00			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.95	0.04	0.35	9.04	21.44			N/A	N/A
	2 - Grovehurst Road	5.90	0.07	1.15	16.60	25.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.41	0.00	0.00	0.41	0.41			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.90	0.53	1.26	2.88	3.54			N/A	N/A
	3 - A249 offslip (SB)	125.27	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	32.25	5.05	26.44	62.59	76.60			N/A	N/A
	5 - Grovehurst Road	11.41	0.32	6.53	27.51	37.04			N/A	N/A

2031, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	208.46	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1529.32	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	813	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	442	100.000
	4 - Swale Way		ONE HOUR	✓	1252	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	633
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	262	521	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	42	0	0	465	322
	3 - A249 offslip (SB)	1	27	0	198	216
	4 - Swale Way	662	431	0	0	159
	5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	1	0	20
	2 - Grovehurst Road	0	0	0	1
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	26	1
	3 - A249 offslip (SB)	0	11	0	8	4
	4 - Swale Way	17	2	0	0	3
	5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.21	388.10	87.6	137.8	F	746	1119
	2 - Grovehurst Road	0.49	13.57	0.9	3.5	B	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.38	3.63	0.6	2.1	A	547	820
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.45	3.76	0.8	1.5	A	749	1123
	3 - A249 offslip (SB)	0.65	13.50	1.8	5.2	B	406	608
	4 - Swale Way	2.19	3677.22	727.1	181.7	F	1149	1723
	5 - Grovehurst Road	0.85	32.51	5.0	26.6	D	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	612	153	500	806	0.759	600	0	0.0	2.9	16.654	C
	2 - Grovehurst Road	171	43	800	630	0.271	169	300	0.0	0.4	7.792	A

	3 - A249 onslip (NB)			617				353				
	4 - B2005 - link	502	125	0	1591	0.316	500	617	0.0	0.5	3.295	A
2 - South	1 - A249 onslip (SB)			579				489				
	2 - B2005 - link	619	155	79	1770	0.349	616	500	0.0	0.5	3.115	A
	3 - A249 offslip (SB)	333	83	695	923	0.360	331	0	0.0	0.6	6.052	A
	4 - Swale Way	943	236	453	721	1.307	709	572	0.0	58.3	159.833	F
	5 - Grovehurst Road	402	101	671	660	0.609	396	491	0.0	1.5	13.374	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	731	183	542	778	0.940	707	0	2.9	8.8	41.313	E
	2 - Grovehurst Road	204	51	911	555	0.368	203	338	0.4	0.6	10.213	B
	3 - A249 onslip (NB)			730				385				
	4 - B2005 - link	542	135	0	1591	0.341	542	730	0.5	0.5	3.432	A
2 - South	1 - A249 onslip (SB)			634				492				
	2 - B2005 - link	732	183	95	1761	0.415	731	540	0.5	0.7	3.492	A
	3 - A249 offslip (SB)	397	99	826	819	0.485	396	0	0.6	0.9	8.487	A
	4 - Swale Way	1126	281	539	673	1.672	673	682	58.3	171.4	642.020	F
	5 - Grovehurst Road	480	120	650	674	0.712	477	563	1.5	2.3	17.898	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	895	224	594	742	1.206	737	0	8.8	48.4	154.316	F
	2 - Grovehurst Road	250	62	969	518	0.483	249	362	0.6	0.9	13.306	B
	3 - A249 onslip (NB)			793				425				
	4 - B2005 - link	594	149	0	1591	0.374	594	793	0.5	0.6	3.611	A
2 - South	1 - A249 onslip (SB)			706				494				
	2 - B2005 - link	790	198	115	1750	0.452	790	592	0.7	0.8	3.747	A
	3 - A249 offslip (SB)	487	122	905	756	0.644	483	0	0.9	1.7	13.049	B
	4 - Swale Way	1378	345	614	632	2.182	632	774	171.4	358.1	1516.049	F
	5 - Grovehurst Road	588	147	622	693	0.848	579	623	2.3	4.7	29.145	D

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	895	224	599	739	1.211	738	0	48.4	87.6	337.970	F
	2 - Grovehurst Road	250	62	973	515	0.485	250	364	0.9	0.9	13.568	B
	3 - A249 onslip (NB)			795				428				
	4 - B2005 - link	599	150	0	1591	0.376	599	795	0.6	0.6	3.627	A
2 - South	1 - A249 onslip (SB)			712				495				
	2 - B2005 - link	793	198	116	1749	0.453	793	596	0.8	0.8	3.763	A
	3 - A249 offslip (SB)	487	122	909	753	0.647	486	0	1.7	1.8	13.500	B
	4 - Swale Way	1378	345	617	630	2.188	630	779	358.1	545.2	2489.328	F
	5 - Grovehurst Road	588	147	621	694	0.847	587	626	4.7	5.0	32.511	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	731	183	546	775	0.943	766	0	87.6	78.7	388.101	F
	2 - Grovehurst Road	204	51	960	521	0.392	205	352	0.9	0.7	11.448	B
	3 - A249 onslip (NB)			777				388				
	4 - B2005 - link	546	136	0	1591	0.343	546	777	0.6	0.5	3.448	A
2 - South	1 - A249 onslip (SB)			641				490				
	2 - B2005 - link	781	195	97	1760	0.444	781	543	0.8	0.8	3.677	A
	3 - A249 offslip (SB)	397	99	878	776	0.512	400	0	1.8	1.1	9.650	A
	4 - Swale Way	1126	281	564	660	1.706	660	715	545.2	661.6	3224.325	F
	5 - Grovehurst Road	480	120	641	680	0.706	490	583	5.0	2.5	19.765	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	612	153	499	807	0.758	797	0	78.7	32.4	254.588	F

1 - North	2 - Grovehurst Road	171	43	953	523	0.327	172	343	0.7	0.5	10.271	B
	3 - A249 onslip (NB)			772				352				
	4 - B2005 - link	498	125	0	1591	0.313	499	772	0.5	0.5	3.299	A
2 - South	1 - A249 onslip (SB)			577				484				
	2 - B2005 - link	780	195	81	1769	0.441	780	497	0.8	0.8	3.641	A
	3 - A249 offslip (SB)	333	83	861	789	0.422	334	0	1.1	0.7	7.935	A
	4 - Swale Way	943	236	527	681	1.384	681	668	661.6	727.1	3677.222	F
	5 - Grovehurst Road	402	101	655	671	0.599	406	553	2.5	1.5	13.786	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.91	0.08	1.39	7.35	10.58			N/A	N/A
	2 - Grovehurst Road	0.37	0.00	0.00	0.37	0.37			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.53	0.53	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.56	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	58.33	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.50	1.05	1.50	1.90	1.95			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.77	0.24	4.77	21.27	28.84			N/A	N/A
	2 - Grovehurst Road	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.71	0.19	0.92	1.39	1.44			N/A	N/A
	3 - A249 offslip (SB)	0.93	0.09	0.90	1.44	1.81			N/A	N/A
	4 - Swale Way	171.42	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.32	0.09	1.42	5.30	7.30			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	48.40	20.91	45.33	73.93	83.76			N/A	N/A
	2 - Grovehurst Road	0.91	0.03	0.26	0.91	0.91			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.25	0.59	0.59			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.03	0.25	0.82	0.82			N/A	N/A
	3 - A249 offslip (SB)	1.74	0.03	0.28	1.74	5.22			N/A	N/A
	4 - Swale Way	358.13	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.67	0.04	0.43	12.87	24.30			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	87.62	46.62	84.16	124.47	137.83			N/A	N/A
	2 - Grovehurst Road	0.93	0.03	0.28	0.95	3.54			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.60	0.03	0.28	0.60	2.14			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.03	0.27	0.82	1.08			N/A	N/A
	3 - A249 offslip (SB)	1.79	0.03	0.28	1.79	4.43			N/A	N/A
	4 - Swale Way	545.24	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.02	0.03	0.33	9.18	26.61			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	78.75	35.89	74.42	118.72	133.82			N/A	N/A
	2 - Grovehurst Road	0.66	0.09	0.80	1.36	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.80	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.07	0.08	0.92	1.87	2.53			N/A	N/A
	4 - Swale Way	661.64	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.54	0.04	0.43	6.99	12.43			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	32.45	9.45	28.89	55.36	64.95			N/A	N/A
	2 - Grovehurst Road	0.49	0.04	0.44	1.27	1.39			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.79	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.74	0.05	0.49	1.38	1.89			N/A	N/A
	4 - Swale Way	727.07	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.55	0.04	0.35	3.78	7.90			N/A	N/A

2031 + Cumulative, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	1199.33	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	958.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2031 + Cumulative	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1084	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	619	100.000
	4 - Swale Way		ONE HOUR	✓	753	100.000
	5 - Grovehurst Road		ONE HOUR	✓	775	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	123	0	961
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	159	402	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	419	0	0	1008	231
	3 - A249 offslip (SB)	1	22	0	380	216
	4 - Swale Way	447	228	0	0	78
	5 - Grovehurst Road	289	313	0	173	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	2	0	15
	2 - Grovehurst Road	0	0	5	2
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	5	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	15	5
	3 - A249 offslip (SB)	0	5	0	9	3
	4 - Swale Way	34	9	0	0	9
	5 - Grovehurst Road	1	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.35	822.84	209.5	209.5	F	995	1492
	2 - Grovehurst Road	1.81	2534.43	329.5	195.8	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.26	3.13	0.3	1.3	A	397	595
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	5.88	2.0	6.0	A	1206	1809
	3 - A249 offslip (SB)	1.52	1454.61	182.4	187.4	F	568	852
	4 - Swale Way	1.52	1484.99	226.3	161.5	F	691	1036
	5 - Grovehurst Road	1.57	1663.71	254.9	196.7	F	711	1067

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	816	204	384	896	0.911	787	0	0.0	7.2	28.120	D
	2 - Grovehurst Road	555	139	973	513	1.081	485	198	0.0	17.4	82.933	F

	3 - A249 onslip (NB)			1158				300				
	4 - B2005 - link	386	96	0	1549	0.249	384	1158	0.0	0.3	3.088	A
2 - South	1 - A249 onslip (SB)			506				797				
	2 - B2005 - link	1158	290	119	1831	0.633	1152	387	0.0	1.7	5.246	A
	3 - A249 offslip (SB)	466	117	1270	500	0.931	438	0	0.0	7.0	46.272	E
	4 - Swale Way	567	142	621	560	1.013	518	1088	0.0	12.3	60.405	F
	5 - Grovehurst Road	583	146	771	572	1.020	531	367	0.0	13.0	61.522	F

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	974	244	399	886	1.100	872	0	7.2	32.9	97.214	F
	2 - Grovehurst Road	663	166	1059	457	1.449	456	212	17.4	69.0	358.889	F
	3 - A249 onslip (NB)			1206				309				
	4 - B2005 - link	399	100	0	1549	0.257	399	1206	0.3	0.3	3.127	A
2 - South	1 - A249 onslip (SB)			521				831				
	2 - B2005 - link	1211	303	121	1830	0.662	1210	400	1.7	1.9	5.800	A
	3 - A249 offslip (SB)	556	139	1332	453	1.228	448	0	7.0	34.1	185.750	F
	4 - Swale Way	677	169	647	546	1.239	543	1132	12.3	45.8	209.637	F
	5 - Grovehurst Road	697	174	809	546	1.277	543	381	13.0	51.5	230.322	F

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1194	298	399	885	1.348	885	0	32.9	110.1	300.428	F
	2 - Grovehurst Road	811	203	1070	449	1.806	449	214	69.0	159.5	927.727	F
	3 - A249 onslip (NB)			1210				309				
	4 - B2005 - link	399	100	0	1549	0.258	399	1210	0.3	0.3	3.129	A
2 - South	1 - A249 onslip (SB)			522				834				
	2 - B2005 - link	1217	304	121	1830	0.665	1217	400	1.9	2.0	5.871	A
	3 - A249 offslip (SB)	682	170	1338	448	1.520	448	0	34.1	92.5	523.230	F
	4 - Swale Way	829	207	650	545	1.521	545	1136	45.8	116.8	548.852	F
	5 - Grovehurst Road	853	213	813	543	1.570	543	382	51.5	129.0	609.152	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1194	298	399	885	1.348	885	0	110.1	187.2	611.286	F
	2 - Grovehurst Road	811	203	1071	449	1.808	449	214	159.5	250.2	1653.056	F
	3 - A249 onslip (NB)			1211				309				
	4 - B2005 - link	399	100	0	1549	0.258	399	1211	0.3	0.3	3.129	A
2 - South	1 - A249 onslip (SB)			522				834				
	2 - B2005 - link	1217	304	121	1830	0.665	1217	400	2.0	2.0	5.876	A
	3 - A249 offslip (SB)	682	170	1339	448	1.521	448	0	92.5	150.9	989.833	F
	4 - Swale Way	829	207	650	545	1.521	545	1136	116.8	187.9	1015.786	F
	5 - Grovehurst Road	853	213	813	543	1.571	543	382	129.0	206.5	1120.906	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	974	244	399	885	1.101	885	0	187.2	209.5	812.558	F
	2 - Grovehurst Road	663	166	1071	449	1.476	449	214	250.2	303.6	2223.006	F
	3 - A249 onslip (NB)			1211				309				
	4 - B2005 - link	399	100	0	1549	0.258	399	1211	0.3	0.3	3.129	A
2 - South	1 - A249 onslip (SB)			522				834				
	2 - B2005 - link	1217	304	121	1830	0.665	1217	400	2.0	2.0	5.876	A
	3 - A249 offslip (SB)	556	139	1339	448	1.242	448	0	150.9	178.1	1331.653	F
	4 - Swale Way	677	169	650	545	1.242	545	1136	187.9	220.9	1358.464	F
	5 - Grovehurst Road	697	174	813	543	1.283	543	382	206.5	244.9	1504.070	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	816	204	399	885	0.922	881	0	209.5	193.2	822.844	F

1 - North	2 - Grovehurst Road	555	139	1067	451	1.229	451	213	303.6	329.5	2534.431	F
	3 - A249 onslip (NB)			1209				309				
	4 - B2005 - link	399	100	0	1549	0.258	399	1209	0.3	0.3	3.129	A
2 - South	1 - A249 onslip (SB)			522				834				
	2 - B2005 - link	1216	304	121	1830	0.664	1216	400	2.0	2.0	5.860	A
	3 - A249 offslip (SB)	466	117	1337	449	1.037	449	0	178.1	182.4	1454.614	F
	4 - Swale Way	567	142	650	545	1.040	545	1136	220.9	226.3	1484.990	F
	5 - Grovehurst Road	583	146	812	543	1.074	543	382	244.9	254.9	1663.709	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	7.23	0.03	0.29	7.23	24.03			N/A	N/A
	2 - Grovehurst Road	17.37	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.69	1.05	1.50	1.90	1.95			N/A	N/A
	3 - A249 offslip (SB)	7.02	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	12.33	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	13.02	>199	>199	>199	>199			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	32.89	0.22	13.35	89.94	129.51			N/A	N/A
	2 - Grovehurst Road	68.97	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.93	0.08	1.20	4.37	6.04			N/A	N/A
	3 - A249 offslip (SB)	34.11	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	45.79	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	51.45	>199	>199	>199	>199			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	110.11	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	159.53	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.35	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.96	0.03	0.27	1.96	1.96			N/A	N/A
	3 - A249 offslip (SB)	92.52	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	116.85	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	128.99	>199	>199	>199	>199			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	187.16	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	250.18	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.35	0.03	0.31	1.18	1.27			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.97	0.03	0.26	1.97	1.97			N/A	N/A
	3 - A249 offslip (SB)	150.94	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	187.87	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	206.52	>199	>199	>199	>199			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	209.48	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	303.59	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.35	0.00	0.00	0.35	0.35			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.98	0.12	1.42	4.01	5.40			N/A	N/A
	3 - A249 offslip (SB)	178.09	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	220.86	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	244.90	>199	>199	>199	>199			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	193.21	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	329.48	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.35	0.00	0.00	0.35	0.35			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.98	0.24	1.16	3.51	4.41			N/A	N/A
	3 - A249 offslip (SB)	182.37	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	226.35	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	254.92	>199	>199	>199	>199			N/A	N/A

2031 + Cumulative, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	1015.51	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	2361.27	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2031 + Cumulative	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1178	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	528	100.000
	4 - Swale Way		ONE HOUR	✓	1350	100.000
	5 - Grovehurst Road		ONE HOUR	✓	613	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
1 - North	From				
	1 - A249 offslip (NB)	0	430	0	748
	2 - Grovehurst Road	0	0	34	355
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	277	559	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	187	0	0	509	402
	3 - A249 offslip (SB)	1	39	0	201	287
	4 - Swale Way	755	434	0	0	161
	5 - Grovehurst Road	150	356	0	107	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	0	0	18
	2 - Grovehurst Road	0	0	0	0
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	1	0	0	25	1
	3 - A249 offslip (SB)	0	8	0	8	3
	4 - Swale Way	16	2	0	0	3
	5 - Grovehurst Road	0	1	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.68	1773.43	418.6	179.5	F	1081	1621
	2 - Grovehurst Road	0.73	22.53	2.6	12.9	C	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.37	3.60	0.6	2.3	A	541	812
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.48	3.87	0.9	1.5	A	826	1239
	3 - A249 offslip (SB)	0.81	25.47	3.9	19.9	D	485	727
	4 - Swale Way	2.87	5790.74	1014.9	181.9	F	1239	1858
	5 - Grovehurst Road	0.98	84.86	15.3	59.8	F	562	844

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	887	222	484	850	1.044	808	0	0.0	19.6	57.371	F
	2 - Grovehurst Road	293	73	837	615	0.476	289	455	0.0	0.9	10.944	B

	3 - A249 onslip (NB)			777				349				
	4 - B2005 - link	485	121	0	1591	0.305	484	777	0.0	0.4	3.242	A
2 - South	1 - A249 onslip (SB)			565				581				
	2 - B2005 - link	776	194	79	1817	0.427	773	486	0.0	0.7	3.438	A
	3 - A249 offslip (SB)	398	99	852	819	0.485	394	0	0.0	0.9	8.388	A
	4 - Swale Way	1016	254	658	610	1.666	604	587	0.0	103.1	323.577	F
	5 - Grovehurst Road	461	115	694	657	0.703	453	569	0.0	2.2	16.979	C

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1059	265	532	816	1.298	814	0	19.6	80.9	236.381	F
	2 - Grovehurst Road	350	87	872	593	0.590	348	473	0.9	1.4	14.559	B
	3 - A249 onslip (NB)			834				386				
	4 - B2005 - link	532	133	0	1591	0.334	532	834	0.4	0.5	3.399	A
2 - South	1 - A249 onslip (SB)			628				592				
	2 - B2005 - link	827	207	95	1807	0.457	826	533	0.7	0.8	3.667	A
	3 - A249 offslip (SB)	475	119	921	765	0.621	472	0	0.9	1.6	12.180	B
	4 - Swale Way	1214	303	736	567	2.141	567	658	103.1	264.7	1243.663	F
	5 - Grovehurst Road	551	138	676	669	0.823	544	627	2.2	4.0	27.100	D

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1297	324	582	780	1.664	779	0	80.9	210.3	682.638	F
	2 - Grovehurst Road	428	107	884	587	0.729	424	477	1.4	2.5	21.422	C
	3 - A249 onslip (NB)			882				426				
	4 - B2005 - link	583	146	0	1591	0.366	582	882	0.5	0.6	3.570	A
2 - South	1 - A249 onslip (SB)			696				597				
	2 - B2005 - link	866	216	112	1797	0.482	866	584	0.8	0.9	3.864	A
	3 - A249 offslip (SB)	581	145	978	721	0.806	573	0	1.6	3.7	23.095	C
	4 - Swale Way	1486	372	819	520	2.857	520	732	264.7	506.3	2675.242	F
	5 - Grovehurst Road	675	169	649	688	0.981	644	690	4.0	11.7	58.264	F

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1297	324	592	773	1.678	773	0	210.3	341.3	1290.994	F
	2 - Grovehurst Road	428	107	886	587	0.730	428	478	2.5	2.6	22.532	C
	3 - A249 onslip (NB)			881				433				
	4 - B2005 - link	592	148	0	1591	0.372	592	881	0.6	0.6	3.603	A
2 - South	1 - A249 onslip (SB)			708				600				
	2 - B2005 - link	865	216	115	1796	0.482	865	593	0.9	0.9	3.867	A
	3 - A249 offslip (SB)	581	145	980	719	0.808	580	0	3.7	3.9	25.469	D
	4 - Swale Way	1486	372	823	518	2.870	518	737	506.3	748.4	3949.472	F
	5 - Grovehurst Road	675	169	647	689	0.980	661	694	11.7	15.3	84.862	F

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1059	265	559	796	1.330	796	0	341.3	407.0	1655.582	F
	2 - Grovehurst Road	350	87	879	590	0.593	354	476	2.6	1.5	15.548	C
	3 - A249 onslip (NB)			829				405				
	4 - B2005 - link	559	140	0	1591	0.351	559	829	0.6	0.5	3.492	A
2 - South	1 - A249 onslip (SB)			663				601				
	2 - B2005 - link	820	205	103	1803	0.455	820	560	0.9	0.8	3.668	A
	3 - A249 offslip (SB)	475	119	923	764	0.622	484	0	3.9	1.7	13.232	B
	4 - Swale Way	1214	303	740	565	2.149	565	667	748.4	910.6	5041.966	F
	5 - Grovehurst Road	551	138	674	671	0.822	590	631	15.3	5.5	52.778	F

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	887	222	496	841	1.055	840	0	407.0	418.6	1773.429	F

1 - North	2 - Grovehurst Road	293	73	866	595	0.492	295	471	1.5	1.0	12.066	B
	3 - A249 onslip (NB)			803				358				
	4 - B2005 - link	496	124	0	1591	0.312	496	803	0.5	0.5	3.293	A
2 - South	1 - A249 onslip (SB)			580				588				
	2 - B2005 - link	802	200	83	1815	0.442	802	497	0.8	0.8	3.557	A
	3 - A249 offslip (SB)	398	99	884	794	0.501	400	0	1.7	1.0	9.215	A
	4 - Swale Way	1016	254	678	599	1.696	599	607	910.6	1014.9	5790.738	F
	5 - Grovehurst Road	461	115	695	656	0.703	473	583	5.5	2.5	20.766	C

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	19.59	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.89	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.44	0.00	0.00	0.44	0.44			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.74	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.93	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	103.06	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.22	0.73	1.63	2.92	3.47			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	80.89	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.39	0.11	1.14	2.56	3.30			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.00	0.00	0.50	0.50			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.84	0.18	0.94	1.42	1.49			N/A	N/A
	3 - A249 offslip (SB)	1.58	0.07	1.00	3.56	4.95			N/A	N/A
	4 - Swale Way	264.74	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.03	0.13	1.89	9.62	13.18			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	210.28	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	2.49	0.03	0.32	4.32	12.92			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.57	0.03	0.25	0.57	0.57			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.92	0.03	0.25	0.92	0.92			N/A	N/A
	3 - A249 offslip (SB)	3.69	0.04	0.36	8.81	19.87			N/A	N/A
	4 - Swale Way	506.25	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	11.67	0.25	6.15	29.07	39.81			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	341.33	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	2.59	0.03	0.29	2.59	9.85			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.28	0.76	2.28			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.93	0.03	0.26	0.93	0.93			N/A	N/A
	3 - A249 offslip (SB)	3.93	0.03	0.31	4.63	18.60			N/A	N/A
	4 - Swale Way	748.36	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	15.26	0.15	5.93	41.44	59.76			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	407.05	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.51	0.05	0.51	3.81	5.86			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.84	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.70	0.04	0.45	4.53	7.45			N/A	N/A
	4 - Swale Way	910.59	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.47	0.05	0.49	15.65	27.50			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	418.64	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.99	0.04	0.39	2.47	4.15			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.46	0.00	0.00	0.46	0.46			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.80	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.02	0.03	0.34	2.42	4.97			N/A	N/A
	4 - Swale Way	1014.88	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.52	0.03	0.34	5.61	13.46			N/A	N/A

2031 + K3 Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	233.64	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	373.36	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	864	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	692	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	822
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	147	327	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	141	0	0	911	183
	3 - A249 offslip (SB)	1	18	0	377	174
	4 - Swale Way	389	226	0	0	77
	5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	7	0	18
	2 - Grovehurst Road	0	0	8	3
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	16	6
	3 - A249 offslip (SB)	0	6	0	9	4
	4 - Swale Way	39	10	0	0	9
	5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.15	303.59	73.4	125.6	F	793	1189
	2 - Grovehurst Road	1.16	322.36	39.2	75.7	F	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.29	3.30	0.4	1.7	A	418	627
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	6.20	2.0	4.9	A	1115	1672
	3 - A249 offslip (SB)	1.49	1135.42	134.6	200.0	F	523	785
	4 - Swale Way	1.21	464.80	79.9	138.5	F	635	952
	5 - Grovehurst Road	1.15	303.51	52.2	95.5	F	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	650	163	350	887	0.734	640	0	0.0	2.6	14.059	B
	2 - Grovehurst Road	331	83	850	573	0.578	326	140	0.0	1.3	14.264	B

	3 - A249 onslip (NB)			916				260				
	4 - B2005 - link	351	88	0	1530	0.230	350	916	0.0	0.3	3.049	A
2 - South	1 - A249 onslip (SB)			479				543				
	2 - B2005 - link	919	230	127	1780	0.516	914	352	0.0	1.1	4.141	A
	3 - A249 offslip (SB)	429	107	1042	654	0.656	422	0	0.0	1.8	15.062	C
	4 - Swale Way	521	130	383	661	0.788	508	1081	0.0	3.3	21.882	C
	5 - Grovehurst Road	460	115	570	685	0.672	452	321	0.0	1.9	15.022	C

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	410	845	0.920	756	0	2.6	7.7	34.572	D
	2 - Grovehurst Road	396	99	1002	473	0.836	385	164	1.3	4.1	36.744	E
	3 - A249 onslip (NB)			1082				305				
	4 - B2005 - link	410	103	0	1530	0.268	410	1082	0.3	0.4	3.215	A
2 - South	1 - A249 onslip (SB)			561				636				
	2 - B2005 - link	1085	271	150	1766	0.614	1083	411	1.1	1.6	5.250	A
	3 - A249 offslip (SB)	512	128	1233	506	1.014	472	0	1.8	11.9	71.981	F
	4 - Swale Way	622	156	444	631	0.985	590	1261	3.3	11.4	60.430	F
	5 - Grovehurst Road	549	137	663	616	0.892	533	370	1.9	5.9	37.921	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	436	826	1.152	817	0	7.7	41.2	122.211	F
	2 - Grovehurst Road	484	121	1078	423	1.145	412	175	4.1	22.1	136.651	F
	3 - A249 onslip (NB)			1166				325				
	4 - B2005 - link	437	109	0	1530	0.285	436	1166	0.4	0.4	3.292	A
2 - South	1 - A249 onslip (SB)			600				679				
	2 - B2005 - link	1169	292	163	1759	0.665	1168	437	1.6	1.9	6.070	A
	3 - A249 offslip (SB)	628	157	1330	430	1.460	428	0	11.9	61.7	329.127	F
	4 - Swale Way	762	190	451	628	1.214	624	1307	11.4	46.0	181.554	F
	5 - Grovehurst Road	673	168	702	588	1.145	578	373	5.9	29.7	128.958	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	951	238	439	824	1.154	823	0	41.2	73.4	261.360	F
	2 - Grovehurst Road	484	121	1086	418	1.158	416	176	22.1	39.2	282.954	F
	3 - A249 onslip (NB)			1175				327				
	4 - B2005 - link	439	110	0	1530	0.287	439	1175	0.4	0.4	3.301	A
2 - South	1 - A249 onslip (SB)			604				684				
	2 - B2005 - link	1178	295	164	1758	0.670	1178	440	1.9	2.0	6.197	A
	3 - A249 offslip (SB)	628	157	1342	421	1.491	421	0	61.7	113.4	755.750	F
	4 - Swale Way	762	190	451	628	1.214	627	1311	46.0	79.7	372.652	F
	5 - Grovehurst Road	673	168	706	585	1.150	583	373	29.7	52.2	266.407	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	777	194	436	826	0.940	815	0	73.4	63.8	303.591	F
	2 - Grovehurst Road	396	99	1076	424	0.932	414	175	39.2	34.7	322.362	F
	3 - A249 onslip (NB)			1166				324				
	4 - B2005 - link	436	109	0	1530	0.285	436	1166	0.4	0.4	3.291	A
2 - South	1 - A249 onslip (SB)			600				678				
	2 - B2005 - link	1169	292	163	1759	0.665	1169	437	2.0	2.0	6.102	A
	3 - A249 offslip (SB)	512	128	1332	429	1.195	429	0	113.4	134.4	1051.459	F
	4 - Swale Way	622	156	452	628	0.991	622	1309	79.7	79.9	464.804	F
	5 - Grovehurst Road	549	137	700	589	0.933	578	373	52.2	45.0	303.509	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	650	163	435	827	0.787	814	0	63.8	22.8	195.943	F

1 - North	2 - Grovehurst Road	331	83	1075	425	0.779	414	175	34.7	14.1	219.366	F
	3 - A249 onslip (NB)			1165				324				
	4 - B2005 - link	435	109	0	1530	0.285	435	1165	0.4	0.4	3.288	A
2 - South	1 - A249 onslip (SB)			599				677				
	2 - B2005 - link	1168	292	163	1759	0.664	1168	436	2.0	2.0	6.087	A
	3 - A249 offslip (SB)	429	107	1330	430	0.998	428	0	134.4	134.6	1135.422	F
	4 - Swale Way	521	130	451	628	0.830	620	1307	79.9	55.1	393.772	F
	5 - Grovehurst Road	460	115	699	590	0.779	577	373	45.0	15.7	195.392	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.59	0.08	1.37	6.33	8.97			N/A	N/A
	2 - Grovehurst Road	1.32	0.05	0.47	3.29	5.13			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.06	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.82	0.03	0.25	1.82	1.82			N/A	N/A
	4 - Swale Way	3.31	0.04	0.44	9.25	16.43			N/A	N/A
	5 - Grovehurst Road	1.94	0.07	1.03	4.72	6.81			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	7.71	0.18	3.79	19.19	26.45			N/A	N/A
	2 - Grovehurst Road	4.07	0.08	1.03	10.87	16.08			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.57	0.07	1.00	3.51	4.88			N/A	N/A
	3 - A249 offslip (SB)	11.94	0.03	0.29	11.94	32.57			N/A	N/A
	4 - Swale Way	11.41	0.27	6.20	28.06	38.17			N/A	N/A
	5 - Grovehurst Road	5.92	0.14	2.63	14.90	20.81			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	41.25	14.73	37.74	66.80	77.04			N/A	N/A
	2 - Grovehurst Road	22.14	5.28	19.14	39.20	46.63			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.95	0.03	0.27	1.95	1.95			N/A	N/A
	3 - A249 offslip (SB)	61.72	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	45.99	17.54	42.45	73.16	83.90			N/A	N/A
	5 - Grovehurst Road	29.67	8.70	26.42	50.44	59.13			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	73.44	32.91	69.24	111.27	125.62			N/A	N/A
	2 - Grovehurst Road	39.23	12.84	35.51	65.14	75.74			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.30	1.26	1.70			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.00	0.03	0.26	2.00	2.00			N/A	N/A
	3 - A249 offslip (SB)	113.42	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	79.74	39.99	76.10	115.91	129.23			N/A	N/A
	5 - Grovehurst Road	52.15	19.79	48.15	83.22	95.49			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	63.78	23.34	58.72	103.23	118.92			N/A	N/A
	2 - Grovehurst Road	34.65	7.86	29.89	62.81	75.13			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.99	0.20	1.12	3.66	4.66			N/A	N/A
	3 - A249 offslip (SB)	134.36	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	79.88	34.85	75.13	122.30	138.49			N/A	N/A
	5 - Grovehurst Road	44.99	12.90	40.09	77.61	91.28			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	22.84	3.58	18.71	43.91	53.68			N/A	N/A
	2 - Grovehurst Road	14.08	0.89	9.61	31.24	40.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.00	0.00	0.40	0.40			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.99	0.52	1.31	3.08	3.80			N/A	N/A
	3 - A249 offslip (SB)	134.59	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	55.11	13.84	48.32	98.39	116.90			N/A	N/A
	5 - Grovehurst Road	15.67	1.39	11.36	33.42	42.53			N/A	N/A

2031 + K3 Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	254.29	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1665.61	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	828	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	443	100.000
	4 - Swale Way		ONE HOUR	✓	1279	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	648
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	262	522	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	42	0	0	480	322
	3 - A249 offslip (SB)	1	27	0	199	216
	4 - Swale Way	688	432	0	0	159
	5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	1	0	22
	2 - Grovehurst Road	0	0	0	1
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	4	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	28	1
	3 - A249 offslip (SB)	0	11	0	8	4
	4 - Swale Way	19	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.25	466.35	101.2	157.5	F	760	1140
	2 - Grovehurst Road	0.49	13.78	0.9	3.5	B	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.37	3.64	0.6	2.2	A	539	808
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.46	3.83	0.8	1.5	A	752	1128
	3 - A249 offslip (SB)	0.65	13.85	1.8	5.8	B	407	610
	4 - Swale Way	2.25	3942.99	773.9	179.2	F	1174	1760
	5 - Grovehurst Road	0.85	33.48	5.2	27.6	D	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	623	156	492	799	0.781	610	0	0.0	3.2	18.061	C
	2 - Grovehurst Road	171	43	805	619	0.276	169	297	0.0	0.4	7.989	A

	3 - A249 onslip (NB)			627				348				
	4 - B2005 - link	494	123	0	1580	0.312	492	627	0.0	0.5	3.301	A
2 - South	1 - A249 onslip (SB)			571				490				
	2 - B2005 - link	630	158	79	1750	0.360	628	493	0.0	0.6	3.201	A
	3 - A249 offslip (SB)	334	83	707	908	0.367	331	0	0.0	0.6	6.218	A
	4 - Swale Way	963	241	453	711	1.354	701	584	0.0	65.6	180.266	F
	5 - Grovehurst Road	402	101	666	657	0.612	396	488	0.0	1.5	13.504	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	533	770	0.966	714	0	3.2	10.7	48.205	E
	2 - Grovehurst Road	204	51	914	543	0.375	203	334	0.4	0.6	10.555	B
	3 - A249 onslip (NB)			738				379				
	4 - B2005 - link	533	133	0	1580	0.338	533	738	0.5	0.5	3.437	A
2 - South	1 - A249 onslip (SB)			627				494				
	2 - B2005 - link	741	185	95	1741	0.426	741	533	0.6	0.7	3.597	A
	3 - A249 offslip (SB)	398	100	835	804	0.495	397	0	0.6	1.0	8.810	A
	4 - Swale Way	1150	287	538	665	1.729	665	694	65.6	186.8	712.677	F
	5 - Grovehurst Road	480	120	644	672	0.714	477	559	1.5	2.3	18.093	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	586	735	1.241	731	0	10.7	56.0	178.451	F
	2 - Grovehurst Road	250	62	962	513	0.487	249	355	0.6	0.9	13.546	B
	3 - A249 onslip (NB)			791				420				
	4 - B2005 - link	586	147	0	1580	0.371	586	791	0.5	0.6	3.620	A
2 - South	1 - A249 onslip (SB)			700				496				
	2 - B2005 - link	789	197	115	1730	0.456	789	585	0.7	0.8	3.823	A
	3 - A249 offslip (SB)	488	122	904	749	0.651	484	0	1.0	1.8	13.418	B
	4 - Swale Way	1408	352	607	626	2.248	626	781	186.8	382.3	1641.556	F
	5 - Grovehurst Road	588	147	618	690	0.852	578	615	2.3	4.8	29.815	D

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	912	228	591	731	1.247	731	0	56.0	101.2	391.765	F
	2 - Grovehurst Road	250	62	965	511	0.489	250	356	0.9	0.9	13.781	B
	3 - A249 onslip (NB)			792				423				
	4 - B2005 - link	591	148	0	1580	0.374	591	792	0.6	0.6	3.637	A
2 - South	1 - A249 onslip (SB)			707				498				
	2 - B2005 - link	790	198	116	1729	0.457	790	590	0.8	0.8	3.834	A
	3 - A249 offslip (SB)	488	122	907	747	0.653	488	0	1.8	1.8	13.845	B
	4 - Swale Way	1408	352	609	625	2.252	625	785	382.3	578.0	2661.399	F
	5 - Grovehurst Road	588	147	618	690	0.852	586	617	4.8	5.2	33.477	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	744	186	539	767	0.971	759	0	101.2	97.5	466.350	F
	2 - Grovehurst Road	204	51	953	516	0.395	205	345	0.9	0.7	11.618	B
	3 - A249 onslip (NB)			775				383				
	4 - B2005 - link	538	135	0	1580	0.341	539	775	0.6	0.5	3.455	A
2 - South	1 - A249 onslip (SB)			635				493				
	2 - B2005 - link	780	195	97	1740	0.448	780	537	0.8	0.8	3.750	A
	3 - A249 offslip (SB)	398	100	877	770	0.517	401	0	1.8	1.1	9.846	A
	4 - Swale Way	1150	287	557	654	1.757	654	721	578.0	701.9	3447.735	F
	5 - Grovehurst Road	480	120	637	677	0.709	490	574	5.2	2.6	20.219	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	623	156	491	799	0.780	791	0	97.5	55.6	350.619	F

1 - North	2 - Grovehurst Road	171	43	946	518	0.330	172	336	0.7	0.5	10.421	B
	3 - A249 onslip (NB)			770				348				
	4 - B2005 - link	491	123	0	1580	0.311	491	770	0.5	0.5	3.305	A
2 - South	1 - A249 onslip (SB)			571				486				
	2 - B2005 - link	780	195	81	1749	0.446	780	490	0.8	0.8	3.717	A
	3 - A249 offslip (SB)	334	83	860	782	0.427	335	0	1.1	0.8	8.079	A
	4 - Swale Way	963	241	521	675	1.427	675	675	701.9	773.9	3942.986	F
	5 - Grovehurst Road	402	101	651	668	0.602	406	545	2.6	1.6	13.980	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.24	0.05	0.79	9.00	14.35			N/A	N/A
	2 - Grovehurst Road	0.38	0.00	0.00	0.38	0.38			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.56	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.57	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	65.57	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.52	1.05	1.50	1.90	1.95			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	10.73	0.28	5.94	26.13	35.40			N/A	N/A
	2 - Grovehurst Road	0.59	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.74	0.20	0.93	1.39	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.96	0.09	0.92	1.55	1.89			N/A	N/A
	4 - Swale Way	186.84	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.35	0.09	1.42	5.38	7.42			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	55.98	25.85	52.86	83.63	94.06			N/A	N/A
	2 - Grovehurst Road	0.92	0.03	0.26	0.92	0.92			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.25	0.59	0.59			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.83	0.03	0.25	0.83	0.83			N/A	N/A
	3 - A249 offslip (SB)	1.79	0.03	0.28	1.79	5.79			N/A	N/A
	4 - Swale Way	382.28	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.78	0.04	0.44	13.30	24.70			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	101.22	57.88	97.92	139.58	153.20			N/A	N/A
	2 - Grovehurst Road	0.94	0.03	0.28	0.94	3.50			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.28	0.65	2.19			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.84	0.03	0.26	0.84	0.86			N/A	N/A
	3 - A249 offslip (SB)	1.84	0.03	0.28	1.84	4.53			N/A	N/A
	4 - Swale Way	578.03	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.16	0.03	0.34	9.91	27.64			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	97.47	49.33	93.20	141.40	157.50			N/A	N/A
	2 - Grovehurst Road	0.67	0.08	0.79	1.37	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.52	0.52	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.10	0.07	0.90	1.95	2.72			N/A	N/A
	4 - Swale Way	701.91	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.59	0.04	0.43	7.14	12.70			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	55.61	18.26	50.48	92.76	107.90			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.45	1.28	1.39			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.81	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.76	0.05	0.48	1.48	1.99			N/A	N/A
	4 - Swale Way	773.94	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.57	0.03	0.35	3.82	8.02			N/A	N/A

2031 + K3 and WKN Operational, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	259.05	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	394.50	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	874	100.000
	2 - Grovehurst Road		ONE HOUR	✓	440	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	570	100.000
	4 - Swale Way		ONE HOUR	✓	702	100.000
	5 - Grovehurst Road		ONE HOUR	✓	611	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	42	0	832
		2 - Grovehurst Road	0	0	25	415
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	147	327	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	141	0	0	921	183
	3 - A249 offslip (SB)	1	18	0	377	174
	4 - Swale Way	399	226	0	0	77
	5 - Grovehurst Road	206	233	0	172	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	7	0	19
	2 - Grovehurst Road	0	0	8	3
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	4	7	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	0	0	0	17	6
	3 - A249 offslip (SB)	0	6	0	9	4
	4 - Swale Way	40	10	0	0	9
	5 - Grovehurst Road	1	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.17	346.24	81.4	135.0	F	802	1203
	2 - Grovehurst Road	1.16	330.47	39.9	76.8	F	404	606
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.28	3.29	0.4	1.7	A	415	623
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	6.27	2.0	5.0	A	1114	1670
	3 - A249 offslip (SB)	1.50	1171.97	138.2	186.3	F	523	785
	4 - Swale Way	1.23	516.79	89.3	150.3	F	644	966
	5 - Grovehurst Road	1.15	314.07	53.2	96.6	F	561	841

Main Results for each time segment

07:15 - 07:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	658	164	350	880	0.748	647	0	0.0	2.8	14.822	B
	2 - Grovehurst Road	331	83	857	565	0.586	326	139	0.0	1.4	14.711	B

	3 - A249 onslip (NB)			923				260				
	4 - B2005 - link	351	88	0	1530	0.229	350	923	0.0	0.3	3.048	A
2 - South	1 - A249 onslip (SB)			478				550				
	2 - B2005 - link	925	231	127	1768	0.523	921	351	0.0	1.1	4.229	A
	3 - A249 offslip (SB)	429	107	1048	645	0.666	422	0	0.0	1.9	15.658	C
	4 - Swale Way	529	132	382	658	0.804	514	1087	0.0	3.6	23.214	C
	5 - Grovehurst Road	460	115	576	678	0.679	452	320	0.0	2.0	15.457	C

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	408	839	0.936	762	0	2.8	8.7	38.108	E
	2 - Grovehurst Road	396	99	1007	466	0.848	384	163	1.4	4.3	39.037	E
	3 - A249 onslip (NB)			1087				303				
	4 - B2005 - link	408	102	0	1530	0.267	408	1087	0.3	0.4	3.209	A
2 - South	1 - A249 onslip (SB)			559				641				
	2 - B2005 - link	1089	272	150	1755	0.621	1087	409	1.1	1.6	5.375	A
	3 - A249 offslip (SB)	512	128	1237	497	1.032	467	0	1.9	13.2	78.349	F
	4 - Swale Way	631	158	441	629	1.003	593	1263	3.6	13.0	66.488	F
	5 - Grovehurst Road	549	137	667	610	0.900	532	367	2.0	6.2	39.637	E

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	433	822	1.170	815	0	8.7	45.6	134.038	F
	2 - Grovehurst Road	484	121	1074	421	1.150	411	173	4.3	22.7	140.508	F
	3 - A249 onslip (NB)			1163				322				
	4 - B2005 - link	433	108	0	1530	0.283	433	1163	0.4	0.4	3.281	A
2 - South	1 - A249 onslip (SB)			596				681				
	2 - B2005 - link	1166	291	162	1748	0.667	1164	434	1.6	2.0	6.153	A
	3 - A249 offslip (SB)	628	157	1326	427	1.471	426	0	13.2	63.7	344.878	F
	4 - Swale Way	773	193	447	626	1.234	623	1305	13.0	50.5	198.863	F
	5 - Grovehurst Road	673	168	701	586	1.149	576	369	6.2	30.3	132.224	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	962	241	435	820	1.173	819	0	45.6	81.4	288.993	F
	2 - Grovehurst Road	484	121	1080	418	1.160	415	174	22.7	39.9	288.750	F
	3 - A249 onslip (NB)			1171				324				
	4 - B2005 - link	435	109	0	1530	0.285	435	1171	0.4	0.4	3.288	A
2 - South	1 - A249 onslip (SB)			600				685				
	2 - B2005 - link	1173	293	164	1747	0.672	1173	436	2.0	2.0	6.272	A
	3 - A249 offslip (SB)	628	157	1337	419	1.499	418	0	63.7	116.0	778.887	F
	4 - Swale Way	773	193	447	626	1.234	626	1308	50.5	87.3	407.921	F
	5 - Grovehurst Road	673	168	704	583	1.153	581	369	30.3	53.2	272.351	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	786	196	432	822	0.955	812	0	81.4	74.7	346.242	F
	2 - Grovehurst Road	396	99	1072	423	0.935	413	173	39.9	35.6	330.473	F
	3 - A249 onslip (NB)			1163				322				
	4 - B2005 - link	432	108	0	1530	0.283	432	1163	0.4	0.4	3.282	A
2 - South	1 - A249 onslip (SB)			595				681				
	2 - B2005 - link	1165	291	162	1748	0.666	1165	433	2.0	2.0	6.175	A
	3 - A249 offslip (SB)	512	128	1326	427	1.201	427	0	116.0	137.4	1080.530	F
	4 - Swale Way	631	158	448	626	1.008	623	1305	87.3	89.3	516.792	F
	5 - Grovehurst Road	549	137	701	585	0.938	574	370	53.2	46.9	314.067	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	658	164	431	823	0.800	812	0	74.7	36.2	248.929	F

1 - North	2 - Grovehurst Road	331	83	1071	424	0.782	412	173	35.6	15.4	229.602	F
	3 - A249 onslip (NB)			1162				321				
	4 - B2005 - link	431	108	0	1530	0.282	431	1162	0.4	0.4	3.277	A
2 - South	1 - A249 onslip (SB)			595				679				
	2 - B2005 - link	1164	291	162	1748	0.666	1164	432	2.0	2.0	6.168	A
	3 - A249 offslip (SB)	429	107	1326	427	1.005	426	0	137.4	138.2	1171.972	F
	4 - Swale Way	529	132	447	626	0.844	619	1305	89.3	66.6	454.629	F
	5 - Grovehurst Road	460	115	697	588	0.782	576	369	46.9	17.9	208.100	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	2.78	0.06	1.03	7.39	11.17			N/A	N/A
	2 - Grovehurst Road	1.36	0.05	0.45	3.48	5.53			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.30	0.00	0.00	0.30	0.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.09	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.89	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	3.58	0.04	0.39	9.50	18.98			N/A	N/A
	5 - Grovehurst Road	2.00	0.06	0.98	4.94	7.26			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.72	0.19	4.31	21.87	30.18			N/A	N/A
	2 - Grovehurst Road	4.34	0.08	1.26	11.54	16.90			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.36	0.00	0.00	0.36	0.36			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.61	0.07	1.02	3.62	5.01			N/A	N/A
	3 - A249 offslip (SB)	13.21	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	12.98	0.27	6.90	32.39	44.31			N/A	N/A
	5 - Grovehurst Road	6.21	0.15	2.85	15.58	21.66			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	45.58	17.49	42.10	72.40	83.01			N/A	N/A
	2 - Grovehurst Road	22.68	5.55	19.67	39.93	47.42			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.97	0.03	0.27	1.97	1.97			N/A	N/A
	3 - A249 offslip (SB)	63.71	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	50.50	19.52	46.72	80.11	91.78			N/A	N/A
	5 - Grovehurst Road	30.34	9.10	27.09	51.28	60.00			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	81.38	39.30	77.39	120.10	134.52			N/A	N/A
	2 - Grovehurst Road	39.95	13.35	36.25	65.94	76.52			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.40	0.03	0.30	1.26	1.66			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.02	0.03	0.26	2.02	2.02			N/A	N/A
	3 - A249 offslip (SB)	116.00	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	87.34	45.34	83.69	125.35	139.23			N/A	N/A
	5 - Grovehurst Road	53.17	20.57	49.21	84.36	96.64			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	74.72	29.62	69.50	118.08	135.00			N/A	N/A
	2 - Grovehurst Road	35.62	8.25	30.82	64.31	76.81			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.01	0.18	1.10	3.77	4.83			N/A	N/A
	3 - A249 offslip (SB)	137.44	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	89.28	41.54	84.61	133.69	150.35			N/A	N/A
	5 - Grovehurst Road	46.87	13.81	41.92	80.31	94.24			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	36.19	8.74	31.49	64.72	77.04			N/A	N/A
	2 - Grovehurst Road	15.40	0.98	10.55	34.20	44.24			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.39	0.00	0.00	0.39	0.39			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.01	0.48	1.31	3.21	3.91			N/A	N/A
	3 - A249 offslip (SB)	138.22	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	66.61	20.30	59.96	113.63	133.03			N/A	N/A
	5 - Grovehurst Road	17.88	1.78	13.80	36.30	45.29			N/A	N/A

2031 + K3 and WKN Operational, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	282.17	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1750.21	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	838	100.000
	2 - Grovehurst Road		ONE HOUR	✓	227	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	444	100.000
	4 - Swale Way		ONE HOUR	✓	1300	100.000
	5 - Grovehurst Road		ONE HOUR	✓	534	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link	
1 - North	From					
		1 - A249 offslip (NB)	0	180	0	658
		2 - Grovehurst Road	0	0	27	200
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only

	4 - B2005 - link	0	262	523	0
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Demand (Veh/hr)

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	42	0	0	490	322
	3 - A249 offslip (SB)	1	27	0	200	216
	4 - Swale Way	708	433	0	0	159
	5 - Grovehurst Road	110	318	0	106	0

Vehicle Mix

Heavy Vehicle Percentages

1 - North

		To			
		1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
From	1 - A249 offslip (NB)	0	1	0	23
	2 - Grovehurst Road	0	0	0	1
	3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
	4 - B2005 - link	0	0	3	0

Heavy Vehicle Percentages

2 - South

		To				
		1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
From	1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
	2 - B2005 - link	2	0	0	30	1
	3 - A249 offslip (SB)	0	11	0	8	4
	4 - Swale Way	20	3	0	0	3
	5 - Grovehurst Road	0	2	0	4	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.27	512.52	109.4	171.0	F	769	1153
	2 - Grovehurst Road	0.49	13.84	0.9	3.5	B	208	312
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.37	3.60	0.6	2.2	A	539	808
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.46	3.90	0.8	1.4	A	750	1126
	3 - A249 offslip (SB)	0.66	14.11	1.9	6.2	B	407	611
	4 - Swale Way	2.29	4103.27	804.9	178.2	F	1193	1789
	5 - Grovehurst Road	0.86	34.20	5.3	28.4	D	490	735

Main Results for each time segment

16:15 - 16:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	631	158	491	796	0.793	617	0	0.0	3.5	18.913	C
	2 - Grovehurst Road	171	43	811	613	0.279	169	296	0.0	0.4	8.088	A

	3 - A249 onslip (NB)			634				347					
	4 - B2005 - link	493	123	0	1591	0.310		491	634	0.0	0.4	3.267	A
2 - South	1 - A249 onslip (SB)			567					494				
	2 - B2005 - link	634	159	79	1731	0.367		632	488	0.0	0.6	3.269	A
	3 - A249 offslip (SB)	334	84	711	899	0.372		332	0	0.0	0.6	6.328	A
	4 - Swale Way	979	245	452	708	1.382		698	591	0.0	70.2	192.834	F
	5 - Grovehurst Road	402	101	665	655	0.614		396	485	0.0	1.5	13.592	B

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	533	768	0.981	719	0	3.5	12.1	52.722	F
	2 - Grovehurst Road	204	51	919	538	0.379	203	332	0.4	0.6	10.709	B
	3 - A249 onslip (NB)			743				379				
	4 - B2005 - link	533	133	0	1591	0.335	533	743	0.4	0.5	3.402	A
2 - South	1 - A249 onslip (SB)			623				496				
	2 - B2005 - link	744	186	95	1722	0.432	743	529	0.6	0.8	3.675	A
	3 - A249 offslip (SB)	399	100	837	795	0.502	398	0	0.6	1.0	9.016	A
	4 - Swale Way	1169	292	535	662	1.764	662	700	70.2	196.8	755.385	F
	5 - Grovehurst Road	480	120	643	670	0.716	477	554	1.5	2.4	18.255	C

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	586	732	1.261	728	0	12.1	60.6	193.485	F
	2 - Grovehurst Road	250	62	963	511	0.489	249	352	0.6	0.9	13.624	B
	3 - A249 onslip (NB)			791				420				
	4 - B2005 - link	587	147	0	1591	0.369	586	791	0.5	0.6	3.585	A
2 - South	1 - A249 onslip (SB)			697				500				
	2 - B2005 - link	786	196	115	1711	0.459	785	582	0.8	0.8	3.887	A
	3 - A249 offslip (SB)	489	122	900	745	0.656	485	0	1.0	1.8	13.680	B
	4 - Swale Way	1431	358	602	626	2.287	626	784	196.8	398.1	1716.863	F
	5 - Grovehurst Road	588	147	618	687	0.855	578	609	2.4	4.9	30.320	D

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	923	231	592	728	1.267	728	0	60.6	109.4	423.936	F
	2 - Grovehurst Road	250	62	966	510	0.490	250	354	0.9	0.9	13.842	B
	3 - A249 onslip (NB)			792				424				
	4 - B2005 - link	592	148	0	1591	0.372	592	792	0.6	0.6	3.602	A
2 - South	1 - A249 onslip (SB)			703				501				
	2 - B2005 - link	786	197	116	1710	0.460	786	587	0.8	0.8	3.896	A
	3 - A249 offslip (SB)	489	122	903	743	0.658	489	0	1.8	1.9	14.105	B
	4 - Swale Way	1431	358	604	625	2.291	625	788	398.1	599.8	2765.090	F
	5 - Grovehurst Road	588	147	618	688	0.855	586	611	4.9	5.3	34.205	D

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	753	188	539	764	0.987	756	0	109.4	108.6	512.516	F
	2 - Grovehurst Road	204	51	953	515	0.396	205	342	0.9	0.7	11.666	B
	3 - A249 onslip (NB)			775				383				
	4 - B2005 - link	539	135	0	1591	0.339	539	775	0.6	0.5	3.422	A
2 - South	1 - A249 onslip (SB)			632				496				
	2 - B2005 - link	776	194	97	1721	0.451	776	534	0.8	0.8	3.812	A
	3 - A249 offslip (SB)	399	100	873	766	0.521	402	0	1.9	1.1	9.982	A
	4 - Swale Way	1169	292	552	653	1.788	653	724	599.8	728.6	3582.405	F
	5 - Grovehurst Road	480	120	637	674	0.712	491	568	5.3	2.6	20.558	C

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
	1 - A249 offslip (NB)	631	158	491	796	0.793	788	0	108.6	69.3	407.949	F

1 - North	2 - Grovehurst Road	171	43	946	516	0.331	172	333	0.7	0.5	10.474	B
	3 - A249 onslip (NB)			770				348				
	4 - B2005 - link	491	123	0	1591	0.308	491	770	0.5	0.4	3.276	A
2 - South	1 - A249 onslip (SB)			567				490				
	2 - B2005 - link	777	194	81	1730	0.449	777	487	0.8	0.8	3.779	A
	3 - A249 offslip (SB)	334	84	857	777	0.430	336	0	1.1	0.8	8.175	A
	4 - Swale Way	979	245	516	674	1.453	674	677	728.6	804.9	4103.275	F
	5 - Grovehurst Road	402	101	651	665	0.604	406	539	2.6	1.6	14.124	B

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	3.45	0.05	0.47	9.73	16.63			N/A	N/A
	2 - Grovehurst Road	0.38	0.00	0.00	0.38	0.38			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.58	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.59	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	70.18	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.53	1.05	1.50	1.90	1.95			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	12.08	0.30	6.74	29.49	39.93			N/A	N/A
	2 - Grovehurst Road	0.60	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.50	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.75	0.21	0.94	1.39	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.99	0.09	0.93	1.61	1.93			N/A	N/A
	4 - Swale Way	196.75	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.37	0.09	1.43	5.44	7.51			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	60.64	28.67	57.44	89.89	100.85			N/A	N/A
	2 - Grovehurst Road	0.93	0.03	0.26	0.93	0.93			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.58	0.03	0.25	0.58	0.58			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.84	0.03	0.25	0.84	0.84			N/A	N/A
	3 - A249 offslip (SB)	1.83	0.03	0.28	1.83	6.20			N/A	N/A
	4 - Swale Way	398.14	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.86	0.04	0.44	13.63	25.05			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	109.37	64.46	106.13	148.89	162.81			N/A	N/A
	2 - Grovehurst Road	0.95	0.03	0.28	0.95	3.46			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.28	0.71	2.23			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.85	0.03	0.26	0.85	0.85			N/A	N/A
	3 - A249 offslip (SB)	1.88	0.03	0.28	1.88	4.64			N/A	N/A
	4 - Swale Way	599.81	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.26	0.03	0.34	10.47	28.39			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	108.65	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.67	0.08	0.78	1.37	1.44			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.51	0.51	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.83	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.11	0.07	0.89	2.03	2.84			N/A	N/A
	4 - Swale Way	728.60	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.63	0.04	0.43	7.25	12.91			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	69.28	24.62	63.59	113.25	130.86			N/A	N/A
	2 - Grovehurst Road	0.50	0.04	0.45	1.28	1.39			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.77	0.05	0.47	1.54	2.13			N/A	N/A
	4 - Swale Way	804.87	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	1.58	0.03	0.35	3.84	8.12			N/A	N/A

2031 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	1290.38	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1004.92	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1110	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	620	100.000
	4 - Swale Way		ONE HOUR	✓	769	100.000
	5 - Grovehurst Road		ONE HOUR	✓	775	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip	2 - Grovehurst	3 - A249 onslip	4 - B2005 -

1 - North	From		(NB)	Road	(NB)	link
		1 - A249 offslip (NB)	0	123	0	987
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	159	403	0

Demand (Veh/hr)

2 - South	From		To				
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	419	0	0	1034	231
		3 - A249 offslip (SB)	1	22	0	381	216
		4 - Swale Way	462	229	0	0	78
5 - Grovehurst Road	289	313	0	173	0		

Vehicle Mix

Heavy Vehicle Percentages

1 - North	From		To			
			1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
		1 - A249 offslip (NB)	0	2	0	16
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	4	6	0		

Heavy Vehicle Percentages

2 - South	From		To				
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	0	0	0	16	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	36	10	0	0	9
5 - Grovehurst Road	0	1	0	4	0		

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.39	973.55	241.8	241.8	F	1019	1528
	2 - Grovehurst Road	1.82	2596.30	335.6	195.8	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.26	3.15	0.3	1.3	A	393	589
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	5.93	2.0	6.1	A	1203	1804
	3 - A249 offslip (SB)	1.53	1492.71	186.7	187.3	F	569	853
	4 - Swale Way	1.56	1638.33	250.3	159.3	F	706	1058
	5 - Grovehurst Road	1.57	1657.85	254.3	197.4	F	711	1067

Main Results for each time segment

07:15 - 07:30

Total	Junction	Circulating	Capacity	Throughput	Throughput	Start	End	Delay

Junction	Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)	RFC	(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	LOS
1 - North	1 - A249 offslip (NB)	836	209	380	890	0.939	800	0	0.0	8.9	32.560	D
	2 - Grovehurst Road	555	139	984	500	1.109	476	196	0.0	19.7	92.800	F
	3 - A249 onslip (NB)			1163				297				
	4 - B2005 - link	382	95	0	1539	0.248	380	1163	0.0	0.3	3.105	A
2 - South	1 - A249 onslip (SB)			502				798				
	2 - B2005 - link	1163	291	118	1820	0.639	1156	384	0.0	1.7	5.370	A
	3 - A249 offslip (SB)	467	117	1275	491	0.950	436	0	0.0	7.8	50.355	F
	4 - Swale Way	579	145	614	555	1.043	520	1096	0.0	14.8	68.527	F
	5 - Grovehurst Road	583	146	771	569	1.026	529	363	0.0	13.5	63.303	F

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	394	880	1.134	871	0	8.9	40.7	116.577	F
	2 - Grovehurst Road	663	166	1057	452	1.466	451	208	19.7	72.5	385.390	F
	3 - A249 onslip (NB)			1202				306				
	4 - B2005 - link	394	99	0	1539	0.256	394	1202	0.3	0.3	3.144	A
2 - South	1 - A249 onslip (SB)			518				829				
	2 - B2005 - link	1208	302	121	1818	0.664	1207	397	1.7	1.9	5.877	A
	3 - A249 offslip (SB)	557	139	1328	450	1.238	446	0	7.8	35.8	196.402	F
	4 - Swale Way	691	173	638	544	1.271	542	1136	14.8	52.2	238.883	F
	5 - Grovehurst Road	697	174	803	546	1.276	543	376	13.5	51.8	232.897	F

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1222	306	395	880	1.390	879	0	40.7	126.5	351.297	F
	2 - Grovehurst Road	811	203	1065	447	1.817	447	209	72.5	163.7	964.170	F
	3 - A249 onslip (NB)			1205				306				
	4 - B2005 - link	395	99	0	1539	0.257	395	1205	0.3	0.3	3.146	A
2 - South	1 - A249 onslip (SB)			519				831				
	2 - B2005 - link	1211	303	121	1818	0.666	1211	397	1.9	2.0	5.929	A
	3 - A249 offslip (SB)	683	171	1333	447	1.529	446	0	35.8	94.9	541.263	F
	4 - Swale Way	847	212	640	543	1.560	543	1139	52.2	128.2	609.538	F
	5 - Grovehurst Road	853	213	806	544	1.568	544	377	51.8	129.1	609.829	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1222	306	395	879	1.390	879	0	126.5	212.2	699.880	F
	2 - Grovehurst Road	811	203	1065	446	1.818	446	209	163.7	255.0	1698.493	F
	3 - A249 onslip (NB)			1205				306				
	4 - B2005 - link	395	99	0	1539	0.257	395	1205	0.3	0.3	3.146	A
2 - South	1 - A249 onslip (SB)			519				831				
	2 - B2005 - link	1212	303	121	1818	0.666	1212	397	2.0	2.0	5.933	A
	3 - A249 offslip (SB)	683	171	1333	446	1.530	446	0	94.9	154.0	1015.284	F
	4 - Swale Way	847	212	640	543	1.560	543	1140	128.2	204.2	1111.407	F
	5 - Grovehurst Road	853	213	806	544	1.568	544	377	129.1	206.4	1119.037	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	998	249	395	879	1.135	879	0	212.2	241.8	935.264	F
	2 - Grovehurst Road	663	166	1065	446	1.484	446	209	255.0	309.0	2277.208	F
	3 - A249 onslip (NB)			1205				306				
	4 - B2005 - link	395	99	0	1539	0.257	395	1205	0.3	0.3	3.146	A
2 - South	1 - A249 onslip (SB)			519				831				
	2 - B2005 - link	1212	303	121	1818	0.666	1212	397	2.0	2.0	5.933	A
	3 - A249 offslip (SB)	557	139	1333	446	1.249	446	0	154.0	181.8	1363.836	F
	4 - Swale Way	691	173	640	543	1.274	543	1140	204.2	241.3	1485.693	F
	5 - Grovehurst Road	697	174	806	544	1.280	544	377	206.4	244.6	1499.937	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	836	209	395	879	0.950	876	0	241.8	231.8	973.548	F
	2 - Grovehurst Road	555	139	1062	449	1.237	449	209	309.0	335.6	2596.304	F
	3 - A249 onslip (NB)			1204				306				
	4 - B2005 - link	395	99	0	1539	0.257	395	1204	0.3	0.3	3.146	A
2 - South	1 - A249 onslip (SB)			519				831				
	2 - B2005 - link	1210	303	121	1818	0.666	1210	397	2.0	2.0	5.919	A
	3 - A249 offslip (SB)	467	117	1332	447	1.043	447	0	181.8	186.7	1492.714	F
	4 - Swale Way	579	145	639	543	1.066	543	1139	241.3	250.3	1638.332	F
	5 - Grovehurst Road	583	146	805	544	1.072	544	377	244.6	254.3	1657.853	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	8.91	0.03	0.28	8.91	9.82			N/A	N/A
	2 - Grovehurst Road	19.70	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.74	1.05	1.50	1.90	1.95			N/A	N/A
	3 - A249 offslip (SB)	7.81	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	14.76	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	13.50	>199	>199	>199	>199			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	40.72	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	72.54	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.94	0.08	1.21	4.42	6.11			N/A	N/A
	3 - A249 offslip (SB)	35.77	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	52.21	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	51.84	>199	>199	>199	>199			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	126.51	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	163.75	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.97	0.03	0.27	1.97	1.97			N/A	N/A
	3 - A249 offslip (SB)	94.89	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	128.20	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	129.13	>199	>199	>199	>199			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	212.20	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	255.00	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.03	0.31	1.18	1.25			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.98	0.03	0.26	1.98	1.98			N/A	N/A
	3 - A249 offslip (SB)	154.00	>199	>199	>199	>199			N/A	N/A

	4 - Swale Way	204.18	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	206.42	>199	>199	>199	>199			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	241.83	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	309.03	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.99	0.11	1.41	4.09	5.51			N/A	N/A
	3 - A249 offslip (SB)	181.79	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	241.31	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	244.55	>199	>199	>199	>199			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	231.79	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	335.61	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.99	0.23	1.16	3.56	4.49			N/A	N/A
	3 - A249 offslip (SB)	186.69	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	250.34	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	254.34	>199	>199	>199	>199			N/A	N/A

2031 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	1084.34	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	2487.54	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1192	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	529	100.000
	4 - Swale Way		ONE HOUR	✓	1376	100.000
	5 - Grovehurst Road		ONE HOUR	✓	613	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	1 - A249 offslip	2 - Grovehurst	3 - A249 onslip	4 - B2005 -

1 - North	From		(NB)	Road	(NB)	link
		1 - A249 offslip (NB)	0	430	0	762
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	277	560	0

Demand (Veh/hr)

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	187	0	0	524	402
		3 - A249 offslip (SB)	1	39	0	202	287
		4 - Swale Way	780	435	0	0	161
5 - Grovehurst Road	150	356	0	107	0		

Vehicle Mix

Heavy Vehicle Percentages

1 - North	From	To				
			1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
		1 - A249 offslip (NB)	0	0	0	19
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	0	3	0		

Heavy Vehicle Percentages

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	1	0	0	27	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	17	3	0	0	3
5 - Grovehurst Road	0	1	0	4	0		

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.71	1877.99	442.7	178.3	F	1094	1641
	2 - Grovehurst Road	0.73	22.96	2.6	13.2	C	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.37	3.60	0.6	2.3	A	539	809
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.48	3.93	0.9	1.5	A	824	1235
	3 - A249 offslip (SB)	0.81	26.42	4.1	20.5	D	485	728
	4 - Swale Way	2.93	6015.44	1052.3	180.3	F	1263	1894
	5 - Grovehurst Road	0.98	87.19	15.7	60.4	F	562	844

Main Results for each time segment

16:15 - 16:30

Total	Junction	Circulating	Capacity	Throughput	Throughput	Start	End	Delay

Junction	Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)	RFC	(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	LOS
1 - North	1 - A249 offslip (NB)	897	224	481	846	1.061	809	0	0.0	22.1	62.591	F
	2 - Grovehurst Road	293	73	839	610	0.480	289	451	0.0	0.9	11.111	B
	3 - A249 onslip (NB)			781				347				
	4 - B2005 - link	483	121	0	1591	0.304	481	781	0.0	0.4	3.242	A
2 - South	1 - A249 onslip (SB)			561				583				
	2 - B2005 - link	777	194	79	1799	0.432	774	482	0.0	0.8	3.502	A
	3 - A249 offslip (SB)	398	100	853	813	0.490	394	0	0.0	0.9	8.535	A
	4 - Swale Way	1036	259	653	607	1.706	602	594	0.0	108.5	341.464	F
	5 - Grovehurst Road	461	115	691	655	0.705	453	564	0.0	2.2	17.135	C

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1072	268	530	812	1.320	810	0	22.1	87.4	257.387	F
	2 - Grovehurst Road	350	87	872	590	0.593	348	468	0.9	1.4	14.754	B
	3 - A249 onslip (NB)			835				385				
	4 - B2005 - link	530	133	0	1591	0.333	530	835	0.4	0.5	3.394	A
2 - South	1 - A249 onslip (SB)			624				593				
	2 - B2005 - link	824	206	95	1790	0.461	824	529	0.8	0.8	3.726	A
	3 - A249 offslip (SB)	476	119	919	760	0.626	473	0	0.9	1.6	12.408	B
	4 - Swale Way	1237	309	728	566	2.186	566	663	108.5	276.3	1303.314	F
	5 - Grovehurst Road	551	138	674	667	0.826	544	620	2.2	4.1	27.486	D

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1312	328	581	776	1.692	776	0	87.4	221.6	727.312	F
	2 - Grovehurst Road	428	107	884	584	0.733	424	472	1.4	2.5	21.790	C
	3 - A249 onslip (NB)			883				425				
	4 - B2005 - link	581	145	0	1591	0.365	581	883	0.5	0.6	3.564	A
2 - South	1 - A249 onslip (SB)			693				598				
	2 - B2005 - link	863	216	112	1780	0.485	862	580	0.8	0.9	3.922	A
	3 - A249 offslip (SB)	582	146	975	717	0.813	574	0	1.6	3.8	23.802	C
	4 - Swale Way	1515	379	811	520	2.913	520	737	276.3	525.0	2781.231	F
	5 - Grovehurst Road	675	169	648	686	0.984	644	684	4.1	11.9	59.404	F

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1312	328	590	769	1.706	769	0	221.6	357.4	1361.341	F
	2 - Grovehurst Road	428	107	886	584	0.734	428	473	2.5	2.6	22.956	C
	3 - A249 onslip (NB)			882				432				
	4 - B2005 - link	590	148	0	1591	0.371	590	882	0.6	0.6	3.597	A
2 - South	1 - A249 onslip (SB)			705				601				
	2 - B2005 - link	861	215	115	1778	0.485	861	590	0.9	0.9	3.927	A
	3 - A249 offslip (SB)	582	146	977	715	0.814	581	0	3.8	4.1	26.419	D
	4 - Swale Way	1515	379	815	518	2.926	518	743	525.0	774.4	4092.077	F
	5 - Grovehurst Road	675	169	646	687	0.983	660	687	11.9	15.7	87.191	F

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1072	268	558	792	1.354	792	0	357.4	427.4	1742.690	F
	2 - Grovehurst Road	350	87	879	586	0.596	354	470	2.6	1.5	15.776	C
	3 - A249 onslip (NB)			829				404				
	4 - B2005 - link	558	139	0	1591	0.351	558	829	0.6	0.5	3.486	A
2 - South	1 - A249 onslip (SB)			661				603				
	2 - B2005 - link	817	204	103	1785	0.458	817	557	0.9	0.9	3.722	A
	3 - A249 offslip (SB)	476	119	921	759	0.626	485	0	4.1	1.7	13.530	B
	4 - Swale Way	1237	309	732	564	2.195	564	673	774.4	942.7	5229.615	F
	5 - Grovehurst Road	551	138	672	669	0.824	592	624	15.7	5.6	54.995	F

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	897	224	495	836	1.073	836	0	427.4	442.7	1877.994	F
	2 - Grovehurst Road	293	73	866	592	0.495	295	465	1.5	1.0	12.203	B
	3 - A249 onslip (NB)			804				357				
	4 - B2005 - link	494	124	0	1591	0.311	495	804	0.5	0.5	3.285	A
2 - South	1 - A249 onslip (SB)			576				590				
	2 - B2005 - link	800	200	83	1797	0.445	800	494	0.9	0.8	3.611	A
	3 - A249 offslip (SB)	398	100	882	789	0.505	401	0	1.7	1.0	9.346	A
	4 - Swale Way	1036	259	671	598	1.733	598	612	942.7	1052.3	6015.440	F
	5 - Grovehurst Road	461	115	692	654	0.705	474	576	5.6	2.6	21.109	C

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	22.06	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.90	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.75	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.94	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	108.53	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.24	0.73	1.65	2.96	3.54			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	87.42	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.40	0.11	1.15	2.61	3.38			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.50	0.00	0.00	0.50	0.50			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.85	0.18	0.94	1.43	1.49			N/A	N/A
	3 - A249 offslip (SB)	1.61	0.07	1.00	3.66	5.11			N/A	N/A
	4 - Swale Way	276.32	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.09	0.14	1.93	9.74	13.35			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	221.60	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	2.53	0.03	0.32	4.55	13.23			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.57	0.03	0.25	0.57	0.57			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.93	0.03	0.25	0.93	0.93			N/A	N/A
	3 - A249 offslip (SB)	3.82	0.04	0.37	9.38	20.52			N/A	N/A
	4 - Swale Way	525.04	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	11.94	0.27	6.48	29.44	40.07			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	357.43	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	2.63	0.03	0.29	2.63	10.21			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.59	0.03	0.28	0.78	2.29			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.94	0.03	0.26	0.94	0.94			N/A	N/A
	3 - A249 offslip (SB)	4.07	0.03	0.31	5.23	19.70			N/A	N/A

	4 - Swale Way	774.37	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	15.73	0.17	6.51	42.23	60.38			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	427.42	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.53	0.05	0.50	3.88	5.99			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.85	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.74	0.04	0.44	4.64	7.69			N/A	N/A
	4 - Swale Way	942.72	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.60	0.05	0.49	16.06	28.08			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	442.70	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.00	0.04	0.39	2.50	4.26			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.81	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.04	0.03	0.34	2.44	5.11			N/A	N/A
	4 - Swale Way	1052.30	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.55	0.03	0.34	5.68	13.64			N/A	N/A

2031 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	1334.78	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	1039.24	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1120	100.000
	2 - Grovehurst Road		ONE HOUR	✓	737	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	620	100.000
	4 - Swale Way		ONE HOUR	✓	779	100.000
	5 - Grovehurst Road		ONE HOUR	✓	775	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip	2 - Grovehurst	3 - A249 onslip	4 - B2005 -

1 - North	From		(NB)	Road	(NB)	link
		1 - A249 offslip (NB)	0	123	0	997
		2 - Grovehurst Road	0	0	38	699
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	159	403	0

Demand (Veh/hr)

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	419	0	0	1044	231
		3 - A249 offslip (SB)	1	22	0	381	216
		4 - Swale Way	472	229	0	0	78
5 - Grovehurst Road	289	313	0	173	0		

Vehicle Mix

Heavy Vehicle Percentages

1 - North	From	To				
			1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
		1 - A249 offslip (NB)	0	2	0	17
		2 - Grovehurst Road	0	0	5	2
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	4	6	0		

Heavy Vehicle Percentages

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	0	0	0	17	5
		3 - A249 offslip (SB)	0	5	0	9	3
		4 - Swale Way	38	10	0	0	1
5 - Grovehurst Road	0	1	0	4	0		

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.41	1046.20	256.8	256.8	F	1028	1542
	2 - Grovehurst Road	1.82	2621.17	338.1	195.8	F	676	1014
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.25	3.14	0.3	1.2	A	389	584
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.67	5.99	2.0	6.2	A	1199	1799
	3 - A249 offslip (SB)	1.54	1519.28	189.4	187.3	F	569	853
	4 - Swale Way	1.58	1718.64	263.4	158.6	F	715	1072
	5 - Grovehurst Road	1.58	1696.85	259.1	197.4	F	711	1067

Main Results for each time segment

07:15 - 07:30

	Total	Junction	Circulating	Capacity	Throughput	Throughput	Start	End	Delay

Junction	Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)	RFC	(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	LOS
1 - North	1 - A249 offslip (NB)	843	211	378	885	0.953	804	0	0.0	9.9	35.107	E
	2 - Grovehurst Road	555	139	986	495	1.122	472	195	0.0	20.8	97.350	F
	3 - A249 onslip (NB)			1163				295				
	4 - B2005 - link	379	95	0	1539	0.246	378	1163	0.0	0.3	3.098	A
2 - South	1 - A249 onslip (SB)			499				799				
	2 - B2005 - link	1164	291	118	1810	0.643	1156	382	0.0	1.8	5.450	A
	3 - A249 offslip (SB)	467	117	1274	487	0.959	434	0	0.0	8.2	52.530	F
	4 - Swale Way	586	147	611	554	1.058	522	1097	0.0	16.1	72.865	F
	5 - Grovehurst Road	583	146	772	564	1.035	527	361	0.0	14.2	66.042	F

07:30 - 07:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1007	252	391	876	1.150	868	0	9.9	44.7	126.901	F
	2 - Grovehurst Road	663	166	1053	450	1.472	449	206	20.8	74.1	396.819	F
	3 - A249 onslip (NB)			1199				303				
	4 - B2005 - link	391	98	0	1539	0.254	391	1199	0.3	0.3	3.135	A
2 - South	1 - A249 onslip (SB)			514				828				
	2 - B2005 - link	1204	301	121	1808	0.666	1203	393	1.8	2.0	5.944	A
	3 - A249 offslip (SB)	557	139	1324	448	1.245	444	0	8.2	36.7	202.601	F
	4 - Swale Way	700	175	633	544	1.288	542	1135	16.1	55.7	254.646	F
	5 - Grovehurst Road	697	174	802	542	1.285	540	373	14.2	53.4	241.610	F

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1233	308	391	875	1.409	875	0	44.7	134.3	376.891	F
	2 - Grovehurst Road	811	203	1059	446	1.820	446	207	74.1	165.5	979.334	F
	3 - A249 onslip (NB)			1201				304				
	4 - B2005 - link	391	98	0	1539	0.254	391	1201	0.3	0.3	3.136	A
2 - South	1 - A249 onslip (SB)			515				830				
	2 - B2005 - link	1207	302	121	1808	0.668	1207	394	2.0	2.0	5.990	A
	3 - A249 offslip (SB)	683	171	1328	445	1.535	444	0	36.7	96.3	552.730	F
	4 - Swale Way	858	214	635	543	1.580	543	1138	55.7	134.5	641.716	F
	5 - Grovehurst Road	853	213	804	541	1.577	541	374	53.4	131.5	626.312	F

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1233	308	391	875	1.409	875	0	134.3	223.8	743.248	F
	2 - Grovehurst Road	811	203	1060	446	1.821	445	207	165.5	257.0	1717.094	F
	3 - A249 onslip (NB)			1201				304				
	4 - B2005 - link	391	98	0	1539	0.254	391	1201	0.3	0.3	3.136	A
2 - South	1 - A249 onslip (SB)			515				830				
	2 - B2005 - link	1207	302	121	1808	0.668	1207	394	2.0	2.0	5.994	A
	3 - A249 offslip (SB)	683	171	1328	444	1.536	444	0	96.3	155.8	1032.394	F
	4 - Swale Way	858	214	635	543	1.580	543	1138	134.5	213.2	1161.729	F
	5 - Grovehurst Road	853	213	804	541	1.577	541	374	131.5	209.6	1143.989	F

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1007	252	391	875	1.151	875	0	223.8	256.8	994.674	F
	2 - Grovehurst Road	663	166	1060	446	1.487	446	207	257.0	311.2	2299.152	F
	3 - A249 onslip (NB)			1201				304				
	4 - B2005 - link	391	98	0	1539	0.254	391	1201	0.3	0.3	3.136	A
2 - South	1 - A249 onslip (SB)			515				830				
	2 - B2005 - link	1207	302	121	1808	0.668	1207	394	2.0	2.0	5.994	A
	3 - A249 offslip (SB)	557	139	1328	444	1.254	444	0	155.8	184.1	1386.050	F
	4 - Swale Way	700	175	635	543	1.290	543	1138	213.2	252.5	1552.438	F
	5 - Grovehurst Road	697	174	804	541	1.288	541	374	209.6	248.5	1532.563	F

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	843	211	392	875	0.964	872	0	256.8	249.7	1046.203	F
	2 - Grovehurst Road	555	139	1057	448	1.240	447	206	311.2	338.1	2621.174	F
	3 - A249 onslip (NB)			1200				304				
	4 - B2005 - link	392	98	0	1539	0.254	392	1200	0.3	0.3	3.137	A
2 - South	1 - A249 onslip (SB)			515				830				
	2 - B2005 - link	1206	302	121	1808	0.667	1206	394	2.0	2.0	5.980	A
	3 - A249 offslip (SB)	467	117	1327	446	1.048	445	0	184.1	189.4	1519.276	F
	4 - Swale Way	586	147	634	543	1.080	543	1138	252.5	263.4	1718.641	F
	5 - Grovehurst Road	583	146	803	541	1.078	541	374	248.5	259.1	1696.846	F

Queue Variation Results for each time segment

07:15 - 07:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	9.90	0.03	0.27	9.90	9.90			N/A	N/A
	2 - Grovehurst Road	20.76	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.33	0.00	0.00	0.33	0.33			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.77	1.05	1.50	1.90	1.95			N/A	N/A
	3 - A249 offslip (SB)	8.23	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	16.13	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	14.22	>199	>199	>199	>199			N/A	N/A

07:30 - 07:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	44.66	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	74.05	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.96	0.08	1.22	4.46	6.18			N/A	N/A
	3 - A249 offslip (SB)	36.70	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	55.74	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	53.38	>199	>199	>199	>199			N/A	N/A

07:45 - 08:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	134.29	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	165.50	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.03	0.25	0.45	0.48			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	1.99	0.03	0.27	1.99	1.99			N/A	N/A
	3 - A249 offslip (SB)	96.27	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	134.47	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	131.48	>199	>199	>199	>199			N/A	N/A

08:00 - 08:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	223.84	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	256.99	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.03	0.31	1.17	1.20			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.00	0.03	0.26	2.00	2.00			N/A	N/A
	3 - A249 offslip (SB)	155.83	>199	>199	>199	>199			N/A	N/A

	4 - Swale Way	213.18	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	209.57	>199	>199	>199	>199			N/A	N/A

08:15 - 08:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	256.82	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	311.24	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.00	0.11	1.40	4.17	5.62			N/A	N/A
	3 - A249 offslip (SB)	184.08	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	252.53	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	248.52	>199	>199	>199	>199			N/A	N/A

08:30 - 08:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	249.72	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	338.08	>199	>199	>199	>199			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.34	0.00	0.00	0.34	0.34			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	2.00	0.22	1.16	3.61	4.56			N/A	N/A
	3 - A249 offslip (SB)	189.44	>199	>199	>199	>199			N/A	N/A
	4 - Swale Way	263.43	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	259.12	>199	>199	>199	>199			N/A	N/A

2031 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	North	Standard Roundabout	1, 2, 3, 4	1141.36	F
2	South	Standard Roundabout	1, 2, 3, 4, 5	2591.04	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (Veh/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - North	4 - B2005 - link	2	2	Queue limited	Normal	0	100.00	20.00
2 - South	2 - B2005 - link	1	4	Queue limited	Normal	0	100.00	20.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1 - North	1 - A249 offslip (NB)		ONE HOUR	✓	1203	100.000
	2 - Grovehurst Road		ONE HOUR	✓	389	100.000
	3 - A249 onslip (NB)					
	4 - B2005 - link	✓				
2 - South	1 - A249 onslip (SB)					
	2 - B2005 - link	✓				
	3 - A249 offslip (SB)		ONE HOUR	✓	529	100.000
	4 - Swale Way		ONE HOUR	✓	1398	100.000
	5 - Grovehurst Road		ONE HOUR	✓	613	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		1 - A249 offslip	2 - Grovehurst	3 - A249 onslip	4 - B2005 -

1 - North	From		(NB)	Road	(NB)	link
		1 - A249 offslip (NB)	0	430	0	773
		2 - Grovehurst Road	0	0	34	355
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
		4 - B2005 - link	0	277	561	0

Demand (Veh/hr)

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	187	0	0	534	402
		3 - A249 offslip (SB)	1	39	0	202	287
		4 - Swale Way	801	436	0	0	161
5 - Grovehurst Road	150	356	0	107	0		

Vehicle Mix

Heavy Vehicle Percentages

1 - North	From	To				
			1 - A249 offslip (NB)	2 - Grovehurst Road	3 - A249 onslip (NB)	4 - B2005 - link
		1 - A249 offslip (NB)	0	0	0	20
		2 - Grovehurst Road	0	0	0	0
		3 - A249 onslip (NB)	Exit-only	Exit-only	Exit-only	Exit-only
4 - B2005 - link	0	0	3	0		

Heavy Vehicle Percentages

2 - South	From	To					
			1 - A249 onslip (SB)	2 - B2005 - link	3 - A249 offslip (SB)	4 - Swale Way	5 - Grovehurst Road
		1 - A249 onslip (SB)	Exit-only	Exit-only	Exit-only	Exit-only	Exit-only
		2 - B2005 - link	1	0	0	29	1
		3 - A249 offslip (SB)	0	8	0	8	3
		4 - Swale Way	18	3	0	0	3
5 - Grovehurst Road	0	1	0	4	0		

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1 - North	1 - A249 offslip (NB)	1.73	1961.86	461.8	177.2	F	1104	1656
	2 - Grovehurst Road	0.74	23.31	2.7	13.5	C	357	535
	3 - A249 onslip (NB)							
	4 - B2005 - link	0.37	3.59	0.6	2.3	A	537	805
2 - South	1 - A249 onslip (SB)							
	2 - B2005 - link	0.49	3.99	0.9	1.5	A	821	1232
	3 - A249 offslip (SB)	0.82	27.16	4.2	21.0	D	485	728
	4 - Swale Way	2.97	6198.73	1083.4	179.2	F	1283	1924
	5 - Grovehurst Road	0.99	88.97	16.1	60.8	F	562	844

Main Results for each time segment

16:15 - 16:30

Total	Junction	Circulating	Capacity	Throughput	Throughput	Start	End	Delay

Junction	Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	(Veh/hr)	RFC	(Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	(s)	LOS
1 - North	1 - A249 offslip (NB)	906	226	478	843	1.075	809	0	0.0	24.1	66.965	F
	2 - Grovehurst Road	293	73	840	606	0.483	289	447	0.0	0.9	11.240	B
	3 - A249 onslip (NB)			784				345				
	4 - B2005 - link	480	120	0	1591	0.302	478	784	0.0	0.4	3.233	A
2 - South	1 - A249 onslip (SB)			558				584				
	2 - B2005 - link	777	194	79	1782	0.436	774	479	0.0	0.8	3.561	A
	3 - A249 offslip (SB)	398	100	853	807	0.494	394	0	0.0	1.0	8.654	A
	4 - Swale Way	1052	263	650	606	1.737	600	597	0.0	113.0	355.917	F
	5 - Grovehurst Road	461	115	690	653	0.707	452	560	0.0	2.3	17.255	C

16:30 - 16:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1081	270	527	808	1.338	807	0	24.1	92.7	274.755	F
	2 - Grovehurst Road	350	87	872	587	0.596	348	463	0.9	1.4	14.925	B
	3 - A249 onslip (NB)			836				383				
	4 - B2005 - link	527	132	0	1591	0.332	527	836	0.4	0.5	3.385	A
2 - South	1 - A249 onslip (SB)			622				595				
	2 - B2005 - link	822	206	95	1773	0.464	822	527	0.8	0.9	3.782	A
	3 - A249 offslip (SB)	476	119	917	756	0.629	473	0	1.0	1.6	12.591	B
	4 - Swale Way	1257	314	723	565	2.223	565	666	113.0	285.9	1351.572	F
	5 - Grovehurst Road	551	138	673	666	0.828	544	616	2.3	4.1	27.779	D

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1325	331	578	773	1.714	773	0	92.7	230.7	763.569	F
	2 - Grovehurst Road	428	107	883	582	0.736	424	467	1.4	2.6	22.096	C
	3 - A249 onslip (NB)			883				424				
	4 - B2005 - link	578	145	0	1591	0.364	578	883	0.5	0.6	3.555	A
2 - South	1 - A249 onslip (SB)			690				600				
	2 - B2005 - link	859	215	112	1763	0.488	859	578	0.9	0.9	3.981	A
	3 - A249 offslip (SB)	582	146	971	713	0.817	573	0	1.6	3.9	24.354	C
	4 - Swale Way	1539	385	805	520	2.959	520	740	285.9	540.6	2867.525	F
	5 - Grovehurst Road	675	169	647	684	0.987	643	679	4.1	12.1	60.272	F

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1325	331	587	766	1.729	766	0	230.7	370.3	1418.125	F
	2 - Grovehurst Road	428	107	885	581	0.737	428	468	2.6	2.7	23.310	C
	3 - A249 onslip (NB)			883				431				
	4 - B2005 - link	587	147	0	1591	0.369	587	883	0.6	0.6	3.588	A
2 - South	1 - A249 onslip (SB)			702				602				
	2 - B2005 - link	858	215	115	1761	0.487	858	587	0.9	0.9	3.986	A
	3 - A249 offslip (SB)	582	146	973	711	0.819	581	0	3.9	4.2	27.160	D
	4 - Swale Way	1539	385	810	518	2.973	518	745	540.6	796.0	4208.472	F
	5 - Grovehurst Road	675	169	645	685	0.985	659	682	12.1	16.1	88.972	F

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	1081	270	556	788	1.372	788	0	370.3	443.6	1812.666	F
	2 - Grovehurst Road	350	87	879	584	0.599	354	466	2.7	1.6	15.963	C
	3 - A249 onslip (NB)			830				403				
	4 - B2005 - link	556	139	0	1591	0.350	556	830	0.6	0.5	3.482	A
2 - South	1 - A249 onslip (SB)			659				604				
	2 - B2005 - link	814	204	103	1768	0.461	815	556	0.9	0.9	3.777	A
	3 - A249 offslip (SB)	476	119	918	755	0.630	485	0	4.2	1.8	13.768	B
	4 - Swale Way	1257	314	727	563	2.232	563	676	796.0	969.4	5382.715	F
	5 - Grovehurst Road	551	138	671	667	0.826	593	620	16.1	5.7	56.737	F

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
1 - North	1 - A249 offslip (NB)	906	226	492	833	1.087	833	0	443.6	461.8	1961.859	F
	2 - Grovehurst Road	293	73	865	590	0.497	295	460	1.6	1.0	12.313	B
	3 - A249 onslip (NB)			804				355				
	4 - B2005 - link	492	123	0	1591	0.309	492	804	0.5	0.4	3.277	A
2 - South	1 - A249 onslip (SB)			574				591				
	2 - B2005 - link	797	199	83	1780	0.448	798	491	0.9	0.8	3.668	A
	3 - A249 offslip (SB)	398	100	880	785	0.508	401	0	1.8	1.1	9.459	A
	4 - Swale Way	1052	263	666	597	1.764	597	615	969.4	1083.4	6198.729	F
	5 - Grovehurst Road	461	115	691	653	0.707	474	572	5.7	2.6	21.373	C

Queue Variation Results for each time segment

16:15 - 16:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	24.13	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	0.91	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.43	0.00	0.00	0.43	0.43			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.77	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	0.96	0.55	1.00	1.40	1.45			N/A	N/A
	4 - Swale Way	113.01	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.26	0.73	1.66	2.98	3.59			N/A	N/A

16:30 - 16:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	92.70	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.42	0.11	1.16	2.65	3.46			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.49	0.00	0.00	0.49	0.49			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.86	0.17	0.94	1.03	1.03			N/A	N/A
	3 - A249 offslip (SB)	1.64	0.07	1.01	3.72	5.23			N/A	N/A
	4 - Swale Way	285.88	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	4.14	0.14	1.96	9.83	13.47			N/A	N/A

16:45 - 17:00

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	230.67	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	2.56	0.03	0.32	4.74	13.49			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.57	0.03	0.25	0.57	0.57			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.94	0.03	0.25	0.94	0.94			N/A	N/A
	3 - A249 offslip (SB)	3.91	0.04	0.37	9.81	21.01			N/A	N/A
	4 - Swale Way	540.62	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	12.15	0.30	6.73	29.76	40.37			N/A	N/A

17:00 - 17:15

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	370.28	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	2.67	0.03	0.29	2.67	10.52			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.58	0.03	0.28	0.81	2.30			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.95	0.03	0.26	0.95	0.95			N/A	N/A
	3 - A249 offslip (SB)	4.18	0.03	0.31	5.72	20.55			N/A	N/A

	4 - Swale Way	795.99	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	16.08	0.18	6.94	42.82	60.81			N/A	N/A

17:15 - 17:30

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	443.63	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.55	0.05	0.49	3.93	6.12			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.54	0.54	1.00	1.40	1.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.86	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.76	0.04	0.44	4.72	7.89			N/A	N/A
	4 - Swale Way	969.43	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	5.70	0.05	0.50	16.38	28.52			N/A	N/A

17:30 - 17:45

Junction	Arm	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
1 - North	1 - A249 offslip (NB)	461.82	>199	>199	>199	>199			N/A	N/A
	2 - Grovehurst Road	1.01	0.04	0.39	2.54	4.35			N/A	N/A
	3 - A249 onslip (NB)									
	4 - B2005 - link	0.45	0.00	0.00	0.45	0.45			N/A	N/A
2 - South	1 - A249 onslip (SB)									
	2 - B2005 - link	0.82	0.55	1.00	1.40	1.45			N/A	N/A
	3 - A249 offslip (SB)	1.05	0.03	0.34	2.44	5.21			N/A	N/A
	4 - Swale Way	1083.37	>199	>199	>199	>199			N/A	N/A
	5 - Grovehurst Road	2.57	0.03	0.34	5.73	13.77			N/A	N/A

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.0.2.5947 © Copyright TRL Limited, 2017
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Filename: Fleet End - Barge Way_Sensitivity_FULLLK3.j9
Path: P:\JNY9290 - Kemsley K5\Transport\Arcady\WKN DCO\Fleet End - Barge Way
Report generation date: 08/07/2019 15:01:42

- »2017, AM
- »2017, PM
- »2024, AM
- »2024, PM
- »2024 + Cumulative Development, AM
- »2024 + Cumulative Development, PM
- »2024 + K3 Operational, AM
- »2024 + K3 Operational, PM
- »2024 + K3 and WKN Operational, AM
- »2024 + K3 and WKN Operational, PM
- »2024 + K3 Operational + Cumulative Development, AM
- »2024 + K3 Operational + Cumulative Development, PM
- »2024 + K3 and WKN Operational + Cumulative Development, AM
- »2024 + K3 and WKN Operational + Cumulative Development, PM
- »2031, AM
- »2031, PM
- »2031 + Cumulative Development, AM
- »2031 + Cumulative Development, PM
- »2031 + K3 Operational, AM
- »2031 + K3 Operational, PM
- »2031 + K3 and WKN Operational, AM
- »2031 + K3 and WKN Operational, PM
- »2031 + K3 Operational + Cumulative Development, AM
- »2031 + K3 Operational + Cumulative Development, PM
- »2031 + K3 and WKN Operational + Cumulative Development, AM
- »2031 + K3 and WKN Operational + Cumulative Development, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2017						
Arm Bar E	0.1	4.29	0.07	0.1	3.32	0.13
Arm Bar S	0.2	3.51	0.17	0.2	3.03	0.14
Arm Fleet	0.0	4.10	0.04	0.1	4.18	0.08
Arm Site	0.0	0.00	0.00	0.0	0.00	0.00
2024						
Arm Bar E	0.1	3.85	0.11	0.2	3.44	0.16
Arm Bar S	0.3	3.74	0.23	0.2	3.27	0.18

Arm Fleet	0.0	4.30	0.04	0.1	4.32	0.09
Arm Site	0.0	5.85	0.03	0.0	5.86	0.04
2024 + Cumulative Development						
Arm Bar E	0.1	3.85	0.11	0.2	3.44	0.16
Arm Bar S	0.3	3.74	0.23	0.2	3.27	0.18
Arm Fleet	0.0	4.30	0.04	0.1	4.32	0.09
Arm Site	0.0	5.85	0.03	0.0	5.86	0.04
2024 + K3 Operational						
Arm Bar E	0.1	4.09	0.13	0.2	3.67	0.19
Arm Bar S	0.3	3.94	0.26	0.3	3.46	0.20
Arm Fleet	0.0	4.39	0.04	0.1	4.39	0.09
Arm Site	0.0	5.99	0.04	0.0	5.95	0.04
2024 + K3 and WKN Operational						
Arm Bar E	0.2	4.26	0.14	0.3	3.83	0.21
Arm Bar S	0.4	4.07	0.27	0.3	3.61	0.22
Arm Fleet	0.0	4.43	0.04	0.1	4.44	0.09
Arm Site	0.0	6.05	0.04	0.0	6.01	0.04
2024 + K3 Operational + Cumulative Development						
Arm Bar E	0.1	4.09	0.13	0.2	3.67	0.19
Arm Bar S	0.3	3.94	0.26	0.3	3.46	0.20
Arm Fleet	0.0	4.39	0.04	0.1	4.39	0.09
Arm Site	0.0	5.99	0.04	0.0	5.95	0.04
2024 + K3 and WKN Operational + Cumulative Development						
Arm Bar E	0.2	4.26	0.14	0.3	3.83	0.21
Arm Bar S	0.4	4.07	0.27	0.3	3.61	0.22
Arm Fleet	0.0	4.43	0.04	0.1	4.43	0.09
Arm Site	0.0	6.05	0.04	0.0	6.01	0.04
2031						
Arm Bar E	0.1	3.85	0.11	0.2	3.44	0.16
Arm Bar S	0.3	3.74	0.23	0.2	3.27	0.18
Arm Fleet	0.0	4.30	0.04	0.1	4.32	0.09
Arm Site	0.0	5.85	0.03	0.0	5.86	0.04
2031 + Cumulative Development						
Arm Bar E	0.1	3.85	0.11	0.2	3.44	0.16
Arm Bar S	0.3	3.74	0.23	0.2	3.27	0.18
Arm Fleet	0.0	4.30	0.04	0.1	4.32	0.09
Arm Site	0.0	5.85	0.03	0.0	5.86	0.04
2031 + K3 Operational						
Arm Bar E	0.1	4.09	0.13	0.2	3.67	0.19
Arm Bar S	0.3	3.94	0.26	0.3	3.46	0.20
Arm Fleet	0.0	4.39	0.04	0.1	4.39	0.09
Arm Site	0.0	5.99	0.04	0.0	5.95	0.04
2031 + K3 and WKN Operational						
Arm Bar E	0.2	4.26	0.14	0.3	3.83	0.21
Arm Bar S	0.4	4.07	0.27	0.3	3.61	0.22
Arm Fleet	0.0	4.43	0.04	0.1	4.44	0.09
Arm Site	0.0	6.05	0.04	0.0	6.01	0.04
2031 + K3 Operational + Cumulative Development						
Arm Bar E	0.1	4.09	0.13	0.2	3.67	0.19
Arm Bar S	0.3	3.94	0.26	0.3	3.46	0.20
Arm Fleet	0.0	4.39	0.04	0.1	4.39	0.09
Arm Site	0.0	5.99	0.04	0.0	5.95	0.04
2031 + K3 and WKN Operational + Cumulative Development						
Arm Bar E	0.2	4.26	0.14	0.3	3.83	0.21
Arm Bar S	0.4	4.07	0.27	0.3	3.61	0.22
Arm Fleet	0.0	4.43	0.04	0.1	4.44	0.09

Arm Site	0.0	6.05	0.04	0.0	6.01	0.04
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Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/11/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\jack.clarke-williams
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
Bar E	untitled	
Bar S	untitled	
Fleet	untitled	
Site	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
Bar E	3.50	7.00	21.0	18.0	44.0	45.0	
Bar S	4.00	6.50	23.0	24.0	45.0	40.0	
Fleet	3.50	7.00	16.5	11.5	44.0	50.0	
Site	3.50	6.50	11.0	13.5	44.0	40.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
Bar E	0.604	1651
Bar S	0.625	1727
Fleet	0.563	1514
Site	0.566	1456

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	61	100.000
Bar S		ONE HOUR	✓	187	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	Bar E	Bar S	Fleet	Site	
From	Bar E	0	59	2	0
	Bar S	135	0	52	0
	Fleet	1	31	0	0
	Site	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	Bar E	Bar S	Fleet	Site	
From	Bar E	0	78	100	0
	Bar S	36	0	50	0
	Fleet	0	55	0	0
	Site	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.07	4.29	0.1	A	56	84
Bar S	0.17	3.51	0.2	A	172	257
Fleet	0.04	4.10	0.0	A	29	44
Site	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	46	11	23	912	0.050	46	102	0.0	0.1	4.155	A
Bar S	141	35	1	1233	0.114	140	67	0.0	0.1	3.292	A
Fleet	24	6	101	937	0.026	24	41	0.0	0.0	3.943	A
Site	0	0	125	1357	0.000	0	0	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	55	14	28	909	0.060	55	122	0.1	0.1	4.212	A
Bar S	168	42	2	1233	0.136	168	81	0.1	0.2	3.380	A
Fleet	29	7	121	927	0.031	29	49	0.0	0.0	4.008	A
Site	0	0	150	1338	0.000	0	0	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	67	17	34	906	0.074	67	150	0.1	0.1	4.290	A
Bar S	206	51	2	1232	0.167	206	99	0.2	0.2	3.505	A
Fleet	35	9	149	913	0.039	35	59	0.0	0.0	4.099	A
Site	0	0	184	1311	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	67	17	34	906	0.074	67	150	0.1	0.1	4.290	A
Bar S	206	51	2	1232	0.167	206	99	0.2	0.2	3.505	A
Fleet	35	9	149	913	0.039	35	59	0.0	0.0	4.100	A
Site	0	0	184	1311	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	55	14	28	909	0.060	55	122	0.1	0.1	4.214	A
Bar S	168	42	2	1233	0.136	168	81	0.2	0.2	3.384	A
Fleet	29	7	121	927	0.031	29	49	0.0	0.0	4.010	A
Site	0	0	150	1337	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	46	11	23	912	0.050	46	102	0.1	0.1	4.159	A
Bar S	141	35	2	1233	0.114	141	68	0.2	0.1	3.295	A
Fleet	24	6	102	937	0.026	24	41	0.0	0.0	3.946	A
Site	0	0	126	1357	0.000	0	0	0.0	0.0	0.000	A

2017, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	141	100.000
Bar S		ONE HOUR	✓	173	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	137	3	0
	Bar S	101	2	70	0
	Fleet	3	68	0	0
	Site	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	27	67	0
	Bar S	33	0	14	0
	Fleet	33	53	0	0
	Site	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	3.32	0.1	A	129	194
Bar S	0.14	3.03	0.2	A	159	238
Fleet	0.08	4.18	0.1	A	65	98
Site	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	52	1256	0.085	106	79	0.0	0.1	3.130	A
Bar S	130	33	3	1380	0.094	130	155	0.0	0.1	2.879	A
Fleet	53	13	78	957	0.056	53	55	0.0	0.1	3.984	A
Site	0	0	131	1352	0.000	0	0	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	63	1249	0.102	127	94	0.1	0.1	3.208	A
Bar S	156	39	4	1380	0.113	155	186	0.1	0.1	2.940	A
Fleet	64	16	93	949	0.067	64	66	0.1	0.1	4.066	A
Site	0	0	157	1331	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	155	39	77	1238	0.125	155	116	0.1	0.1	3.322	A
Bar S	190	48	4	1379	0.138	190	228	0.1	0.2	3.028	A
Fleet	78	20	114	939	0.083	78	80	0.1	0.1	4.182	A
Site	0	0	193	1303	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	155	39	77	1238	0.125	155	116	0.1	0.1	3.323	A
Bar S	190	48	4	1379	0.138	190	228	0.2	0.2	3.028	A
Fleet	78	20	115	939	0.083	78	80	0.1	0.1	4.182	A
Site	0	0	193	1303	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	63	1248	0.102	127	94	0.1	0.1	3.211	A
Bar S	156	39	4	1380	0.113	156	186	0.2	0.1	2.940	A
Fleet	64	16	94	949	0.067	64	66	0.1	0.1	4.067	A
Site	0	0	157	1331	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	53	1256	0.085	106	79	0.1	0.1	3.131	A
Bar S	130	33	3	1380	0.094	130	156	0.1	0.1	2.882	A
Fleet	53	13	78	956	0.056	54	55	0.1	0.1	3.988	A
Site	0	0	132	1351	0.000	0	0	0.0	0.0	0.000	A

2024, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	102	100.000
Bar S		ONE HOUR	✓	262	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	100	2	0
	Bar S	190	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	51	100	0
	Bar S	28	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.11	3.85	0.1	A	94	140
Bar S	0.23	3.74	0.3	A	240	361
Fleet	0.04	4.30	0.0	A	29	44
Site	0.03	5.85	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	77	19	38	1061	0.072	76	143	0.0	0.1	3.658	A
Bar S	197	49	1	1251	0.158	197	113	0.0	0.2	3.411	A
Fleet	24	6	158	909	0.026	24	41	0.0	0.0	4.065	A
Site	15	4	166	666	0.023	15	15	0.0	0.0	5.530	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	92	23	46	1055	0.087	92	172	0.1	0.1	3.735	A
Bar S	236	59	2	1251	0.188	235	136	0.2	0.2	3.544	A
Fleet	29	7	189	894	0.032	29	49	0.0	0.0	4.160	A
Site	18	4	199	654	0.028	18	18	0.0	0.0	5.662	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	56	1048	0.107	112	210	0.1	0.1	3.846	A
Bar S	288	72	2	1251	0.231	288	166	0.2	0.3	3.740	A
Fleet	35	9	231	873	0.040	35	59	0.0	0.0	4.296	A
Site	22	6	244	637	0.035	22	22	0.0	0.0	5.853	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	56	1048	0.107	112	210	0.1	0.1	3.846	A
Bar S	288	72	2	1251	0.231	288	166	0.3	0.3	3.740	A
Fleet	35	9	231	873	0.040	35	59	0.0	0.0	4.297	A
Site	22	6	244	637	0.035	22	22	0.0	0.0	5.854	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	92	23	46	1055	0.087	92	172	0.1	0.1	3.736	A
Bar S	236	59	2	1251	0.188	236	136	0.3	0.2	3.546	A
Fleet	29	7	189	894	0.032	29	49	0.0	0.0	4.163	A
Site	18	4	200	654	0.028	18	18	0.0	0.0	5.666	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	77	19	38	1060	0.072	77	144	0.1	0.1	3.659	A
Bar S	197	49	2	1251	0.158	197	114	0.2	0.2	3.418	A
Fleet	24	6	158	909	0.027	24	41	0.0	0.0	4.067	A
Site	15	4	167	666	0.023	15	15	0.0	0.0	5.535	A

2024, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	180	100.000
Bar S		ONE HOUR	✓	223	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	176	3	0
	Bar S	137	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	24	67	0
	Bar S	28	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.16	3.44	0.2	A	165	248
Bar S	0.18	3.27	0.2	A	205	307
Fleet	0.09	4.32	0.1	A	65	98
Site	0.04	5.86	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	136	34	69	1271	0.107	135	106	0.0	0.1	3.167	A
Bar S	168	42	3	1348	0.125	167	201	0.0	0.1	3.046	A
Fleet	53	13	116	937	0.057	53	55	0.0	0.1	4.070	A
Site	17	4	158	667	0.025	16	11	0.0	0.0	5.532	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	162	40	83	1260	0.128	162	127	0.1	0.1	3.276	A
Bar S	200	50	4	1348	0.149	200	241	0.1	0.2	3.136	A
Fleet	64	16	138	926	0.069	64	66	0.1	0.1	4.174	A
Site	20	5	190	655	0.030	20	13	0.0	0.0	5.665	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	198	50	101	1245	0.159	198	155	0.1	0.2	3.436	A
Bar S	246	61	4	1347	0.182	245	295	0.2	0.2	3.266	A
Fleet	78	20	169	911	0.086	78	80	0.1	0.1	4.323	A
Site	24	6	232	639	0.038	24	15	0.0	0.0	5.857	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	198	50	101	1245	0.159	198	155	0.2	0.2	3.436	A
Bar S	246	61	4	1347	0.182	246	295	0.2	0.2	3.266	A
Fleet	78	20	170	911	0.086	78	80	0.1	0.1	4.323	A
Site	24	6	232	639	0.038	24	15	0.0	0.0	5.857	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	162	40	83	1260	0.128	162	127	0.2	0.1	3.278	A
Bar S	200	50	4	1348	0.149	201	241	0.2	0.2	3.140	A
Fleet	64	16	139	926	0.069	64	66	0.1	0.1	4.175	A
Site	20	5	190	655	0.030	20	13	0.0	0.0	5.669	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	136	34	69	1271	0.107	136	106	0.1	0.1	3.173	A
Bar S	168	42	3	1348	0.125	168	202	0.2	0.1	3.052	A
Fleet	53	13	116	937	0.057	54	55	0.1	0.1	4.073	A
Site	17	4	159	667	0.025	17	11	0.0	0.0	5.535	A

2024 + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	102	100.000
Bar S		ONE HOUR	✓	262	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	100	2	0
	Bar S	190	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	51	100	0
	Bar S	28	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.11	3.85	0.1	A	94	140
Bar S	0.23	3.74	0.3	A	240	361
Fleet	0.04	4.30	0.0	A	29	44
Site	0.03	5.85	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	77	19	38	1061	0.072	76	143	0.0	0.1	3.658	A
Bar S	197	49	1	1251	0.158	197	113	0.0	0.2	3.411	A
Fleet	24	6	158	909	0.026	24	41	0.0	0.0	4.065	A
Site	15	4	166	666	0.023	15	15	0.0	0.0	5.530	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	92	23	46	1055	0.087	92	172	0.1	0.1	3.735	A
Bar S	236	59	2	1251	0.188	235	136	0.2	0.2	3.544	A
Fleet	29	7	189	894	0.032	29	49	0.0	0.0	4.160	A
Site	18	4	199	654	0.028	18	18	0.0	0.0	5.662	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	56	1048	0.107	112	210	0.1	0.1	3.846	A
Bar S	288	72	2	1251	0.231	288	166	0.2	0.3	3.740	A
Fleet	35	9	231	873	0.040	35	59	0.0	0.0	4.296	A
Site	22	6	244	637	0.035	22	22	0.0	0.0	5.853	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	56	1048	0.107	112	210	0.1	0.1	3.846	A
Bar S	288	72	2	1251	0.231	288	166	0.3	0.3	3.740	A
Fleet	35	9	231	873	0.040	35	59	0.0	0.0	4.297	A
Site	22	6	244	637	0.035	22	22	0.0	0.0	5.854	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	92	23	46	1055	0.087	92	172	0.1	0.1	3.736	A
Bar S	236	59	2	1251	0.188	236	136	0.3	0.2	3.546	A
Fleet	29	7	189	894	0.032	29	49	0.0	0.0	4.163	A
Site	18	4	200	654	0.028	18	18	0.0	0.0	5.666	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	77	19	38	1060	0.072	77	144	0.1	0.1	3.659	A
Bar S	197	49	2	1251	0.158	197	114	0.2	0.2	3.418	A
Fleet	24	6	158	909	0.027	24	41	0.0	0.0	4.067	A
Site	15	4	167	666	0.023	15	15	0.0	0.0	5.535	A

2024 + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	180	100.000
Bar S		ONE HOUR	✓	223	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	176	3	0
	Bar S	137	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	24	67	0
	Bar S	28	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.16	3.44	0.2	A	165	248
Bar S	0.18	3.27	0.2	A	205	307
Fleet	0.09	4.32	0.1	A	65	98
Site	0.04	5.86	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	136	34	69	1271	0.107	135	106	0.0	0.1	3.167	A
Bar S	168	42	3	1348	0.125	167	201	0.0	0.1	3.046	A
Fleet	53	13	116	937	0.057	53	55	0.0	0.1	4.070	A
Site	17	4	158	667	0.025	16	11	0.0	0.0	5.532	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	162	40	83	1260	0.128	162	127	0.1	0.1	3.276	A
Bar S	200	50	4	1348	0.149	200	241	0.1	0.2	3.136	A
Fleet	64	16	138	926	0.069	64	66	0.1	0.1	4.174	A
Site	20	5	190	655	0.030	20	13	0.0	0.0	5.665	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	198	50	101	1245	0.159	198	155	0.1	0.2	3.436	A
Bar S	246	61	4	1347	0.182	245	295	0.2	0.2	3.266	A
Fleet	78	20	169	911	0.086	78	80	0.1	0.1	4.323	A
Site	24	6	232	639	0.038	24	15	0.0	0.0	5.857	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	198	50	101	1245	0.159	198	155	0.2	0.2	3.436	A
Bar S	246	61	4	1347	0.182	246	295	0.2	0.2	3.266	A
Fleet	78	20	170	911	0.086	78	80	0.1	0.1	4.323	A
Site	24	6	232	639	0.038	24	15	0.0	0.0	5.857	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	162	40	83	1260	0.128	162	127	0.2	0.1	3.278	A
Bar S	200	50	4	1348	0.149	201	241	0.2	0.2	3.140	A
Fleet	64	16	139	926	0.069	64	66	0.1	0.1	4.175	A
Site	20	5	190	655	0.030	20	13	0.0	0.0	5.669	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	136	34	69	1271	0.107	136	106	0.1	0.1	3.173	A
Bar S	168	42	3	1348	0.125	168	202	0.2	0.1	3.052	A
Fleet	53	13	116	937	0.057	54	55	0.1	0.1	4.073	A
Site	17	4	159	667	0.025	17	11	0.0	0.0	5.535	A

2024 + K3 Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	118	100.000
Bar S		ONE HOUR	✓	290	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	116	2	0
	Bar S	218	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	57	100	0
	Bar S	32	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.09	0.1	A	108	162
Bar S	0.26	3.94	0.3	A	266	399
Fleet	0.04	4.39	0.0	A	29	44
Site	0.04	5.99	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	88	164	0.0	0.1	3.855	A
Bar S	218	55	1	1233	0.177	217	125	0.0	0.2	3.541	A
Fleet	24	6	178	897	0.027	24	40	0.0	0.0	4.122	A
Site	15	4	187	656	0.023	15	15	0.0	0.0	5.611	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.953	A
Bar S	261	65	2	1233	0.212	260	150	0.2	0.3	3.703	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.232	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.765	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.941	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.390	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.988	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.942	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.391	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.989	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.956	A
Bar S	261	65	2	1233	0.212	261	150	0.3	0.3	3.705	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.235	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.769	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	89	165	0.1	0.1	3.860	A
Bar S	218	55	2	1233	0.177	219	126	0.3	0.2	3.551	A
Fleet	24	6	179	897	0.027	24	41	0.0	0.0	4.126	A
Site	15	4	188	656	0.023	15	15	0.0	0.0	5.617	A

2024 + K3 Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	207	100.000
Bar S		ONE HOUR	✓	238	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	203	3	0
	Bar S	152	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	28	67	0
	Bar S	35	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.67	0.2	A	190	285
Bar S	0.20	3.46	0.3	A	218	328
Fleet	0.09	4.39	0.1	A	65	98
Site	0.04	5.95	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	155	117	0.0	0.1	3.338	A
Bar S	179	45	3	1303	0.138	179	221	0.0	0.2	3.201	A
Fleet	53	13	127	929	0.058	53	55	0.0	0.1	4.108	A
Site	17	4	169	661	0.025	16	11	0.0	0.0	5.587	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.1	0.2	3.472	A
Bar S	214	53	4	1302	0.164	214	265	0.2	0.2	3.307	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.222	A
Site	20	5	203	648	0.031	20	13	0.0	0.0	5.733	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	324	0.2	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	630	0.038	24	15	0.0	0.0	5.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	325	0.3	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	629	0.038	24	15	0.0	0.0	5.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.2	0.2	3.477	A
Bar S	214	53	4	1302	0.164	214	266	0.3	0.2	3.308	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.226	A
Site	20	5	203	647	0.031	20	13	0.0	0.0	5.738	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	156	118	0.2	0.1	3.343	A
Bar S	179	45	3	1303	0.138	179	222	0.2	0.2	3.206	A
Fleet	53	13	127	929	0.058	54	55	0.1	0.1	4.112	A
Site	17	4	170	661	0.025	17	11	0.0	0.0	5.590	A

2024 + K3 and WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	128	100.000
Bar S		ONE HOUR	✓	300	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	126	2	0
	Bar S	228	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	61	100	0
	Bar S	35	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.26	0.2	A	117	176
Bar S	0.27	4.07	0.4	A	275	413
Fleet	0.04	4.43	0.0	A	29	44
Site	0.04	6.05	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	172	0.0	0.1	3.992	A
Bar S	226	56	1	1215	0.186	225	133	0.0	0.2	3.631	A
Fleet	24	6	186	892	0.027	24	40	0.0	0.0	4.149	A
Site	15	4	195	652	0.023	15	15	0.0	0.0	5.649	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.1	0.1	4.103	A
Bar S	270	67	2	1215	0.222	269	159	0.2	0.3	3.806	A
Fleet	29	7	223	873	0.033	29	49	0.0	0.0	4.265	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.812	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.1	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.3	0.4	4.066	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.434	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.051	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.2	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.4	0.4	4.069	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.435	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.052	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.2	0.1	4.105	A
Bar S	270	67	2	1215	0.222	270	159	0.4	0.3	3.812	A
Fleet	29	7	223	872	0.033	29	49	0.0	0.0	4.268	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	173	0.1	0.1	3.999	A
Bar S	226	56	2	1215	0.186	226	133	0.3	0.2	3.641	A
Fleet	24	6	187	891	0.027	24	41	0.0	0.0	4.153	A
Site	15	4	196	652	0.023	15	15	0.0	0.0	5.653	A

2024 + K3 and WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	228	100.000
Bar S		ONE HOUR	✓	248	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	224	3	0
	Bar S	162	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	30	67	0
	Bar S	40	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.83	0.3	A	209	314
Bar S	0.22	3.61	0.3	A	228	341
Fleet	0.09	4.44	0.1	A	65	98
Site	0.04	6.01	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1215	0.141	171	125	0.0	0.2	3.447	A
Bar S	187	47	3	1270	0.147	186	237	0.0	0.2	3.318	A
Fleet	53	13	134	923	0.058	53	55	0.0	0.1	4.137	A
Site	17	4	177	656	0.025	16	11	0.0	0.0	5.627	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.2	0.2	3.601	A
Bar S	223	56	4	1270	0.176	223	284	0.2	0.2	3.437	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.258	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.784	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.2	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.2	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.434	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.013	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.3	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.3	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.435	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.014	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.3	0.2	3.603	A
Bar S	223	56	4	1270	0.176	223	284	0.3	0.2	3.442	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.262	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.788	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1214	0.141	172	125	0.2	0.2	3.455	A
Bar S	187	47	3	1270	0.147	187	238	0.2	0.2	3.322	A
Fleet	53	13	135	923	0.058	54	55	0.1	0.1	4.140	A
Site	17	4	178	656	0.025	17	11	0.0	0.0	5.630	A

2024 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	118	100.000
Bar S		ONE HOUR	✓	290	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	116	2	0
	Bar S	218	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Bar E	Bar S	Fleet	Site
Bar E	0	57	100	0
Bar S	32	0	50	100
Fleet	0	55	0	0
Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.09	0.1	A	108	162
Bar S	0.26	3.94	0.3	A	266	399
Fleet	0.04	4.39	0.0	A	29	44
Site	0.04	5.99	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	88	164	0.0	0.1	3.855	A
Bar S	218	55	1	1233	0.177	217	125	0.0	0.2	3.541	A
Fleet	24	6	178	897	0.027	24	40	0.0	0.0	4.122	A
Site	15	4	187	656	0.023	15	15	0.0	0.0	5.611	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.953	A
Bar S	261	65	2	1233	0.212	260	150	0.2	0.3	3.703	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.232	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.765	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.941	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.390	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.988	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.942	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.391	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.989	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.956	A
Bar S	261	65	2	1233	0.212	261	150	0.3	0.3	3.705	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.235	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.769	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	89	165	0.1	0.1	3.860	A
Bar S	218	55	2	1233	0.177	219	126	0.3	0.2	3.551	A
Fleet	24	6	179	897	0.027	24	41	0.0	0.0	4.126	A
Site	15	4	188	656	0.023	15	15	0.0	0.0	5.617	A

2024 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	207	100.000
Bar S		ONE HOUR	✓	238	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	203	3	0
	Bar S	152	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Bar E	Bar S	Fleet	Site
Bar E	0	28	67	0
Bar S	35	0	14	100
Fleet	33	53	0	0
Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.67	0.2	A	190	285
Bar S	0.20	3.46	0.3	A	218	328
Fleet	0.09	4.39	0.1	A	65	98
Site	0.04	5.95	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	155	117	0.0	0.1	3.338	A
Bar S	179	45	3	1303	0.138	179	221	0.0	0.2	3.201	A
Fleet	53	13	127	929	0.058	53	55	0.0	0.1	4.108	A
Site	17	4	169	661	0.025	16	11	0.0	0.0	5.587	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.1	0.2	3.472	A
Bar S	214	53	4	1302	0.164	214	265	0.2	0.2	3.307	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.222	A
Site	20	5	203	648	0.031	20	13	0.0	0.0	5.733	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	324	0.2	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	630	0.038	24	15	0.0	0.0	5.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	325	0.3	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	629	0.038	24	15	0.0	0.0	5.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.2	0.2	3.477	A
Bar S	214	53	4	1302	0.164	214	266	0.3	0.2	3.308	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.226	A
Site	20	5	203	647	0.031	20	13	0.0	0.0	5.738	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	156	118	0.2	0.1	3.343	A
Bar S	179	45	3	1303	0.138	179	222	0.2	0.2	3.206	A
Fleet	53	13	127	929	0.058	54	55	0.1	0.1	4.112	A
Site	17	4	170	661	0.025	17	11	0.0	0.0	5.590	A

2024 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	128	100.000
Bar S		ONE HOUR	✓	300	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	126	2	0
	Bar S	228	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Bar E	Bar S	Fleet	Site
Bar E	0	61	100	0
Bar S	35	0	50	100
Fleet	0	55	0	0
Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.26	0.2	A	117	176
Bar S	0.27	4.07	0.4	A	275	413
Fleet	0.04	4.43	0.0	A	29	44
Site	0.04	6.05	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	172	0.0	0.1	3.992	A
Bar S	226	56	1	1215	0.186	225	133	0.0	0.2	3.631	A
Fleet	24	6	186	892	0.027	24	40	0.0	0.0	4.149	A
Site	15	4	195	652	0.023	15	15	0.0	0.0	5.649	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.1	0.1	4.103	A
Bar S	270	67	2	1215	0.222	269	159	0.2	0.3	3.806	A
Fleet	29	7	223	873	0.033	29	49	0.0	0.0	4.265	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.812	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.1	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.3	0.4	4.066	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.434	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.051	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.2	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.4	0.4	4.069	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.435	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.052	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.2	0.1	4.105	A
Bar S	270	67	2	1215	0.222	270	159	0.4	0.3	3.812	A
Fleet	29	7	223	872	0.033	29	49	0.0	0.0	4.268	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	173	0.1	0.1	3.999	A
Bar S	226	56	2	1215	0.186	226	133	0.3	0.2	3.641	A
Fleet	24	6	187	891	0.027	24	41	0.0	0.0	4.153	A
Site	15	4	196	652	0.023	15	15	0.0	0.0	5.653	A

2024 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	227	100.000
Bar S		ONE HOUR	✓	248	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	224	3	0
	Bar S	162	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Bar E	Bar S	Fleet	Site
Bar E	0	30	67	0
Bar S	40	0	14	100
Fleet	33	53	0	0
Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.83	0.3	A	208	312
Bar S	0.22	3.61	0.3	A	228	341
Fleet	0.09	4.43	0.1	A	65	98
Site	0.04	6.01	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	171	43	69	1213	0.141	170	124	0.0	0.2	3.449	A
Bar S	187	47	2	1271	0.147	186	237	0.0	0.2	3.317	A
Fleet	53	13	134	923	0.058	53	55	0.0	0.1	4.135	A
Site	17	4	176	656	0.025	16	11	0.0	0.0	5.625	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	204	51	83	1203	0.170	204	148	0.2	0.2	3.602	A
Bar S	223	56	3	1270	0.176	223	284	0.2	0.2	3.436	A
Fleet	64	16	160	909	0.070	64	66	0.1	0.1	4.257	A
Site	20	5	211	642	0.031	20	13	0.0	0.0	5.782	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	250	62	101	1189	0.210	250	182	0.2	0.3	3.832	A
Bar S	273	68	3	1270	0.215	273	348	0.2	0.3	3.610	A
Fleet	78	20	196	890	0.088	78	80	0.1	0.1	4.432	A
Site	24	6	258	623	0.039	24	15	0.0	0.0	6.010	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	250	62	101	1189	0.210	250	182	0.3	0.3	3.832	A
Bar S	273	68	3	1270	0.215	273	348	0.3	0.3	3.610	A
Fleet	78	20	196	890	0.088	78	80	0.1	0.1	4.433	A
Site	24	6	259	623	0.039	24	15	0.0	0.0	6.011	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	204	51	83	1203	0.170	204	148	0.3	0.2	3.607	A
Bar S	223	56	3	1270	0.176	223	284	0.3	0.2	3.438	A
Fleet	64	16	160	909	0.070	64	66	0.1	0.1	4.260	A
Site	20	5	211	642	0.031	20	13	0.0	0.0	5.784	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	171	43	69	1213	0.141	171	124	0.2	0.2	3.456	A
Bar S	187	47	2	1271	0.147	187	238	0.2	0.2	3.321	A
Fleet	53	13	134	923	0.058	54	55	0.1	0.1	4.139	A
Site	17	4	177	656	0.025	17	11	0.0	0.0	5.630	A

2031, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	102	100.000
Bar S		ONE HOUR	✓	262	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	100	2	0
	Bar S	190	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	51	100	0
	Bar S	28	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.11	3.85	0.1	A	94	140
Bar S	0.23	3.74	0.3	A	240	361
Fleet	0.04	4.30	0.0	A	29	44
Site	0.03	5.85	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	77	19	38	1061	0.072	76	143	0.0	0.1	3.658	A
Bar S	197	49	1	1251	0.158	197	113	0.0	0.2	3.411	A
Fleet	24	6	158	909	0.026	24	41	0.0	0.0	4.065	A
Site	15	4	166	666	0.023	15	15	0.0	0.0	5.530	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	92	23	46	1055	0.087	92	172	0.1	0.1	3.735	A
Bar S	236	59	2	1251	0.188	235	136	0.2	0.2	3.544	A
Fleet	29	7	189	894	0.032	29	49	0.0	0.0	4.160	A
Site	18	4	199	654	0.028	18	18	0.0	0.0	5.662	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	56	1048	0.107	112	210	0.1	0.1	3.846	A
Bar S	288	72	2	1251	0.231	288	166	0.2	0.3	3.740	A
Fleet	35	9	231	873	0.040	35	59	0.0	0.0	4.296	A
Site	22	6	244	637	0.035	22	22	0.0	0.0	5.853	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	56	1048	0.107	112	210	0.1	0.1	3.846	A
Bar S	288	72	2	1251	0.231	288	166	0.3	0.3	3.740	A
Fleet	35	9	231	873	0.040	35	59	0.0	0.0	4.297	A
Site	22	6	244	637	0.035	22	22	0.0	0.0	5.854	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	92	23	46	1055	0.087	92	172	0.1	0.1	3.736	A
Bar S	236	59	2	1251	0.188	236	136	0.3	0.2	3.546	A
Fleet	29	7	189	894	0.032	29	49	0.0	0.0	4.163	A
Site	18	4	200	654	0.028	18	18	0.0	0.0	5.666	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	77	19	38	1060	0.072	77	144	0.1	0.1	3.659	A
Bar S	197	49	2	1251	0.158	197	114	0.2	0.2	3.418	A
Fleet	24	6	158	909	0.027	24	41	0.0	0.0	4.067	A
Site	15	4	167	666	0.023	15	15	0.0	0.0	5.535	A

2031, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	180	100.000
Bar S		ONE HOUR	✓	223	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	176	3	0
	Bar S	137	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	24	67	0
	Bar S	28	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.16	3.44	0.2	A	165	248
Bar S	0.18	3.27	0.2	A	205	307
Fleet	0.09	4.32	0.1	A	65	98
Site	0.04	5.86	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	136	34	69	1271	0.107	135	106	0.0	0.1	3.167	A
Bar S	168	42	3	1348	0.125	167	201	0.0	0.1	3.046	A
Fleet	53	13	116	937	0.057	53	55	0.0	0.1	4.070	A
Site	17	4	158	667	0.025	16	11	0.0	0.0	5.532	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	162	40	83	1260	0.128	162	127	0.1	0.1	3.276	A
Bar S	200	50	4	1348	0.149	200	241	0.1	0.2	3.136	A
Fleet	64	16	138	926	0.069	64	66	0.1	0.1	4.174	A
Site	20	5	190	655	0.030	20	13	0.0	0.0	5.665	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	198	50	101	1245	0.159	198	155	0.1	0.2	3.436	A
Bar S	246	61	4	1347	0.182	245	295	0.2	0.2	3.266	A
Fleet	78	20	169	911	0.086	78	80	0.1	0.1	4.323	A
Site	24	6	232	639	0.038	24	15	0.0	0.0	5.857	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	198	50	101	1245	0.159	198	155	0.2	0.2	3.436	A
Bar S	246	61	4	1347	0.182	246	295	0.2	0.2	3.266	A
Fleet	78	20	170	911	0.086	78	80	0.1	0.1	4.323	A
Site	24	6	232	639	0.038	24	15	0.0	0.0	5.857	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	162	40	83	1260	0.128	162	127	0.2	0.1	3.278	A
Bar S	200	50	4	1348	0.149	201	241	0.2	0.2	3.140	A
Fleet	64	16	139	926	0.069	64	66	0.1	0.1	4.175	A
Site	20	5	190	655	0.030	20	13	0.0	0.0	5.669	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	136	34	69	1271	0.107	136	106	0.1	0.1	3.173	A
Bar S	168	42	3	1348	0.125	168	202	0.2	0.1	3.052	A
Fleet	53	13	116	937	0.057	54	55	0.1	0.1	4.073	A
Site	17	4	159	667	0.025	17	11	0.0	0.0	5.535	A

2031 + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	102	100.000
Bar S		ONE HOUR	✓	262	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	100	2	0
	Bar S	190	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	51	100	0
	Bar S	28	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.11	3.85	0.1	A	94	140
Bar S	0.23	3.74	0.3	A	240	361
Fleet	0.04	4.30	0.0	A	29	44
Site	0.03	5.85	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	77	19	38	1061	0.072	76	143	0.0	0.1	3.658	A
Bar S	197	49	1	1251	0.158	197	113	0.0	0.2	3.411	A
Fleet	24	6	158	909	0.026	24	41	0.0	0.0	4.065	A
Site	15	4	166	666	0.023	15	15	0.0	0.0	5.530	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	92	23	46	1055	0.087	92	172	0.1	0.1	3.735	A
Bar S	236	59	2	1251	0.188	235	136	0.2	0.2	3.544	A
Fleet	29	7	189	894	0.032	29	49	0.0	0.0	4.160	A
Site	18	4	199	654	0.028	18	18	0.0	0.0	5.662	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	56	1048	0.107	112	210	0.1	0.1	3.846	A
Bar S	288	72	2	1251	0.231	288	166	0.2	0.3	3.740	A
Fleet	35	9	231	873	0.040	35	59	0.0	0.0	4.296	A
Site	22	6	244	637	0.035	22	22	0.0	0.0	5.853	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	56	1048	0.107	112	210	0.1	0.1	3.846	A
Bar S	288	72	2	1251	0.231	288	166	0.3	0.3	3.740	A
Fleet	35	9	231	873	0.040	35	59	0.0	0.0	4.297	A
Site	22	6	244	637	0.035	22	22	0.0	0.0	5.854	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	92	23	46	1055	0.087	92	172	0.1	0.1	3.736	A
Bar S	236	59	2	1251	0.188	236	136	0.3	0.2	3.546	A
Fleet	29	7	189	894	0.032	29	49	0.0	0.0	4.163	A
Site	18	4	200	654	0.028	18	18	0.0	0.0	5.666	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	77	19	38	1060	0.072	77	144	0.1	0.1	3.659	A
Bar S	197	49	2	1251	0.158	197	114	0.2	0.2	3.418	A
Fleet	24	6	158	909	0.027	24	41	0.0	0.0	4.067	A
Site	15	4	167	666	0.023	15	15	0.0	0.0	5.535	A

2031 + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.67	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	180	100.000
Bar S		ONE HOUR	✓	223	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

	From	To			
		Bar E	Bar S	Fleet	Site
	Bar E	1	176	3	0
	Bar S	137	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

	From	To			
		Bar E	Bar S	Fleet	Site
	Bar E	0	24	67	0
	Bar S	28	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.16	3.44	0.2	A	165	248
Bar S	0.18	3.27	0.2	A	205	307
Fleet	0.09	4.32	0.1	A	65	98
Site	0.04	5.86	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	136	34	69	1271	0.107	135	106	0.0	0.1	3.167	A
Bar S	168	42	3	1348	0.125	167	201	0.0	0.1	3.046	A
Fleet	53	13	116	937	0.057	53	55	0.0	0.1	4.070	A
Site	17	4	158	667	0.025	16	11	0.0	0.0	5.532	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	162	40	83	1260	0.128	162	127	0.1	0.1	3.276	A
Bar S	200	50	4	1348	0.149	200	241	0.1	0.2	3.136	A
Fleet	64	16	138	926	0.069	64	66	0.1	0.1	4.174	A
Site	20	5	190	655	0.030	20	13	0.0	0.0	5.665	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	198	50	101	1245	0.159	198	155	0.1	0.2	3.436	A
Bar S	246	61	4	1347	0.182	245	295	0.2	0.2	3.266	A
Fleet	78	20	169	911	0.086	78	80	0.1	0.1	4.323	A
Site	24	6	232	639	0.038	24	15	0.0	0.0	5.857	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	198	50	101	1245	0.159	198	155	0.2	0.2	3.436	A
Bar S	246	61	4	1347	0.182	246	295	0.2	0.2	3.266	A
Fleet	78	20	170	911	0.086	78	80	0.1	0.1	4.323	A
Site	24	6	232	639	0.038	24	15	0.0	0.0	5.857	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	162	40	83	1260	0.128	162	127	0.2	0.1	3.278	A
Bar S	200	50	4	1348	0.149	201	241	0.2	0.2	3.140	A
Fleet	64	16	139	926	0.069	64	66	0.1	0.1	4.175	A
Site	20	5	190	655	0.030	20	13	0.0	0.0	5.669	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	136	34	69	1271	0.107	136	106	0.1	0.1	3.173	A
Bar S	168	42	3	1348	0.125	168	202	0.2	0.1	3.052	A
Fleet	53	13	116	937	0.057	54	55	0.1	0.1	4.073	A
Site	17	4	159	667	0.025	17	11	0.0	0.0	5.535	A

2031 + K3 Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	118	100.000
Bar S		ONE HOUR	✓	290	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	116	2	0
	Bar S	218	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	57	100	0
	Bar S	32	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.09	0.1	A	108	162
Bar S	0.26	3.94	0.3	A	266	399
Fleet	0.04	4.39	0.0	A	29	44
Site	0.04	5.99	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	88	164	0.0	0.1	3.855	A
Bar S	218	55	1	1233	0.177	217	125	0.0	0.2	3.541	A
Fleet	24	6	178	897	0.027	24	40	0.0	0.0	4.122	A
Site	15	4	187	656	0.023	15	15	0.0	0.0	5.611	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.953	A
Bar S	261	65	2	1233	0.212	260	150	0.2	0.3	3.703	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.232	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.765	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.941	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.390	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.988	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.942	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.391	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.989	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.956	A
Bar S	261	65	2	1233	0.212	261	150	0.3	0.3	3.705	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.235	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.769	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	89	165	0.1	0.1	3.860	A
Bar S	218	55	2	1233	0.177	219	126	0.3	0.2	3.551	A
Fleet	24	6	179	897	0.027	24	41	0.0	0.0	4.126	A
Site	15	4	188	656	0.023	15	15	0.0	0.0	5.617	A

2031 + K3 Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	207	100.000
Bar S		ONE HOUR	✓	238	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	203	3	0
	Bar S	152	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	28	67	0
	Bar S	35	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.67	0.2	A	190	285
Bar S	0.20	3.46	0.3	A	218	328
Fleet	0.09	4.39	0.1	A	65	98
Site	0.04	5.95	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	155	117	0.0	0.1	3.338	A
Bar S	179	45	3	1303	0.138	179	221	0.0	0.2	3.201	A
Fleet	53	13	127	929	0.058	53	55	0.0	0.1	4.108	A
Site	17	4	169	661	0.025	16	11	0.0	0.0	5.587	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.1	0.2	3.472	A
Bar S	214	53	4	1302	0.164	214	265	0.2	0.2	3.307	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.222	A
Site	20	5	203	648	0.031	20	13	0.0	0.0	5.733	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	324	0.2	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	630	0.038	24	15	0.0	0.0	5.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	325	0.3	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	629	0.038	24	15	0.0	0.0	5.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.2	0.2	3.477	A
Bar S	214	53	4	1302	0.164	214	266	0.3	0.2	3.308	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.226	A
Site	20	5	203	647	0.031	20	13	0.0	0.0	5.738	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	156	118	0.2	0.1	3.343	A
Bar S	179	45	3	1303	0.138	179	222	0.2	0.2	3.206	A
Fleet	53	13	127	929	0.058	54	55	0.1	0.1	4.112	A
Site	17	4	170	661	0.025	17	11	0.0	0.0	5.590	A

2031 + K3 and WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	128	100.000
Bar S		ONE HOUR	✓	300	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	126	2	0
	Bar S	228	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	61	100	0
	Bar S	35	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.26	0.2	A	117	176
Bar S	0.27	4.07	0.4	A	275	413
Fleet	0.04	4.43	0.0	A	29	44
Site	0.04	6.05	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	172	0.0	0.1	3.992	A
Bar S	226	56	1	1215	0.186	225	133	0.0	0.2	3.631	A
Fleet	24	6	186	892	0.027	24	40	0.0	0.0	4.149	A
Site	15	4	195	652	0.023	15	15	0.0	0.0	5.649	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.1	0.1	4.103	A
Bar S	270	67	2	1215	0.222	269	159	0.2	0.3	3.806	A
Fleet	29	7	223	873	0.033	29	49	0.0	0.0	4.265	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.812	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.1	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.3	0.4	4.066	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.434	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.051	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.2	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.4	0.4	4.069	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.435	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.052	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.2	0.1	4.105	A
Bar S	270	67	2	1215	0.222	270	159	0.4	0.3	3.812	A
Fleet	29	7	223	872	0.033	29	49	0.0	0.0	4.268	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	173	0.1	0.1	3.999	A
Bar S	226	56	2	1215	0.186	226	133	0.3	0.2	3.641	A
Fleet	24	6	187	891	0.027	24	41	0.0	0.0	4.153	A
Site	15	4	196	652	0.023	15	15	0.0	0.0	5.653	A

2031 + K3 and WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	228	100.000
Bar S		ONE HOUR	✓	248	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	224	3	0
	Bar S	162	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	30	67	0
	Bar S	40	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.83	0.3	A	209	314
Bar S	0.22	3.61	0.3	A	228	341
Fleet	0.09	4.44	0.1	A	65	98
Site	0.04	6.01	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1215	0.141	171	125	0.0	0.2	3.447	A
Bar S	187	47	3	1270	0.147	186	237	0.0	0.2	3.318	A
Fleet	53	13	134	923	0.058	53	55	0.0	0.1	4.137	A
Site	17	4	177	656	0.025	16	11	0.0	0.0	5.627	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.2	0.2	3.601	A
Bar S	223	56	4	1270	0.176	223	284	0.2	0.2	3.437	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.258	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.784	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.2	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.2	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.434	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.013	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.3	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.3	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.435	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.014	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.3	0.2	3.603	A
Bar S	223	56	4	1270	0.176	223	284	0.3	0.2	3.442	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.262	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.788	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1214	0.141	172	125	0.2	0.2	3.455	A
Bar S	187	47	3	1270	0.147	187	238	0.2	0.2	3.322	A
Fleet	53	13	135	923	0.058	54	55	0.1	0.1	4.140	A
Site	17	4	178	656	0.025	17	11	0.0	0.0	5.630	A

2031 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	118	100.000
Bar S		ONE HOUR	✓	290	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	116	2	0
	Bar S	218	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To				
	Bar E	Bar S	Fleet	Site	
Bar E	0	57	100	0	
Bar S	32	0	50	100	
Fleet	0	55	0	0	
Site	0	100	0	0	

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.09	0.1	A	108	162
Bar S	0.26	3.94	0.3	A	266	399
Fleet	0.04	4.39	0.0	A	29	44
Site	0.04	5.99	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	88	164	0.0	0.1	3.855	A
Bar S	218	55	1	1233	0.177	217	125	0.0	0.2	3.541	A
Fleet	24	6	178	897	0.027	24	40	0.0	0.0	4.122	A
Site	15	4	187	656	0.023	15	15	0.0	0.0	5.611	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.953	A
Bar S	261	65	2	1233	0.212	260	150	0.2	0.3	3.703	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.232	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.765	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.941	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.390	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.988	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.942	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.391	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.989	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.956	A
Bar S	261	65	2	1233	0.212	261	150	0.3	0.3	3.705	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.235	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.769	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	89	165	0.1	0.1	3.860	A
Bar S	218	55	2	1233	0.177	219	126	0.3	0.2	3.551	A
Fleet	24	6	179	897	0.027	24	41	0.0	0.0	4.126	A
Site	15	4	188	656	0.023	15	15	0.0	0.0	5.617	A

2031 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	207	100.000
Bar S		ONE HOUR	✓	238	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	203	3	0
	Bar S	152	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Bar E	Bar S	Fleet	Site
Bar E	0	28	67	0
Bar S	35	0	14	100
Fleet	33	53	0	0
Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.67	0.2	A	190	285
Bar S	0.20	3.46	0.3	A	218	328
Fleet	0.09	4.39	0.1	A	65	98
Site	0.04	5.95	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	155	117	0.0	0.1	3.338	A
Bar S	179	45	3	1303	0.138	179	221	0.0	0.2	3.201	A
Fleet	53	13	127	929	0.058	53	55	0.0	0.1	4.108	A
Site	17	4	169	661	0.025	16	11	0.0	0.0	5.587	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.1	0.2	3.472	A
Bar S	214	53	4	1302	0.164	214	265	0.2	0.2	3.307	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.222	A
Site	20	5	203	648	0.031	20	13	0.0	0.0	5.733	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	324	0.2	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	630	0.038	24	15	0.0	0.0	5.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	325	0.3	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	629	0.038	24	15	0.0	0.0	5.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.2	0.2	3.477	A
Bar S	214	53	4	1302	0.164	214	266	0.3	0.2	3.308	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.226	A
Site	20	5	203	647	0.031	20	13	0.0	0.0	5.738	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	156	118	0.2	0.1	3.343	A
Bar S	179	45	3	1303	0.138	179	222	0.2	0.2	3.206	A
Fleet	53	13	127	929	0.058	54	55	0.1	0.1	4.112	A
Site	17	4	170	661	0.025	17	11	0.0	0.0	5.590	A

2031 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	128	100.000
Bar S		ONE HOUR	✓	300	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	126	2	0
	Bar S	228	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Bar E	Bar S	Fleet	Site
Bar E	0	61	100	0
Bar S	35	0	50	100
Fleet	0	55	0	0
Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.26	0.2	A	117	176
Bar S	0.27	4.07	0.4	A	275	413
Fleet	0.04	4.43	0.0	A	29	44
Site	0.04	6.05	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	172	0.0	0.1	3.992	A
Bar S	226	56	1	1215	0.186	225	133	0.0	0.2	3.631	A
Fleet	24	6	186	892	0.027	24	40	0.0	0.0	4.149	A
Site	15	4	195	652	0.023	15	15	0.0	0.0	5.649	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.1	0.1	4.103	A
Bar S	270	67	2	1215	0.222	269	159	0.2	0.3	3.806	A
Fleet	29	7	223	873	0.033	29	49	0.0	0.0	4.265	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.812	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.1	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.3	0.4	4.066	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.434	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.051	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.2	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.4	0.4	4.069	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.435	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.052	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.2	0.1	4.105	A
Bar S	270	67	2	1215	0.222	270	159	0.4	0.3	3.812	A
Fleet	29	7	223	872	0.033	29	49	0.0	0.0	4.268	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	173	0.1	0.1	3.999	A
Bar S	226	56	2	1215	0.186	226	133	0.3	0.2	3.641	A
Fleet	24	6	187	891	0.027	24	41	0.0	0.0	4.153	A
Site	15	4	196	652	0.023	15	15	0.0	0.0	5.653	A

2031 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	228	100.000
Bar S		ONE HOUR	✓	248	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	224	3	0
	Bar S	162	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Bar E	Bar S	Fleet	Site
Bar E	0	30	67	0
Bar S	40	0	14	100
Fleet	33	53	0	0
Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.83	0.3	A	209	314
Bar S	0.22	3.61	0.3	A	228	341
Fleet	0.09	4.44	0.1	A	65	98
Site	0.04	6.01	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1215	0.141	171	125	0.0	0.2	3.447	A
Bar S	187	47	3	1270	0.147	186	237	0.0	0.2	3.318	A
Fleet	53	13	134	923	0.058	53	55	0.0	0.1	4.137	A
Site	17	4	177	656	0.025	16	11	0.0	0.0	5.627	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.2	0.2	3.601	A
Bar S	223	56	4	1270	0.176	223	284	0.2	0.2	3.437	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.258	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.784	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.2	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.2	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.434	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.013	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.3	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.3	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.435	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.014	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.3	0.2	3.603	A
Bar S	223	56	4	1270	0.176	223	284	0.3	0.2	3.442	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.262	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.788	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1214	0.141	172	125	0.2	0.2	3.455	A
Bar S	187	47	3	1270	0.147	187	238	0.2	0.2	3.322	A
Fleet	53	13	135	923	0.058	54	55	0.1	0.1	4.140	A
Site	17	4	178	656	0.025	17	11	0.0	0.0	5.630	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Fleet End - Barge Way_Sensitivity.j9

Path: P:\JNY9290 - Kemsley K5\Transport\Arcady\WKN DCO\Fleet End - Barge Way

Report generation date: 18/03/2019 09:10:36

- »2017, AM
- »2017, PM
- »2024, AM
- »2024, PM
- »2024 + Cumulative Development, AM
- »2024 + Cumulative Development, PM
- »2024 + K3 Operational, AM
- »2024 + K3 Operational, PM
- »2024 + WKN Operational, AM
- »2024 + WKN Operational, PM
- »2024 + K3 and WKN Operational, AM
- »2024 + K3 and WKN Operational, PM
- »2024 + K3 Operational + Cumulative Development, AM
- »2024 + K3 Operational + Cumulative Development, PM
- »2024 + WKN Operational + Cumulative Development, AM
- »2024 + WKN Operational + Cumulative Development, PM
- »2024 + K3 and WKN Operational + Cumulative Development, AM
- »2024 + K3 and WKN Operational + Cumulative Development, PM
- »2031, AM
- »2031, PM
- »2031 + Cumulative Development, AM
- »2031 + Cumulative Development, PM
- »2031 + K3 Operational, AM
- »2031 + K3 Operational, PM
- »2031 + WKN Operational, AM
- »2031 + WKN Operational, PM
- »2031 + K3 and WKN Operational, AM
- »2031 + K3 and WKN Operational, PM
- »2031 + K3 Operational + Cumulative Development, AM
- »2031 + K3 Operational + Cumulative Development, PM
- »2031 + WKN Operational + Cumulative Development, AM
- »2031 + WKN Operational + Cumulative Development, PM
- »2031 + K3 and WKN Operational + Cumulative Development, AM
- »2031 + K3 and WKN Operational + Cumulative Development, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2017						
Arm Bar E	0.1	4.29	0.07	0.1	3.32	0.13
Arm Bar S	0.2	3.51	0.17	0.2	3.03	0.14
Arm Fleet	0.0	4.10	0.04	0.1	4.18	0.08

Arm Site	0.0	0.00	0.00	0.0	0.00	0.00
2024						
Arm Bar E	0.1	4.08	0.13	0.2	3.66	0.19
Arm Bar S	0.3	3.90	0.26	0.2	3.43	0.20
Arm Fleet	0.0	4.38	0.04	0.1	4.38	0.09
Arm Site	0.0	5.97	0.04	0.0	5.93	0.04
2024 + Cumulative Development						
Arm Bar E	0.1	4.08	0.13	0.2	3.66	0.19
Arm Bar S	0.3	3.90	0.26	0.2	3.43	0.20
Arm Fleet	0.0	4.38	0.04	0.1	4.38	0.09
Arm Site	0.0	5.97	0.04	0.0	5.93	0.04
2024 + K3 Operational						
Arm Bar E	0.1	4.09	0.13	0.2	3.67	0.19
Arm Bar S	0.3	3.94	0.26	0.3	3.46	0.20
Arm Fleet	0.0	4.39	0.04	0.1	4.39	0.09
Arm Site	0.0	5.99	0.04	0.0	5.95	0.04
2024 + WKN Operational						
Arm Bar E	0.2	4.22	0.14	0.3	3.79	0.21
Arm Bar S	0.4	4.03	0.27	0.3	3.56	0.21
Arm Fleet	0.0	4.42	0.04	0.1	4.42	0.09
Arm Site	0.0	6.04	0.04	0.0	6.00	0.04
2024 + K3 and WKN Operational						
Arm Bar E	0.2	4.26	0.14	0.3	3.83	0.21
Arm Bar S	0.4	4.07	0.27	0.3	3.61	0.22
Arm Fleet	0.0	4.43	0.04	0.1	4.44	0.09
Arm Site	0.0	6.05	0.04	0.0	6.01	0.04
2024 + K3 Operational + Cumulative Development						
Arm Bar E	0.1	4.09	0.13	0.2	3.67	0.19
Arm Bar S	0.3	3.94	0.26	0.3	3.46	0.20
Arm Fleet	0.0	4.39	0.04	0.1	4.39	0.09
Arm Site	0.0	5.99	0.04	0.0	5.95	0.04
2024 + WKN Operational + Cumulative Development						
Arm Bar E	0.2	4.22	0.14	0.3	3.79	0.21
Arm Bar S	0.4	4.03	0.27	0.3	3.56	0.21
Arm Fleet	0.0	4.42	0.04	0.1	4.42	0.09
Arm Site	0.0	6.04	0.04	0.0	5.99	0.04
2024 + K3 and WKN Operational + Cumulative Development						
Arm Bar E	0.2	4.26	0.14	0.3	3.83	0.21
Arm Bar S	0.4	4.07	0.27	0.3	3.61	0.22
Arm Fleet	0.0	4.43	0.04	0.1	4.43	0.09
Arm Site	0.0	6.05	0.04	0.0	6.01	0.04
2031						
Arm Bar E	0.1	4.08	0.13	0.2	3.66	0.19
Arm Bar S	0.3	3.90	0.26	0.2	3.43	0.20
Arm Fleet	0.0	4.38	0.04	0.1	4.38	0.09
Arm Site	0.0	5.97	0.04	0.0	5.93	0.04
2031 + Cumulative Development						
Arm Bar E	0.1	4.08	0.13	0.2	3.66	0.19
Arm Bar S	0.3	3.90	0.26	0.2	3.43	0.20
Arm Fleet	0.0	4.38	0.04	0.1	4.38	0.09
Arm Site	0.0	5.97	0.04	0.0	5.93	0.04
2031 + K3 Operational						
Arm Bar E	0.1	4.09	0.13	0.2	3.67	0.19
Arm Bar S	0.3	3.94	0.26	0.3	3.46	0.20
Arm Fleet	0.0	4.39	0.04	0.1	4.39	0.09
Arm Site	0.0	5.99	0.04	0.0	5.95	0.04
2031 + WKN Operational						
Arm Bar E	0.2	4.22	0.14	0.3	3.79	0.21
Arm Bar S	0.4	4.03	0.27	0.3	3.56	0.21
Arm Fleet						

	0.0	4.42	0.04	0.1	4.42	0.09
Arm Site	0.0	6.04	0.04	0.0	6.00	0.04
2031 + K3 and WKN Operational						
Arm Bar E	0.2	4.26	0.14	0.3	3.83	0.21
Arm Bar S	0.4	4.07	0.27	0.3	3.61	0.22
Arm Fleet	0.0	4.43	0.04	0.1	4.44	0.09
Arm Site	0.0	6.05	0.04	0.0	6.01	0.04
2031 + K3 Operational + Cumulative Development						
Arm Bar E	0.1	4.09	0.13	0.2	3.67	0.19
Arm Bar S	0.3	3.94	0.26	0.3	3.46	0.20
Arm Fleet	0.0	4.39	0.04	0.1	4.39	0.09
Arm Site	0.0	5.99	0.04	0.0	5.95	0.04
2031 + WKN Operational + Cumulative Development						
Arm Bar E	0.2	4.22	0.14	0.3	3.79	0.21
Arm Bar S	0.4	4.03	0.27	0.3	3.56	0.21
Arm Fleet	0.0	4.42	0.04	0.1	4.42	0.09
Arm Site	0.0	6.04	0.04	0.0	5.99	0.04
2031 + K3 and WKN Operational + Cumulative Development						
Arm Bar E	0.2	4.26	0.14	0.3	3.83	0.21
Arm Bar S	0.4	4.07	0.27	0.3	3.61	0.22
Arm Fleet	0.0	4.43	0.04	0.1	4.44	0.09
Arm Site	0.0	6.05	0.04	0.0	6.01	0.04

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/11/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\jack.clarke-williams
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024	PM	ONE	16:15	17:45	15	✓

			HOUR				
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D15	2024 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D16	2024 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D25	2031 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D26	2031 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D31	2031 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D32	2031 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.78	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
Bar E	untitled	
Bar S	untitled	
Fleet	untitled	
Site	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
Bar E	3.50	7.00	21.0	18.0	44.0	45.0	
Bar S	4.00	6.50	23.0	24.0	45.0	40.0	
Fleet	3.50	7.00	16.5	11.5	44.0	50.0	
Site	3.50	6.50	11.0	13.5	44.0	40.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
Bar E	0.604	1651
Bar S	0.625	1727
Fleet	0.563	1514
Site	0.566	1456

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓

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

✓	✓	HV Percentages	2.00
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Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	61	100.000
Bar S		ONE HOUR	✓	187	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	Bar E	Bar S	Fleet	Site	
From	Bar E	0	59	2	0
	Bar S	135	0	52	0
	Fleet	1	31	0	0
	Site	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	Bar E	Bar S	Fleet	Site	
From	Bar E	0	78	100	0
	Bar S	36	0	50	0
	Fleet	0	55	0	0
	Site	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.07	4.29	0.1	A	56	84
Bar S	0.17	3.51	0.2	A	172	257
Fleet	0.04	4.10	0.0	A	29	44
Site	0.00	0.00	0.0	A	0	0

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	46	11	23	912	0.050	46	102	0.0	0.1	4.155	A
Bar S	141	35	1	1233	0.114	140	67	0.0	0.1	3.292	A
Fleet	24	6	101	937	0.026	24	41	0.0	0.0	3.943	A
Site	0	0	125	1357	0.000	0	0	0.0	0.0	0.000	A

07:30 - 07:45

Arm	Total Demand	Junction Arrivals	Circulating flow	Capacity	RFC	Throughput	Throughput (exit side)	Start queue	End queue	Delay	LOS
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	(Veh/hr)	(Veh)	(Veh/hr)	(Veh/hr)		(Veh/hr)	(Veh/hr)	(Veh)	(Veh)	(s)	
Bar E	55	14	28	909	0.060	55	122	0.1	0.1	4.212	A
Bar S	168	42	2	1233	0.136	168	81	0.1	0.2	3.380	A
Fleet	29	7	121	927	0.031	29	49	0.0	0.0	4.008	A
Site	0	0	150	1338	0.000	0	0	0.0	0.0	0.000	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	67	17	34	906	0.074	67	150	0.1	0.1	4.290	A
Bar S	206	51	2	1232	0.167	206	99	0.2	0.2	3.505	A
Fleet	35	9	149	913	0.039	35	59	0.0	0.0	4.099	A
Site	0	0	184	1311	0.000	0	0	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	67	17	34	906	0.074	67	150	0.1	0.1	4.290	A
Bar S	206	51	2	1232	0.167	206	99	0.2	0.2	3.505	A
Fleet	35	9	149	913	0.039	35	59	0.0	0.0	4.100	A
Site	0	0	184	1311	0.000	0	0	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	55	14	28	909	0.060	55	122	0.1	0.1	4.214	A
Bar S	168	42	2	1233	0.136	168	81	0.2	0.2	3.384	A
Fleet	29	7	121	927	0.031	29	49	0.0	0.0	4.010	A
Site	0	0	150	1337	0.000	0	0	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	46	11	23	912	0.050	46	102	0.1	0.1	4.159	A
Bar S	141	35	2	1233	0.114	141	68	0.2	0.1	3.295	A
Fleet	24	6	102	937	0.026	24	41	0.0	0.0	3.946	A
Site	0	0	126	1357	0.000	0	0	0.0	0.0	0.000	A

2017, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.38	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	141	100.000
Bar S		ONE HOUR	✓	173	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	0	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	137	3	0
	Bar S	101	2	70	0
	Fleet	3	68	0	0
	Site	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	27	67	0
	Bar S	33	0	14	0
	Fleet	33	53	0	0
	Site	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	3.32	0.1	A	129	194
Bar S	0.14	3.03	0.2	A	159	238
Fleet	0.08	4.18	0.1	A	65	98
Site	0.00	0.00	0.0	A	0	0

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	52	1256	0.085	106	79	0.0	0.1	3.130	A
Bar S	130	33	3	1380	0.094	130	155	0.0	0.1	2.879	A
Fleet	53	13	78	957	0.056	53	55	0.0	0.1	3.984	A
Site	0	0	131	1352	0.000	0	0	0.0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	63	1249	0.102	127	94	0.1	0.1	3.208	A
Bar S	156	39	4	1380	0.113	155	186	0.1	0.1	2.940	A
Fleet	64	16	93	949	0.067	64	66	0.1	0.1	4.066	A
Site	0	0	157	1331	0.000	0	0	0.0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	155	39	77	1238	0.125	155	116	0.1	0.1	3.322	A
Bar S	190	48	4	1379	0.138	190	228	0.1	0.2	3.028	A
Fleet	78	20	114	939	0.083	78	80	0.1	0.1	4.182	A
Site	0	0	193	1303	0.000	0	0	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	155	39	77	1238	0.125	155	116	0.1	0.1	3.323	A
Bar S	190	48	4	1379	0.138	190	228	0.2	0.2	3.028	A
Fleet	78	20	115	939	0.083	78	80	0.1	0.1	4.182	A
Site	0	0	193	1303	0.000	0	0	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	127	32	63	1248	0.102	127	94	0.1	0.1	3.211	A

E											
Bar S	156	39	4	1380	0.113	156	186	0.2	0.1	2.940	A
Fleet	64	16	94	949	0.067	64	66	0.1	0.1	4.067	A
Site	0	0	157	1331	0.000	0	0	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	53	1256	0.085	106	79	0.1	0.1	3.131	A
Bar S	130	33	3	1380	0.094	130	156	0.1	0.1	2.882	A
Fleet	53	13	78	956	0.056	54	55	0.1	0.1	3.988	A
Site	0	0	132	1351	0.000	0	0	0.0	0.0	0.000	A

2024, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	115	100.000
Bar S		ONE HOUR	✓	287	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	113	2	0
	Bar S	215	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	57	100	0
	Bar S	31	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.08	0.1	A	106	158
Bar S	0.26	3.90	0.3	A	263	395
Fleet	0.04	4.38	0.0	A	29	44
Site	0.04	5.97	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	87	22	38	1022	0.085	86	162	0.0	0.1	3.846	A
Bar S	216	54	1	1239	0.174	215	123	0.0	0.2	3.513	A
Fleet	24	6	176	899	0.027	24	40	0.0	0.0	4.115	A
Site	15	4	185	658	0.023	15	15	0.0	0.0	5.600	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	103	26	46	1017	0.102	103	194	0.1	0.1	3.941	A
Bar S	258	65	2	1239	0.208	258	147	0.2	0.3	3.670	A
Fleet	29	7	211	881	0.033	29	49	0.0	0.0	4.222	A
Site	18	4	222	644	0.028	18	18	0.0	0.0	5.751	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	56	1010	0.125	126	238	0.1	0.1	4.076	A
Bar S	316	79	2	1238	0.255	316	180	0.3	0.3	3.902	A
Fleet	35	9	258	858	0.041	35	59	0.0	0.0	4.377	A
Site	22	6	272	625	0.035	22	22	0.0	0.0	5.969	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	56	1010	0.125	127	238	0.1	0.1	4.076	A
Bar S	316	79	2	1238	0.255	316	181	0.3	0.3	3.903	A
Fleet	35	9	259	857	0.041	35	59	0.0	0.0	4.378	A
Site	22	6	272	625	0.035	22	22	0.0	0.0	5.970	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	103	26	46	1016	0.102	103	194	0.1	0.1	3.943	A

E											
Bar S	258	65	2	1239	0.208	258	148	0.3	0.3	3.672	A
Fleet	29	7	212	881	0.033	29	49	0.0	0.0	4.225	A
Site	18	4	222	644	0.028	18	18	0.0	0.0	5.753	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	87	22	38	1021	0.085	87	163	0.1	0.1	3.851	A
Bar S	216	54	2	1239	0.174	216	124	0.3	0.2	3.520	A
Fleet	24	6	177	898	0.027	24	41	0.0	0.0	4.117	A
Site	15	4	186	657	0.023	15	15	0.0	0.0	5.604	A

2024, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	204	100.000
Bar S		ONE HOUR	✓	235	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	200	3	0
	Bar S	149	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	28	67	0
	Bar S	34	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.66	0.2	A	187	281
Bar S	0.20	3.43	0.2	A	216	323
Fleet	0.09	4.38	0.1	A	65	98
Site	0.04	5.93	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	154	38	69	1233	0.125	153	115	0.0	0.1	3.332	A
Bar S	177	44	3	1309	0.135	176	219	0.0	0.2	3.176	A
Fleet	53	13	125	931	0.057	53	55	0.0	0.1	4.101	A
Site	17	4	167	662	0.025	16	11	0.0	0.0	5.576	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	183	46	83	1222	0.150	183	137	0.1	0.2	3.464	A
Bar S	211	53	4	1309	0.161	211	262	0.2	0.2	3.279	A
Fleet	64	16	149	918	0.070	64	66	0.1	0.1	4.213	A
Site	20	5	200	649	0.030	20	13	0.0	0.0	5.721	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	225	56	101	1208	0.186	224	168	0.2	0.2	3.659	A
Bar S	259	65	4	1308	0.198	259	321	0.2	0.2	3.429	A
Fleet	78	20	183	901	0.087	78	80	0.1	0.1	4.375	A
Site	24	6	245	631	0.038	24	15	0.0	0.0	5.929	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	225	56	101	1208	0.186	225	168	0.2	0.2	3.659	A
Bar S	259	65	4	1308	0.198	259	321	0.2	0.2	3.429	A
Fleet	78	20	183	901	0.087	78	80	0.1	0.1	4.375	A
Site	24	6	246	631	0.038	24	15	0.0	0.0	5.930	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	183	46	83	1222	0.150	184	138	0.2	0.2	3.465	A

E											
Bar S	211	53	4	1309	0.161	211	263	0.2	0.2	3.280	A
Fleet	64	16	149	918	0.070	64	66	0.1	0.1	4.216	A
Site	20	5	201	649	0.030	20	13	0.0	0.0	5.722	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	154	38	69	1233	0.125	154	115	0.2	0.1	3.336	A
Bar S	177	44	3	1309	0.135	177	220	0.2	0.2	3.179	A
Fleet	53	13	125	930	0.057	54	55	0.1	0.1	4.106	A
Site	17	4	168	662	0.025	17	11	0.0	0.0	5.582	A

2024 + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	115	100.000
Bar S		ONE HOUR	✓	287	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	113	2	0
	Bar S	215	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	57	100	0
	Bar S	31	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.08	0.1	A	106	158
Bar S	0.26	3.90	0.3	A	263	395
Fleet	0.04	4.38	0.0	A	29	44
Site	0.04	5.97	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	87	22	38	1022	0.085	86	162	0.0	0.1	3.846	A
Bar S	216	54	1	1239	0.174	215	123	0.0	0.2	3.513	A
Fleet	24	6	176	899	0.027	24	40	0.0	0.0	4.115	A
Site	15	4	185	658	0.023	15	15	0.0	0.0	5.600	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	103	26	46	1017	0.102	103	194	0.1	0.1	3.941	A
Bar S	258	65	2	1239	0.208	258	147	0.2	0.3	3.670	A
Fleet	29	7	211	881	0.033	29	49	0.0	0.0	4.222	A
Site	18	4	222	644	0.028	18	18	0.0	0.0	5.751	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	56	1010	0.125	126	238	0.1	0.1	4.076	A
Bar S	316	79	2	1238	0.255	316	180	0.3	0.3	3.902	A
Fleet	35	9	258	858	0.041	35	59	0.0	0.0	4.377	A
Site	22	6	272	625	0.035	22	22	0.0	0.0	5.969	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	56	1010	0.125	127	238	0.1	0.1	4.076	A
Bar S	316	79	2	1238	0.255	316	181	0.3	0.3	3.903	A
Fleet	35	9	259	857	0.041	35	59	0.0	0.0	4.378	A
Site	22	6	272	625	0.035	22	22	0.0	0.0	5.970	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	103	26	46	1016	0.102	103	194	0.1	0.1	3.943	A

E											
Bar S	258	65	2	1239	0.208	258	148	0.3	0.3	3.672	A
Fleet	29	7	212	881	0.033	29	49	0.0	0.0	4.225	A
Site	18	4	222	644	0.028	18	18	0.0	0.0	5.753	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	87	22	38	1021	0.085	87	163	0.1	0.1	3.851	A
Bar S	216	54	2	1239	0.174	216	124	0.3	0.2	3.520	A
Fleet	24	6	177	898	0.027	24	41	0.0	0.0	4.117	A
Site	15	4	186	657	0.023	15	15	0.0	0.0	5.604	A

2024 + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	204	100.000
Bar S		ONE HOUR	✓	235	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	200	3	0
	Bar S	149	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	28	67	0
	Bar S	34	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.66	0.2	A	187	281
Bar S	0.20	3.43	0.2	A	216	323
Fleet	0.09	4.38	0.1	A	65	98
Site	0.04	5.93	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	154	38	69	1233	0.125	153	115	0.0	0.1	3.332	A
Bar S	177	44	3	1309	0.135	176	219	0.0	0.2	3.176	A
Fleet	53	13	125	931	0.057	53	55	0.0	0.1	4.101	A
Site	17	4	167	662	0.025	16	11	0.0	0.0	5.576	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	183	46	83	1222	0.150	183	137	0.1	0.2	3.464	A
Bar S	211	53	4	1309	0.161	211	262	0.2	0.2	3.279	A
Fleet	64	16	149	918	0.070	64	66	0.1	0.1	4.213	A
Site	20	5	200	649	0.030	20	13	0.0	0.0	5.721	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	225	56	101	1208	0.186	224	168	0.2	0.2	3.659	A
Bar S	259	65	4	1308	0.198	259	321	0.2	0.2	3.429	A
Fleet	78	20	183	901	0.087	78	80	0.1	0.1	4.375	A
Site	24	6	245	631	0.038	24	15	0.0	0.0	5.929	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	225	56	101	1208	0.186	225	168	0.2	0.2	3.659	A
Bar S	259	65	4	1308	0.198	259	321	0.2	0.2	3.429	A
Fleet	78	20	183	901	0.087	78	80	0.1	0.1	4.375	A
Site	24	6	246	631	0.038	24	15	0.0	0.0	5.930	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	183	46	83	1222	0.150	184	138	0.2	0.2	3.465	A

E											
Bar S	211	53	4	1309	0.161	211	263	0.2	0.2	3.280	A
Fleet	64	16	149	918	0.070	64	66	0.1	0.1	4.216	A
Site	20	5	201	649	0.030	20	13	0.0	0.0	5.722	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	154	38	69	1233	0.125	154	115	0.2	0.1	3.336	A
Bar S	177	44	3	1309	0.135	177	220	0.2	0.2	3.179	A
Fleet	53	13	125	930	0.057	54	55	0.1	0.1	4.106	A
Site	17	4	168	662	0.025	17	11	0.0	0.0	5.582	A

2024 + K3 Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	118	100.000
Bar S		ONE HOUR	✓	290	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	116	2	0
	Bar S	218	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	57	100	0
	Bar S	32	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.09	0.1	A	108	162
Bar S	0.26	3.94	0.3	A	266	399
Fleet	0.04	4.39	0.0	A	29	44
Site	0.04	5.99	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	88	164	0.0	0.1	3.855	A
Bar S	218	55	1	1233	0.177	217	125	0.0	0.2	3.541	A
Fleet	24	6	178	897	0.027	24	40	0.0	0.0	4.122	A
Site	15	4	187	656	0.023	15	15	0.0	0.0	5.611	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.953	A
Bar S	261	65	2	1233	0.212	260	150	0.2	0.3	3.703	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.232	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.765	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.941	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.390	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.988	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.942	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.391	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.989	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	106	27	46	1017	0.104	106	197	0.1	0.1	3.956	A

E											
Bar S	261	65	2	1233	0.212	261	150	0.3	0.3	3.705	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.235	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.769	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	89	165	0.1	0.1	3.860	A
Bar S	218	55	2	1233	0.177	219	126	0.3	0.2	3.551	A
Fleet	24	6	179	897	0.027	24	41	0.0	0.0	4.126	A
Site	15	4	188	656	0.023	15	15	0.0	0.0	5.617	A

2024 + K3 Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	207	100.000
Bar S		ONE HOUR	✓	238	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	203	3	0
	Bar S	152	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	28	67	0
	Bar S	35	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.67	0.2	A	190	285
Bar S	0.20	3.46	0.3	A	218	328
Fleet	0.09	4.39	0.1	A	65	98
Site	0.04	5.95	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	155	117	0.0	0.1	3.338	A
Bar S	179	45	3	1303	0.138	179	221	0.0	0.2	3.201	A
Fleet	53	13	127	929	0.058	53	55	0.0	0.1	4.108	A
Site	17	4	169	661	0.025	16	11	0.0	0.0	5.587	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.1	0.2	3.472	A
Bar S	214	53	4	1302	0.164	214	265	0.2	0.2	3.307	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.222	A
Site	20	5	203	648	0.031	20	13	0.0	0.0	5.733	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	324	0.2	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	630	0.038	24	15	0.0	0.0	5.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	325	0.3	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	629	0.038	24	15	0.0	0.0	5.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	186	47	83	1222	0.152	186	140	0.2	0.2	3.477	A

E											
Bar S	214	53	4	1302	0.164	214	266	0.3	0.2	3.308	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.226	A
Site	20	5	203	647	0.031	20	13	0.0	0.0	5.738	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	156	118	0.2	0.1	3.343	A
Bar S	179	45	3	1303	0.138	179	222	0.2	0.2	3.206	A
Fleet	53	13	127	929	0.058	54	55	0.1	0.1	4.112	A
Site	17	4	170	661	0.025	17	11	0.0	0.0	5.590	A

2024 + WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	125	100.000
Bar S		ONE HOUR	✓	298	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	123	2	0
	Bar S	226	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	60	100	0
	Bar S	34	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.22	0.2	A	115	172
Bar S	0.27	4.03	0.4	A	273	410
Fleet	0.04	4.42	0.0	A	29	44
Site	0.04	6.04	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	94	24	38	1003	0.094	94	170	0.0	0.1	3.956	A
Bar S	224	56	1	1222	0.184	223	130	0.0	0.2	3.603	A
Fleet	24	6	184	893	0.027	24	40	0.0	0.0	4.142	A
Site	15	4	193	653	0.023	15	15	0.0	0.0	5.640	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	46	998	0.113	112	204	0.1	0.1	4.063	A
Bar S	268	67	2	1221	0.219	268	156	0.2	0.3	3.775	A
Fleet	29	7	221	874	0.033	29	49	0.0	0.0	4.257	A
Site	18	4	232	639	0.028	18	18	0.0	0.0	5.800	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	138	34	56	992	0.139	137	250	0.1	0.2	4.215	A
Bar S	328	82	2	1221	0.269	328	191	0.3	0.4	4.031	A
Fleet	35	9	271	849	0.042	35	59	0.0	0.0	4.423	A
Site	22	6	284	618	0.036	22	22	0.0	0.0	6.035	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	138	34	56	992	0.139	138	250	0.2	0.2	4.215	A
Bar S	328	82	2	1221	0.269	328	192	0.4	0.4	4.032	A
Fleet	35	9	271	849	0.042	35	59	0.0	0.0	4.424	A
Site	22	6	284	618	0.036	22	22	0.0	0.0	6.036	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	112	28	46	998	0.113	113	204	0.2	0.1	4.064	A

E											
Bar S	268	67	2	1221	0.219	268	157	0.4	0.3	3.780	A
Fleet	29	7	221	874	0.033	29	49	0.0	0.0	4.258	A
Site	18	4	232	638	0.028	18	18	0.0	0.0	5.805	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	94	24	38	1003	0.094	94	171	0.1	0.1	3.962	A
Bar S	224	56	2	1222	0.184	225	131	0.3	0.2	3.611	A
Fleet	24	6	185	893	0.027	24	41	0.0	0.0	4.145	A
Site	15	4	194	653	0.023	15	15	0.0	0.0	5.643	A

2024 + WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	226	100.000
Bar S		ONE HOUR	✓	246	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	222	3	0
	Bar S	160	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	29	67	0
	Bar S	38	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.79	0.3	A	207	311
Bar S	0.21	3.56	0.3	A	226	339
Fleet	0.09	4.42	0.1	A	65	98
Site	0.04	6.00	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	170	43	69	1224	0.139	170	123	0.0	0.2	3.412	A
Bar S	185	46	3	1283	0.144	185	235	0.0	0.2	3.276	A
Fleet	53	13	133	925	0.058	53	55	0.0	0.1	4.129	A
Site	17	4	175	658	0.025	16	11	0.0	0.0	5.615	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	203	51	83	1213	0.167	203	147	0.2	0.2	3.562	A
Bar S	221	55	4	1282	0.172	221	282	0.2	0.2	3.391	A
Fleet	64	16	159	911	0.070	64	66	0.1	0.1	4.248	A
Site	20	5	210	644	0.031	20	13	0.0	0.0	5.770	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	249	62	101	1199	0.207	249	180	0.2	0.3	3.786	A
Bar S	271	68	4	1282	0.211	271	345	0.2	0.3	3.559	A
Fleet	78	20	195	892	0.088	78	80	0.1	0.1	4.421	A
Site	24	6	257	625	0.039	24	15	0.0	0.0	5.994	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	249	62	101	1199	0.207	249	181	0.3	0.3	3.786	A
Bar S	271	68	4	1282	0.211	271	346	0.3	0.3	3.559	A
Fleet	78	20	195	892	0.088	78	80	0.1	0.1	4.422	A
Site	24	6	258	625	0.039	24	15	0.0	0.0	5.995	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	203	51	83	1213	0.167	203	148	0.3	0.2	3.567	A

E											
Bar S	221	55	4	1282	0.172	221	283	0.3	0.2	3.392	A
Fleet	64	16	159	911	0.070	64	66	0.1	0.1	4.251	A
Site	20	5	211	643	0.031	20	13	0.0	0.0	5.772	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	170	43	69	1224	0.139	170	124	0.2	0.2	3.420	A
Bar S	185	46	3	1283	0.144	185	237	0.2	0.2	3.279	A
Fleet	53	13	133	925	0.058	54	55	0.1	0.1	4.134	A
Site	17	4	176	657	0.025	17	11	0.0	0.0	5.619	A

2024 + K3 and WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	128	100.000
Bar S		ONE HOUR	✓	300	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	126	2	0
	Bar S	228	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	61	100	0
	Bar S	35	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.26	0.2	A	117	176
Bar S	0.27	4.07	0.4	A	275	413
Fleet	0.04	4.43	0.0	A	29	44
Site	0.04	6.05	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	172	0.0	0.1	3.992	A
Bar S	226	56	1	1215	0.186	225	133	0.0	0.2	3.631	A
Fleet	24	6	186	892	0.027	24	40	0.0	0.0	4.149	A
Site	15	4	195	652	0.023	15	15	0.0	0.0	5.649	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.1	0.1	4.103	A
Bar S	270	67	2	1215	0.222	269	159	0.2	0.3	3.806	A
Fleet	29	7	223	873	0.033	29	49	0.0	0.0	4.265	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.812	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.1	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.3	0.4	4.066	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.434	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.051	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.2	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.4	0.4	4.069	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.435	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.052	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	115	29	46	992	0.116	115	206	0.2	0.1	4.105	A

E											
Bar S	270	67	2	1215	0.222	270	159	0.4	0.3	3.812	A
Fleet	29	7	223	872	0.033	29	49	0.0	0.0	4.268	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	173	0.1	0.1	3.999	A
Bar S	226	56	2	1215	0.186	226	133	0.3	0.2	3.641	A
Fleet	24	6	187	891	0.027	24	41	0.0	0.0	4.153	A
Site	15	4	196	652	0.023	15	15	0.0	0.0	5.653	A

2024 + K3 and WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	228	100.000
Bar S		ONE HOUR	✓	248	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	224	3	0
	Bar S	162	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	30	67	0
	Bar S	40	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.83	0.3	A	209	314
Bar S	0.22	3.61	0.3	A	228	341
Fleet	0.09	4.44	0.1	A	65	98
Site	0.04	6.01	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1215	0.141	171	125	0.0	0.2	3.447	A
Bar S	187	47	3	1270	0.147	186	237	0.0	0.2	3.318	A
Fleet	53	13	134	923	0.058	53	55	0.0	0.1	4.137	A
Site	17	4	177	656	0.025	16	11	0.0	0.0	5.627	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.2	0.2	3.601	A
Bar S	223	56	4	1270	0.176	223	284	0.2	0.2	3.437	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.258	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.784	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.2	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.2	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.434	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.013	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.3	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.3	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.435	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.014	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	205	51	83	1204	0.170	205	149	0.3	0.2	3.603	A

E											
Bar S	223	56	4	1270	0.176	223	284	0.3	0.2	3.442	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.262	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.788	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1214	0.141	172	125	0.2	0.2	3.455	A
Bar S	187	47	3	1270	0.147	187	238	0.2	0.2	3.322	A
Fleet	53	13	135	923	0.058	54	55	0.1	0.1	4.140	A
Site	17	4	178	656	0.025	17	11	0.0	0.0	5.630	A

2024 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	118	100.000
Bar S		ONE HOUR	✓	290	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	116	2	0
	Bar S	218	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
Bar E	0	57	100	0	

From	Bar S	32	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.09	0.1	A	108	162
Bar S	0.26	3.94	0.3	A	266	399
Fleet	0.04	4.39	0.0	A	29	44
Site	0.04	5.99	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	88	164	0.0	0.1	3.855	A
Bar S	218	55	1	1233	0.177	217	125	0.0	0.2	3.541	A
Fleet	24	6	178	897	0.027	24	40	0.0	0.0	4.122	A
Site	15	4	187	656	0.023	15	15	0.0	0.0	5.611	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.953	A
Bar S	261	65	2	1233	0.212	260	150	0.2	0.3	3.703	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.232	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.765	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.941	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.390	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.988	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.942	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.391	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.989	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.956	A
Bar S	261	65	2	1233	0.212	261	150	0.3	0.3	3.705	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.235	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.769	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	89	165	0.1	0.1	3.860	A
Bar S	218	55	2	1233	0.177	219	126	0.3	0.2	3.551	A
Fleet	24	6	179	897	0.027	24	41	0.0	0.0	4.126	A
Site	15	4	188	656	0.023	15	15	0.0	0.0	5.617	A

2024 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	207	100.000
Bar S		ONE HOUR	✓	238	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	203	3	0
	Bar S	152	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
Bar E	0	28	67	0	

From	Bar S	35	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.67	0.2	A	190	285
Bar S	0.20	3.46	0.3	A	218	328
Fleet	0.09	4.39	0.1	A	65	98
Site	0.04	5.95	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	155	117	0.0	0.1	3.338	A
Bar S	179	45	3	1303	0.138	179	221	0.0	0.2	3.201	A
Fleet	53	13	127	929	0.058	53	55	0.0	0.1	4.108	A
Site	17	4	169	661	0.025	16	11	0.0	0.0	5.587	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.1	0.2	3.472	A
Bar S	214	53	4	1302	0.164	214	265	0.2	0.2	3.307	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.222	A
Site	20	5	203	648	0.031	20	13	0.0	0.0	5.733	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	324	0.2	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	630	0.038	24	15	0.0	0.0	5.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	325	0.3	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	629	0.038	24	15	0.0	0.0	5.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.2	0.2	3.477	A
Bar S	214	53	4	1302	0.164	214	266	0.3	0.2	3.308	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.226	A
Site	20	5	203	647	0.031	20	13	0.0	0.0	5.738	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	156	118	0.2	0.1	3.343	A
Bar S	179	45	3	1303	0.138	179	222	0.2	0.2	3.206	A
Fleet	53	13	127	929	0.058	54	55	0.1	0.1	4.112	A
Site	17	4	170	661	0.025	17	11	0.0	0.0	5.590	A

2024 + WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2024 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	125	100.000
Bar S		ONE HOUR	✓	298	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	123	2	0
	Bar S	226	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	60	100	0

From	Bar S	34	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.22	0.2	A	115	172
Bar S	0.27	4.03	0.4	A	273	410
Fleet	0.04	4.42	0.0	A	29	44
Site	0.04	6.04	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	94	24	38	1003	0.094	94	170	0.0	0.1	3.956	A
Bar S	224	56	1	1222	0.184	223	130	0.0	0.2	3.603	A
Fleet	24	6	184	893	0.027	24	40	0.0	0.0	4.142	A
Site	15	4	193	653	0.023	15	15	0.0	0.0	5.640	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	46	998	0.113	112	204	0.1	0.1	4.063	A
Bar S	268	67	2	1221	0.219	268	156	0.2	0.3	3.775	A
Fleet	29	7	221	874	0.033	29	49	0.0	0.0	4.257	A
Site	18	4	232	639	0.028	18	18	0.0	0.0	5.800	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	138	34	56	992	0.139	137	250	0.1	0.2	4.215	A
Bar S	328	82	2	1221	0.269	328	191	0.3	0.4	4.031	A
Fleet	35	9	271	849	0.042	35	59	0.0	0.0	4.423	A
Site	22	6	284	618	0.036	22	22	0.0	0.0	6.035	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	138	34	56	992	0.139	138	250	0.2	0.2	4.215	A
Bar S	328	82	2	1221	0.269	328	192	0.4	0.4	4.032	A
Fleet	35	9	271	849	0.042	35	59	0.0	0.0	4.424	A
Site	22	6	284	618	0.036	22	22	0.0	0.0	6.036	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	46	998	0.113	113	204	0.2	0.1	4.064	A
Bar S	268	67	2	1221	0.219	268	157	0.4	0.3	3.780	A
Fleet	29	7	221	874	0.033	29	49	0.0	0.0	4.258	A
Site	18	4	232	638	0.028	18	18	0.0	0.0	5.805	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	94	24	38	1003	0.094	94	171	0.1	0.1	3.962	A
Bar S	224	56	2	1222	0.184	225	131	0.3	0.2	3.611	A
Fleet	24	6	185	893	0.027	24	41	0.0	0.0	4.145	A
Site	15	4	194	653	0.023	15	15	0.0	0.0	5.643	A

2024 + WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2024 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	225	100.000
Bar S		ONE HOUR	✓	246	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	222	3	0
	Bar S	160	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	29	67	0

From	Bar S	38	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.79	0.3	A	206	310
Bar S	0.21	3.56	0.3	A	226	339
Fleet	0.09	4.42	0.1	A	65	98
Site	0.04	5.99	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	169	42	69	1223	0.139	169	122	0.0	0.2	3.414	A
Bar S	185	46	2	1283	0.144	185	235	0.0	0.2	3.275	A
Fleet	53	13	132	925	0.058	53	55	0.0	0.1	4.127	A
Site	17	4	175	658	0.025	16	11	0.0	0.0	5.614	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	202	51	83	1212	0.167	202	146	0.2	0.2	3.563	A
Bar S	221	55	3	1283	0.172	221	282	0.2	0.2	3.389	A
Fleet	64	16	158	911	0.070	64	66	0.1	0.1	4.247	A
Site	20	5	209	644	0.031	20	13	0.0	0.0	5.767	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	248	62	101	1198	0.207	247	179	0.2	0.3	3.786	A
Bar S	271	68	3	1282	0.211	271	345	0.2	0.3	3.557	A
Fleet	78	20	194	893	0.088	78	80	0.1	0.1	4.419	A
Site	24	6	256	625	0.039	24	15	0.0	0.0	5.991	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	248	62	101	1198	0.207	248	179	0.3	0.3	3.787	A
Bar S	271	68	3	1282	0.211	271	346	0.3	0.3	3.557	A
Fleet	78	20	194	893	0.088	78	80	0.1	0.1	4.419	A
Site	24	6	257	625	0.039	24	15	0.0	0.0	5.992	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	202	51	83	1212	0.167	203	147	0.3	0.2	3.565	A
Bar S	221	55	3	1283	0.172	221	283	0.3	0.2	3.391	A
Fleet	64	16	158	911	0.070	64	66	0.1	0.1	4.248	A
Site	20	5	210	644	0.031	20	13	0.0	0.0	5.772	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	169	42	69	1222	0.139	170	123	0.2	0.2	3.419	A
Bar S	185	46	2	1283	0.144	185	237	0.2	0.2	3.281	A
Fleet	53	13	133	925	0.058	54	55	0.1	0.1	4.133	A
Site	17	4	176	657	0.025	17	11	0.0	0.0	5.619	A

2024 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	128	100.000
Bar S		ONE HOUR	✓	300	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	126	2	0
	Bar S	228	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site

From	Bar E	0	61	100	0
	Bar S	35	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.26	0.2	A	117	176
Bar S	0.27	4.07	0.4	A	275	413
Fleet	0.04	4.43	0.0	A	29	44
Site	0.04	6.05	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	172	0.0	0.1	3.992	A
Bar S	226	56	1	1215	0.186	225	133	0.0	0.2	3.631	A
Fleet	24	6	186	892	0.027	24	40	0.0	0.0	4.149	A
Site	15	4	195	652	0.023	15	15	0.0	0.0	5.649	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.1	0.1	4.103	A
Bar S	270	67	2	1215	0.222	269	159	0.2	0.3	3.806	A
Fleet	29	7	223	873	0.033	29	49	0.0	0.0	4.265	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.812	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.1	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.3	0.4	4.066	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.434	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.051	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.2	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.4	0.4	4.069	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.435	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.052	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.2	0.1	4.105	A
Bar S	270	67	2	1215	0.222	270	159	0.4	0.3	3.812	A
Fleet	29	7	223	872	0.033	29	49	0.0	0.0	4.268	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	173	0.1	0.1	3.999	A
Bar S	226	56	2	1215	0.186	226	133	0.3	0.2	3.641	A
Fleet	24	6	187	891	0.027	24	41	0.0	0.0	4.153	A
Site	15	4	196	652	0.023	15	15	0.0	0.0	5.653	A

2024 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	227	100.000
Bar S		ONE HOUR	✓	248	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	224	3	0
	Bar S	162	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site

From	Bar E	0	30	67	0
	Bar S	40	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.83	0.3	A	208	312
Bar S	0.22	3.61	0.3	A	228	341
Fleet	0.09	4.43	0.1	A	65	98
Site	0.04	6.01	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	171	43	69	1213	0.141	170	124	0.0	0.2	3.449	A
Bar S	187	47	2	1271	0.147	186	237	0.0	0.2	3.317	A
Fleet	53	13	134	923	0.058	53	55	0.0	0.1	4.135	A
Site	17	4	176	656	0.025	16	11	0.0	0.0	5.625	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	204	51	83	1203	0.170	204	148	0.2	0.2	3.602	A
Bar S	223	56	3	1270	0.176	223	284	0.2	0.2	3.436	A
Fleet	64	16	160	909	0.070	64	66	0.1	0.1	4.257	A
Site	20	5	211	642	0.031	20	13	0.0	0.0	5.782	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	250	62	101	1189	0.210	250	182	0.2	0.3	3.832	A
Bar S	273	68	3	1270	0.215	273	348	0.2	0.3	3.610	A
Fleet	78	20	196	890	0.088	78	80	0.1	0.1	4.432	A
Site	24	6	258	623	0.039	24	15	0.0	0.0	6.010	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	250	62	101	1189	0.210	250	182	0.3	0.3	3.832	A
Bar S	273	68	3	1270	0.215	273	348	0.3	0.3	3.610	A
Fleet	78	20	196	890	0.088	78	80	0.1	0.1	4.433	A
Site	24	6	259	623	0.039	24	15	0.0	0.0	6.011	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	204	51	83	1203	0.170	204	148	0.3	0.2	3.607	A
Bar S	223	56	3	1270	0.176	223	284	0.3	0.2	3.438	A
Fleet	64	16	160	909	0.070	64	66	0.1	0.1	4.260	A
Site	20	5	211	642	0.031	20	13	0.0	0.0	5.784	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	171	43	69	1213	0.141	171	124	0.2	0.2	3.456	A
Bar S	187	47	2	1271	0.147	187	238	0.2	0.2	3.321	A
Fleet	53	13	134	923	0.058	54	55	0.1	0.1	4.139	A
Site	17	4	177	656	0.025	17	11	0.0	0.0	5.630	A

2031, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	115	100.000
Bar S		ONE HOUR	✓	287	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	113	2	0
	Bar S	215	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	57	100	0
	Bar S	31	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.08	0.1	A	106	158
Bar S	0.26	3.90	0.3	A	263	395
Fleet	0.04	4.38	0.0	A	29	44
Site	0.04	5.97	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	87	22	38	1022	0.085	86	162	0.0	0.1	3.846	A
Bar S	216	54	1	1239	0.174	215	123	0.0	0.2	3.513	A
Fleet	24	6	176	899	0.027	24	40	0.0	0.0	4.115	A
Site	15	4	185	658	0.023	15	15	0.0	0.0	5.600	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	103	26	46	1017	0.102	103	194	0.1	0.1	3.941	A
Bar S	258	65	2	1239	0.208	258	147	0.2	0.3	3.670	A
Fleet	29	7	211	881	0.033	29	49	0.0	0.0	4.222	A
Site	18	4	222	644	0.028	18	18	0.0	0.0	5.751	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	56	1010	0.125	126	238	0.1	0.1	4.076	A
Bar S	316	79	2	1238	0.255	316	180	0.3	0.3	3.902	A
Fleet	35	9	258	858	0.041	35	59	0.0	0.0	4.377	A
Site	22	6	272	625	0.035	22	22	0.0	0.0	5.969	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	56	1010	0.125	127	238	0.1	0.1	4.076	A
Bar S	316	79	2	1238	0.255	316	181	0.3	0.3	3.903	A
Fleet	35	9	259	857	0.041	35	59	0.0	0.0	4.378	A
Site	22	6	272	625	0.035	22	22	0.0	0.0	5.970	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	103	26	46	1016	0.102	103	194	0.1	0.1	3.943	A

E											
Bar S	258	65	2	1239	0.208	258	148	0.3	0.3	3.672	A
Fleet	29	7	212	881	0.033	29	49	0.0	0.0	4.225	A
Site	18	4	222	644	0.028	18	18	0.0	0.0	5.753	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	87	22	38	1021	0.085	87	163	0.1	0.1	3.851	A
Bar S	216	54	2	1239	0.174	216	124	0.3	0.2	3.520	A
Fleet	24	6	177	898	0.027	24	41	0.0	0.0	4.117	A
Site	15	4	186	657	0.023	15	15	0.0	0.0	5.604	A

2031, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	204	100.000
Bar S		ONE HOUR	✓	235	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	200	3	0
	Bar S	149	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	28	67	0
	Bar S	34	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.66	0.2	A	187	281
Bar S	0.20	3.43	0.2	A	216	323
Fleet	0.09	4.38	0.1	A	65	98
Site	0.04	5.93	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	154	38	69	1233	0.125	153	115	0.0	0.1	3.332	A
Bar S	177	44	3	1309	0.135	176	219	0.0	0.2	3.176	A
Fleet	53	13	125	931	0.057	53	55	0.0	0.1	4.101	A
Site	17	4	167	662	0.025	16	11	0.0	0.0	5.576	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	183	46	83	1222	0.150	183	137	0.1	0.2	3.464	A
Bar S	211	53	4	1309	0.161	211	262	0.2	0.2	3.279	A
Fleet	64	16	149	918	0.070	64	66	0.1	0.1	4.213	A
Site	20	5	200	649	0.030	20	13	0.0	0.0	5.721	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	225	56	101	1208	0.186	224	168	0.2	0.2	3.659	A
Bar S	259	65	4	1308	0.198	259	321	0.2	0.2	3.429	A
Fleet	78	20	183	901	0.087	78	80	0.1	0.1	4.375	A
Site	24	6	245	631	0.038	24	15	0.0	0.0	5.929	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	225	56	101	1208	0.186	225	168	0.2	0.2	3.659	A
Bar S	259	65	4	1308	0.198	259	321	0.2	0.2	3.429	A
Fleet	78	20	183	901	0.087	78	80	0.1	0.1	4.375	A
Site	24	6	246	631	0.038	24	15	0.0	0.0	5.930	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	183	46	83	1222	0.150	184	138	0.2	0.2	3.465	A

E											
Bar S	211	53	4	1309	0.161	211	263	0.2	0.2	3.280	A
Fleet	64	16	149	918	0.070	64	66	0.1	0.1	4.216	A
Site	20	5	201	649	0.030	20	13	0.0	0.0	5.722	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	154	38	69	1233	0.125	154	115	0.2	0.1	3.336	A
Bar S	177	44	3	1309	0.135	177	220	0.2	0.2	3.179	A
Fleet	53	13	125	930	0.057	54	55	0.1	0.1	4.106	A
Site	17	4	168	662	0.025	17	11	0.0	0.0	5.582	A

2031 + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	115	100.000
Bar S		ONE HOUR	✓	287	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	113	2	0
	Bar S	215	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	57	100	0
	Bar S	31	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.08	0.1	A	106	158
Bar S	0.26	3.90	0.3	A	263	395
Fleet	0.04	4.38	0.0	A	29	44
Site	0.04	5.97	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	87	22	38	1022	0.085	86	162	0.0	0.1	3.846	A
Bar S	216	54	1	1239	0.174	215	123	0.0	0.2	3.513	A
Fleet	24	6	176	899	0.027	24	40	0.0	0.0	4.115	A
Site	15	4	185	658	0.023	15	15	0.0	0.0	5.600	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	103	26	46	1017	0.102	103	194	0.1	0.1	3.941	A
Bar S	258	65	2	1239	0.208	258	147	0.2	0.3	3.670	A
Fleet	29	7	211	881	0.033	29	49	0.0	0.0	4.222	A
Site	18	4	222	644	0.028	18	18	0.0	0.0	5.751	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	56	1010	0.125	126	238	0.1	0.1	4.076	A
Bar S	316	79	2	1238	0.255	316	180	0.3	0.3	3.902	A
Fleet	35	9	258	858	0.041	35	59	0.0	0.0	4.377	A
Site	22	6	272	625	0.035	22	22	0.0	0.0	5.969	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	127	32	56	1010	0.125	127	238	0.1	0.1	4.076	A
Bar S	316	79	2	1238	0.255	316	181	0.3	0.3	3.903	A
Fleet	35	9	259	857	0.041	35	59	0.0	0.0	4.378	A
Site	22	6	272	625	0.035	22	22	0.0	0.0	5.970	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	103	26	46	1016	0.102	103	194	0.1	0.1	3.943	A

E											
Bar S	258	65	2	1239	0.208	258	148	0.3	0.3	3.672	A
Fleet	29	7	212	881	0.033	29	49	0.0	0.0	4.225	A
Site	18	4	222	644	0.028	18	18	0.0	0.0	5.753	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	87	22	38	1021	0.085	87	163	0.1	0.1	3.851	A
Bar S	216	54	2	1239	0.174	216	124	0.3	0.2	3.520	A
Fleet	24	6	177	898	0.027	24	41	0.0	0.0	4.117	A
Site	15	4	186	657	0.023	15	15	0.0	0.0	5.604	A

2031 + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.81	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	204	100.000
Bar S		ONE HOUR	✓	235	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	200	3	0
	Bar S	149	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	28	67	0
	Bar S	34	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.66	0.2	A	187	281
Bar S	0.20	3.43	0.2	A	216	323
Fleet	0.09	4.38	0.1	A	65	98
Site	0.04	5.93	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	154	38	69	1233	0.125	153	115	0.0	0.1	3.332	A
Bar S	177	44	3	1309	0.135	176	219	0.0	0.2	3.176	A
Fleet	53	13	125	931	0.057	53	55	0.0	0.1	4.101	A
Site	17	4	167	662	0.025	16	11	0.0	0.0	5.576	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	183	46	83	1222	0.150	183	137	0.1	0.2	3.464	A
Bar S	211	53	4	1309	0.161	211	262	0.2	0.2	3.279	A
Fleet	64	16	149	918	0.070	64	66	0.1	0.1	4.213	A
Site	20	5	200	649	0.030	20	13	0.0	0.0	5.721	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	225	56	101	1208	0.186	224	168	0.2	0.2	3.659	A
Bar S	259	65	4	1308	0.198	259	321	0.2	0.2	3.429	A
Fleet	78	20	183	901	0.087	78	80	0.1	0.1	4.375	A
Site	24	6	245	631	0.038	24	15	0.0	0.0	5.929	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	225	56	101	1208	0.186	225	168	0.2	0.2	3.659	A
Bar S	259	65	4	1308	0.198	259	321	0.2	0.2	3.429	A
Fleet	78	20	183	901	0.087	78	80	0.1	0.1	4.375	A
Site	24	6	246	631	0.038	24	15	0.0	0.0	5.930	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	183	46	83	1222	0.150	184	138	0.2	0.2	3.465	A

E											
Bar S	211	53	4	1309	0.161	211	263	0.2	0.2	3.280	A
Fleet	64	16	149	918	0.070	64	66	0.1	0.1	4.216	A
Site	20	5	201	649	0.030	20	13	0.0	0.0	5.722	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	154	38	69	1233	0.125	154	115	0.2	0.1	3.336	A
Bar S	177	44	3	1309	0.135	177	220	0.2	0.2	3.179	A
Fleet	53	13	125	930	0.057	54	55	0.1	0.1	4.106	A
Site	17	4	168	662	0.025	17	11	0.0	0.0	5.582	A

2031 + K3 Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	118	100.000
Bar S		ONE HOUR	✓	290	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	116	2	0
	Bar S	218	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	57	100	0
	Bar S	32	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.09	0.1	A	108	162
Bar S	0.26	3.94	0.3	A	266	399
Fleet	0.04	4.39	0.0	A	29	44
Site	0.04	5.99	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	88	164	0.0	0.1	3.855	A
Bar S	218	55	1	1233	0.177	217	125	0.0	0.2	3.541	A
Fleet	24	6	178	897	0.027	24	40	0.0	0.0	4.122	A
Site	15	4	187	656	0.023	15	15	0.0	0.0	5.611	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.953	A
Bar S	261	65	2	1233	0.212	260	150	0.2	0.3	3.703	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.232	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.765	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.941	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.390	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.988	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.942	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.391	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.989	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	106	27	46	1017	0.104	106	197	0.1	0.1	3.956	A

E											
Bar S	261	65	2	1233	0.212	261	150	0.3	0.3	3.705	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.235	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.769	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	89	165	0.1	0.1	3.860	A
Bar S	218	55	2	1233	0.177	219	126	0.3	0.2	3.551	A
Fleet	24	6	179	897	0.027	24	41	0.0	0.0	4.126	A
Site	15	4	188	656	0.023	15	15	0.0	0.0	5.617	A

2031 + K3 Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	207	100.000
Bar S		ONE HOUR	✓	238	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	203	3	0
	Bar S	152	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	28	67	0
	Bar S	35	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.67	0.2	A	190	285
Bar S	0.20	3.46	0.3	A	218	328
Fleet	0.09	4.39	0.1	A	65	98
Site	0.04	5.95	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	155	117	0.0	0.1	3.338	A
Bar S	179	45	3	1303	0.138	179	221	0.0	0.2	3.201	A
Fleet	53	13	127	929	0.058	53	55	0.0	0.1	4.108	A
Site	17	4	169	661	0.025	16	11	0.0	0.0	5.587	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.1	0.2	3.472	A
Bar S	214	53	4	1302	0.164	214	265	0.2	0.2	3.307	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.222	A
Site	20	5	203	648	0.031	20	13	0.0	0.0	5.733	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	324	0.2	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	630	0.038	24	15	0.0	0.0	5.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	325	0.3	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	629	0.038	24	15	0.0	0.0	5.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	186	47	83	1222	0.152	186	140	0.2	0.2	3.477	A

E											
Bar S	214	53	4	1302	0.164	214	266	0.3	0.2	3.308	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.226	A
Site	20	5	203	647	0.031	20	13	0.0	0.0	5.738	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	156	118	0.2	0.1	3.343	A
Bar S	179	45	3	1303	0.138	179	222	0.2	0.2	3.206	A
Fleet	53	13	127	929	0.058	54	55	0.1	0.1	4.112	A
Site	17	4	170	661	0.025	17	11	0.0	0.0	5.590	A

2031 + WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D25	2031 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	125	100.000
Bar S		ONE HOUR	✓	298	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	123	2	0
	Bar S	226	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	60	100	0
	Bar S	34	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.22	0.2	A	115	172
Bar S	0.27	4.03	0.4	A	273	410
Fleet	0.04	4.42	0.0	A	29	44
Site	0.04	6.04	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	94	24	38	1003	0.094	94	170	0.0	0.1	3.956	A
Bar S	224	56	1	1222	0.184	223	130	0.0	0.2	3.603	A
Fleet	24	6	184	893	0.027	24	40	0.0	0.0	4.142	A
Site	15	4	193	653	0.023	15	15	0.0	0.0	5.640	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	46	998	0.113	112	204	0.1	0.1	4.063	A
Bar S	268	67	2	1221	0.219	268	156	0.2	0.3	3.775	A
Fleet	29	7	221	874	0.033	29	49	0.0	0.0	4.257	A
Site	18	4	232	639	0.028	18	18	0.0	0.0	5.800	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	138	34	56	992	0.139	137	250	0.1	0.2	4.215	A
Bar S	328	82	2	1221	0.269	328	191	0.3	0.4	4.031	A
Fleet	35	9	271	849	0.042	35	59	0.0	0.0	4.423	A
Site	22	6	284	618	0.036	22	22	0.0	0.0	6.035	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	138	34	56	992	0.139	138	250	0.2	0.2	4.215	A
Bar S	328	82	2	1221	0.269	328	192	0.4	0.4	4.032	A
Fleet	35	9	271	849	0.042	35	59	0.0	0.0	4.424	A
Site	22	6	284	618	0.036	22	22	0.0	0.0	6.036	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	112	28	46	998	0.113	113	204	0.2	0.1	4.064	A

E											
Bar S	268	67	2	1221	0.219	268	157	0.4	0.3	3.780	A
Fleet	29	7	221	874	0.033	29	49	0.0	0.0	4.258	A
Site	18	4	232	638	0.028	18	18	0.0	0.0	5.805	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	94	24	38	1003	0.094	94	171	0.1	0.1	3.962	A
Bar S	224	56	2	1222	0.184	225	131	0.3	0.2	3.611	A
Fleet	24	6	185	893	0.027	24	41	0.0	0.0	4.145	A
Site	15	4	194	653	0.023	15	15	0.0	0.0	5.643	A

2031 + WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D26	2031 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	226	100.000
Bar S		ONE HOUR	✓	246	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	222	3	0
	Bar S	160	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	29	67	0
	Bar S	38	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.79	0.3	A	207	311
Bar S	0.21	3.56	0.3	A	226	339
Fleet	0.09	4.42	0.1	A	65	98
Site	0.04	6.00	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	170	43	69	1224	0.139	170	123	0.0	0.2	3.412	A
Bar S	185	46	3	1283	0.144	185	235	0.0	0.2	3.276	A
Fleet	53	13	133	925	0.058	53	55	0.0	0.1	4.129	A
Site	17	4	175	658	0.025	16	11	0.0	0.0	5.615	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	203	51	83	1213	0.167	203	147	0.2	0.2	3.562	A
Bar S	221	55	4	1282	0.172	221	282	0.2	0.2	3.391	A
Fleet	64	16	159	911	0.070	64	66	0.1	0.1	4.248	A
Site	20	5	210	644	0.031	20	13	0.0	0.0	5.770	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	249	62	101	1199	0.207	249	180	0.2	0.3	3.786	A
Bar S	271	68	4	1282	0.211	271	345	0.2	0.3	3.559	A
Fleet	78	20	195	892	0.088	78	80	0.1	0.1	4.421	A
Site	24	6	257	625	0.039	24	15	0.0	0.0	5.994	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	249	62	101	1199	0.207	249	181	0.3	0.3	3.786	A
Bar S	271	68	4	1282	0.211	271	346	0.3	0.3	3.559	A
Fleet	78	20	195	892	0.088	78	80	0.1	0.1	4.422	A
Site	24	6	258	625	0.039	24	15	0.0	0.0	5.995	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	203	51	83	1213	0.167	203	148	0.3	0.2	3.567	A

E											
Bar S	221	55	4	1282	0.172	221	283	0.3	0.2	3.392	A
Fleet	64	16	159	911	0.070	64	66	0.1	0.1	4.251	A
Site	20	5	211	643	0.031	20	13	0.0	0.0	5.772	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	170	43	69	1224	0.139	170	124	0.2	0.2	3.420	A
Bar S	185	46	3	1283	0.144	185	237	0.2	0.2	3.279	A
Fleet	53	13	133	925	0.058	54	55	0.1	0.1	4.134	A
Site	17	4	176	657	0.025	17	11	0.0	0.0	5.619	A

2031 + K3 and WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	128	100.000
Bar S		ONE HOUR	✓	300	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	126	2	0
	Bar S	228	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	61	100	0
	Bar S	35	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.26	0.2	A	117	176
Bar S	0.27	4.07	0.4	A	275	413
Fleet	0.04	4.43	0.0	A	29	44
Site	0.04	6.05	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	172	0.0	0.1	3.992	A
Bar S	226	56	1	1215	0.186	225	133	0.0	0.2	3.631	A
Fleet	24	6	186	892	0.027	24	40	0.0	0.0	4.149	A
Site	15	4	195	652	0.023	15	15	0.0	0.0	5.649	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.1	0.1	4.103	A
Bar S	270	67	2	1215	0.222	269	159	0.2	0.3	3.806	A
Fleet	29	7	223	873	0.033	29	49	0.0	0.0	4.265	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.812	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.1	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.3	0.4	4.066	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.434	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.051	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.2	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.4	0.4	4.069	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.435	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.052	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	115	29	46	992	0.116	115	206	0.2	0.1	4.105	A

E											
Bar S	270	67	2	1215	0.222	270	159	0.4	0.3	3.812	A
Fleet	29	7	223	872	0.033	29	49	0.0	0.0	4.268	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	173	0.1	0.1	3.999	A
Bar S	226	56	2	1215	0.186	226	133	0.3	0.2	3.641	A
Fleet	24	6	187	891	0.027	24	41	0.0	0.0	4.153	A
Site	15	4	196	652	0.023	15	15	0.0	0.0	5.653	A

2031 + K3 and WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	228	100.000
Bar S		ONE HOUR	✓	248	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	224	3	0
	Bar S	162	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	30	67	0
	Bar S	40	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.83	0.3	A	209	314
Bar S	0.22	3.61	0.3	A	228	341
Fleet	0.09	4.44	0.1	A	65	98
Site	0.04	6.01	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1215	0.141	171	125	0.0	0.2	3.447	A
Bar S	187	47	3	1270	0.147	186	237	0.0	0.2	3.318	A
Fleet	53	13	134	923	0.058	53	55	0.0	0.1	4.137	A
Site	17	4	177	656	0.025	16	11	0.0	0.0	5.627	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.2	0.2	3.601	A
Bar S	223	56	4	1270	0.176	223	284	0.2	0.2	3.437	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.258	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.784	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.2	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.2	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.434	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.013	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.3	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.3	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.435	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.014	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar	205	51	83	1204	0.170	205	149	0.3	0.2	3.603	A

E											
Bar S	223	56	4	1270	0.176	223	284	0.3	0.2	3.442	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.262	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.788	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1214	0.141	172	125	0.2	0.2	3.455	A
Bar S	187	47	3	1270	0.147	187	238	0.2	0.2	3.322	A
Fleet	53	13	135	923	0.058	54	55	0.1	0.1	4.140	A
Site	17	4	178	656	0.025	17	11	0.0	0.0	5.630	A

2031 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.14	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	118	100.000
Bar S		ONE HOUR	✓	290	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	116	2	0
	Bar S	218	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
Bar E	0	57	100	0	

From	Bar S	32	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.13	4.09	0.1	A	108	162
Bar S	0.26	3.94	0.3	A	266	399
Fleet	0.04	4.39	0.0	A	29	44
Site	0.04	5.99	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	88	164	0.0	0.1	3.855	A
Bar S	218	55	1	1233	0.177	217	125	0.0	0.2	3.541	A
Fleet	24	6	178	897	0.027	24	40	0.0	0.0	4.122	A
Site	15	4	187	656	0.023	15	15	0.0	0.0	5.611	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.953	A
Bar S	261	65	2	1233	0.212	260	150	0.2	0.3	3.703	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.232	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.765	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.941	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.390	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.988	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	130	32	56	1010	0.129	130	241	0.1	0.1	4.090	A
Bar S	319	80	2	1232	0.259	319	184	0.3	0.3	3.942	A
Fleet	35	9	262	855	0.041	35	59	0.0	0.0	4.391	A
Site	22	6	275	623	0.035	22	22	0.0	0.0	5.989	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	106	27	46	1017	0.104	106	197	0.1	0.1	3.956	A
Bar S	261	65	2	1233	0.212	261	150	0.3	0.3	3.705	A
Fleet	29	7	214	879	0.033	29	49	0.0	0.0	4.235	A
Site	18	4	225	642	0.028	18	18	0.0	0.0	5.769	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	89	22	38	1022	0.087	89	165	0.1	0.1	3.860	A
Bar S	218	55	2	1233	0.177	219	126	0.3	0.2	3.551	A
Fleet	24	6	179	897	0.027	24	41	0.0	0.0	4.126	A
Site	15	4	188	656	0.023	15	15	0.0	0.0	5.617	A

2031 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	207	100.000
Bar S		ONE HOUR	✓	238	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	203	3	0
	Bar S	152	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
Bar E	0	28	67	0	

From	Bar S	35	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.19	3.67	0.2	A	190	285
Bar S	0.20	3.46	0.3	A	218	328
Fleet	0.09	4.39	0.1	A	65	98
Site	0.04	5.95	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	155	117	0.0	0.1	3.338	A
Bar S	179	45	3	1303	0.138	179	221	0.0	0.2	3.201	A
Fleet	53	13	127	929	0.058	53	55	0.0	0.1	4.108	A
Site	17	4	169	661	0.025	16	11	0.0	0.0	5.587	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.1	0.2	3.472	A
Bar S	214	53	4	1302	0.164	214	265	0.2	0.2	3.307	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.222	A
Site	20	5	203	648	0.031	20	13	0.0	0.0	5.733	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	324	0.2	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	630	0.038	24	15	0.0	0.0	5.946	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	228	57	101	1208	0.189	228	172	0.2	0.2	3.671	A
Bar S	262	66	4	1302	0.201	262	325	0.3	0.3	3.461	A
Fleet	78	20	186	899	0.087	78	80	0.1	0.1	4.387	A
Site	24	6	249	629	0.038	24	15	0.0	0.0	5.947	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	186	47	83	1222	0.152	186	140	0.2	0.2	3.477	A
Bar S	214	53	4	1302	0.164	214	266	0.3	0.2	3.308	A
Fleet	64	16	152	916	0.070	64	66	0.1	0.1	4.226	A
Site	20	5	203	647	0.031	20	13	0.0	0.0	5.738	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	156	39	69	1233	0.126	156	118	0.2	0.1	3.343	A
Bar S	179	45	3	1303	0.138	179	222	0.2	0.2	3.206	A
Fleet	53	13	127	929	0.058	54	55	0.1	0.1	4.112	A
Site	17	4	170	661	0.025	17	11	0.0	0.0	5.590	A

2031 + WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D31	2031 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	125	100.000
Bar S		ONE HOUR	✓	298	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	123	2	0
	Bar S	226	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	60	100	0

From	Bar S	34	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.22	0.2	A	115	172
Bar S	0.27	4.03	0.4	A	273	410
Fleet	0.04	4.42	0.0	A	29	44
Site	0.04	6.04	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	94	24	38	1003	0.094	94	170	0.0	0.1	3.956	A
Bar S	224	56	1	1222	0.184	223	130	0.0	0.2	3.603	A
Fleet	24	6	184	893	0.027	24	40	0.0	0.0	4.142	A
Site	15	4	193	653	0.023	15	15	0.0	0.0	5.640	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	46	998	0.113	112	204	0.1	0.1	4.063	A
Bar S	268	67	2	1221	0.219	268	156	0.2	0.3	3.775	A
Fleet	29	7	221	874	0.033	29	49	0.0	0.0	4.257	A
Site	18	4	232	639	0.028	18	18	0.0	0.0	5.800	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	138	34	56	992	0.139	137	250	0.1	0.2	4.215	A
Bar S	328	82	2	1221	0.269	328	191	0.3	0.4	4.031	A
Fleet	35	9	271	849	0.042	35	59	0.0	0.0	4.423	A
Site	22	6	284	618	0.036	22	22	0.0	0.0	6.035	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	138	34	56	992	0.139	138	250	0.2	0.2	4.215	A
Bar S	328	82	2	1221	0.269	328	192	0.4	0.4	4.032	A
Fleet	35	9	271	849	0.042	35	59	0.0	0.0	4.424	A
Site	22	6	284	618	0.036	22	22	0.0	0.0	6.036	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	112	28	46	998	0.113	113	204	0.2	0.1	4.064	A
Bar S	268	67	2	1221	0.219	268	157	0.4	0.3	3.780	A
Fleet	29	7	221	874	0.033	29	49	0.0	0.0	4.258	A
Site	18	4	232	638	0.028	18	18	0.0	0.0	5.805	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	94	24	38	1003	0.094	94	171	0.1	0.1	3.962	A
Bar S	224	56	2	1222	0.184	225	131	0.3	0.2	3.611	A
Fleet	24	6	185	893	0.027	24	41	0.0	0.0	4.145	A
Site	15	4	194	653	0.023	15	15	0.0	0.0	5.643	A

2031 + WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D32	2031 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	225	100.000
Bar S		ONE HOUR	✓	246	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	222	3	0
	Bar S	160	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	29	67	0

From	Bar S	38	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.79	0.3	A	206	310
Bar S	0.21	3.56	0.3	A	226	339
Fleet	0.09	4.42	0.1	A	65	98
Site	0.04	5.99	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	169	42	69	1223	0.139	169	122	0.0	0.2	3.414	A
Bar S	185	46	2	1283	0.144	185	235	0.0	0.2	3.275	A
Fleet	53	13	132	925	0.058	53	55	0.0	0.1	4.127	A
Site	17	4	175	658	0.025	16	11	0.0	0.0	5.614	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	202	51	83	1212	0.167	202	146	0.2	0.2	3.563	A
Bar S	221	55	3	1283	0.172	221	282	0.2	0.2	3.389	A
Fleet	64	16	158	911	0.070	64	66	0.1	0.1	4.247	A
Site	20	5	209	644	0.031	20	13	0.0	0.0	5.767	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	248	62	101	1198	0.207	247	179	0.2	0.3	3.786	A
Bar S	271	68	3	1282	0.211	271	345	0.2	0.3	3.557	A
Fleet	78	20	194	893	0.088	78	80	0.1	0.1	4.419	A
Site	24	6	256	625	0.039	24	15	0.0	0.0	5.991	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	248	62	101	1198	0.207	248	179	0.3	0.3	3.787	A
Bar S	271	68	3	1282	0.211	271	346	0.3	0.3	3.557	A
Fleet	78	20	194	893	0.088	78	80	0.1	0.1	4.419	A
Site	24	6	257	625	0.039	24	15	0.0	0.0	5.992	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	202	51	83	1212	0.167	203	147	0.3	0.2	3.565	A
Bar S	221	55	3	1283	0.172	221	283	0.3	0.2	3.391	A
Fleet	64	16	158	911	0.070	64	66	0.1	0.1	4.248	A
Site	20	5	210	644	0.031	20	13	0.0	0.0	5.772	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	169	42	69	1222	0.139	170	123	0.2	0.2	3.419	A
Bar S	185	46	2	1283	0.144	185	237	0.2	0.2	3.281	A
Fleet	53	13	133	925	0.058	54	55	0.1	0.1	4.133	A
Site	17	4	176	657	0.025	17	11	0.0	0.0	5.619	A

2031 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	4.26	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	128	100.000
Bar S		ONE HOUR	✓	300	100.000
Fleet		ONE HOUR	✓	32	100.000
Site		ONE HOUR	✓	20	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	0	126	2	0
	Bar S	228	0	52	20
	Fleet	1	31	0	0
	Site	0	20	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site

From	Bar E	0	61	100	0
	Bar S	35	0	50	100
	Fleet	0	55	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.14	4.26	0.2	A	117	176
Bar S	0.27	4.07	0.4	A	275	413
Fleet	0.04	4.43	0.0	A	29	44
Site	0.04	6.05	0.0	A	18	28

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	172	0.0	0.1	3.992	A
Bar S	226	56	1	1215	0.186	225	133	0.0	0.2	3.631	A
Fleet	24	6	186	892	0.027	24	40	0.0	0.0	4.149	A
Site	15	4	195	652	0.023	15	15	0.0	0.0	5.649	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.1	0.1	4.103	A
Bar S	270	67	2	1215	0.222	269	159	0.2	0.3	3.806	A
Fleet	29	7	223	873	0.033	29	49	0.0	0.0	4.265	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.812	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.1	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.3	0.4	4.066	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.434	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.051	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	141	35	56	986	0.143	141	252	0.2	0.2	4.261	A
Bar S	330	83	2	1215	0.272	330	195	0.4	0.4	4.069	A
Fleet	35	9	273	847	0.042	35	59	0.0	0.0	4.435	A
Site	22	6	286	617	0.036	22	22	0.0	0.0	6.052	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	115	29	46	992	0.116	115	206	0.2	0.1	4.105	A
Bar S	270	67	2	1215	0.222	270	159	0.4	0.3	3.812	A
Fleet	29	7	223	872	0.033	29	49	0.0	0.0	4.268	A
Site	18	4	234	637	0.028	18	18	0.0	0.0	5.815	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	96	24	38	997	0.097	96	173	0.1	0.1	3.999	A
Bar S	226	56	2	1215	0.186	226	133	0.3	0.2	3.641	A
Fleet	24	6	187	891	0.027	24	41	0.0	0.0	4.153	A
Site	15	4	196	652	0.023	15	15	0.0	0.0	5.653	A

2031 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Bar E, Bar S, Fleet, Site	3.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Bar E		ONE HOUR	✓	228	100.000
Bar S		ONE HOUR	✓	248	100.000
Fleet		ONE HOUR	✓	71	100.000
Site		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Bar E	Bar S	Fleet	Site
From	Bar E	1	224	3	0
	Bar S	162	2	70	14
	Fleet	3	68	0	0
	Site	0	22	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Bar E	Bar S	Fleet	Site

From	Bar E	0	30	67	0
	Bar S	40	0	14	100
	Fleet	33	53	0	0
	Site	0	100	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Bar E	0.21	3.83	0.3	A	209	314
Bar S	0.22	3.61	0.3	A	228	341
Fleet	0.09	4.44	0.1	A	65	98
Site	0.04	6.01	0.0	A	20	30

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1215	0.141	171	125	0.0	0.2	3.447	A
Bar S	187	47	3	1270	0.147	186	237	0.0	0.2	3.318	A
Fleet	53	13	134	923	0.058	53	55	0.0	0.1	4.137	A
Site	17	4	177	656	0.025	16	11	0.0	0.0	5.627	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.2	0.2	3.601	A
Bar S	223	56	4	1270	0.176	223	284	0.2	0.2	3.437	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.258	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.784	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.2	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.2	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.434	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.013	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	251	63	101	1190	0.211	251	183	0.3	0.3	3.831	A
Bar S	273	68	4	1269	0.215	273	348	0.3	0.3	3.612	A
Fleet	78	20	197	890	0.088	78	80	0.1	0.1	4.435	A
Site	24	6	260	623	0.039	24	15	0.0	0.0	6.014	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	205	51	83	1204	0.170	205	149	0.3	0.2	3.603	A
Bar S	223	56	4	1270	0.176	223	284	0.3	0.2	3.442	A
Fleet	64	16	161	909	0.070	64	66	0.1	0.1	4.262	A
Site	20	5	212	642	0.031	20	13	0.0	0.0	5.788	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Bar E	172	43	69	1214	0.141	172	125	0.2	0.2	3.455	A
Bar S	187	47	3	1270	0.147	187	238	0.2	0.2	3.322	A
Fleet	53	13	135	923	0.058	54	55	0.1	0.1	4.140	A
Site	17	4	178	656	0.025	17	11	0.0	0.0	5.630	A

Junctions 9
ARCADY 9 - Roundabout Module
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Filename: Swale Way - Barge Way_Sensitivity_FULLLK3.j9
Path: P:\JNY9290 - Kemsley K5\Transport\Arcady\WKN DCO\Swale Way - Barge Way
Report generation date: 08/07/2019 15:22:34

- »2017, AM
- »2017, PM
- »2024, AM
- »2024, PM
- »2024 + Cumulative Development, AM
- »2024 + Cumulative Development, PM
- »2024 + K3 Operational, AM
- »2024 + K3 Operational, PM
- »2024 + K3 and WKN Operational, AM
- »2024 + K3 and WKN Operational, PM
- »2024 + K3 Operational + Cumulative Development, AM
- »2024 + K3 Operational + Cumulative Development, PM
- »2024 + K3 and WKN Operational + Cumulative Development, AM
- »2024 + K3 and WKN Operational + Cumulative Development, PM
- »2031, AM
- »2031, PM
- »2031 + Cumulative Development, AM
- »2031 + Cumulative Development, PM
- »2031 + K3 Operational, AM
- »2031 + K3 Operational, PM
- »2031 + K3 and WKN Operational, AM
- »2031 + K3 and WKN Operational, PM
- »2031 + K3 Operational + Cumulative Development, AM
- »2031 + K3 Operational + Cumulative Development, PM
- »2031 + K3 and WKN Operational + Cumulative Development, AM
- »2031 + K3 and WKN Operational + Cumulative Development, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2017						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.5	3.90	0.32	1.7	6.78	0.64
Swa W - Swale Way West	4.4	13.55	0.82	0.9	4.74	0.46
Barge - Barge Way	0.3	7.43	0.22	0.4	4.75	0.26
2024						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.77	0.42	4.9	15.74	0.84

Swa W - Swale Way West	67.9	141.81	1.08	1.2	5.92	0.55
Barge - Barge Way	0.6	10.04	0.37	0.6	5.79	0.36
2024 + Cumulative Development						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.85	0.42	4.9	15.74	0.84
Swa W - Swale Way West	67.9	141.81	1.08	1.2	5.93	0.55
Barge - Barge Way	0.6	10.04	0.37	0.6	5.80	0.36
2024 + K3 Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.89	0.42	5.5	17.80	0.85
Swa W - Swale Way West	88.1	182.70	1.11	1.3	6.32	0.57
Barge - Barge Way	0.7	10.56	0.40	0.6	6.22	0.39
2024 + K3 and WKN Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.98	0.43	6.0	19.72	0.87
Swa W - Swale Way West	97.1	210.51	1.12	1.4	6.60	0.59
Barge - Barge Way	0.7	11.02	0.42	0.7	6.56	0.42
2024 + K3 Operational + Cumulative Development						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.97	0.43	5.5	17.80	0.85
Swa W - Swale Way West	88.1	182.70	1.11	1.3	6.34	0.57
Barge - Barge Way	0.7	10.56	0.40	0.6	6.23	0.39
2024 + K3 and WKN Operational + Cumulative Development						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.8	5.06	0.43	6.0	19.72	0.87
Swa W - Swale Way West	97.1	210.51	1.12	1.4	6.62	0.59
Barge - Barge Way	0.7	11.02	0.42	0.7	6.57	0.42
2031						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.77	0.42	4.9	15.74	0.84
Swa W - Swale Way West	67.9	141.81	1.08	1.2	5.92	0.55
Barge - Barge Way	0.6	10.04	0.37	0.6	5.79	0.36
2031 + Cumulative Development						
Site - Site Access	0.2	7.83	0.15	0.1	4.92	0.13
Swa S - Swale Way South	0.8	5.16	0.44	6.7	22.16	0.88
Swa W - Swale Way West	139.4	329.14	1.17	1.4	6.43	0.59
Barge - Barge Way	0.6	10.44	0.38	0.6	6.06	0.37
2031 + K3 Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.89	0.42	5.5	17.80	0.85
Swa W - Swale Way West	88.1	182.70	1.11	1.3	6.32	0.57
Barge - Barge Way	0.7	10.56	0.40	0.6	6.22	0.39
2031 + K3 and WKN Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.98	0.43	6.0	19.72	0.87
Swa W - Swale Way West	97.1	210.51	1.12	1.4	6.60	0.59
Barge - Barge Way	0.7	11.02	0.42	0.7	6.56	0.42
2031 + K3 Operational + Cumulative Development						
Site - Site Access	0.2	7.87	0.15	0.2	5.10	0.13
Swa S - Swale Way South	0.8	5.29	0.44	7.9	26.15	0.90
Swa W - Swale Way West	162.9	400.97	1.20	1.5	6.89	0.61
Barge - Barge Way	0.7	11.00	0.41	0.7	6.53	0.41
2031 + K3 and WKN Operational + Cumulative Development						
Site - Site Access	0.2	7.97	0.16	0.2	5.24	0.13
Swa S - Swale Way South	0.8	5.40	0.45	9.0	30.05	0.91
Swa W - Swale Way West	173.4	433.56	1.22	1.6	7.21	0.62

Barge - Barge Way	0.8	11.49	0.43	0.8	6.90	0.43
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Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/11/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\jack.clarke-williams
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	10.51	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
Site	Site Access	
Swa S	Swale Way South	
Swa W	Swale Way West	
Barge	Barge Way	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
Site - Site Access	3.50	6.50	11.0	15.0	45.0	25.0	
Swa S - Swale Way South	3.75	7.00	13.0	23.0	45.5	30.0	
Swa W - Swale Way West	3.75	7.00	10.0	47.5	45.5	30.0	
Barge - Barge Way	3.50	6.50	16.5	23.0	45.5	28.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
Site - Site Access	0.598	1548
Swa S - Swale Way South	0.627	1694
Swa W - Swale Way West	0.628	1665
Barge - Barge Way	0.622	1657

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	400	100.000
Swa W - Swale Way West		ONE HOUR	✓	1107	100.000
Barge - Barge Way		ONE HOUR	✓	127	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	358	41
	Swa W - Swale Way West	0	925	2	180
	Barge - Barge Way	0	34	92	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	15	27
	Swa W - Swale Way West	0	5	50	34
	Barge - Barge Way	0	29	70	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.32	3.90	0.5	A	367	551
Swa W - Swale Way West	0.82	13.55	4.4	B	1016	1524
Barge - Barge Way	0.22	7.43	0.3	A	117	175

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	790	1021	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	301	75	71	1393	0.216	300	718	0.0	0.3	3.290	A
Swa W - Swale Way West	833	208	32	1493	0.558	828	339	0.0	1.2	5.377	A
Barge - Barge Way	96	24	694	759	0.126	95	166	0.0	0.1	5.415	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	946	916	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	360	90	85	1380	0.261	359	861	0.3	0.4	3.525	A
Swa W - Swale Way West	995	249	39	1488	0.669	992	406	1.2	2.0	7.210	A
Barge - Barge Way	114	29	832	703	0.162	114	199	0.1	0.2	6.114	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1153	778	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	104	1363	0.323	440	1049	0.4	0.5	3.898	A
Swa W - Swale Way West	1219	305	47	1482	0.822	1210	497	2.0	4.3	12.778	B
Barge - Barge Way	140	35	1014	628	0.223	139	243	0.2	0.3	7.371	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1161	773	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	105	1363	0.323	440	1056	0.5	0.5	3.902	A
Swa W - Swale Way West	1219	305	47	1482	0.822	1218	498	4.3	4.4	13.549	B
Barge - Barge Way	140	35	1021	625	0.224	140	244	0.3	0.3	7.426	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	957	909	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	360	90	86	1380	0.261	360	871	0.5	0.4	3.533	A
Swa W - Swale Way West	995	249	39	1488	0.669	1005	407	4.4	2.1	7.584	A
Barge - Barge Way	114	29	842	698	0.163	115	201	0.3	0.2	6.169	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	797	1016	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	301	75	72	1393	0.216	301	725	0.4	0.3	3.299	A
Swa W - Swale Way West	833	208	32	1493	0.558	837	341	2.1	1.3	5.511	A
Barge - Barge Way	96	24	701	756	0.126	96	168	0.2	0.1	5.452	A

2017, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	5.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	839	100.000
Swa W - Swale Way West		ONE HOUR	✓	592	100.000
Barge - Barge Way		ONE HOUR	✓	247	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	776	62
	Swa W - Swale Way West	0	454	0	138
	Barge - Barge Way	0	55	192	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	4	13
	Swa W - Swale Way West	0	8	0	36
	Barge - Barge Way	0	22	30	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.64	6.78	1.7	A	770	1155
Swa W - Swale Way West	0.46	4.74	0.9	A	543	815
Barge - Barge Way	0.26	4.75	0.4	A	227	340

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	526	1185	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	632	158	144	1507	0.419	629	382	0.0	0.7	4.088	A
Swa W - Swale Way West	446	111	47	1424	0.313	444	725	0.0	0.5	3.665	A
Barge - Barge Way	186	46	341	1114	0.167	185	150	0.0	0.2	3.874	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	630	1113	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	754	189	172	1484	0.508	753	458	0.7	1.0	4.914	A
Swa W - Swale Way West	532	133	57	1419	0.375	532	869	0.5	0.6	4.055	A
Barge - Barge Way	222	56	409	1078	0.206	222	180	0.2	0.3	4.202	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	772	1016	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	924	231	211	1454	0.635	921	561	1.0	1.7	6.716	A
Swa W - Swale Way West	652	163	69	1411	0.462	651	1063	0.6	0.9	4.731	A
Barge - Barge Way	272	68	500	1030	0.264	272	220	0.3	0.4	4.742	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	773	1015	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	924	231	211	1454	0.635	924	562	1.7	1.7	6.785	A
Swa W - Swale Way West	652	163	69	1411	0.462	652	1066	0.9	0.9	4.742	A
Barge - Barge Way	272	68	501	1030	0.264	272	220	0.4	0.4	4.748	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	632	1112	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	754	189	173	1484	0.508	757	459	1.7	1.0	4.971	A
Swa W - Swale Way West	532	133	57	1419	0.375	533	873	0.9	0.6	4.070	A
Barge - Barge Way	222	56	410	1078	0.206	222	180	0.4	0.3	4.210	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	529	1183	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	632	158	145	1506	0.419	633	384	1.0	0.7	4.129	A
Swa W - Swale Way West	446	111	48	1424	0.313	446	730	0.6	0.5	3.685	A
Barge - Barge Way	186	46	343	1113	0.167	186	151	0.3	0.2	3.886	A

2024, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	93.85	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1417	100.000
Barge - Barge Way		ONE HOUR	✓	191	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	258
	Barge - Barge Way	0	50	140	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	34
	Barge - Barge Way	0	20	65	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.77	0.7	A	449	673
Swa W - Swale Way West	1.08	141.81	67.9	F	1300	1950
Barge - Barge Way	0.37	10.04	0.6	B	175	263

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1008	863	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	107	1336	0.275	367	901	0.0	0.4	3.708	A
Swa W - Swale Way West	1067	267	36	1462	0.730	1056	438	0.0	2.6	8.669	A
Barge - Barge Way	144	36	865	707	0.203	143	228	0.0	0.3	6.365	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1203	730	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	128	1318	0.334	439	1075	0.4	0.5	4.095	A
Swa W - Swale Way West	1274	318	43	1457	0.874	1260	524	2.6	6.1	17.154	C
Barge - Barge Way	172	43	1032	635	0.271	171	272	0.3	0.4	7.759	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	607	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	157	1293	0.416	538	1221	0.5	0.7	4.760	A
Swa W - Swale Way West	1560	390	53	1450	1.076	1427	641	6.1	39.3	68.013	F
Barge - Barge Way	210	53	1169	575	0.366	209	312	0.4	0.6	9.827	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1394	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	157	1293	0.417	538	1236	0.7	0.7	4.772	A
Swa W - Swale Way West	1560	390	53	1450	1.076	1445	643	39.3	67.9	141.806	F
Barge - Barge Way	210	53	1183	569	0.370	210	315	0.6	0.6	10.042	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1348	637	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	129	1317	0.334	440	1218	0.7	0.5	4.110	A
Swa W - Swale Way West	1274	318	43	1457	0.874	1436	526	67.9	27.5	122.843	F
Barge - Barge Way	172	43	1175	572	0.300	172	304	0.6	0.4	9.016	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1098	804	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	108	1335	0.276	369	990	0.5	0.4	3.728	A
Swa W - Swale Way West	1067	267	36	1462	0.730	1165	441	27.5	2.8	16.331	C
Barge - Barge Way	144	36	954	669	0.215	144	248	0.4	0.3	6.876	A

2024, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	10.57	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	678	100.000
Barge - Barge Way		ONE HOUR	✓	315	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	177
	Barge - Barge Way	0	57	258	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	40
	Barge - Barge Way	0	21	34	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.84	15.74	4.9	C	963	1444
Swa W - Swale Way West	0.55	5.92	1.2	A	622	933
Barge - Barge Way	0.36	5.79	0.6	A	289	434

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	612	1112	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	193	1453	0.544	785	419	0.0	1.2	5.353	A
Swa W - Swale Way West	510	128	57	1371	0.372	508	921	0.0	0.6	4.163	A
Barge - Barge Way	237	59	376	1061	0.223	236	189	0.0	0.3	4.354	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	733	1025	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	232	1422	0.663	940	502	1.2	1.9	7.418	A
Swa W - Swale Way West	610	152	68	1364	0.447	609	1104	0.6	0.8	4.761	A
Barge - Barge Way	283	71	451	1022	0.277	283	226	0.3	0.4	4.865	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	898	909	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	284	1381	0.836	1144	614	1.9	4.7	14.555	B
Swa W - Swale Way West	746	187	83	1355	0.551	745	1345	0.8	1.2	5.881	A
Barge - Barge Way	347	87	551	970	0.358	346	276	0.4	0.6	5.768	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	899	907	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	284	1381	0.837	1154	615	4.7	4.9	15.744	C
Swa W - Swale Way West	746	187	84	1355	0.551	746	1355	1.2	1.2	5.915	A
Barge - Barge Way	347	87	553	969	0.358	347	277	0.6	0.6	5.785	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	736	1023	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	232	1422	0.663	954	504	4.9	2.0	7.885	A
Swa W - Swale Way West	610	152	69	1363	0.447	611	1118	1.2	0.8	4.796	A
Barge - Barge Way	283	71	452	1021	0.277	284	228	0.6	0.4	4.886	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	616	1109	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	195	1452	0.544	793	422	2.0	1.2	5.491	A
Swa W - Swale Way West	510	128	57	1370	0.372	511	930	0.8	0.6	4.196	A
Barge - Barge Way	237	59	379	1060	0.224	238	190	0.4	0.3	4.379	A

2024 + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	93.62	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	491	100.000
Swa W - Swale Way West		ONE HOUR	✓	1417	100.000
Barge - Barge Way		ONE HOUR	✓	191	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	444	46
	Swa W - Swale Way West	0	1157	2	258
	Barge - Barge Way	0	50	140	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	19	24
	Swa W - Swale Way West	0	7	50	34
	Barge - Barge Way	0	20	65	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.85	0.7	A	451	676
Swa W - Swale Way West	1.08	141.81	67.9	F	1300	1950
Barge - Barge Way	0.37	10.04	0.6	B	175	263

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1008	863	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	107	1326	0.279	368	901	0.0	0.4	3.750	A
Swa W - Swale Way West	1067	267	36	1462	0.730	1056	439	0.0	2.6	8.668	A
Barge - Barge Way	144	36	865	707	0.203	143	228	0.0	0.3	6.365	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1203	730	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	128	1308	0.337	441	1075	0.4	0.5	4.151	A
Swa W - Swale Way West	1274	318	43	1457	0.874	1260	526	2.6	6.1	17.154	C
Barge - Barge Way	172	43	1032	635	0.271	171	272	0.3	0.4	7.759	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	607	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	157	1283	0.421	540	1221	0.5	0.7	4.838	A
Swa W - Swale Way West	1560	390	53	1450	1.076	1427	644	6.1	39.3	68.013	F
Barge - Barge Way	210	53	1169	575	0.366	209	312	0.4	0.6	9.827	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1394	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	157	1283	0.421	541	1236	0.7	0.7	4.849	A
Swa W - Swale Way West	1560	390	53	1450	1.076	1445	645	39.3	67.9	141.806	F
Barge - Barge Way	210	53	1183	569	0.370	210	315	0.6	0.6	10.042	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1348	637	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	129	1307	0.338	442	1218	0.7	0.5	4.168	A
Swa W - Swale Way West	1274	318	43	1457	0.874	1436	528	67.9	27.5	122.843	F
Barge - Barge Way	172	43	1175	572	0.300	172	304	0.6	0.4	9.018	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1098	804	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	108	1325	0.279	370	990	0.5	0.4	3.773	A
Swa W - Swale Way West	1067	267	36	1462	0.730	1165	442	27.5	2.8	16.331	C
Barge - Barge Way	144	36	954	669	0.215	144	248	0.4	0.3	6.876	A

2024 + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	10.57	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	680	100.000
Barge - Barge Way		ONE HOUR	✓	315	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	503	0	177
	Barge - Barge Way	0	57	258	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	40
	Barge - Barge Way	0	21	34	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.84	15.74	4.9	C	963	1444
Swa W - Swale Way West	0.55	5.93	1.2	A	624	936
Barge - Barge Way	0.36	5.80	0.6	A	289	434

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	614	1111	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	193	1453	0.544	785	420	0.0	1.2	5.353	A
Swa W - Swale Way West	512	128	57	1371	0.373	510	921	0.0	0.6	4.169	A
Barge - Barge Way	237	59	378	1061	0.224	236	189	0.0	0.3	4.359	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	735	1024	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	232	1422	0.663	940	504	1.2	1.9	7.418	A
Swa W - Swale Way West	611	153	68	1364	0.448	610	1104	0.6	0.8	4.770	A
Barge - Barge Way	283	71	452	1021	0.277	283	226	0.3	0.4	4.871	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	900	907	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	284	1381	0.836	1144	616	1.9	4.7	14.555	B
Swa W - Swale Way West	749	187	83	1356	0.552	747	1345	0.8	1.2	5.901	A
Barge - Barge Way	347	87	554	968	0.358	346	276	0.4	0.6	5.779	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	902	906	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	284	1381	0.837	1154	618	4.7	4.9	15.744	C
Swa W - Swale Way West	749	187	84	1355	0.552	749	1355	1.2	1.2	5.934	A
Barge - Barge Way	347	87	555	968	0.358	347	277	0.6	0.6	5.796	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	738	1022	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	232	1422	0.663	954	506	4.9	2.0	7.884	A
Swa W - Swale Way West	611	153	69	1364	0.448	613	1118	1.2	0.8	4.806	A
Barge - Barge Way	283	71	454	1021	0.277	284	228	0.6	0.4	4.892	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	618	1108	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	195	1452	0.544	793	423	2.0	1.2	5.489	A
Swa W - Swale Way West	512	128	57	1371	0.374	513	930	0.8	0.6	4.200	A
Barge - Barge Way	237	59	380	1059	0.224	238	190	0.4	0.3	4.383	A

2024 + K3 Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	120.09	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1444	100.000
Barge - Barge Way		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	285
	Barge - Barge Way	0	50	155	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	37
	Barge - Barge Way	0	20	69	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.89	0.7	A	449	673
Swa W - Swale Way West	1.11	182.70	88.1	F	1325	1988
Barge - Barge Way	0.40	10.56	0.7	B	189	284

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1018	850	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	118	1324	0.278	367	900	0.0	0.4	3.752	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1076	449	0.0	2.9	9.375	A
Barge - Barge Way	155	39	864	690	0.225	154	248	0.0	0.3	6.702	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1213	715	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	142	1303	0.337	439	1072	0.4	0.5	4.165	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1280	538	2.9	7.3	20.075	C
Barge - Barge Way	185	46	1029	620	0.299	185	295	0.3	0.4	8.256	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1368	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	173	1275	0.422	538	1195	0.5	0.7	4.874	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1422	658	7.3	49.3	82.225	F
Barge - Barge Way	227	57	1142	572	0.397	226	332	0.4	0.6	10.378	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1379	596	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	174	1275	0.422	538	1206	0.7	0.7	4.889	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1435	659	49.3	88.1	179.863	F
Barge - Barge Way	227	57	1153	567	0.400	227	335	0.6	0.7	10.562	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1333	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	143	1302	0.338	440	1190	0.7	0.5	4.183	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1428	540	88.1	55.7	182.699	F
Barge - Barge Way	185	46	1147	570	0.325	186	324	0.7	0.5	9.388	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1197	734	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	120	1323	0.278	369	1077	0.5	0.4	3.777	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1297	452	55.7	3.3	50.557	F
Barge - Barge Way	155	39	1041	615	0.252	156	291	0.5	0.3	7.853	A

2024 + K3 Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.59	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	694	100.000
Barge - Barge Way		ONE HOUR	✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	193
	Barge - Barge Way	0	57	285	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	45
	Barge - Barge Way	0	21	36	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.80	5.5	C	963	1444
Swa W - Swale Way West	0.57	6.32	1.3	A	637	955
Barge - Barge Way	0.39	6.22	0.6	A	314	471

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	632	1093	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	213	1434	0.551	785	419	0.0	1.2	5.504	A
Swa W - Swale Way West	522	131	57	1349	0.387	520	942	0.0	0.6	4.328	A
Barge - Barge Way	257	64	376	1047	0.246	256	201	0.0	0.3	4.546	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	758	1003	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	256	1400	0.674	940	502	1.2	2.0	7.768	A
Swa W - Swale Way West	624	156	68	1343	0.465	623	1128	0.6	0.9	4.995	A
Barge - Barge Way	307	77	451	1008	0.305	307	240	0.3	0.4	5.130	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	927	881	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	313	1354	0.853	1142	614	2.0	5.2	16.132	C
Swa W - Swale Way West	764	191	83	1334	0.573	762	1373	0.9	1.3	6.273	A
Barge - Barge Way	377	94	551	956	0.394	376	294	0.4	0.6	6.192	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	929	880	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	314	1353	0.854	1154	615	5.2	5.5	17.801	C
Swa W - Swale Way West	764	191	84	1334	0.573	764	1384	1.3	1.3	6.318	A
Barge - Barge Way	377	94	553	956	0.394	377	295	0.6	0.6	6.217	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	761	1001	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	257	1399	0.674	956	504	5.5	2.1	8.364	A
Swa W - Swale Way West	624	156	69	1342	0.465	626	1144	1.3	0.9	5.037	A
Barge - Barge Way	307	77	453	1007	0.305	308	242	0.6	0.4	5.157	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	637	1090	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	215	1433	0.551	793	422	2.1	1.2	5.658	A
Swa W - Swale Way West	522	131	57	1349	0.387	523	951	0.9	0.6	4.366	A
Barge - Barge Way	257	64	379	1045	0.246	258	202	0.4	0.3	4.573	A

2024 + K3 and WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	137.54	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1454	100.000
Barge - Barge Way		ONE HOUR	✓	217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	295
	Barge - Barge Way	0	50	166	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	39
	Barge - Barge Way	0	20	71	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.98	0.7	A	449	673
Swa W - Swale Way West	1.12	210.51	97.1	F	1334	2001
Barge - Barge Way	0.42	11.02	0.7	B	199	299

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1026	840	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	126	1316	0.280	367	900	0.0	0.4	3.787	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1083	457	0.0	3.0	9.725	A
Barge - Barge Way	163	41	864	681	0.240	162	255	0.0	0.3	6.923	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1221	705	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	151	1293	0.340	439	1070	0.4	0.5	4.213	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1287	547	3.0	8.0	21.610	C
Barge - Barge Way	195	49	1027	612	0.319	194	303	0.3	0.5	8.600	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1369	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	185	1263	0.426	537	1184	0.5	0.7	4.959	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1417	670	8.0	53.9	89.012	F
Barge - Barge Way	239	60	1131	569	0.420	238	339	0.5	0.7	10.838	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	590	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	186	1262	0.427	538	1193	0.7	0.7	4.975	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1428	671	53.9	97.1	197.545	F
Barge - Barge Way	239	60	1140	565	0.423	239	342	0.7	0.7	11.023	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1330	635	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	153	1292	0.340	440	1178	0.7	0.5	4.233	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1422	550	97.1	68.4	210.510	F
Barge - Barge Way	195	49	1134	567	0.344	196	331	0.7	0.5	9.709	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1244	700	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	128	1314	0.280	369	1116	0.5	0.4	3.812	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1354	461	68.4	3.6	79.133	F
Barge - Barge Way	163	41	1080	590	0.277	164	310	0.5	0.4	8.453	A

2024 + K3 and WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.51	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	704	100.000
Barge - Barge Way		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	203
	Barge - Barge Way	0	57	306	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	48
	Barge - Barge Way	0	21	37	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.87	19.72	6.0	C	963	1444
Swa W - Swale Way West	0.59	6.60	1.4	A	646	969
Barge - Barge Way	0.42	6.56	0.7	A	333	500

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	648	1079	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	229	1420	0.556	785	419	0.0	1.2	5.624	A
Swa W - Swale Way West	530	133	57	1336	0.397	527	957	0.0	0.7	4.439	A
Barge - Barge Way	273	68	376	1039	0.263	272	208	0.0	0.4	4.683	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	776	986	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	275	1383	0.682	940	502	1.2	2.1	8.054	A
Swa W - Swale Way West	633	158	68	1329	0.476	632	1146	0.7	0.9	5.154	A
Barge - Barge Way	326	82	451	1001	0.326	326	249	0.4	0.5	5.330	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	950	861	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	336	1333	0.866	1141	614	2.1	5.7	17.528	C
Swa W - Swale Way West	775	194	83	1321	0.587	773	1394	0.9	1.4	6.547	A
Barge - Barge Way	400	100	551	949	0.421	399	304	0.5	0.7	6.529	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	952	859	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	337	1332	0.867	1154	615	5.7	6.0	19.718	C
Swa W - Swale Way West	775	194	84	1321	0.587	775	1407	1.4	1.4	6.599	A
Barge - Barge Way	400	100	553	949	0.421	400	306	0.7	0.7	6.558	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	780	984	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	276	1382	0.682	958	504	6.0	2.2	8.784	A
Swa W - Swale Way West	633	158	69	1329	0.476	635	1165	1.4	0.9	5.205	A
Barge - Barge Way	326	82	453	1000	0.326	327	252	0.7	0.5	5.361	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	652	1076	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	231	1419	0.557	793	422	2.2	1.3	5.789	A
Swa W - Swale Way West	530	133	57	1335	0.397	531	967	0.9	0.7	4.480	A
Barge - Barge Way	273	68	379	1038	0.263	274	210	0.5	0.4	4.714	A

2024 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	119.80	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	491	100.000
Swa W - Swale Way West		ONE HOUR	✓	1444	100.000
Barge - Barge Way		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	444	46
	Swa W - Swale Way West	0	1157	2	285
	Barge - Barge Way	0	50	155	1

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
Site - Site Access	0	0	0	0
Swa S - Swale Way South	0	0	19	24
Swa W - Swale Way West	0	7	50	37
Barge - Barge Way	0	20	69	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.97	0.7	A	451	676
Swa W - Swale Way West	1.11	182.70	88.1	F	1325	1988
Barge - Barge Way	0.40	10.56	0.7	B	189	284

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1018	850	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	118	1314	0.281	368	900	0.0	0.4	3.798	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1076	450	0.0	2.9	9.375	A
Barge - Barge Way	155	39	864	690	0.225	154	248	0.0	0.3	6.702	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1213	715	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	142	1293	0.341	441	1072	0.4	0.5	4.220	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1280	539	2.9	7.3	20.075	C
Barge - Barge Way	185	46	1029	620	0.299	185	295	0.3	0.4	8.256	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1368	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	173	1266	0.427	540	1195	0.5	0.7	4.953	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1422	660	7.3	49.3	82.225	F
Barge - Barge Way	227	57	1142	572	0.397	226	332	0.4	0.6	10.378	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1379	596	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	174	1265	0.427	541	1206	0.7	0.7	4.969	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1435	661	49.3	88.1	179.863	F
Barge - Barge Way	227	57	1153	567	0.400	227	335	0.6	0.7	10.562	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1333	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	143	1292	0.342	442	1190	0.7	0.5	4.238	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1428	542	88.1	55.7	182.699	F
Barge - Barge Way	185	46	1147	570	0.325	186	324	0.7	0.5	9.390	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1197	734	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	120	1313	0.282	370	1077	0.5	0.4	3.820	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1297	454	55.7	3.3	50.557	F
Barge - Barge Way	155	39	1041	615	0.252	156	291	0.5	0.3	7.853	A

2024 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.60	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	696	100.000
Barge - Barge Way		ONE HOUR	✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	503	0	193
	Barge - Barge Way	0	57	285	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
Site - Site Access	0	0	0	0
Swa S - Swale Way South	0	0	5	11
Swa W - Swale Way West	0	11	0	45
Barge - Barge Way	0	21	36	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.80	5.5	C	963	1444
Swa W - Swale Way West	0.57	6.34	1.3	A	639	958
Barge - Barge Way	0.39	6.23	0.6	A	314	471

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	634	1092	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	213	1434	0.551	785	420	0.0	1.2	5.504	A
Swa W - Swale Way West	524	131	57	1350	0.388	521	942	0.0	0.6	4.334	A
Barge - Barge Way	257	64	378	1046	0.246	256	201	0.0	0.3	4.550	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	759	1002	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	256	1400	0.674	940	504	1.2	2.0	7.768	A
Swa W - Swale Way West	626	156	68	1343	0.466	625	1128	0.6	0.9	5.006	A
Barge - Barge Way	307	77	452	1007	0.305	307	240	0.3	0.4	5.137	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	929	880	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	313	1354	0.853	1142	616	2.0	5.2	16.132	C
Swa W - Swale Way West	766	192	83	1335	0.574	764	1373	0.9	1.3	6.294	A
Barge - Barge Way	377	94	554	955	0.394	376	294	0.4	0.6	6.205	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	931	878	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	314	1353	0.854	1154	618	5.2	5.5	17.801	C
Swa W - Swale Way West	766	192	84	1334	0.574	766	1384	1.3	1.3	6.339	A
Barge - Barge Way	377	94	555	954	0.395	377	295	0.6	0.6	6.229	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	763	1000	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	257	1399	0.674	956	506	5.5	2.1	8.366	A
Swa W - Swale Way West	626	156	69	1342	0.466	628	1144	1.3	0.9	5.048	A
Barge - Barge Way	307	77	454	1006	0.306	308	242	0.6	0.4	5.164	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	638	1089	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	215	1433	0.551	793	423	2.1	1.2	5.658	A
Swa W - Swale Way West	524	131	57	1349	0.388	525	951	0.9	0.6	4.374	A
Barge - Barge Way	257	64	380	1045	0.246	258	202	0.4	0.3	4.579	A

2024 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	137.21	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	491	100.000
Swa W - Swale Way West		ONE HOUR	✓	1454	100.000
Barge - Barge Way		ONE HOUR	✓	217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	444	46
	Swa W - Swale Way West	0	1157	2	295
	Barge - Barge Way	0	50	166	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	19	24
	Swa W - Swale Way West	0	7	50	39
	Barge - Barge Way	0	20	71	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	5.06	0.8	A	451	676
Swa W - Swale Way West	1.12	210.51	97.1	F	1334	2001
Barge - Barge Way	0.42	11.02	0.7	B	199	299

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1026	840	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	126	1306	0.283	368	900	0.0	0.4	3.834	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1083	458	0.0	3.0	9.725	A
Barge - Barge Way	163	41	864	681	0.240	162	255	0.0	0.3	6.923	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1221	705	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	151	1283	0.344	441	1070	0.4	0.5	4.271	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1287	549	3.0	8.0	21.609	C
Barge - Barge Way	195	49	1027	612	0.319	194	303	0.3	0.5	8.600	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1369	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	185	1253	0.431	540	1184	0.5	0.8	5.041	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1417	672	8.0	53.9	89.012	F
Barge - Barge Way	239	60	1131	569	0.420	238	339	0.5	0.7	10.838	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	590	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	186	1252	0.432	541	1193	0.8	0.8	5.057	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1428	674	53.9	97.1	197.544	F
Barge - Barge Way	239	60	1140	565	0.423	239	342	0.7	0.7	11.023	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1330	635	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	153	1282	0.344	442	1178	0.8	0.5	4.293	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1422	552	97.1	68.4	210.508	F
Barge - Barge Way	195	49	1134	567	0.344	196	331	0.7	0.5	9.707	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1244	700	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	128	1304	0.283	370	1116	0.5	0.4	3.856	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1354	462	68.4	3.6	79.134	F
Barge - Barge Way	163	41	1080	590	0.277	164	310	0.5	0.4	8.453	A

2024 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.52	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	706	100.000
Barge - Barge Way		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	503	0	203
	Barge - Barge Way	0	57	306	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	48
	Barge - Barge Way	0	21	37	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.87	19.72	6.0	C	963	1444
Swa W - Swale Way West	0.59	6.62	1.4	A	648	972
Barge - Barge Way	0.42	6.57	0.7	A	333	500

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	649	1078	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	229	1420	0.556	785	420	0.0	1.2	5.624	A
Swa W - Swale Way West	532	133	57	1336	0.398	529	957	0.0	0.7	4.445	A
Barge - Barge Way	273	68	378	1038	0.263	272	208	0.0	0.4	4.688	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	778	985	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	275	1383	0.682	940	504	1.2	2.1	8.054	A
Swa W - Swale Way West	635	159	68	1330	0.477	634	1146	0.7	0.9	5.164	A
Barge - Barge Way	326	82	452	1000	0.326	326	249	0.4	0.5	5.337	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	952	859	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	336	1333	0.866	1141	616	2.1	5.7	17.528	C
Swa W - Swale Way West	777	194	83	1321	0.588	775	1394	0.9	1.4	6.569	A
Barge - Barge Way	400	100	553	948	0.422	399	304	0.5	0.7	6.540	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	955	857	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	337	1332	0.867	1154	618	5.7	6.0	19.718	C
Swa W - Swale Way West	777	194	84	1321	0.589	777	1407	1.4	1.4	6.622	A
Barge - Barge Way	400	100	555	947	0.422	400	306	0.7	0.7	6.572	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	782	982	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	276	1382	0.682	958	506	6.0	2.2	8.782	A
Swa W - Swale Way West	635	159	69	1329	0.478	637	1165	1.4	0.9	5.214	A
Barge - Barge Way	326	82	455	999	0.327	327	252	0.7	0.5	5.369	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	654	1075	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	231	1419	0.557	793	423	2.2	1.3	5.791	A
Swa W - Swale Way West	532	133	57	1336	0.398	533	967	0.9	0.7	4.489	A
Barge - Barge Way	273	68	380	1037	0.264	274	210	0.5	0.4	4.721	A

2031, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	93.85	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1417	100.000
Barge - Barge Way		ONE HOUR	✓	191	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	258
	Barge - Barge Way	0	50	140	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	34
	Barge - Barge Way	0	20	65	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.77	0.7	A	449	673
Swa W - Swale Way West	1.08	141.81	67.9	F	1300	1950
Barge - Barge Way	0.37	10.04	0.6	B	175	263

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1008	863	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	107	1336	0.275	367	901	0.0	0.4	3.708	A
Swa W - Swale Way West	1067	267	36	1462	0.730	1056	438	0.0	2.6	8.669	A
Barge - Barge Way	144	36	865	707	0.203	143	228	0.0	0.3	6.365	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1203	730	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	128	1318	0.334	439	1075	0.4	0.5	4.095	A
Swa W - Swale Way West	1274	318	43	1457	0.874	1260	524	2.6	6.1	17.154	C
Barge - Barge Way	172	43	1032	635	0.271	171	272	0.3	0.4	7.759	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	607	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	157	1293	0.416	538	1221	0.5	0.7	4.760	A
Swa W - Swale Way West	1560	390	53	1450	1.076	1427	641	6.1	39.3	68.013	F
Barge - Barge Way	210	53	1169	575	0.366	209	312	0.4	0.6	9.827	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1394	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	157	1293	0.417	538	1236	0.7	0.7	4.772	A
Swa W - Swale Way West	1560	390	53	1450	1.076	1445	643	39.3	67.9	141.806	F
Barge - Barge Way	210	53	1183	569	0.370	210	315	0.6	0.6	10.042	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1348	637	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	129	1317	0.334	440	1218	0.7	0.5	4.110	A
Swa W - Swale Way West	1274	318	43	1457	0.874	1436	526	67.9	27.5	122.843	F
Barge - Barge Way	172	43	1175	572	0.300	172	304	0.6	0.4	9.016	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1098	804	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	108	1335	0.276	369	990	0.5	0.4	3.728	A
Swa W - Swale Way West	1067	267	36	1462	0.730	1165	441	27.5	2.8	16.331	C
Barge - Barge Way	144	36	954	669	0.215	144	248	0.4	0.3	6.876	A

2031, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	10.57	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	678	100.000
Barge - Barge Way		ONE HOUR	✓	315	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	177
	Barge - Barge Way	0	57	258	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	40
	Barge - Barge Way	0	21	34	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.84	15.74	4.9	C	963	1444
Swa W - Swale Way West	0.55	5.92	1.2	A	622	933
Barge - Barge Way	0.36	5.79	0.6	A	289	434

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	612	1112	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	193	1453	0.544	785	419	0.0	1.2	5.353	A
Swa W - Swale Way West	510	128	57	1371	0.372	508	921	0.0	0.6	4.163	A
Barge - Barge Way	237	59	376	1061	0.223	236	189	0.0	0.3	4.354	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	733	1025	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	232	1422	0.663	940	502	1.2	1.9	7.418	A
Swa W - Swale Way West	610	152	68	1364	0.447	609	1104	0.6	0.8	4.761	A
Barge - Barge Way	283	71	451	1022	0.277	283	226	0.3	0.4	4.865	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	898	909	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	284	1381	0.836	1144	614	1.9	4.7	14.555	B
Swa W - Swale Way West	746	187	83	1355	0.551	745	1345	0.8	1.2	5.881	A
Barge - Barge Way	347	87	551	970	0.358	346	276	0.4	0.6	5.768	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	899	907	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	284	1381	0.837	1154	615	4.7	4.9	15.744	C
Swa W - Swale Way West	746	187	84	1355	0.551	746	1355	1.2	1.2	5.915	A
Barge - Barge Way	347	87	553	969	0.358	347	277	0.6	0.6	5.785	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	736	1023	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	232	1422	0.663	954	504	4.9	2.0	7.885	A
Swa W - Swale Way West	610	152	69	1363	0.447	611	1118	1.2	0.8	4.796	A
Barge - Barge Way	283	71	452	1021	0.277	284	228	0.6	0.4	4.886	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	616	1109	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	195	1452	0.544	793	422	2.0	1.2	5.491	A
Swa W - Swale Way West	510	128	57	1370	0.372	511	930	0.8	0.6	4.196	A
Barge - Barge Way	237	59	379	1060	0.224	238	190	0.4	0.3	4.379	A

2031 + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	213.64	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	76	100.000
Swa S - Swale Way South		ONE HOUR	✓	492	100.000
Swa W - Swale Way West		ONE HOUR	✓	1546	100.000
Barge - Barge Way		ONE HOUR	✓	191	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	76	0
	Swa S - Swale Way South	1	1	444	46
	Swa W - Swale Way West	128	1158	2	258
	Barge - Barge Way	0	50	140	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	21	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	11	7	50	34
	Barge - Barge Way	0	20	65	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.15	7.83	0.2	A	70	105
Swa S - Swale Way South	0.44	5.16	0.8	A	451	677
Swa W - Swale Way West	1.17	329.14	139.4	F	1419	2128
Barge - Barge Way	0.38	10.44	0.6	B	175	263

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1006	714	0.080	57	96	0.0	0.1	5.475	A
Swa S - Swale Way South	370	93	164	1300	0.285	369	899	0.0	0.4	3.858	A
Swa W - Swale Way West	1164	291	37	1463	0.796	1149	496	0.0	3.7	11.025	B
Barge - Barge Way	144	36	959	665	0.216	143	227	0.0	0.3	6.881	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1190	610	0.112	68	113	0.1	0.1	6.642	A
Swa S - Swale Way South	442	111	196	1275	0.347	442	1062	0.4	0.5	4.319	A
Swa W - Swale Way West	1390	347	44	1458	0.953	1357	594	3.7	11.9	28.961	D
Barge - Barge Way	172	43	1132	589	0.291	171	269	0.3	0.4	8.602	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1294	546	0.153	83	121	0.1	0.2	7.777	A
Swa S - Swale Way South	542	135	240	1240	0.437	541	1138	0.5	0.8	5.139	A
Swa W - Swale Way West	1702	426	54	1451	1.173	1444	727	11.9	76.4	119.376	F
Barge - Barge Way	210	53	1206	557	0.378	210	293	0.4	0.6	10.336	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1299	543	0.154	84	121	0.2	0.2	7.830	A
Swa S - Swale Way South	542	135	241	1240	0.437	542	1142	0.8	0.8	5.158	A
Swa W - Swale Way West	1702	426	54	1451	1.173	1450	729	76.4	139.4	273.786	F
Barge - Barge Way	210	53	1210	555	0.379	210	294	0.6	0.6	10.440	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1259	573	0.119	69	121	0.2	0.1	7.136	A
Swa S - Swale Way South	442	111	198	1274	0.347	443	1130	0.8	0.5	4.341	A
Swa W - Swale Way West	1390	347	44	1458	0.954	1447	597	139.4	125.1	329.139	F
Barge - Barge Way	172	43	1207	556	0.309	172	284	0.6	0.5	9.391	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1234	593	0.096	57	121	0.1	0.1	6.722	A
Swa S - Swale Way South	370	93	166	1299	0.285	371	1125	0.5	0.4	3.881	A
Swa W - Swale Way West	1164	291	37	1462	0.796	1451	500	125.1	53.4	223.497	F
Barge - Barge Way	144	36	1210	555	0.259	144	278	0.5	0.4	8.773	A

2031 + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	13.31	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	97	100.000
Swa S - Swale Way South		ONE HOUR	✓	1050	100.000
Swa W - Swale Way West		ONE HOUR	✓	726	100.000
Barge - Barge Way		ONE HOUR	✓	315	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	97	0
	Swa S - Swale Way South	0	1	974	75
	Swa W - Swale Way West	46	503	0	177
	Barge - Barge Way	0	57	258	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	8	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	13	11	0	40
	Barge - Barge Way	0	21	34	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.13	4.92	0.1	A	89	134
Swa S - Swale Way South	0.88	22.16	6.7	C	963	1445
Swa W - Swale Way West	0.59	6.43	1.4	A	666	999
Barge - Barge Way	0.37	6.06	0.6	A	289	434

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	614	1029	0.071	73	34	0.0	0.1	3.766	A
Swa S - Swale Way South	790	198	266	1406	0.562	785	420	0.0	1.3	5.754	A
Swa W - Swale Way West	547	137	57	1375	0.398	544	995	0.0	0.7	4.319	A
Barge - Barge Way	237	59	412	1042	0.228	236	189	0.0	0.3	4.458	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	735	948	0.092	87	41	0.1	0.1	4.179	A
Swa S - Swale Way South	944	236	319	1366	0.691	940	504	1.3	2.2	8.375	A
Swa W - Swale Way West	653	163	68	1368	0.477	652	1191	0.7	0.9	5.015	A
Barge - Barge Way	283	71	494	999	0.283	283	226	0.3	0.4	5.021	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	900	840	0.127	107	51	0.1	0.1	4.906	A
Swa S - Swale Way South	1156	289	390	1313	0.881	1140	616	2.2	6.3	19.228	C
Swa W - Swale Way West	799	200	82	1360	0.588	797	1447	0.9	1.4	6.375	A
Barge - Barge Way	347	87	604	942	0.368	346	276	0.4	0.6	6.038	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	902	839	0.127	107	51	0.1	0.1	4.917	A
Swa S - Swale Way South	1156	289	391	1312	0.881	1154	618	6.3	6.7	22.161	C
Swa W - Swale Way West	799	200	84	1359	0.588	799	1461	1.4	1.4	6.427	A
Barge - Barge Way	347	87	606	941	0.369	347	277	0.6	0.6	6.060	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	738	946	0.092	87	41	0.1	0.1	4.193	A
Swa S - Swale Way South	944	236	320	1366	0.691	962	506	6.7	2.3	9.282	A
Swa W - Swale Way West	653	163	70	1368	0.477	655	1212	1.4	0.9	5.063	A
Barge - Barge Way	283	71	496	998	0.284	284	228	0.6	0.4	5.043	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	618	1026	0.071	73	35	0.1	0.1	3.777	A
Swa S - Swale Way South	790	198	268	1405	0.563	794	423	2.3	1.3	5.934	A
Swa W - Swale Way West	547	137	58	1375	0.398	548	1005	0.9	0.7	4.357	A
Barge - Barge Way	237	59	415	1041	0.228	238	190	0.4	0.3	4.485	A

2031 + K3 Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	120.09	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1444	100.000
Barge - Barge Way		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	285
	Barge - Barge Way	0	50	155	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	37
	Barge - Barge Way	0	20	69	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.89	0.7	A	449	673
Swa W - Swale Way West	1.11	182.70	88.1	F	1325	1988
Barge - Barge Way	0.40	10.56	0.7	B	189	284

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1018	850	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	118	1324	0.278	367	900	0.0	0.4	3.752	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1076	449	0.0	2.9	9.375	A
Barge - Barge Way	155	39	864	690	0.225	154	248	0.0	0.3	6.702	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1213	715	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	142	1303	0.337	439	1072	0.4	0.5	4.165	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1280	538	2.9	7.3	20.075	C
Barge - Barge Way	185	46	1029	620	0.299	185	295	0.3	0.4	8.256	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1368	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	173	1275	0.422	538	1195	0.5	0.7	4.874	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1422	658	7.3	49.3	82.225	F
Barge - Barge Way	227	57	1142	572	0.397	226	332	0.4	0.6	10.378	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1379	596	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	174	1275	0.422	538	1206	0.7	0.7	4.889	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1435	659	49.3	88.1	179.863	F
Barge - Barge Way	227	57	1153	567	0.400	227	335	0.6	0.7	10.562	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1333	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	143	1302	0.338	440	1190	0.7	0.5	4.183	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1428	540	88.1	55.7	182.699	F
Barge - Barge Way	185	46	1147	570	0.325	186	324	0.7	0.5	9.388	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1197	734	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	120	1323	0.278	369	1077	0.5	0.4	3.777	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1297	452	55.7	3.3	50.557	F
Barge - Barge Way	155	39	1041	615	0.252	156	291	0.5	0.3	7.853	A

2031 + K3 Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.59	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	694	100.000
Barge - Barge Way		ONE HOUR	✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	193
	Barge - Barge Way	0	57	285	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	45
	Barge - Barge Way	0	21	36	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.80	5.5	C	963	1444
Swa W - Swale Way West	0.57	6.32	1.3	A	637	955
Barge - Barge Way	0.39	6.22	0.6	A	314	471

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	632	1093	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	213	1434	0.551	785	419	0.0	1.2	5.504	A
Swa W - Swale Way West	522	131	57	1349	0.387	520	942	0.0	0.6	4.328	A
Barge - Barge Way	257	64	376	1047	0.246	256	201	0.0	0.3	4.546	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	758	1003	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	256	1400	0.674	940	502	1.2	2.0	7.768	A
Swa W - Swale Way West	624	156	68	1343	0.465	623	1128	0.6	0.9	4.995	A
Barge - Barge Way	307	77	451	1008	0.305	307	240	0.3	0.4	5.130	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	927	881	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	313	1354	0.853	1142	614	2.0	5.2	16.132	C
Swa W - Swale Way West	764	191	83	1334	0.573	762	1373	0.9	1.3	6.273	A
Barge - Barge Way	377	94	551	956	0.394	376	294	0.4	0.6	6.192	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	929	880	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	314	1353	0.854	1154	615	5.2	5.5	17.801	C
Swa W - Swale Way West	764	191	84	1334	0.573	764	1384	1.3	1.3	6.318	A
Barge - Barge Way	377	94	553	956	0.394	377	295	0.6	0.6	6.217	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	761	1001	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	257	1399	0.674	956	504	5.5	2.1	8.364	A
Swa W - Swale Way West	624	156	69	1342	0.465	626	1144	1.3	0.9	5.037	A
Barge - Barge Way	307	77	453	1007	0.305	308	242	0.6	0.4	5.157	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	637	1090	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	215	1433	0.551	793	422	2.1	1.2	5.658	A
Swa W - Swale Way West	522	131	57	1349	0.387	523	951	0.9	0.6	4.366	A
Barge - Barge Way	257	64	379	1045	0.246	258	202	0.4	0.3	4.573	A

2031 + K3 and WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	137.54	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1454	100.000
Barge - Barge Way		ONE HOUR	✓	217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	295
	Barge - Barge Way	0	50	166	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	39
	Barge - Barge Way	0	20	71	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.98	0.7	A	449	673
Swa W - Swale Way West	1.12	210.51	97.1	F	1334	2001
Barge - Barge Way	0.42	11.02	0.7	B	199	299

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1026	840	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	126	1316	0.280	367	900	0.0	0.4	3.787	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1083	457	0.0	3.0	9.725	A
Barge - Barge Way	163	41	864	681	0.240	162	255	0.0	0.3	6.923	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1221	705	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	151	1293	0.340	439	1070	0.4	0.5	4.213	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1287	547	3.0	8.0	21.610	C
Barge - Barge Way	195	49	1027	612	0.319	194	303	0.3	0.5	8.600	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1369	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	185	1263	0.426	537	1184	0.5	0.7	4.959	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1417	670	8.0	53.9	89.012	F
Barge - Barge Way	239	60	1131	569	0.420	238	339	0.5	0.7	10.838	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	590	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	186	1262	0.427	538	1193	0.7	0.7	4.975	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1428	671	53.9	97.1	197.545	F
Barge - Barge Way	239	60	1140	565	0.423	239	342	0.7	0.7	11.023	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1330	635	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	153	1292	0.340	440	1178	0.7	0.5	4.233	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1422	550	97.1	68.4	210.510	F
Barge - Barge Way	195	49	1134	567	0.344	196	331	0.7	0.5	9.709	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1244	700	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	128	1314	0.280	369	1116	0.5	0.4	3.812	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1354	461	68.4	3.6	79.133	F
Barge - Barge Way	163	41	1080	590	0.277	164	310	0.5	0.4	8.453	A

2031 + K3 and WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.51	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	704	100.000
Barge - Barge Way		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	203
	Barge - Barge Way	0	57	306	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	48
	Barge - Barge Way	0	21	37	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.87	19.72	6.0	C	963	1444
Swa W - Swale Way West	0.59	6.60	1.4	A	646	969
Barge - Barge Way	0.42	6.56	0.7	A	333	500

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	648	1079	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	229	1420	0.556	785	419	0.0	1.2	5.624	A
Swa W - Swale Way West	530	133	57	1336	0.397	527	957	0.0	0.7	4.439	A
Barge - Barge Way	273	68	376	1039	0.263	272	208	0.0	0.4	4.683	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	776	986	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	275	1383	0.682	940	502	1.2	2.1	8.054	A
Swa W - Swale Way West	633	158	68	1329	0.476	632	1146	0.7	0.9	5.154	A
Barge - Barge Way	326	82	451	1001	0.326	326	249	0.4	0.5	5.330	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	950	861	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	336	1333	0.866	1141	614	2.1	5.7	17.528	C
Swa W - Swale Way West	775	194	83	1321	0.587	773	1394	0.9	1.4	6.547	A
Barge - Barge Way	400	100	551	949	0.421	399	304	0.5	0.7	6.529	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	952	859	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	337	1332	0.867	1154	615	5.7	6.0	19.718	C
Swa W - Swale Way West	775	194	84	1321	0.587	775	1407	1.4	1.4	6.599	A
Barge - Barge Way	400	100	553	949	0.421	400	306	0.7	0.7	6.558	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	780	984	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	276	1382	0.682	958	504	6.0	2.2	8.784	A
Swa W - Swale Way West	633	158	69	1329	0.476	635	1165	1.4	0.9	5.205	A
Barge - Barge Way	326	82	453	1000	0.326	327	252	0.7	0.5	5.361	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	652	1076	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	231	1419	0.557	793	422	2.2	1.3	5.789	A
Swa W - Swale Way West	530	133	57	1335	0.397	531	967	0.9	0.7	4.480	A
Barge - Barge Way	273	68	379	1038	0.263	274	210	0.5	0.4	4.714	A

2031 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	259.31	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	76	100.000
Swa S - Swale Way South		ONE HOUR	✓	492	100.000
Swa W - Swale Way West		ONE HOUR	✓	1573	100.000
Barge - Barge Way		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	76	0
	Swa S - Swale Way South	1	1	444	46
	Swa W - Swale Way West	128	1158	2	285
	Barge - Barge Way	0	50	155	1

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
Site - Site Access	0	0	21	0
Swa S - Swale Way South	0	0	18	24
Swa W - Swale Way West	11	7	50	37
Barge - Barge Way	0	20	69	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.15	7.87	0.2	A	70	105
Swa S - Swale Way South	0.44	5.29	0.8	A	451	677
Swa W - Swale Way West	1.20	400.97	162.9	F	1443	2165
Barge - Barge Way	0.41	11.00	0.7	B	189	284

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1016	703	0.081	57	96	0.0	0.1	5.566	A
Swa S - Swale Way South	370	93	175	1288	0.288	369	898	0.0	0.4	3.909	A
Swa W - Swale Way West	1184	296	37	1451	0.816	1168	507	0.0	4.1	12.105	B
Barge - Barge Way	155	39	958	649	0.239	154	247	0.0	0.3	7.255	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1195	601	0.114	68	112	0.1	0.1	6.759	A
Swa S - Swale Way South	442	111	210	1260	0.351	442	1054	0.4	0.5	4.396	A
Swa W - Swale Way West	1414	354	44	1446	0.978	1370	607	4.1	15.3	34.974	D
Barge - Barge Way	185	46	1123	578	0.320	185	290	0.3	0.5	9.128	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1285	543	0.154	83	118	0.1	0.2	7.831	A
Swa S - Swale Way South	542	135	256	1222	0.443	541	1112	0.5	0.8	5.274	A
Swa W - Swale Way West	1732	433	54	1439	1.204	1435	743	15.3	89.6	140.320	F
Barge - Barge Way	227	57	1177	555	0.408	226	312	0.5	0.7	10.899	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1289	541	0.155	84	118	0.2	0.2	7.872	A
Swa S - Swale Way South	542	135	257	1222	0.443	542	1115	0.8	0.8	5.294	A
Swa W - Swale Way West	1732	433	54	1439	1.204	1438	745	89.6	162.9	321.347	F
Barge - Barge Way	227	57	1180	554	0.409	227	312	0.7	0.7	10.995	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1246	573	0.119	69	118	0.2	0.1	7.135	A
Swa S - Swale Way South	442	111	211	1259	0.351	443	1104	0.8	0.5	4.418	A
Swa W - Swale Way West	1414	354	44	1446	0.978	1437	610	162.9	157.3	400.971	F
Barge - Barge Way	185	46	1178	555	0.334	186	303	0.7	0.5	9.775	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1219	595	0.096	57	118	0.1	0.1	6.694	A
Swa S - Swale Way South	370	93	177	1287	0.288	371	1100	0.5	0.4	3.935	A
Swa W - Swale Way West	1184	296	37	1450	0.816	1441	511	157.3	93.0	313.779	F
Barge - Barge Way	155	39	1182	553	0.280	156	297	0.5	0.4	9.061	A

2031 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	15.08	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	97	100.000
Swa S - Swale Way South		ONE HOUR	✓	1050	100.000
Swa W - Swale Way West		ONE HOUR	✓	742	100.000
Barge - Barge Way		ONE HOUR	✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	97	0
	Swa S - Swale Way South	0	1	974	75
	Swa W - Swale Way West	46	503	0	193
	Barge - Barge Way	0	57	285	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
Site - Site Access	0	0	8	0
Swa S - Swale Way South	0	0	5	11
Swa W - Swale Way West	13	11	0	45
Barge - Barge Way	0	21	36	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.13	5.10	0.2	A	89	134
Swa S - Swale Way South	0.90	26.15	7.9	D	963	1445
Swa W - Swale Way West	0.61	6.89	1.5	A	681	1021
Barge - Barge Way	0.41	6.53	0.7	A	314	471

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	634	1011	0.072	73	34	0.0	0.1	3.835	A
Swa S - Swale Way South	790	198	286	1388	0.570	785	420	0.0	1.3	5.927	A
Swa W - Swale Way West	559	140	57	1355	0.412	556	1015	0.0	0.7	4.491	A
Barge - Barge Way	257	64	412	1028	0.250	256	201	0.0	0.3	4.657	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	759	928	0.094	87	41	0.1	0.1	4.282	A
Swa S - Swale Way South	944	236	343	1344	0.702	940	504	1.3	2.3	8.821	A
Swa W - Swale Way West	667	167	68	1348	0.495	666	1215	0.7	1.0	5.267	A
Barge - Barge Way	307	77	494	986	0.312	307	240	0.3	0.4	5.301	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	929	815	0.131	107	51	0.1	0.1	5.082	A
Swa S - Swale Way South	1156	289	420	1285	0.899	1136	616	2.3	7.2	21.792	C
Swa W - Swale Way West	817	204	82	1340	0.610	815	1474	1.0	1.5	6.822	A
Barge - Barge Way	377	94	604	929	0.406	376	293	0.4	0.7	6.500	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	931	813	0.131	107	51	0.1	0.2	5.095	A
Swa S - Swale Way South	1156	289	421	1285	0.900	1153	618	7.2	7.9	26.150	D
Swa W - Swale Way West	817	204	83	1339	0.610	817	1490	1.5	1.5	6.888	A
Barge - Barge Way	377	94	606	928	0.406	377	295	0.7	0.7	6.530	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	763	925	0.094	87	41	0.2	0.1	4.298	A
Swa S - Swale Way South	944	236	344	1343	0.703	966	506	7.9	2.4	10.061	B
Swa W - Swale Way West	667	167	70	1347	0.495	669	1240	1.5	1.0	5.327	A
Barge - Barge Way	307	77	496	984	0.312	308	243	0.7	0.5	5.333	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	638	1008	0.072	73	35	0.1	0.1	3.851	A
Swa S - Swale Way South	790	198	288	1386	0.570	795	423	2.4	1.3	6.132	A
Swa W - Swale Way West	559	140	58	1354	0.412	560	1025	1.0	0.7	4.538	A
Barge - Barge Way	257	64	415	1026	0.251	258	202	0.5	0.3	4.689	A

2031 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	279.23	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	76	100.000
Swa S - Swale Way South		ONE HOUR	✓	492	100.000
Swa W - Swale Way West		ONE HOUR	✓	1583	100.000
Barge - Barge Way		ONE HOUR	✓	217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	76	0
	Swa S - Swale Way South	1	1	444	46
	Swa W - Swale Way West	128	1158	2	295
	Barge - Barge Way	0	50	166	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	21	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	11	7	50	39
	Barge - Barge Way	0	20	71	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.16	7.97	0.2	A	70	105
Swa S - Swale Way South	0.45	5.40	0.8	A	451	677
Swa W - Swale Way West	1.22	433.56	173.4	F	1453	2179
Barge - Barge Way	0.43	11.49	0.8	B	199	299

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1023	696	0.082	57	96	0.0	0.1	5.634	A
Swa S - Swale Way South	370	93	183	1280	0.289	369	897	0.0	0.4	3.945	A
Swa W - Swale Way West	1192	298	37	1444	0.825	1174	515	0.0	4.4	12.644	B
Barge - Barge Way	163	41	957	640	0.255	162	254	0.0	0.3	7.505	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1201	593	0.115	68	112	0.1	0.1	6.854	A
Swa S - Swale Way South	442	111	220	1250	0.354	442	1050	0.4	0.5	4.453	A
Swa W - Swale Way West	1423	356	44	1439	0.989	1372	617	4.4	17.1	38.033	E
Barge - Barge Way	195	49	1118	573	0.341	194	298	0.3	0.5	9.503	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1286	537	0.156	83	117	0.1	0.2	7.934	A
Swa S - Swale Way South	542	135	268	1210	0.448	541	1101	0.5	0.8	5.382	A
Swa W - Swale Way West	1743	436	54	1432	1.217	1429	755	17.1	95.6	150.474	F
Barge - Barge Way	239	60	1165	553	0.432	238	318	0.5	0.7	11.390	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1289	535	0.156	84	117	0.2	0.2	7.974	A
Swa S - Swale Way South	542	135	269	1209	0.448	542	1104	0.8	0.8	5.395	A
Swa W - Swale Way West	1743	436	54	1432	1.217	1432	757	95.6	173.4	343.274	F
Barge - Barge Way	239	60	1167	552	0.433	239	319	0.7	0.8	11.492	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1251	566	0.121	69	117	0.2	0.1	7.233	A
Swa S - Swale Way South	442	111	221	1248	0.354	443	1099	0.8	0.6	4.476	A
Swa W - Swale Way West	1423	356	44	1439	0.989	1439	620	173.4	169.4	433.564	F
Barge - Barge Way	195	49	1173	550	0.355	196	310	0.8	0.6	10.195	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1216	593	0.097	57	117	0.1	0.1	6.725	A
Swa S - Swale Way South	370	93	185	1278	0.290	371	1088	0.6	0.4	3.972	A
Swa W - Swale Way West	1192	298	37	1444	0.825	1435	519	169.4	108.5	349.594	F
Barge - Barge Way	163	41	1169	551	0.296	164	303	0.6	0.4	9.310	A

2031 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	16.76	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	97	100.000
Swa S - Swale Way South		ONE HOUR	✓	1050	100.000
Swa W - Swale Way West		ONE HOUR	✓	752	100.000
Barge - Barge Way		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	97	0
	Swa S - Swale Way South	0	1	974	75
	Swa W - Swale Way West	46	503	0	203
	Barge - Barge Way	0	57	306	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
Site - Site Access	0	0	8	0
Swa S - Swale Way South	0	0	5	11
Swa W - Swale Way West	13	11	0	48
Barge - Barge Way	0	21	37	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.13	5.24	0.2	A	89	134
Swa S - Swale Way South	0.91	30.05	9.0	D	963	1445
Swa W - Swale Way West	0.62	7.21	1.6	A	690	1035
Barge - Barge Way	0.43	6.90	0.8	A	333	500

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	649	998	0.073	73	34	0.0	0.1	3.889	A
Swa S - Swale Way South	790	198	302	1374	0.576	785	420	0.0	1.3	6.065	A
Swa W - Swale Way West	566	142	57	1342	0.422	563	1030	0.0	0.7	4.607	A
Barge - Barge Way	273	68	412	1020	0.268	272	208	0.0	0.4	4.801	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	778	912	0.096	87	41	0.1	0.1	4.364	A
Swa S - Swale Way South	944	236	362	1327	0.711	940	503	1.3	2.4	9.189	A
Swa W - Swale Way West	676	169	68	1336	0.506	675	1233	0.7	1.0	5.438	A
Barge - Barge Way	326	82	494	978	0.334	326	249	0.4	0.5	5.511	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	952	796	0.134	107	50	0.1	0.2	5.223	A
Swa S - Swale Way South	1156	289	443	1265	0.914	1133	616	2.4	8.1	24.105	C
Swa W - Swale Way West	828	207	82	1327	0.624	826	1494	1.0	1.6	7.135	A
Barge - Barge Way	400	100	604	922	0.434	399	304	0.5	0.8	6.866	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	955	794	0.135	107	51	0.2	0.2	5.238	A
Swa S - Swale Way South	1156	289	444	1264	0.915	1152	618	8.1	9.0	30.048	D
Swa W - Swale Way West	828	207	83	1327	0.624	828	1512	1.6	1.6	7.214	A
Barge - Barge Way	400	100	606	921	0.434	400	306	0.8	0.8	6.905	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	782	909	0.096	87	42	0.2	0.1	4.380	A
Swa S - Swale Way South	944	236	363	1326	0.712	970	506	9.0	2.6	10.795	B
Swa W - Swale Way West	676	169	70	1334	0.507	678	1263	1.6	1.0	5.508	A
Barge - Barge Way	326	82	496	977	0.334	327	252	0.8	0.5	5.551	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	654	995	0.073	73	35	0.1	0.1	3.906	A
Swa S - Swale Way South	790	198	304	1372	0.576	795	423	2.6	1.4	6.294	A
Swa W - Swale Way West	566	142	58	1342	0.422	567	1042	1.0	0.7	4.658	A
Barge - Barge Way	273	68	415	1019	0.268	274	210	0.5	0.4	4.835	A

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.0.2.5947
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Filename: Swale Way - Barge Way_Sensitivity.j9

Path: P:\JNY9290 - Kemsley K5\Transport\Arcady\WKN DCO\Swale Way - Barge Way

Report generation date: 18/03/2019 09:31:00

- »2017, AM
- »2017, PM
- »2024, AM
- »2024, PM
- »2024 + Cumulative Development, AM
- »2024 + Cumulative Development, PM
- »2024 + K3 Operational, AM
- »2024 + K3 Operational, PM
- »2024 + WKN Operational, AM
- »2024 + WKN Operational, PM
- »2024 + K3 and WKN Operational, AM
- »2024 + K3 and WKN Operational, PM
- »2024 + K3 Operational + Cumulative Development, AM
- »2024 + K3 Operational + Cumulative Development, PM
- »2024 + WKN Operational + Cumulative Development, AM
- »2024 + WKN Operational + Cumulative Development, PM
- »2024 + K3 and WKN Operational + Cumulative Development, AM
- »2024 + K3 and WKN Operational + Cumulative Development, PM
- »2031, AM
- »2031, PM
- »2031 + Cumulative Development, AM
- »2031 + Cumulative Development, PM
- »2031 + K3 Operational, AM
- »2031 + K3 Operational, PM
- »2031 + WKN Operational, AM
- »2031 + WKN Operational, PM
- »2031 + K3 and WKN Operational, AM
- »2031 + K3 and WKN Operational, PM
- »2031 + K3 Operational + Cumulative Development, AM
- »2031 + K3 Operational + Cumulative Development, PM
- »2031 + WKN Operational + Cumulative Development, AM
- »2031 + WKN Operational + Cumulative Development, PM
- »2031 + K3 and WKN Operational + Cumulative Development, AM
- »2031 + K3 and WKN Operational + Cumulative Development, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2017						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swale S - Swale Way South	0.5	3.90	0.32	1.7	6.78	0.64
Swale W - Swale Way West	4.4	13.55	0.82	0.9	4.74	0.46

Barge - Barge Way	0.3	7.43	0.22	0.4	4.75	0.26
2024						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.87	0.42	5.4	17.58	0.85
Swa W - Swale Way West	84.9	173.73	1.10	1.3	6.24	0.57
Barge - Barge Way	0.6	10.46	0.39	0.6	6.18	0.39
2024 + Cumulative Development						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.95	0.43	5.4	17.58	0.85
Swa W - Swale Way West	84.9	173.73	1.10	1.3	6.26	0.57
Barge - Barge Way	0.6	10.46	0.39	0.6	6.19	0.39
2024 + K3 Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.89	0.42	5.5	17.80	0.85
Swa W - Swale Way West	88.1	182.70	1.11	1.3	6.32	0.57
Barge - Barge Way	0.7	10.56	0.40	0.6	6.22	0.39
2024 + WKN Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.95	0.43	5.9	19.25	0.86
Swa W - Swale Way West	93.9	200.35	1.11	1.4	6.51	0.58
Barge - Barge Way	0.7	10.96	0.42	0.7	6.45	0.42
2024 + K3 and WKN Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.98	0.43	6.0	19.72	0.87
Swa W - Swale Way West	97.1	210.51	1.12	1.4	6.60	0.59
Barge - Barge Way	0.7	11.02	0.42	0.7	6.56	0.42
2024 + K3 Operational + Cumulative Development						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.97	0.43	5.5	17.80	0.85
Swa W - Swale Way West	88.1	182.70	1.11	1.3	6.34	0.57
Barge - Barge Way	0.7	10.56	0.40	0.6	6.23	0.39
2024 + WKN Operational + Cumulative Development						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.8	5.04	0.43	5.9	19.25	0.86
Swa W - Swale Way West	93.9	200.35	1.11	1.4	6.53	0.58
Barge - Barge Way	0.7	10.96	0.42	0.7	6.46	0.42
2024 + K3 and WKN Operational + Cumulative Development						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.8	5.06	0.43	6.0	19.72	0.87
Swa W - Swale Way West	97.1	210.51	1.12	1.4	6.62	0.59
Barge - Barge Way	0.7	11.02	0.42	0.7	6.57	0.42
2031						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.87	0.42	5.4	17.58	0.85
Swa W - Swale Way West	84.9	173.73	1.10	1.3	6.24	0.57
Barge - Barge Way	0.6	10.46	0.39	0.6	6.18	0.39
2031 + Cumulative Development						
Site - Site Access	0.2	7.86	0.15	0.2	5.08	0.13
Swa S - Swale Way South	0.8	5.27	0.44	7.8	25.71	0.90
Swa W - Swale Way West	159.4	389.59	1.20	1.5	6.79	0.61
Barge - Barge Way	0.7	10.88	0.40	0.7	6.49	0.40
2031 + K3 Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.89	0.42	5.5	17.80	0.85
Swa W - Swale Way West	88.1	182.70	1.11	1.3	6.32	0.57
Barge - Barge Way	0.7	10.56	0.40	0.6	6.22	0.39
2031 + WKN Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.95	0.43	5.9	19.25	0.86
Swa W - Swale Way West	93.9	200.35	1.11	1.4	6.51	0.58

	0.7	10.96	0.42	0.7	6.45	0.42
2031 + K3 and WKN Operational						
Site - Site Access	0.0	0.00	0.00	0.0	0.00	0.00
Swa S - Swale Way South	0.7	4.98	0.43	6.0	19.72	0.87
Swa W - Swale Way West	97.1	210.51	1.12	1.4	6.60	0.59
Barge - Barge Way	0.7	11.02	0.42	0.7	6.56	0.42
2031 + K3 Operational + Cumulative Development						
Site - Site Access	0.2	7.87	0.15	0.2	5.10	0.13
Swa S - Swale Way South	0.8	5.29	0.44	7.9	26.15	0.90
Swa W - Swale Way West	162.9	400.97	1.20	1.5	6.89	0.61
Barge - Barge Way	0.7	11.00	0.41	0.7	6.53	0.41
2031 + WKN Operational + Cumulative Development						
Site - Site Access	0.2	7.96	0.16	0.2	5.21	0.13
Swa S - Swale Way South	0.8	5.37	0.45	8.8	29.09	0.91
Swa W - Swale Way West	169.6	421.68	1.21	1.6	7.11	0.62
Barge - Barge Way	0.7	11.42	0.43	0.7	6.78	0.43
2031 + K3 and WKN Operational + Cumulative Development						
Site - Site Access	0.2	7.97	0.16	0.2	5.24	0.13
Swa S - Swale Way South	0.8	5.40	0.45	9.0	30.05	0.91
Swa W - Swale Way West	173.4	433.56	1.22	1.6	7.21	0.62
Barge - Barge Way	0.8	11.49	0.43	0.8	6.90	0.43

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	08/11/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	EUR\jack.clarke-williams
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓
D5	2024 + Cumulative Development	AM	ONE	07:15	08:45	15	

			HOUR				✓
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D9	2024 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D10	2024 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D15	2024 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D16	2024 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓
D25	2031 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D26	2031 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D31	2031 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D32	2031 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	10.51	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
Site	Site Access	
Swale S	Swale Way South	
Swale W	Swale Way West	
Barge	Barge Way	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
Site - Site Access	3.50	6.50	11.0	15.0	45.0	25.0	
Swale S - Swale Way South	3.75	7.00	13.0	23.0	45.5	30.0	
Swale W - Swale Way West	3.75	7.00	10.0	47.5	45.5	30.0	
Barge - Barge Way	3.50	6.50	16.5	23.0	45.5	28.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
Site - Site Access	0.598	1548
Swale S - Swale Way South	0.627	1694
Swale W - Swale Way West	0.628	1665
Barge - Barge Way	0.622	1657

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	400	100.000
Swa W - Swale Way West		ONE HOUR	✓	1107	100.000
Barge - Barge Way		ONE HOUR	✓	127	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	358	41
	Swa W - Swale Way West	0	925	2	180
	Barge - Barge Way	0	34	92	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	15	27
	Swa W - Swale Way West	0	5	50	34
	Barge - Barge Way	0	29	70	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.32	3.90	0.5	A	367	551
Swa W - Swale Way West	0.82	13.55	4.4	B	1016	1524
Barge - Barge Way	0.22	7.43	0.3	A	117	175

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	790	1021	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	301	75	71	1393	0.216	300	718	0.0	0.3	3.290	A
Swa W - Swale Way West	833	208	32	1493	0.558	828	339	0.0	1.2	5.377	A
Barge - Barge Way	96	24	694	759	0.126	95	166	0.0	0.1	5.415	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	946	916	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	360	90	85	1380	0.261	359	861	0.3	0.4	3.525	A

Swale W - Swale Way West	995	249	39	1488	0.669	992	406	1.2	2.0	7.210	A
Barge - Barge Way	114	29	832	703	0.162	114	199	0.1	0.2	6.114	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1153	778	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	440	110	104	1363	0.323	440	1049	0.4	0.5	3.898	A
Swale W - Swale Way West	1219	305	47	1482	0.822	1210	497	2.0	4.3	12.778	B
Barge - Barge Way	140	35	1014	628	0.223	139	243	0.2	0.3	7.371	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1161	773	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	440	110	105	1363	0.323	440	1056	0.5	0.5	3.902	A
Swale W - Swale Way West	1219	305	47	1482	0.822	1218	498	4.3	4.4	13.549	B
Barge - Barge Way	140	35	1021	625	0.224	140	244	0.3	0.3	7.426	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	957	909	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	360	90	86	1380	0.261	360	871	0.5	0.4	3.533	A
Swale W - Swale Way West	995	249	39	1488	0.669	1005	407	4.4	2.1	7.584	A
Barge - Barge Way	114	29	842	698	0.163	115	201	0.3	0.2	6.169	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	797	1016	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	301	75	72	1393	0.216	301	725	0.4	0.3	3.299	A
Swale W - Swale Way West	833	208	32	1493	0.558	837	341	2.1	1.3	5.511	A
Barge - Barge Way	96	24	701	756	0.126	96	168	0.2	0.1	5.452	A

2017, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	5.70	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	839	100.000
Swa W - Swale Way West		ONE HOUR	✓	592	100.000
Barge - Barge Way		ONE HOUR	✓	247	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	776	62
	Swa W - Swale Way West	0	454	0	138
	Barge - Barge Way	0	55	192	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	4	13
	Swa W - Swale Way West	0	8	0	36

Barge - Barge Way	0	22	30	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.64	6.78	1.7	A	770	1155
Swa W - Swale Way West	0.46	4.74	0.9	A	543	815
Barge - Barge Way	0.26	4.75	0.4	A	227	340

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	526	1185	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	632	158	144	1507	0.419	629	382	0.0	0.7	4.088	A
Swa W - Swale Way West	446	111	47	1424	0.313	444	725	0.0	0.5	3.665	A
Barge - Barge Way	186	46	341	1114	0.167	185	150	0.0	0.2	3.874	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	630	1113	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	754	189	172	1484	0.508	753	458	0.7	1.0	4.914	A
Swa W - Swale Way West	532	133	57	1419	0.375	532	869	0.5	0.6	4.055	A
Barge - Barge Way	222	56	409	1078	0.206	222	180	0.2	0.3	4.202	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	772	1016	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	924	231	211	1454	0.635	921	561	1.0	1.7	6.716	A
Swa W - Swale Way West	652	163	69	1411	0.462	651	1063	0.6	0.9	4.731	A
Barge - Barge Way	272	68	500	1030	0.264	272	220	0.3	0.4	4.742	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	773	1015	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	924	231	211	1454	0.635	924	562	1.7	1.7	6.785	A
Swa W - Swale Way West	652	163	69	1411	0.462	652	1066	0.9	0.9	4.742	A
Barge - Barge Way	272	68	501	1030	0.264	272	220	0.4	0.4	4.748	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	632	1112	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	754	189	173	1484	0.508	757	459	1.7	1.0	4.971	A
Swa W - Swale Way West	532	133	57	1419	0.375	533	873	0.9	0.6	4.070	A
Barge - Barge Way	222	56	410	1078	0.206	222	180	0.4	0.3	4.210	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	529	1183	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	632	158	145	1506	0.419	633	384	1.0	0.7	4.129	A
Swale W - Swale Way West	446	111	48	1424	0.313	446	730	0.6	0.5	3.685	A
Barge - Barge Way	186	46	343	1113	0.167	186	151	0.3	0.2	3.886	A

2024, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	114.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1441	100.000
Barge - Barge Way		ONE HOUR	✓	204	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	282
	Barge - Barge Way	0	50	153	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	36

Barge - Barge Way	0	20	68	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.87	0.7	A	449	673
Swa W - Swale Way West	1.10	173.73	84.9	F	1322	1983
Barge - Barge Way	0.39	10.46	0.6	B	187	281

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1017	852	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	117	1326	0.278	367	900	0.0	0.4	3.745	A
Swa W - Swale Way West	1085	271	36	1452	0.747	1074	447	0.0	2.8	9.252	A
Barge - Barge Way	154	38	864	694	0.221	152	245	0.0	0.3	6.636	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1212	718	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	140	1306	0.337	439	1072	0.4	0.5	4.153	A
Swa W - Swale Way West	1295	324	43	1447	0.895	1278	536	2.8	7.1	19.562	C
Barge - Barge Way	183	46	1029	623	0.294	183	292	0.3	0.4	8.161	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1370	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	171	1278	0.421	538	1199	0.5	0.7	4.855	A
Swa W - Swale Way West	1587	397	53	1441	1.101	1424	656	7.1	47.7	79.894	F
Barge - Barge Way	225	56	1146	573	0.392	224	330	0.4	0.6	10.270	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1382	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	172	1277	0.421	538	1210	0.7	0.7	4.870	A
Swa W - Swale Way West	1587	397	53	1441	1.101	1438	657	47.7	84.9	173.734	F
Barge - Barge Way	225	56	1157	569	0.395	225	333	0.6	0.6	10.459	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1335	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	141	1305	0.337	440	1194	0.7	0.5	4.169	A
Swa W - Swale Way West	1295	324	43	1447	0.895	1430	538	84.9	51.2	173.047	F
Barge - Barge Way	183	46	1151	571	0.321	184	322	0.6	0.5	9.313	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1182	745	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	368	92	118	1325	0.278	369	1064	0.5	0.4	3.766	A
Swale W - Swale Way West	1085	271	36	1452	0.747	1277	451	51.2	3.2	42.166	E
Barge - Barge Way	154	38	1028	624	0.246	154	285	0.5	0.3	7.674	A

2024, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.48	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	691	100.000
Barge - Barge Way		ONE HOUR	✓	339	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	190
	Barge - Barge Way	0	57	282	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	44

Barge - Barge Way	0	21	36	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.58	5.4	C	963	1444
Swa W - Swale Way West	0.57	6.24	1.3	A	634	951
Barge - Barge Way	0.39	6.18	0.6	A	311	467

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	630	1095	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	211	1436	0.550	785	419	0.0	1.2	5.488	A
Swa W - Swale Way West	520	130	57	1354	0.384	518	939	0.0	0.6	4.294	A
Barge - Barge Way	255	64	376	1047	0.244	254	198	0.0	0.3	4.532	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	755	1005	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	253	1402	0.673	940	502	1.2	2.0	7.732	A
Swa W - Swale Way West	621	155	68	1347	0.461	620	1125	0.6	0.8	4.947	A
Barge - Barge Way	305	76	451	1008	0.302	304	238	0.3	0.4	5.109	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	924	884	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	310	1356	0.852	1142	614	2.0	5.1	15.964	C
Swa W - Swale Way West	761	190	83	1339	0.568	759	1370	0.8	1.3	6.191	A
Barge - Barge Way	373	93	551	956	0.390	372	290	0.4	0.6	6.156	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	926	882	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	310	1356	0.852	1154	615	5.1	5.4	17.578	C
Swa W - Swale Way West	761	190	84	1338	0.569	761	1381	1.3	1.3	6.235	A
Barge - Barge Way	373	93	553	956	0.391	373	292	0.6	0.6	6.180	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	758	1003	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	254	1401	0.673	956	504	5.4	2.1	8.315	A
Swa W - Swale Way West	621	155	69	1346	0.461	623	1141	1.3	0.9	4.990	A
Barge - Barge Way	305	76	453	1007	0.303	306	240	0.6	0.4	5.134	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	634	1092	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	213	1435	0.550	793	422	2.1	1.2	5.641	A
Swale W - Swale Way West	520	130	57	1353	0.384	521	948	0.9	0.6	4.331	A
Barge - Barge Way	255	64	379	1046	0.244	256	200	0.4	0.3	4.559	A

2024 + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	114.06	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	491	100.000
Swa W - Swale Way West		ONE HOUR	✓	1441	100.000
Barge - Barge Way		ONE HOUR	✓	204	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	444	46
	Swa W - Swale Way West	0	1157	2	282
	Barge - Barge Way	0	50	153	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	19	24
	Swa W - Swale Way West	0	7	50	36

Barge - Barge Way	0	20	68	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.95	0.7	A	451	676
Swa W - Swale Way West	1.10	173.73	84.9	F	1322	1983
Barge - Barge Way	0.39	10.46	0.6	B	187	281

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1017	852	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	117	1316	0.281	368	900	0.0	0.4	3.790	A
Swa W - Swale Way West	1085	271	36	1452	0.747	1074	449	0.0	2.8	9.252	A
Barge - Barge Way	154	38	864	694	0.221	152	245	0.0	0.3	6.636	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1212	718	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	140	1296	0.341	441	1072	0.4	0.5	4.208	A
Swa W - Swale Way West	1295	324	43	1447	0.895	1278	538	2.8	7.1	19.562	C
Barge - Barge Way	183	46	1029	623	0.294	183	292	0.3	0.4	8.161	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1370	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	171	1268	0.426	540	1199	0.5	0.7	4.934	A
Swa W - Swale Way West	1587	397	53	1441	1.101	1424	658	7.1	47.7	79.894	F
Barge - Barge Way	225	56	1146	573	0.392	224	330	0.4	0.6	10.270	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1382	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	172	1268	0.426	541	1210	0.7	0.7	4.949	A
Swa W - Swale Way West	1587	397	53	1441	1.101	1438	659	47.7	84.9	173.734	F
Barge - Barge Way	225	56	1157	569	0.395	225	333	0.6	0.6	10.459	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1335	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	141	1295	0.341	442	1194	0.7	0.5	4.228	A
Swa W - Swale Way West	1295	324	43	1447	0.895	1430	540	84.9	51.2	173.047	F
Barge - Barge Way	183	46	1151	571	0.321	184	322	0.6	0.5	9.313	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1182	745	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	370	92	118	1315	0.281	370	1064	0.5	0.4	3.815	A
Swale W - Swale Way West	1085	271	36	1452	0.747	1277	452	51.2	3.2	42.166	E
Barge - Barge Way	154	38	1028	624	0.246	154	285	0.5	0.3	7.674	A

2024 + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.48	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	693	100.000
Barge - Barge Way		ONE HOUR	✓	339	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	503	0	190
	Barge - Barge Way	0	57	282	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	44

Barge - Barge Way	0	21	36	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.58	5.4	C	963	1444
Swa W - Swale Way West	0.57	6.26	1.3	A	636	954
Barge - Barge Way	0.39	6.19	0.6	A	311	467

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	632	1094	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	211	1436	0.550	785	420	0.0	1.2	5.488	A
Swa W - Swale Way West	522	130	57	1354	0.385	519	939	0.0	0.6	4.300	A
Barge - Barge Way	255	64	378	1046	0.244	254	198	0.0	0.3	4.536	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	757	1004	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	253	1402	0.673	940	504	1.2	2.0	7.732	A
Swa W - Swale Way West	623	156	68	1347	0.462	622	1125	0.6	0.9	4.957	A
Barge - Barge Way	305	76	452	1008	0.302	304	238	0.3	0.4	5.116	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	926	882	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	310	1356	0.852	1142	616	2.0	5.1	15.964	C
Swa W - Swale Way West	763	191	83	1339	0.570	761	1369	0.9	1.3	6.212	A
Barge - Barge Way	373	93	554	955	0.391	372	290	0.4	0.6	6.168	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	928	881	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	310	1356	0.852	1154	618	5.1	5.4	17.578	C
Swa W - Swale Way West	763	191	84	1338	0.570	763	1381	1.3	1.3	6.256	A
Barge - Barge Way	373	93	555	955	0.391	373	292	0.6	0.6	6.192	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	760	1002	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	254	1401	0.673	956	506	5.4	2.1	8.314	A
Swa W - Swale Way West	623	156	69	1347	0.463	625	1141	1.3	0.9	4.998	A
Barge - Barge Way	305	76	454	1006	0.303	306	240	0.6	0.4	5.141	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	636	1091	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	213	1435	0.550	793	423	2.1	1.2	5.641	A
Swale W - Swale Way West	522	130	57	1353	0.385	523	948	0.9	0.6	4.339	A
Barge - Barge Way	255	64	380	1045	0.244	256	200	0.4	0.3	4.565	A

2024 + K3 Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	120.09	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2024 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1444	100.000
Barge - Barge Way		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	285
	Barge - Barge Way	0	50	155	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	37

Barge - Barge Way	0	20	69	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.89	0.7	A	449	673
Swa W - Swale Way West	1.11	182.70	88.1	F	1325	1988
Barge - Barge Way	0.40	10.56	0.7	B	189	284

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1018	850	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	118	1324	0.278	367	900	0.0	0.4	3.752	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1076	449	0.0	2.9	9.375	A
Barge - Barge Way	155	39	864	690	0.225	154	248	0.0	0.3	6.702	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1213	715	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	142	1303	0.337	439	1072	0.4	0.5	4.165	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1280	538	2.9	7.3	20.075	C
Barge - Barge Way	185	46	1029	620	0.299	185	295	0.3	0.4	8.256	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1368	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	173	1275	0.422	538	1195	0.5	0.7	4.874	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1422	658	7.3	49.3	82.225	F
Barge - Barge Way	227	57	1142	572	0.397	226	332	0.4	0.6	10.378	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1379	596	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	174	1275	0.422	538	1206	0.7	0.7	4.889	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1435	659	49.3	88.1	179.863	F
Barge - Barge Way	227	57	1153	567	0.400	227	335	0.6	0.7	10.562	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1333	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	143	1302	0.338	440	1190	0.7	0.5	4.183	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1428	540	88.1	55.7	182.699	F
Barge - Barge Way	185	46	1147	570	0.325	186	324	0.7	0.5	9.388	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1197	734	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	368	92	120	1323	0.278	369	1077	0.5	0.4	3.777	A
Swale W - Swale Way West	1087	272	36	1449	0.750	1297	452	55.7	3.3	50.557	F
Barge - Barge Way	155	39	1041	615	0.252	156	291	0.5	0.3	7.853	A

2024 + K3 Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.59	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2024 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	694	100.000
Barge - Barge Way		ONE HOUR	✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	193
	Barge - Barge Way	0	57	285	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	45

Barge - Barge Way	0	21	36	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.80	5.5	C	963	1444
Swa W - Swale Way West	0.57	6.32	1.3	A	637	955
Barge - Barge Way	0.39	6.22	0.6	A	314	471

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	632	1093	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	213	1434	0.551	785	419	0.0	1.2	5.504	A
Swa W - Swale Way West	522	131	57	1349	0.387	520	942	0.0	0.6	4.328	A
Barge - Barge Way	257	64	376	1047	0.246	256	201	0.0	0.3	4.546	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	758	1003	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	256	1400	0.674	940	502	1.2	2.0	7.768	A
Swa W - Swale Way West	624	156	68	1343	0.465	623	1128	0.6	0.9	4.995	A
Barge - Barge Way	307	77	451	1008	0.305	307	240	0.3	0.4	5.130	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	927	881	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	313	1354	0.853	1142	614	2.0	5.2	16.132	C
Swa W - Swale Way West	764	191	83	1334	0.573	762	1373	0.9	1.3	6.273	A
Barge - Barge Way	377	94	551	956	0.394	376	294	0.4	0.6	6.192	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	929	880	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	314	1353	0.854	1154	615	5.2	5.5	17.801	C
Swa W - Swale Way West	764	191	84	1334	0.573	764	1384	1.3	1.3	6.318	A
Barge - Barge Way	377	94	553	956	0.394	377	295	0.6	0.6	6.217	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	761	1001	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	257	1399	0.674	956	504	5.5	2.1	8.364	A
Swa W - Swale Way West	624	156	69	1342	0.465	626	1144	1.3	0.9	5.037	A
Barge - Barge Way	307	77	453	1007	0.305	308	242	0.6	0.4	5.157	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	637	1090	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	215	1433	0.551	793	422	2.1	1.2	5.658	A
Swale W - Swale Way West	522	131	57	1349	0.387	523	951	0.9	0.6	4.366	A
Barge - Barge Way	257	64	379	1045	0.246	258	202	0.4	0.3	4.573	A

2024 + WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	131.06	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2024 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1451	100.000
Barge - Barge Way		ONE HOUR	✓	214	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	292
	Barge - Barge Way	0	50	163	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	38

Barge - Barge Way	0	20	71	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.95	0.7	A	449	673
Swa W - Swale Way West	1.11	200.35	93.9	F	1331	1997
Barge - Barge Way	0.42	10.96	0.7	B	196	295

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1024	842	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	124	1318	0.279	367	900	0.0	0.4	3.779	A
Swa W - Swale Way West	1092	273	36	1445	0.756	1081	455	0.0	3.0	9.591	A
Barge - Barge Way	161	40	864	682	0.236	160	253	0.0	0.3	6.886	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1219	707	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	149	1295	0.339	439	1071	0.4	0.5	4.202	A
Swa W - Swale Way West	1304	326	43	1440	0.906	1285	545	3.0	7.7	21.030	C
Barge - Barge Way	192	48	1028	613	0.314	192	301	0.3	0.5	8.537	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1370	598	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	182	1265	0.425	538	1188	0.5	0.7	4.939	A
Swa W - Swale Way West	1598	399	53	1433	1.114	1419	667	7.7	52.3	86.506	F
Barge - Barge Way	236	59	1135	568	0.415	235	337	0.5	0.7	10.770	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1380	591	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	182	1265	0.426	538	1197	0.7	0.7	4.955	A
Swa W - Swale Way West	1598	399	53	1433	1.115	1431	668	52.3	93.9	191.072	F
Barge - Barge Way	236	59	1144	564	0.418	236	340	0.7	0.7	10.959	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1332	634	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	150	1294	0.340	440	1182	0.7	0.5	4.220	A
Swa W - Swale Way West	1304	326	43	1440	0.906	1425	547	93.9	63.8	200.346	F
Barge - Barge Way	192	48	1139	566	0.340	193	329	0.7	0.5	9.670	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1228	711	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	368	92	126	1316	0.280	369	1102	0.5	0.4	3.801	A
Swale W - Swale Way West	1092	273	36	1445	0.756	1334	458	63.8	3.5	68.097	F
Barge - Barge Way	161	40	1066	597	0.270	162	304	0.5	0.4	8.285	A

2024 + WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.28	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2024 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	701	100.000
Barge - Barge Way		ONE HOUR	✓	360	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	200
	Barge - Barge Way	0	57	303	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	47

Barge - Barge Way	0	21	36	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.86	19.25	5.9	C	963	1444
Swa W - Swale Way West	0.58	6.51	1.4	A	643	965
Barge - Barge Way	0.42	6.45	0.7	A	330	496

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	646	1082	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	227	1423	0.555	785	419	0.0	1.2	5.596	A
Swa W - Swale Way West	528	132	57	1340	0.394	525	955	0.0	0.6	4.390	A
Barge - Barge Way	271	68	376	1046	0.259	270	206	0.0	0.3	4.629	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	774	990	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	272	1387	0.680	940	502	1.2	2.1	7.987	A
Swa W - Swale Way West	630	158	68	1334	0.473	629	1144	0.6	0.9	5.102	A
Barge - Barge Way	324	81	451	1007	0.321	323	247	0.3	0.5	5.258	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	947	865	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	333	1338	0.863	1141	614	2.1	5.5	17.195	C
Swa W - Swale Way West	772	193	83	1325	0.582	770	1391	0.9	1.4	6.456	A
Barge - Barge Way	396	99	551	955	0.415	395	301	0.5	0.7	6.419	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	949	864	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	334	1337	0.864	1154	615	5.5	5.9	19.253	C
Swa W - Swale Way West	772	193	84	1325	0.583	772	1404	1.4	1.4	6.508	A
Barge - Barge Way	396	99	553	955	0.415	396	303	0.7	0.7	6.447	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	777	987	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	273	1386	0.680	958	504	5.9	2.2	8.683	A
Swa W - Swale Way West	630	158	69	1333	0.473	632	1162	1.4	0.9	5.149	A
Barge - Barge Way	324	81	453	1006	0.322	325	249	0.7	0.5	5.289	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	650	1079	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	229	1422	0.555	793	422	2.2	1.3	5.758	A
Swale W - Swale Way West	528	132	57	1340	0.394	529	964	0.9	0.7	4.445	A
Barge - Barge Way	271	68	379	1044	0.259	272	208	0.5	0.4	4.660	A

2024 + K3 and WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	137.54	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2024 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1454	100.000
Barge - Barge Way		ONE HOUR	✓	217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	295
	Barge - Barge Way	0	50	166	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	39

Barge - Barge Way	0	20	71	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.98	0.7	A	449	673
Swa W - Swale Way West	1.12	210.51	97.1	F	1334	2001
Barge - Barge Way	0.42	11.02	0.7	B	199	299

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1026	840	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	126	1316	0.280	367	900	0.0	0.4	3.787	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1083	457	0.0	3.0	9.725	A
Barge - Barge Way	163	41	864	681	0.240	162	255	0.0	0.3	6.923	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1221	705	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	151	1293	0.340	439	1070	0.4	0.5	4.213	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1287	547	3.0	8.0	21.610	C
Barge - Barge Way	195	49	1027	612	0.319	194	303	0.3	0.5	8.600	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1369	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	185	1263	0.426	537	1184	0.5	0.7	4.959	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1417	670	8.0	53.9	89.012	F
Barge - Barge Way	239	60	1131	569	0.420	238	339	0.5	0.7	10.838	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	590	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	186	1262	0.427	538	1193	0.7	0.7	4.975	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1428	671	53.9	97.1	197.545	F
Barge - Barge Way	239	60	1140	565	0.423	239	342	0.7	0.7	11.023	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1330	635	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	153	1292	0.340	440	1178	0.7	0.5	4.233	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1422	550	97.1	68.4	210.510	F
Barge - Barge Way	195	49	1134	567	0.344	196	331	0.7	0.5	9.709	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1244	700	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	368	92	128	1314	0.280	369	1116	0.5	0.4	3.812	A
Swale W - Swale Way West	1095	274	36	1442	0.759	1354	461	68.4	3.6	79.133	F
Barge - Barge Way	163	41	1080	590	0.277	164	310	0.5	0.4	8.453	A

2024 + K3 and WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.51	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2024 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	704	100.000
Barge - Barge Way		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	203
	Barge - Barge Way	0	57	306	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	48

Barge - Barge Way	0	21	37	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.87	19.72	6.0	C	963	1444
Swa W - Swale Way West	0.59	6.60	1.4	A	646	969
Barge - Barge Way	0.42	6.56	0.7	A	333	500

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	648	1079	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	229	1420	0.556	785	419	0.0	1.2	5.624	A
Swa W - Swale Way West	530	133	57	1336	0.397	527	957	0.0	0.7	4.439	A
Barge - Barge Way	273	68	376	1039	0.263	272	208	0.0	0.4	4.683	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	776	986	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	275	1383	0.682	940	502	1.2	2.1	8.054	A
Swa W - Swale Way West	633	158	68	1329	0.476	632	1146	0.7	0.9	5.154	A
Barge - Barge Way	326	82	451	1001	0.326	326	249	0.4	0.5	5.330	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	950	861	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	336	1333	0.866	1141	614	2.1	5.7	17.528	C
Swa W - Swale Way West	775	194	83	1321	0.587	773	1394	0.9	1.4	6.547	A
Barge - Barge Way	400	100	551	949	0.421	399	304	0.5	0.7	6.529	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	952	859	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	337	1332	0.867	1154	615	5.7	6.0	19.718	C
Swa W - Swale Way West	775	194	84	1321	0.587	775	1407	1.4	1.4	6.599	A
Barge - Barge Way	400	100	553	949	0.421	400	306	0.7	0.7	6.558	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	780	984	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	276	1382	0.682	958	504	6.0	2.2	8.784	A
Swa W - Swale Way West	633	158	69	1329	0.476	635	1165	1.4	0.9	5.205	A
Barge - Barge Way	326	82	453	1000	0.326	327	252	0.7	0.5	5.361	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	652	1076	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	231	1419	0.557	793	422	2.2	1.3	5.789	A
Swale W - Swale Way West	530	133	57	1335	0.397	531	967	0.9	0.7	4.480	A
Barge - Barge Way	273	68	379	1038	0.263	274	210	0.5	0.4	4.714	A

2024 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	119.80	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D13	2024 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	491	100.000
Swa W - Swale Way West		ONE HOUR	✓	1444	100.000
Barge - Barge Way		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	444	46
	Swa W - Swale Way West	0	1157	2	285
	Barge - Barge Way	0	50	155	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way

From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	19	24
	Swa W - Swale Way West	0	7	50	37
	Barge - Barge Way	0	20	69	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.97	0.7	A	451	676
Swa W - Swale Way West	1.11	182.70	88.1	F	1325	1988
Barge - Barge Way	0.40	10.56	0.7	B	189	284

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1018	850	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	118	1314	0.281	368	900	0.0	0.4	3.798	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1076	450	0.0	2.9	9.375	A
Barge - Barge Way	155	39	864	690	0.225	154	248	0.0	0.3	6.702	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1213	715	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	142	1293	0.341	441	1072	0.4	0.5	4.220	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1280	539	2.9	7.3	20.075	C
Barge - Barge Way	185	46	1029	620	0.299	185	295	0.3	0.4	8.256	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1368	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	173	1266	0.427	540	1195	0.5	0.7	4.953	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1422	660	7.3	49.3	82.225	F
Barge - Barge Way	227	57	1142	572	0.397	226	332	0.4	0.6	10.378	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1379	596	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	174	1265	0.427	541	1206	0.7	0.7	4.969	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1435	661	49.3	88.1	179.863	F
Barge - Barge Way	227	57	1153	567	0.400	227	335	0.6	0.7	10.562	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1333	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	143	1292	0.342	442	1190	0.7	0.5	4.238	A

Swale W - Swale Way West	1298	325	43	1444	0.899	1428	542	88.1	55.7	182.699	F
Barge - Barge Way	185	46	1147	570	0.325	186	324	0.7	0.5	9.390	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1197	734	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	370	92	120	1313	0.282	370	1077	0.5	0.4	3.820	A
Swale W - Swale Way West	1087	272	36	1449	0.750	1297	454	55.7	3.3	50.557	F
Barge - Barge Way	155	39	1041	615	0.252	156	291	0.5	0.3	7.853	A

2024 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.60	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D14	2024 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	696	100.000
Barge - Barge Way		ONE HOUR	✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	503	0	193
	Barge - Barge Way	0	57	285	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way

From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	45
	Barge - Barge Way	0	21	36	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.80	5.5	C	963	1444
Swa W - Swale Way West	0.57	6.34	1.3	A	639	958
Barge - Barge Way	0.39	6.23	0.6	A	314	471

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	634	1092	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	213	1434	0.551	785	420	0.0	1.2	5.504	A
Swa W - Swale Way West	524	131	57	1350	0.388	521	942	0.0	0.6	4.334	A
Barge - Barge Way	257	64	378	1046	0.246	256	201	0.0	0.3	4.550	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	759	1002	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	256	1400	0.674	940	504	1.2	2.0	7.768	A
Swa W - Swale Way West	626	156	68	1343	0.466	625	1128	0.6	0.9	5.006	A
Barge - Barge Way	307	77	452	1007	0.305	307	240	0.3	0.4	5.137	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	929	880	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	313	1354	0.853	1142	616	2.0	5.2	16.132	C
Swa W - Swale Way West	766	192	83	1335	0.574	764	1373	0.9	1.3	6.294	A
Barge - Barge Way	377	94	554	955	0.394	376	294	0.4	0.6	6.205	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	931	878	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	314	1353	0.854	1154	618	5.2	5.5	17.801	C
Swa W - Swale Way West	766	192	84	1334	0.574	766	1384	1.3	1.3	6.339	A
Barge - Barge Way	377	94	555	954	0.395	377	295	0.6	0.6	6.229	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	763	1000	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	257	1399	0.674	956	506	5.5	2.1	8.366	A

Swale W - Swale Way West	626	156	69	1342	0.466	628	1144	1.3	0.9	5.048	A
Barge - Barge Way	307	77	454	1006	0.306	308	242	0.6	0.4	5.164	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	638	1089	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	215	1433	0.551	793	423	2.1	1.2	5.658	A
Swale W - Swale Way West	524	131	57	1349	0.388	525	951	0.9	0.6	4.374	A
Barge - Barge Way	257	64	380	1045	0.246	258	202	0.4	0.3	4.579	A

2024 + WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	130.75	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2024 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	491	100.000
Swa W - Swale Way West		ONE HOUR	✓	1451	100.000
Barge - Barge Way		ONE HOUR	✓	214	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	444	46
	Swa W - Swale Way West	0	1157	2	292
	Barge - Barge Way	0	50	163	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way

From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	19	24
	Swa W - Swale Way West	0	7	50	38
	Barge - Barge Way	0	20	71	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	5.04	0.8	A	451	676
Swa W - Swale Way West	1.11	200.35	93.9	F	1331	1997
Barge - Barge Way	0.42	10.96	0.7	B	196	295

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1024	842	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	124	1308	0.283	368	900	0.0	0.4	3.825	A
Swa W - Swale Way West	1092	273	36	1445	0.756	1081	456	0.0	3.0	9.591	A
Barge - Barge Way	161	40	864	682	0.236	160	253	0.0	0.3	6.886	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1219	707	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	149	1285	0.343	441	1071	0.4	0.5	4.259	A
Swa W - Swale Way West	1304	326	43	1440	0.906	1285	547	3.0	7.7	21.030	C
Barge - Barge Way	192	48	1028	613	0.314	192	301	0.3	0.5	8.537	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1370	598	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	182	1256	0.430	540	1188	0.5	0.7	5.020	A
Swa W - Swale Way West	1598	399	53	1433	1.114	1419	669	7.7	52.3	86.506	F
Barge - Barge Way	236	59	1135	568	0.415	235	337	0.5	0.7	10.770	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1380	591	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	182	1255	0.431	541	1197	0.7	0.8	5.036	A
Swa W - Swale Way West	1598	399	53	1433	1.115	1431	670	52.3	93.9	191.072	F
Barge - Barge Way	236	59	1144	564	0.418	236	340	0.7	0.7	10.959	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1332	634	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	150	1284	0.344	442	1182	0.8	0.5	4.279	A

Swale W - Swale Way West	1304	326	43	1440	0.906	1425	549	93.9	63.8	200.346	F
Barge - Barge Way	192	48	1139	566	0.340	193	329	0.7	0.5	9.669	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1228	711	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	370	92	126	1306	0.283	370	1102	0.5	0.4	3.849	A
Swale W - Swale Way West	1092	273	36	1445	0.756	1334	460	63.8	3.5	68.097	F
Barge - Barge Way	161	40	1066	597	0.270	162	304	0.5	0.4	8.286	A

2024 + WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.28	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2024 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	703	100.000
Barge - Barge Way		ONE HOUR	✓	360	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	503	0	200
	Barge - Barge Way	0	57	303	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way

From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	47
	Barge - Barge Way	0	21	36	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.86	19.25	5.9	C	963	1444
Swa W - Swale Way West	0.58	6.53	1.4	A	645	968
Barge - Barge Way	0.42	6.46	0.7	A	330	496

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	647	1081	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	227	1423	0.555	785	420	0.0	1.2	5.596	A
Swa W - Swale Way West	529	132	57	1340	0.395	527	955	0.0	0.6	4.409	A
Barge - Barge Way	271	68	378	1045	0.259	270	206	0.0	0.3	4.634	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	776	989	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	272	1387	0.680	940	504	1.2	2.1	7.986	A
Swa W - Swale Way West	632	158	68	1334	0.474	631	1144	0.6	0.9	5.113	A
Barge - Barge Way	324	81	452	1006	0.322	323	247	0.3	0.5	5.265	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	949	864	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	333	1338	0.863	1141	616	2.1	5.5	17.195	C
Swa W - Swale Way West	774	194	83	1326	0.584	772	1391	0.9	1.4	6.478	A
Barge - Barge Way	396	99	554	954	0.415	395	301	0.5	0.7	6.432	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	951	862	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	334	1337	0.864	1154	618	5.5	5.9	19.253	C
Swa W - Swale Way West	774	194	84	1325	0.584	774	1404	1.4	1.4	6.531	A
Barge - Barge Way	396	99	555	953	0.416	396	303	0.7	0.7	6.460	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	779	986	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	273	1386	0.680	958	506	5.9	2.2	8.685	A

Swale W - Swale Way West	632	158	69	1333	0.474	634	1162	1.4	0.9	5.162	A
Barge - Barge Way	324	81	454	1005	0.322	325	249	0.7	0.5	5.296	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	652	1078	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	229	1422	0.555	793	423	2.2	1.3	5.758	A
Swale W - Swale Way West	529	132	57	1340	0.395	530	964	0.9	0.7	4.450	A
Barge - Barge Way	271	68	380	1044	0.260	272	208	0.5	0.4	4.666	A

2024 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	137.21	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D17	2024 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	491	100.000
Swa W - Swale Way West		ONE HOUR	✓	1454	100.000
Barge - Barge Way		ONE HOUR	✓	217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	444	46
	Swa W - Swale Way West	0	1157	2	295
	Barge - Barge Way	0	50	166	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site	Swa S - Swale Way	Swa W - Swale Way	Barge - Barge

		Access	South	West	Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	19	24
	Swa W - Swale Way West	0	7	50	39
	Barge - Barge Way	0	20	71	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	5.06	0.8	A	451	676
Swa W - Swale Way West	1.12	210.51	97.1	F	1334	2001
Barge - Barge Way	0.42	11.02	0.7	B	199	299

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1026	840	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	370	92	126	1306	0.283	368	900	0.0	0.4	3.834	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1083	458	0.0	3.0	9.725	A
Barge - Barge Way	163	41	864	681	0.240	162	255	0.0	0.3	6.923	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1221	705	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	441	110	151	1283	0.344	441	1070	0.4	0.5	4.271	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1287	549	3.0	8.0	21.609	C
Barge - Barge Way	195	49	1027	612	0.319	194	303	0.3	0.5	8.600	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1369	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	185	1253	0.431	540	1184	0.5	0.8	5.041	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1417	672	8.0	53.9	89.012	F
Barge - Barge Way	239	60	1131	569	0.420	238	339	0.5	0.7	10.838	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	590	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	541	135	186	1252	0.432	541	1193	0.8	0.8	5.057	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1428	674	53.9	97.1	197.544	F
Barge - Barge Way	239	60	1140	565	0.423	239	342	0.7	0.7	11.023	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1330	635	0.000	0	0	0.0	0.0	0.000	A

Swale S - Swale Way South	441	110	153	1282	0.344	442	1178	0.8	0.5	4.293	A
Swale W - Swale Way West	1307	327	43	1437	0.910	1422	552	97.1	68.4	210.508	F
Barge - Barge Way	195	49	1134	567	0.344	196	331	0.7	0.5	9.707	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1244	700	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	370	92	128	1304	0.283	370	1116	0.5	0.4	3.856	A
Swale W - Swale Way West	1095	274	36	1442	0.759	1354	462	68.4	3.6	79.134	F
Barge - Barge Way	163	41	1080	590	0.277	164	310	0.5	0.4	8.453	A

2024 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.52	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D18	2024 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	706	100.000
Barge - Barge Way		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	503	0	203
	Barge - Barge Way	0	57	306	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site	Swa S - Swale Way	Swa W - Swale Way	Barge - Barge

	Access	South	West	Way
From	Site - Site Access	0	0	0
	Swa S - Swale Way South	0	0	5
	Swa W - Swale Way West	0	11	0
	Barge - Barge Way	0	21	37

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.87	19.72	6.0	C	963	1444
Swa W - Swale Way West	0.59	6.62	1.4	A	648	972
Barge - Barge Way	0.42	6.57	0.7	A	333	500

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	649	1078	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	229	1420	0.556	785	420	0.0	1.2	5.624	A
Swa W - Swale Way West	532	133	57	1336	0.398	529	957	0.0	0.7	4.445	A
Barge - Barge Way	273	68	378	1038	0.263	272	208	0.0	0.4	4.688	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	778	985	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	275	1383	0.682	940	504	1.2	2.1	8.054	A
Swa W - Swale Way West	635	159	68	1330	0.477	634	1146	0.7	0.9	5.164	A
Barge - Barge Way	326	82	452	1000	0.326	326	249	0.4	0.5	5.337	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	952	859	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	336	1333	0.866	1141	616	2.1	5.7	17.528	C
Swa W - Swale Way West	777	194	83	1321	0.588	775	1394	0.9	1.4	6.569	A
Barge - Barge Way	400	100	553	948	0.422	399	304	0.5	0.7	6.540	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	955	857	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	337	1332	0.867	1154	618	5.7	6.0	19.718	C
Swa W - Swale Way West	777	194	84	1321	0.589	777	1407	1.4	1.4	6.622	A
Barge - Barge Way	400	100	555	947	0.422	400	306	0.7	0.7	6.572	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	782	982	0.000	0	0	0.0	0.0	0.000	A

Swale S - Swale Way South	943	236	276	1382	0.682	958	506	6.0	2.2	8.782	A
Swale W - Swale Way West	635	159	69	1329	0.478	637	1165	1.4	0.9	5.214	A
Barge - Barge Way	326	82	455	999	0.327	327	252	0.7	0.5	5.369	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	654	1075	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	231	1419	0.557	793	423	2.2	1.3	5.791	A
Swale W - Swale Way West	532	133	57	1336	0.398	533	967	0.9	0.7	4.489	A
Barge - Barge Way	273	68	380	1037	0.264	274	210	0.5	0.4	4.721	A

2031, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	114.34	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D19	2031	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1441	100.000
Barge - Barge Way		ONE HOUR	✓	204	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	282
	Barge - Barge Way	0	50	153	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	36

Barge - Barge Way	0	20	68	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.87	0.7	A	449	673
Swa W - Swale Way West	1.10	173.73	84.9	F	1322	1983
Barge - Barge Way	0.39	10.46	0.6	B	187	281

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1017	852	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	117	1326	0.278	367	900	0.0	0.4	3.745	A
Swa W - Swale Way West	1085	271	36	1452	0.747	1074	447	0.0	2.8	9.252	A
Barge - Barge Way	154	38	864	694	0.221	152	245	0.0	0.3	6.636	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1212	718	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	140	1306	0.337	439	1072	0.4	0.5	4.153	A
Swa W - Swale Way West	1295	324	43	1447	0.895	1278	536	2.8	7.1	19.562	C
Barge - Barge Way	183	46	1029	623	0.294	183	292	0.3	0.4	8.161	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1370	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	171	1278	0.421	538	1199	0.5	0.7	4.855	A
Swa W - Swale Way West	1587	397	53	1441	1.101	1424	656	7.1	47.7	79.894	F
Barge - Barge Way	225	56	1146	573	0.392	224	330	0.4	0.6	10.270	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1382	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	172	1277	0.421	538	1210	0.7	0.7	4.870	A
Swa W - Swale Way West	1587	397	53	1441	1.101	1438	657	47.7	84.9	173.734	F
Barge - Barge Way	225	56	1157	569	0.395	225	333	0.6	0.6	10.459	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1335	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	141	1305	0.337	440	1194	0.7	0.5	4.169	A
Swa W - Swale Way West	1295	324	43	1447	0.895	1430	538	84.9	51.2	173.047	F
Barge - Barge Way	183	46	1151	571	0.321	184	322	0.6	0.5	9.313	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1182	745	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	368	92	118	1325	0.278	369	1064	0.5	0.4	3.766	A
Swale W - Swale Way West	1085	271	36	1452	0.747	1277	451	51.2	3.2	42.166	E
Barge - Barge Way	154	38	1028	624	0.246	154	285	0.5	0.3	7.674	A

2031, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.48	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D20	2031	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	691	100.000
Barge - Barge Way		ONE HOUR	✓	339	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	190
	Barge - Barge Way	0	57	282	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	44

Barge - Barge Way	0	21	36	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.58	5.4	C	963	1444
Swa W - Swale Way West	0.57	6.24	1.3	A	634	951
Barge - Barge Way	0.39	6.18	0.6	A	311	467

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	630	1095	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	211	1436	0.550	785	419	0.0	1.2	5.488	A
Swa W - Swale Way West	520	130	57	1354	0.384	518	939	0.0	0.6	4.294	A
Barge - Barge Way	255	64	376	1047	0.244	254	198	0.0	0.3	4.532	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	755	1005	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	253	1402	0.673	940	502	1.2	2.0	7.732	A
Swa W - Swale Way West	621	155	68	1347	0.461	620	1125	0.6	0.8	4.947	A
Barge - Barge Way	305	76	451	1008	0.302	304	238	0.3	0.4	5.109	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	924	884	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	310	1356	0.852	1142	614	2.0	5.1	15.964	C
Swa W - Swale Way West	761	190	83	1339	0.568	759	1370	0.8	1.3	6.191	A
Barge - Barge Way	373	93	551	956	0.390	372	290	0.4	0.6	6.156	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	926	882	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	310	1356	0.852	1154	615	5.1	5.4	17.578	C
Swa W - Swale Way West	761	190	84	1338	0.569	761	1381	1.3	1.3	6.235	A
Barge - Barge Way	373	93	553	956	0.391	373	292	0.6	0.6	6.180	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	758	1003	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	254	1401	0.673	956	504	5.4	2.1	8.315	A
Swa W - Swale Way West	621	155	69	1346	0.461	623	1141	1.3	0.9	4.990	A
Barge - Barge Way	305	76	453	1007	0.303	306	240	0.6	0.4	5.134	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	634	1092	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	213	1435	0.550	793	422	2.1	1.2	5.641	A
Swale W - Swale Way West	520	130	57	1353	0.384	521	948	0.9	0.6	4.331	A
Barge - Barge Way	255	64	379	1046	0.244	256	200	0.4	0.3	4.559	A

2031 + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	252.09	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D21	2031 + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	76	100.000
Swa S - Swale Way South		ONE HOUR	✓	492	100.000
Swa W - Swale Way West		ONE HOUR	✓	1570	100.000
Barge - Barge Way		ONE HOUR	✓	204	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	76	0
	Swa S - Swale Way South	1	1	444	46
	Swa W - Swale Way West	128	1158	2	282
	Barge - Barge Way	0	50	153	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	21	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	11	7	50	36

Barge - Barge Way	0	20	68	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.15	7.86	0.2	A	70	105
Swa S - Swale Way South	0.44	5.27	0.8	A	451	677
Swa W - Swale Way West	1.20	389.59	159.4	F	1441	2161
Barge - Barge Way	0.40	10.88	0.7	B	187	281

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1014	705	0.081	57	96	0.0	0.1	5.552	A
Swa S - Swale Way South	370	93	173	1290	0.287	369	898	0.0	0.4	3.901	A
Swa W - Swale Way West	1182	295	37	1454	0.813	1166	505	0.0	4.1	11.919	B
Barge - Barge Way	154	38	958	652	0.235	152	245	0.0	0.3	7.182	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1195	602	0.113	68	112	0.1	0.1	6.741	A
Swa S - Swale Way South	442	111	208	1262	0.350	442	1055	0.4	0.5	4.384	A
Swa W - Swale Way West	1411	353	44	1449	0.974	1369	606	4.1	14.7	33.943	D
Barge - Barge Way	183	46	1125	581	0.316	183	288	0.3	0.5	9.030	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1287	544	0.154	83	118	0.1	0.2	7.821	A
Swa S - Swale Way South	542	135	254	1225	0.442	541	1116	0.5	0.8	5.252	A
Swa W - Swale Way West	1729	432	54	1442	1.199	1437	741	14.7	87.5	136.861	F
Barge - Barge Way	225	56	1181	557	0.404	224	310	0.5	0.7	10.786	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1291	541	0.155	84	119	0.2	0.2	7.864	A
Swa S - Swale Way South	542	135	255	1224	0.442	542	1119	0.8	0.8	5.272	A
Swa W - Swale Way West	1729	432	54	1442	1.199	1441	743	87.5	159.4	313.740	F
Barge - Barge Way	225	56	1185	555	0.405	225	311	0.7	0.7	10.884	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1249	573	0.119	69	118	0.2	0.1	7.134	A
Swa S - Swale Way South	442	111	209	1261	0.351	443	1108	0.8	0.5	4.407	A
Swa W - Swale Way West	1411	353	44	1448	0.974	1439	608	159.4	152.3	389.595	F
Barge - Barge Way	183	46	1183	556	0.330	184	301	0.7	0.5	9.696	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1222	595	0.096	57	118	0.1	0.1	6.699	A
Swale S - Swale Way South	370	93	175	1289	0.287	371	1104	0.5	0.4	3.925	A
Swale W - Swale Way West	1182	295	37	1453	0.813	1444	509	152.3	86.8	299.485	F
Barge - Barge Way	154	38	1186	555	0.277	154	295	0.5	0.4	8.997	A

2031 + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	14.88	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D22	2031 + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	97	100.000
Swa S - Swale Way South		ONE HOUR	✓	1050	100.000
Swa W - Swale Way West		ONE HOUR	✓	739	100.000
Barge - Barge Way		ONE HOUR	✓	339	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	97	0
	Swa S - Swale Way South	0	1	974	75
	Swa W - Swale Way West	46	503	0	190
	Barge - Barge Way	0	57	282	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	8	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	13	11	0	44

Barge - Barge Way	0	21	36	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.13	5.08	0.2	A	89	134
Swa S - Swale Way South	0.90	25.71	7.8	D	963	1445
Swa W - Swale Way West	0.61	6.79	1.5	A	678	1017
Barge - Barge Way	0.40	6.49	0.7	A	311	467

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	631	1013	0.072	73	34	0.0	0.1	3.829	A
Swa S - Swale Way South	790	198	284	1389	0.569	785	420	0.0	1.3	5.909	A
Swa W - Swale Way West	556	139	57	1359	0.409	554	1012	0.0	0.7	4.456	A
Barge - Barge Way	255	64	412	1028	0.248	254	198	0.0	0.3	4.643	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	757	930	0.094	87	41	0.1	0.1	4.272	A
Swa S - Swale Way South	944	236	340	1346	0.701	940	504	1.3	2.3	8.775	A
Swa W - Swale Way West	664	166	68	1352	0.491	663	1212	0.7	1.0	5.216	A
Barge - Barge Way	305	76	494	986	0.309	304	238	0.3	0.4	5.279	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	926	817	0.131	107	51	0.1	0.1	5.064	A
Swa S - Swale Way South	1156	289	416	1288	0.898	1137	616	2.3	7.1	21.521	C
Swa W - Swale Way West	814	203	82	1344	0.605	811	1471	1.0	1.5	6.731	A
Barge - Barge Way	373	93	604	929	0.402	372	290	0.4	0.7	6.459	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	928	816	0.131	107	51	0.1	0.2	5.077	A
Swa S - Swale Way South	1156	289	417	1287	0.898	1153	618	7.1	7.8	25.706	D
Swa W - Swale Way West	814	203	83	1343	0.606	814	1487	1.5	1.5	6.793	A
Barge - Barge Way	373	93	606	928	0.402	373	292	0.7	0.7	6.489	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	760	927	0.094	87	41	0.2	0.1	4.288	A
Swa S - Swale Way South	944	236	342	1345	0.702	965	506	7.8	2.4	9.975	A
Swa W - Swale Way West	664	166	70	1351	0.492	667	1237	1.5	1.0	5.275	A
Barge - Barge Way	305	76	496	985	0.310	306	240	0.7	0.5	5.308	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	636	1010	0.072	73	35	0.1	0.1	3.842	A
Swale S - Swale Way South	790	198	286	1388	0.570	795	423	2.4	1.3	6.112	A
Swale W - Swale Way West	556	139	58	1358	0.410	557	1023	1.0	0.7	4.502	A
Barge - Barge Way	255	64	415	1027	0.249	256	200	0.5	0.3	4.674	A

2031 + K3 Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	120.09	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D23	2031 + K3 Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1444	100.000
Barge - Barge Way		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	285
	Barge - Barge Way	0	50	155	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	37

Barge - Barge Way	0	20	69	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.42	4.89	0.7	A	449	673
Swa W - Swale Way West	1.11	182.70	88.1	F	1325	1988
Barge - Barge Way	0.40	10.56	0.7	B	189	284

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1018	850	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	118	1324	0.278	367	900	0.0	0.4	3.752	A
Swa W - Swale Way West	1087	272	36	1449	0.750	1076	449	0.0	2.9	9.375	A
Barge - Barge Way	155	39	864	690	0.225	154	248	0.0	0.3	6.702	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1213	715	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	142	1303	0.337	439	1072	0.4	0.5	4.165	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1280	538	2.9	7.3	20.075	C
Barge - Barge Way	185	46	1029	620	0.299	185	295	0.3	0.4	8.256	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1368	604	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	173	1275	0.422	538	1195	0.5	0.7	4.874	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1422	658	7.3	49.3	82.225	F
Barge - Barge Way	227	57	1142	572	0.397	226	332	0.4	0.6	10.378	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1379	596	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	174	1275	0.422	538	1206	0.7	0.7	4.889	A
Swa W - Swale Way West	1590	397	53	1437	1.106	1435	659	49.3	88.1	179.863	F
Barge - Barge Way	227	57	1153	567	0.400	227	335	0.6	0.7	10.562	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1333	638	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	143	1302	0.338	440	1190	0.7	0.5	4.183	A
Swa W - Swale Way West	1298	325	43	1444	0.899	1428	540	88.1	55.7	182.699	F
Barge - Barge Way	185	46	1147	570	0.325	186	324	0.7	0.5	9.388	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1197	734	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	368	92	120	1323	0.278	369	1077	0.5	0.4	3.777	A
Swale W - Swale Way West	1087	272	36	1449	0.750	1297	452	55.7	3.3	50.557	F
Barge - Barge Way	155	39	1041	615	0.252	156	291	0.5	0.3	7.853	A

2031 + K3 Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	11.59	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D24	2031 + K3 Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	694	100.000
Barge - Barge Way		ONE HOUR	✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	193
	Barge - Barge Way	0	57	285	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	45

Barge - Barge Way	0	21	36	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.85	17.80	5.5	C	963	1444
Swa W - Swale Way West	0.57	6.32	1.3	A	637	955
Barge - Barge Way	0.39	6.22	0.6	A	314	471

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	632	1093	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	213	1434	0.551	785	419	0.0	1.2	5.504	A
Swa W - Swale Way West	522	131	57	1349	0.387	520	942	0.0	0.6	4.328	A
Barge - Barge Way	257	64	376	1047	0.246	256	201	0.0	0.3	4.546	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	758	1003	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	256	1400	0.674	940	502	1.2	2.0	7.768	A
Swa W - Swale Way West	624	156	68	1343	0.465	623	1128	0.6	0.9	4.995	A
Barge - Barge Way	307	77	451	1008	0.305	307	240	0.3	0.4	5.130	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	927	881	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	313	1354	0.853	1142	614	2.0	5.2	16.132	C
Swa W - Swale Way West	764	191	83	1334	0.573	762	1373	0.9	1.3	6.273	A
Barge - Barge Way	377	94	551	956	0.394	376	294	0.4	0.6	6.192	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	929	880	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	314	1353	0.854	1154	615	5.2	5.5	17.801	C
Swa W - Swale Way West	764	191	84	1334	0.573	764	1384	1.3	1.3	6.318	A
Barge - Barge Way	377	94	553	956	0.394	377	295	0.6	0.6	6.217	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	761	1001	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	257	1399	0.674	956	504	5.5	2.1	8.364	A
Swa W - Swale Way West	624	156	69	1342	0.465	626	1144	1.3	0.9	5.037	A
Barge - Barge Way	307	77	453	1007	0.305	308	242	0.6	0.4	5.157	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	637	1090	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	215	1433	0.551	793	422	2.1	1.2	5.658	A
Swale W - Swale Way West	522	131	57	1349	0.387	523	951	0.9	0.6	4.366	A
Barge - Barge Way	257	64	379	1045	0.246	258	202	0.4	0.3	4.573	A

2031 + WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	131.06	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D25	2031 + WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1451	100.000
Barge - Barge Way		ONE HOUR	✓	214	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	292
	Barge - Barge Way	0	50	163	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	38

Barge - Barge Way	0	20	71	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.95	0.7	A	449	673
Swa W - Swale Way West	1.11	200.35	93.9	F	1331	1997
Barge - Barge Way	0.42	10.96	0.7	B	196	295

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1024	842	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	124	1318	0.279	367	900	0.0	0.4	3.779	A
Swa W - Swale Way West	1092	273	36	1445	0.756	1081	455	0.0	3.0	9.591	A
Barge - Barge Way	161	40	864	682	0.236	160	253	0.0	0.3	6.886	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1219	707	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	149	1295	0.339	439	1071	0.4	0.5	4.202	A
Swa W - Swale Way West	1304	326	43	1440	0.906	1285	545	3.0	7.7	21.030	C
Barge - Barge Way	192	48	1028	613	0.314	192	301	0.3	0.5	8.537	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1370	598	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	182	1265	0.425	538	1188	0.5	0.7	4.939	A
Swa W - Swale Way West	1598	399	53	1433	1.114	1419	667	7.7	52.3	86.506	F
Barge - Barge Way	236	59	1135	568	0.415	235	337	0.5	0.7	10.770	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1380	591	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	182	1265	0.426	538	1197	0.7	0.7	4.955	A
Swa W - Swale Way West	1598	399	53	1433	1.115	1431	668	52.3	93.9	191.072	F
Barge - Barge Way	236	59	1144	564	0.418	236	340	0.7	0.7	10.959	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1332	634	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	150	1294	0.340	440	1182	0.7	0.5	4.220	A
Swa W - Swale Way West	1304	326	43	1440	0.906	1425	547	93.9	63.8	200.346	F
Barge - Barge Way	192	48	1139	566	0.340	193	329	0.7	0.5	9.670	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1228	711	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	368	92	126	1316	0.280	369	1102	0.5	0.4	3.801	A
Swale W - Swale Way West	1092	273	36	1445	0.756	1334	458	63.8	3.5	68.097	F
Barge - Barge Way	161	40	1066	597	0.270	162	304	0.5	0.4	8.285	A

2031 + WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.28	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D26	2031 + WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	701	100.000
Barge - Barge Way		ONE HOUR	✓	360	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	200
	Barge - Barge Way	0	57	303	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	47

Barge - Barge Way	0	21	36	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.86	19.25	5.9	C	963	1444
Swa W - Swale Way West	0.58	6.51	1.4	A	643	965
Barge - Barge Way	0.42	6.45	0.7	A	330	496

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	646	1082	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	227	1423	0.555	785	419	0.0	1.2	5.596	A
Swa W - Swale Way West	528	132	57	1340	0.394	525	955	0.0	0.6	4.390	A
Barge - Barge Way	271	68	376	1046	0.259	270	206	0.0	0.3	4.629	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	774	990	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	272	1387	0.680	940	502	1.2	2.1	7.987	A
Swa W - Swale Way West	630	158	68	1334	0.473	629	1144	0.6	0.9	5.102	A
Barge - Barge Way	324	81	451	1007	0.321	323	247	0.3	0.5	5.258	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	947	865	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	333	1338	0.863	1141	614	2.1	5.5	17.195	C
Swa W - Swale Way West	772	193	83	1325	0.582	770	1391	0.9	1.4	6.456	A
Barge - Barge Way	396	99	551	955	0.415	395	301	0.5	0.7	6.419	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	949	864	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	334	1337	0.864	1154	615	5.5	5.9	19.253	C
Swa W - Swale Way West	772	193	84	1325	0.583	772	1404	1.4	1.4	6.508	A
Barge - Barge Way	396	99	553	955	0.415	396	303	0.7	0.7	6.447	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	777	987	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	273	1386	0.680	958	504	5.9	2.2	8.683	A
Swa W - Swale Way West	630	158	69	1333	0.473	632	1162	1.4	0.9	5.149	A
Barge - Barge Way	324	81	453	1006	0.322	325	249	0.7	0.5	5.289	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	650	1079	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	229	1422	0.555	793	422	2.2	1.3	5.758	A
Swale W - Swale Way West	528	132	57	1340	0.394	529	964	0.9	0.7	4.445	A
Barge - Barge Way	271	68	379	1044	0.259	272	208	0.5	0.4	4.660	A

2031 + K3 and WKN Operational, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	137.54	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D27	2031 + K3 and WKN Operational	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	489	100.000
Swa W - Swale Way West		ONE HOUR	✓	1454	100.000
Barge - Barge Way		ONE HOUR	✓	217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	442	46
	Swa W - Swale Way West	0	1157	2	295
	Barge - Barge Way	0	50	166	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	0	7	50	39

Barge - Barge Way	0	20	71	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.43	4.98	0.7	A	449	673
Swa W - Swale Way West	1.12	210.51	97.1	F	1334	2001
Barge - Barge Way	0.42	11.02	0.7	B	199	299

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1026	840	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	368	92	126	1316	0.280	367	900	0.0	0.4	3.787	A
Swa W - Swale Way West	1095	274	36	1442	0.759	1083	457	0.0	3.0	9.725	A
Barge - Barge Way	163	41	864	681	0.240	162	255	0.0	0.3	6.923	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1221	705	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	151	1293	0.340	439	1070	0.4	0.5	4.213	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1287	547	3.0	8.0	21.610	C
Barge - Barge Way	195	49	1027	612	0.319	194	303	0.3	0.5	8.600	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1369	597	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	185	1263	0.426	537	1184	0.5	0.7	4.959	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1417	670	8.0	53.9	89.012	F
Barge - Barge Way	239	60	1131	569	0.420	238	339	0.5	0.7	10.838	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1378	590	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	538	135	186	1262	0.427	538	1193	0.7	0.7	4.975	A
Swa W - Swale Way West	1601	400	53	1430	1.119	1428	671	53.9	97.1	197.545	F
Barge - Barge Way	239	60	1140	565	0.423	239	342	0.7	0.7	11.023	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1330	635	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	440	110	153	1292	0.340	440	1178	0.7	0.5	4.233	A
Swa W - Swale Way West	1307	327	43	1437	0.910	1422	550	97.1	68.4	210.510	F
Barge - Barge Way	195	49	1134	567	0.344	196	331	0.7	0.5	9.709	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	1244	700	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	368	92	128	1314	0.280	369	1116	0.5	0.4	3.812	A
Swale W - Swale Way West	1095	274	36	1442	0.759	1354	461	68.4	3.6	79.133	F
Barge - Barge Way	163	41	1080	590	0.277	164	310	0.5	0.4	8.453	A

2031 + K3 and WKN Operational, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	12.51	B

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D28	2031 + K3 and WKN Operational	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	0	100.000
Swa S - Swale Way South		ONE HOUR	✓	1049	100.000
Swa W - Swale Way West		ONE HOUR	✓	704	100.000
Barge - Barge Way		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	1	973	75
	Swa W - Swale Way West	0	501	0	203
	Barge - Barge Way	0	57	306	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	0	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	0	11	0	48

Barge - Barge Way	0	21	37	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.00	0.00	0.0	A	0	0
Swa S - Swale Way South	0.87	19.72	6.0	C	963	1444
Swa W - Swale Way West	0.59	6.60	1.4	A	646	969
Barge - Barge Way	0.42	6.56	0.7	A	333	500

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	648	1079	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	790	197	229	1420	0.556	785	419	0.0	1.2	5.624	A
Swa W - Swale Way West	530	133	57	1336	0.397	527	957	0.0	0.7	4.439	A
Barge - Barge Way	273	68	376	1039	0.263	272	208	0.0	0.4	4.683	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	776	986	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	275	1383	0.682	940	502	1.2	2.1	8.054	A
Swa W - Swale Way West	633	158	68	1329	0.476	632	1146	0.7	0.9	5.154	A
Barge - Barge Way	326	82	451	1001	0.326	326	249	0.4	0.5	5.330	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	950	861	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	336	1333	0.866	1141	614	2.1	5.7	17.528	C
Swa W - Swale Way West	775	194	83	1321	0.587	773	1394	0.9	1.4	6.547	A
Barge - Barge Way	400	100	551	949	0.421	399	304	0.5	0.7	6.529	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	952	859	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	1155	289	337	1332	0.867	1154	615	5.7	6.0	19.718	C
Swa W - Swale Way West	775	194	84	1321	0.587	775	1407	1.4	1.4	6.599	A
Barge - Barge Way	400	100	553	949	0.421	400	306	0.7	0.7	6.558	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	780	984	0.000	0	0	0.0	0.0	0.000	A
Swa S - Swale Way South	943	236	276	1382	0.682	958	504	6.0	2.2	8.784	A
Swa W - Swale Way West	633	158	69	1329	0.476	635	1165	1.4	0.9	5.205	A
Barge - Barge Way	326	82	453	1000	0.326	327	252	0.7	0.5	5.361	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	0	0	652	1076	0.000	0	0	0.0	0.0	0.000	A
Swale S - Swale Way South	790	197	231	1419	0.557	793	422	2.2	1.3	5.789	A
Swale W - Swale Way West	530	133	57	1335	0.397	531	967	0.9	0.7	4.480	A
Barge - Barge Way	273	68	379	1038	0.263	274	210	0.5	0.4	4.714	A

2031 + K3 Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	259.31	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D29	2031 + K3 Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	76	100.000
Swa S - Swale Way South		ONE HOUR	✓	492	100.000
Swa W - Swale Way West		ONE HOUR	✓	1573	100.000
Barge - Barge Way		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	76	0
	Swa S - Swale Way South	1	1	444	46
	Swa W - Swale Way West	128	1158	2	285
	Barge - Barge Way	0	50	155	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way

From	Site - Site Access	0	0	21	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	11	7	50	37
	Barge - Barge Way	0	20	69	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.15	7.87	0.2	A	70	105
Swa S - Swale Way South	0.44	5.29	0.8	A	451	677
Swa W - Swale Way West	1.20	400.97	162.9	F	1443	2165
Barge - Barge Way	0.41	11.00	0.7	B	189	284

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1016	703	0.081	57	96	0.0	0.1	5.566	A
Swa S - Swale Way South	370	93	175	1288	0.288	369	898	0.0	0.4	3.909	A
Swa W - Swale Way West	1184	296	37	1451	0.816	1168	507	0.0	4.1	12.105	B
Barge - Barge Way	155	39	958	649	0.239	154	247	0.0	0.3	7.255	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1195	601	0.114	68	112	0.1	0.1	6.759	A
Swa S - Swale Way South	442	111	210	1260	0.351	442	1054	0.4	0.5	4.396	A
Swa W - Swale Way West	1414	354	44	1446	0.978	1370	607	4.1	15.3	34.974	D
Barge - Barge Way	185	46	1123	578	0.320	185	290	0.3	0.5	9.128	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1285	543	0.154	83	118	0.1	0.2	7.831	A
Swa S - Swale Way South	542	135	256	1222	0.443	541	1112	0.5	0.8	5.274	A
Swa W - Swale Way West	1732	433	54	1439	1.204	1435	743	15.3	89.6	140.320	F
Barge - Barge Way	227	57	1177	555	0.408	226	312	0.5	0.7	10.899	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1289	541	0.155	84	118	0.2	0.2	7.872	A
Swa S - Swale Way South	542	135	257	1222	0.443	542	1115	0.8	0.8	5.294	A
Swa W - Swale Way West	1732	433	54	1439	1.204	1438	745	89.6	162.9	321.347	F
Barge - Barge Way	227	57	1180	554	0.409	227	312	0.7	0.7	10.995	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1246	573	0.119	69	118	0.2	0.1	7.135	A
Swa S - Swale Way South	442	111	211	1259	0.351	443	1104	0.8	0.5	4.418	A

Swale W - Swale Way West	1414	354	44	1446	0.978	1437	610	162.9	157.3	400.971	F
Barge - Barge Way	185	46	1178	555	0.334	186	303	0.7	0.5	9.775	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1219	595	0.096	57	118	0.1	0.1	6.694	A
Swale S - Swale Way South	370	93	177	1287	0.288	371	1100	0.5	0.4	3.935	A
Swale W - Swale Way West	1184	296	37	1450	0.816	1441	511	157.3	93.0	313.779	F
Barge - Barge Way	155	39	1182	553	0.280	156	297	0.5	0.4	9.061	A

2031 + K3 Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	15.08	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D30	2031 + K3 Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	97	100.000
Swa S - Swale Way South		ONE HOUR	✓	1050	100.000
Swa W - Swale Way West		ONE HOUR	✓	742	100.000
Barge - Barge Way		ONE HOUR	✓	342	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	97	0
	Swa S - Swale Way South	0	1	974	75
	Swa W - Swale Way West	46	503	0	193
	Barge - Barge Way	0	57	285	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way

From	Site - Site Access	0	0	8	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	13	11	0	45
	Barge - Barge Way	0	21	36	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.13	5.10	0.2	A	89	134
Swa S - Swale Way South	0.90	26.15	7.9	D	963	1445
Swa W - Swale Way West	0.61	6.89	1.5	A	681	1021
Barge - Barge Way	0.41	6.53	0.7	A	314	471

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	634	1011	0.072	73	34	0.0	0.1	3.835	A
Swa S - Swale Way South	790	198	286	1388	0.570	785	420	0.0	1.3	5.927	A
Swa W - Swale Way West	559	140	57	1355	0.412	556	1015	0.0	0.7	4.491	A
Barge - Barge Way	257	64	412	1028	0.250	256	201	0.0	0.3	4.657	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	759	928	0.094	87	41	0.1	0.1	4.282	A
Swa S - Swale Way South	944	236	343	1344	0.702	940	504	1.3	2.3	8.821	A
Swa W - Swale Way West	667	167	68	1348	0.495	666	1215	0.7	1.0	5.267	A
Barge - Barge Way	307	77	494	986	0.312	307	240	0.3	0.4	5.301	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	929	815	0.131	107	51	0.1	0.1	5.082	A
Swa S - Swale Way South	1156	289	420	1285	0.899	1136	616	2.3	7.2	21.792	C
Swa W - Swale Way West	817	204	82	1340	0.610	815	1474	1.0	1.5	6.822	A
Barge - Barge Way	377	94	604	929	0.406	376	293	0.4	0.7	6.500	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	931	813	0.131	107	51	0.1	0.2	5.095	A
Swa S - Swale Way South	1156	289	421	1285	0.900	1153	618	7.2	7.9	26.150	D
Swa W - Swale Way West	817	204	83	1339	0.610	817	1490	1.5	1.5	6.888	A
Barge - Barge Way	377	94	606	928	0.406	377	295	0.7	0.7	6.530	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	763	925	0.094	87	41	0.2	0.1	4.298	A
Swa S - Swale Way South	944	236	344	1343	0.703	966	506	7.9	2.4	10.061	B

Swale W - Swale Way West	667	167	70	1347	0.495	669	1240	1.5	1.0	5.327	A
Barge - Barge Way	307	77	496	984	0.312	308	243	0.7	0.5	5.333	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	638	1008	0.072	73	35	0.1	0.1	3.851	A
Swale S - Swale Way South	790	198	288	1386	0.570	795	423	2.4	1.3	6.132	A
Swale W - Swale Way West	559	140	58	1354	0.412	560	1025	1.0	0.7	4.538	A
Barge - Barge Way	257	64	415	1026	0.251	258	202	0.5	0.3	4.689	A

2031 + WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	271.73	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D31	2031 + WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	76	100.000
Swa S - Swale Way South		ONE HOUR	✓	492	100.000
Swa W - Swale Way West		ONE HOUR	✓	1580	100.000
Barge - Barge Way		ONE HOUR	✓	214	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	76	0
	Swa S - Swale Way South	1	1	444	46
	Swa W - Swale Way West	128	1158	2	292
	Barge - Barge Way	0	50	163	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way

From	Site - Site Access	0	0	21	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	11	7	50	38
	Barge - Barge Way	0	20	71	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.16	7.96	0.2	A	70	105
Swa S - Swale Way South	0.45	5.37	0.8	A	451	677
Swa W - Swale Way West	1.21	421.68	169.6	F	1450	2175
Barge - Barge Way	0.43	11.42	0.7	B	196	295

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1021	697	0.082	57	96	0.0	0.1	5.618	A
Swa S - Swale Way South	370	93	181	1282	0.289	369	897	0.0	0.4	3.937	A
Swa W - Swale Way West	1190	297	37	1447	0.822	1172	513	0.0	4.3	12.439	B
Barge - Barge Way	161	40	957	641	0.251	160	252	0.0	0.3	7.463	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1200	595	0.115	68	112	0.1	0.1	6.836	A
Swa S - Swale Way South	442	111	217	1252	0.353	442	1051	0.4	0.5	4.439	A
Swa W - Swale Way West	1420	355	44	1442	0.985	1372	615	4.3	16.4	36.885	E
Barge - Barge Way	192	48	1120	572	0.336	192	296	0.3	0.5	9.440	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1287	538	0.156	83	117	0.1	0.2	7.922	A
Swa S - Swale Way South	542	135	265	1213	0.447	541	1105	0.5	0.8	5.350	A
Swa W - Swale Way West	1740	435	54	1435	1.212	1431	752	16.4	93.4	146.718	F
Barge - Barge Way	236	59	1169	552	0.427	235	316	0.5	0.7	11.318	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1290	536	0.156	84	117	0.2	0.2	7.963	A
Swa S - Swale Way South	542	135	266	1212	0.447	542	1108	0.8	0.8	5.371	A
Swa W - Swale Way West	1740	435	54	1435	1.212	1435	754	93.4	169.6	335.254	F
Barge - Barge Way	236	59	1172	551	0.428	236	317	0.7	0.7	11.421	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1246	570	0.120	69	117	0.2	0.1	7.188	A
Swa S - Swale Way South	442	111	218	1251	0.354	443	1097	0.8	0.6	4.463	A

Swale W - Swale Way West	1420	355	44	1442	0.985	1433	618	169.6	166.4	421.682	F
Barge - Barge Way	192	48	1170	551	0.349	193	307	0.7	0.5	10.074	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1218	593	0.097	57	117	0.1	0.1	6.728	A
Swale S - Swale Way South	370	93	183	1280	0.289	371	1093	0.6	0.4	3.963	A
Swale W - Swale Way West	1190	297	37	1447	0.822	1438	517	166.4	104.2	339.788	F
Barge - Barge Way	161	40	1174	550	0.293	162	301	0.5	0.4	9.287	A

2031 + WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	16.34	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D32	2031 + WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	97	100.000
Swa S - Swale Way South		ONE HOUR	✓	1050	100.000
Swa W - Swale Way West		ONE HOUR	✓	749	100.000
Barge - Barge Way		ONE HOUR	✓	360	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	97	0
	Swa S - Swale Way South	0	1	974	75
	Swa W - Swale Way West	46	503	0	200
	Barge - Barge Way	0	57	303	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way

From	Site - Site Access	0	0	8	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	13	11	0	47
	Barge - Barge Way	0	21	36	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.13	5.21	0.2	A	89	134
Swa S - Swale Way South	0.91	29.09	8.8	D	963	1445
Swa W - Swale Way West	0.62	7.11	1.6	A	687	1031
Barge - Barge Way	0.43	6.78	0.7	A	330	496

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	647	1001	0.073	73	34	0.0	0.1	3.876	A
Swa S - Swale Way South	790	198	300	1377	0.574	785	420	0.0	1.3	6.034	A
Swa W - Swale Way West	564	141	57	1346	0.419	561	1028	0.0	0.7	4.569	A
Barge - Barge Way	271	68	412	1027	0.264	270	206	0.0	0.4	4.745	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	775	916	0.095	87	41	0.1	0.1	4.345	A
Swa S - Swale Way South	944	236	359	1331	0.709	940	503	1.3	2.4	9.104	A
Swa W - Swale Way West	673	168	68	1340	0.503	672	1231	0.7	1.0	5.385	A
Barge - Barge Way	324	81	494	985	0.329	323	247	0.4	0.5	5.436	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	949	800	0.134	107	51	0.1	0.2	5.190	A
Swa S - Swale Way South	1156	289	439	1269	0.911	1134	616	2.4	7.8	23.552	C
Swa W - Swale Way West	825	206	82	1332	0.619	822	1491	1.0	1.6	7.034	A
Barge - Barge Way	396	99	604	928	0.427	395	301	0.5	0.7	6.749	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	951	798	0.134	107	51	0.2	0.2	5.205	A
Swa S - Swale Way South	1156	289	440	1269	0.911	1152	618	7.8	8.8	29.088	D
Swa W - Swale Way West	825	206	83	1331	0.620	825	1509	1.6	1.6	7.108	A
Barge - Barge Way	396	99	606	927	0.428	396	302	0.7	0.7	6.785	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	779	913	0.096	87	41	0.2	0.1	4.361	A
Swa S - Swale Way South	944	236	361	1330	0.710	969	506	8.8	2.5	10.615	B

Swale W - Swale Way West	673	168	70	1338	0.503	676	1259	1.6	1.0	5.450	A
Barge - Barge Way	324	81	496	983	0.329	325	250	0.7	0.5	5.474	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	652	998	0.073	73	35	0.1	0.1	3.893	A
Swale S - Swale Way South	790	198	302	1375	0.575	795	423	2.5	1.4	6.255	A
Swale W - Swale Way West	564	141	58	1346	0.419	565	1039	1.0	0.7	4.620	A
Barge - Barge Way	271	68	415	1025	0.264	272	208	0.5	0.4	4.780	A

2031 + K3 and WKN Operational + Cumulative Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	279.23	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D33	2031 + K3 and WKN Operational + Cumulative Development	AM	ONE HOUR	07:15	08:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	76	100.000
Swa S - Swale Way South		ONE HOUR	✓	492	100.000
Swa W - Swale Way West		ONE HOUR	✓	1583	100.000
Barge - Barge Way		ONE HOUR	✓	217	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	76	0
	Swa S - Swale Way South	1	1	444	46
	Swa W - Swale Way West	128	1158	2	295
	Barge - Barge Way	0	50	166	1

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site	Swa S - Swale Way	Swa W - Swale Way	Barge - Barge

	Access	South	West	Way	
From	Site - Site Access	0	0	21	0
	Swa S - Swale Way South	0	0	18	24
	Swa W - Swale Way West	11	7	50	39
	Barge - Barge Way	0	20	71	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.16	7.97	0.2	A	70	105
Swa S - Swale Way South	0.45	5.40	0.8	A	451	677
Swa W - Swale Way West	1.22	433.56	173.4	F	1453	2179
Barge - Barge Way	0.43	11.49	0.8	B	199	299

Main Results for each time segment

07:15 - 07:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1023	696	0.082	57	96	0.0	0.1	5.634	A
Swa S - Swale Way South	370	93	183	1280	0.289	369	897	0.0	0.4	3.945	A
Swa W - Swale Way West	1192	298	37	1444	0.825	1174	515	0.0	4.4	12.644	B
Barge - Barge Way	163	41	957	640	0.255	162	254	0.0	0.3	7.505	A

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1201	593	0.115	68	112	0.1	0.1	6.854	A
Swa S - Swale Way South	442	111	220	1250	0.354	442	1050	0.4	0.5	4.453	A
Swa W - Swale Way West	1423	356	44	1439	0.989	1372	617	4.4	17.1	38.033	E
Barge - Barge Way	195	49	1118	573	0.341	194	298	0.3	0.5	9.503	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1286	537	0.156	83	117	0.1	0.2	7.934	A
Swa S - Swale Way South	542	135	268	1210	0.448	541	1101	0.5	0.8	5.382	A
Swa W - Swale Way West	1743	436	54	1432	1.217	1429	755	17.1	95.6	150.474	F
Barge - Barge Way	239	60	1165	553	0.432	238	318	0.5	0.7	11.390	B

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	84	21	1289	535	0.156	84	117	0.2	0.2	7.974	A
Swa S - Swale Way South	542	135	269	1209	0.448	542	1104	0.8	0.8	5.395	A
Swa W - Swale Way West	1743	436	54	1432	1.217	1432	757	95.6	173.4	343.274	F
Barge - Barge Way	239	60	1167	552	0.433	239	319	0.7	0.8	11.492	B

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	68	17	1251	566	0.121	69	117	0.2	0.1	7.233	A

Swale S - Swale Way South	442	111	221	1248	0.354	443	1099	0.8	0.6	4.476	A
Swale W - Swale Way West	1423	356	44	1439	0.989	1439	620	173.4	169.4	433.564	F
Barge - Barge Way	195	49	1173	550	0.355	196	310	0.8	0.6	10.195	B

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	57	14	1216	593	0.097	57	117	0.1	0.1	6.725	A
Swale S - Swale Way South	370	93	185	1278	0.290	371	1088	0.6	0.4	3.972	A
Swale W - Swale Way West	1192	298	37	1444	0.825	1435	519	169.4	108.5	349.594	F
Barge - Barge Way	163	41	1169	551	0.296	164	303	0.6	0.4	9.310	A

2031 + K3 and WKN Operational + Cumulative Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout	Site, Swa S, Swa W, Barge	16.76	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D34	2031 + K3 and WKN Operational + Cumulative Development	PM	ONE HOUR	16:15	17:45	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
Site - Site Access		ONE HOUR	✓	97	100.000
Swa S - Swale Way South		ONE HOUR	✓	1050	100.000
Swa W - Swale Way West		ONE HOUR	✓	752	100.000
Barge - Barge Way		ONE HOUR	✓	363	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		Site - Site Access	Swa S - Swale Way South	Swa W - Swale Way West	Barge - Barge Way
From	Site - Site Access	0	0	97	0
	Swa S - Swale Way South	0	1	974	75
	Swa W - Swale Way West	46	503	0	203
	Barge - Barge Way	0	57	306	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		Site - Site	Swa S - Swale Way	Swa W - Swale Way	Barge - Barge

		Access	South	West	Way
From	Site - Site Access	0	0	8	0
	Swa S - Swale Way South	0	0	5	11
	Swa W - Swale Way West	13	11	0	48
	Barge - Barge Way	0	21	37	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
Site - Site Access	0.13	5.24	0.2	A	89	134
Swa S - Swale Way South	0.91	30.05	9.0	D	963	1445
Swa W - Swale Way West	0.62	7.21	1.6	A	690	1035
Barge - Barge Way	0.43	6.90	0.8	A	333	500

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	649	998	0.073	73	34	0.0	0.1	3.889	A
Swa S - Swale Way South	790	198	302	1374	0.576	785	420	0.0	1.3	6.065	A
Swa W - Swale Way West	566	142	57	1342	0.422	563	1030	0.0	0.7	4.607	A
Barge - Barge Way	273	68	412	1020	0.268	272	208	0.0	0.4	4.801	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	778	912	0.096	87	41	0.1	0.1	4.364	A
Swa S - Swale Way South	944	236	362	1327	0.711	940	503	1.3	2.4	9.189	A
Swa W - Swale Way West	676	169	68	1336	0.506	675	1233	0.7	1.0	5.438	A
Barge - Barge Way	326	82	494	978	0.334	326	249	0.4	0.5	5.511	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	952	796	0.134	107	50	0.1	0.2	5.223	A
Swa S - Swale Way South	1156	289	443	1265	0.914	1133	616	2.4	8.1	24.105	C
Swa W - Swale Way West	828	207	82	1327	0.624	826	1494	1.0	1.6	7.135	A
Barge - Barge Way	400	100	604	922	0.434	399	304	0.5	0.8	6.866	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	107	27	955	794	0.135	107	51	0.2	0.2	5.238	A
Swa S - Swale Way South	1156	289	444	1264	0.915	1152	618	8.1	9.0	30.048	D
Swa W - Swale Way West	828	207	83	1327	0.624	828	1512	1.6	1.6	7.214	A
Barge - Barge Way	400	100	606	921	0.434	400	306	0.8	0.8	6.905	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	87	22	782	909	0.096	87	42	0.2	0.1	4.380	A

Swale S - Swale Way South	944	236	363	1326	0.712	970	506	9.0	2.6	10.795	B
Swale W - Swale Way West	676	169	70	1334	0.507	678	1263	1.6	1.0	5.508	A
Barge - Barge Way	326	82	496	977	0.334	327	252	0.8	0.5	5.551	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	LOS
Site - Site Access	73	18	654	995	0.073	73	35	0.1	0.1	3.906	A
Swale S - Swale Way South	790	198	304	1372	0.576	795	423	2.6	1.4	6.294	A
Swale W - Swale Way West	566	142	58	1342	0.422	567	1042	1.0	0.7	4.658	A
Barge - Barge Way	273	68	415	1019	0.268	274	210	0.5	0.4	4.835	A

