

Technical Note

Project: Wokingham Junction Modelling Assessments
Project No: 7132.TN06
Subject: Molly Millars Lane Roundabout Junction Modelling Assessments
Prepared by: Rhys Donoghue Date: 05/03/2024

1.0 INTRODUCTION

- 1.1. This Technical Note has been prepared by Stuart Michael Associates Limited (SMA), consulting engineers, to provide a summary of the junction modelling assessments completed on behalf of Wokingham Borough Council (WBC).
- 1.2. WBC's approved Core Strategy sets out the broad vision for development in and around Wokingham up to 2026. The South Wokingham SDL is intended as an urban extension to the South of Wokingham, on land at Buckhurst Farm and land extending between the Borough boundary with Bracknell Forest in the east and Finchampstead Road (A329) in the West.
- 1.3. The SDL will deliver approximately 2,500 new homes, along with new schools, local shopping and community facilities open space and the South Wokingham Distributor Road (SWDR).
- 1.4. To facilitate the provision of this urban extension, and accommodate the proposed increase in traffic movements, it has been necessary for WBC to undertake a series of strategic modelling assessments, to ensure adequate infrastructure is provided.
- 1.5. The Finchampstead Road/Tesco Access Road/Landen Court and Finchampstead Road/Molly Millars Lane Roundabouts are key junctions identified as part of this assessment.
- 1.6. This Note has been prepared to assess the performance of two options for the Molly Millars Lane Roundabout these options are referred to as **WMHP-TG-WG2-SK-HI-0208** and **WMHP-TG-WG2-SK-HI-0209**. These options have been designed by Tony Gee and Partners LLP based on WBC's design brief. Copies of each option are attached to this Note as **Appendix A**.
- 1.7. Modelling Assessments have been undertaken for each option. As there is approximately 120m between the Finchampstead Road/Tesco Access Road/Landen Court and Finchampstead Road/ Molly Millars Lane Roundabouts, linked models assessing both roundabouts have also been undertaken



Assessment Brief

- 1.8. SMA has prepared a junction modelling assessment for the potential junction layout, for the following future year scenarios:
- 2026 with SWDR no SDL
 - 2036 with SWDR no SDL
 - 2036 with SWDR and full SDL using WBC approved trip rates.
- 1.9. Full details of turning flow traffic data have been provided by WBC, based on the area wide strategic model and copies are attached as **Appendix B**.

2.0 MODELLING ASSESSMENTS

- 2.1. Junction operational assessments have been undertaken using industry standard software (ARCADY). These assessments have investigated the ability for the junctions to accommodate the predicted traffic associated with the development proposals in addition to background traffic growth.
- 2.2. ARCADY allow the ratios of flow to capacity (RFC) to be established on each arm of the junctions. It is accepted that an RFC of 1.00 indicates the junction is operating at capacity. However, due to the inherent variability of traffic flows on a daily basis, an RFC of 0.85 is typically considered to be the threshold above which, a junction is considered to be approaching its operational capacity. It is also accepted that the closer the RFC's are to 1.00, the more unstable the traffic model can become, which can result in unrealistic queuing on certain arms.
- 2.3. It should be noted that for linked junctions: any entered demand for internal arms will be dictated by whatever traffic is able to flow from the upstream junction towards the downstream junction. As a result, traffic flows are represented as turning proportions at the downstream junction rather than actual flows. In the O-D screen of the Junctions9 traffic modelling software, the internal arms are highlighted in yellow. In view of the above SMA has modelled the linked junctions using the proportional distribution calculated from the flows provided by WBC.
- 2.4. Junction assessments have been completed for the network AM and PM peak periods.
- 2.5. The proposed junction improvement schemes (**Appendix A**) have been modelled for the scenarios set out in Paragraph 1.8. A summary of the junction modelling results is summarised within **Tables 2.1** and **2.2**. A copy of the junction modelling outputs is attached as **Appendix C**.



WMHP-TG-WG2-SK-HI-0208

Table 2.1 – WMHP-TG-WG2-SK-HI-0208 - Junction Modelling Results

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 with SWDR no SDL						
Finchampstead Road (north)	2.8	9.29	0.74	3.6	11.36	0.79
Finchampstead Road (south)	9.1	37.05	0.92	2.7	12.23	0.74
Molly Millars Lane	0.7	4.65	0.41	1.1	5.78	0.53
2036 with SWDR no SDL						
Finchampstead Road (north)	3.0	9.61	0.75	4.1	12.54	0.81
Finchampstead Road (south)	9.6	39.10	0.92	3.0	12.98	0.76
Molly Millars Lane	0.7	4.71	0.41	1.2	5.95	0.54
2036 with SWDR and full SDL using WBC approved trip rates						
Finchampstead Road (north)	4.5	13.49	0.83	4.3	13.16	0.82
Finchampstead Road (south)	12.1	49.90	0.95	3.9	15.57	0.81
Molly Millars Lane	0.9	5.28	0.48	1.3	6.52	0.57

2.6. As Table 2.1 summarises, in all scenarios the proposed junction will be approaching or above capacity in the AM peak period. The Finchampstead Road (south) is the arm of concern with long delay in the AM peak.

2.7. The PM peak period will be expected to typically operate with spare capacity.

WMHP-TG-WG2-SK-HI-0209

Table 2.2 – WMHP-TG-WG2-SK-HI-0209 - Junction Modelling Results

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 with SWDR no SDL						
Finchampstead Road (north)	2.8	9.29	0.74	3.6	11.36	0.79
Finchampstead Road (south)	105.9	451.02	1.25	10.3	48.77	0.93
Molly Millars Lane	0.6	4.11	0.38	1.1	5.74	0.53
2036 with SWDR no SDL						
Finchampstead Road (north)	3.0	9.61	0.75	4.1	12.54	0.81
Finchampstead Road (south)	109.6	469.89	1.26	14.3	64.46	0.97
Molly Millars Lane	0.6	4.14	0.38	1.1	5.87	0.54
2036 with SWDR and full SDL using WBC approved trip rates						
Finchampstead Road (north)	4.5	13.49	0.83	4.3	13.16	0.82
Finchampstead Road (south)	120.7	550.42	1.31	39.3	146.15	1.07
Molly Millars Lane	0.8	4.53	0.45	1.3	6.11	0.56

2.8. As Table 2.2 summarises, in all scenarios the proposed junction will be approaching or above capacity in both the AM and PM peak periods. The Finchampstead Road (south) is the arm of concern with long delay in both peaks. As previously stated, in terms of RFC, the closer to



1.00 the more unstable the traffic model can become, which can result in unrealistic queuing on certain arms. As the RFC is above 1.00 in a number of scenarios the queue and delay maybe exaggerated.

Linked Junction Assessments

- 2.9. The two Molly Millars Lane Roundabout options have been modelled as linked junctions with the Finchampstead Road/Tesco Access Road/Landen Court Roundabout The modelling outputs are attached as **Appendix D**.

WMHP-TG-WG2-SK-HI-0208

Table 2.3 – WMHP-TG-WG2-SK-HI-0208 – Linked Junction Modelling Results

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 with SWDR no SDL						
Junction 1						
Finchampstead Road (n)	4.8	15.74	0.83	2.4	8.68	0.71
SWDR	0.9	5.90	0.46	2.0	9.14	0.67
Finchampstead Road (s)	3.1	9.92	0.76	3.4	11.23	0.78
Landen Court	0.2	13.89	0.18	0.1	15.13	0.06
Junction 2						
Finchampstead Road (north)	4.1	12.34	0.81	3.8	11.67	0.80
Finchampstead Road (south)	12.1	49.06	0.95	2.7	12.28	0.74
Molly Millars Lane	0.7	4.64	0.41	1.1	5.78	0.53
2036 with SWDR no SDL						
Junction 1						
Finchampstead Road (n)	5.7	18.31	0.86	2.9	10.19	0.75
SWDR	0.9	5.86	0.46	2.6	11.29	0.73
Finchampstead Road (s)	3.2	10.06	0.77	3.9	12.59	0.81
Landen Court	0.2	13.96	0.19	0.1	17.49	0.07
Junction 2						
Finchampstead Road (north)	4.0	12.27	0.81	4.2	12.81	0.82
Finchampstead Road (south)	12.6	50.50	0.95	3.0	12.97	0.76
Molly Millars Lane	0.7	4.69	0.41	1.2	5.95	0.54
2036 with SWDR and full SDL using WBC approved trip rates						
Junction 1						
Finchampstead Road (n)	5.3	17.27	0.85	3.6	12.27	0.79
SWDR	1.3	7.07	0.57	2.7	11.76	0.74
Finchampstead Road (s)	3.8	11.69	0.80	4.6	14.47	0.84
Landen Court	0.3	17.30	0.22	0.1	20.27	0.09
Junction 2						
Finchampstead Road (north)	4.3	12.83	0.82	4.2	12.89	0.82
Finchampstead Road (south)	11.2	46.59	0.94	3.8	15.48	0.81
Molly Millars Lane	0.9	5.28	0.48	1.3	6.52	0.57



- 2.10. The modelling results indicate that Finchampstead Road South arm of the Molly Millars Roundabout is approaching capacity in the AM peak. All other arms can be considered operational in both junctions. Queueing is unlikely to queue back between either junction.
- 2.11. In the PM peak all arms can be considered operational. In all scenarios queueing between the junctions is minimal and should not impact on operation.

WMHP-TG-WG2-SK-HI-0209

Table 2.4 – WMHP-TG-WG2-SK-HI-0209 – Linked Junction Modelling Results

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2026 with SWDR no SDL						
Junction 1						
Finchampstead Road (n)	4.1	13.34	0.81	2.4	8.64	0.71
SWDR	0.9	5.90	0.46	2.0	9.14	0.67
Finchampstead Road (s)	1.9	7.04	0.66	3.2	10.85	0.77
Landen Court	0.2	10.84	0.15	0.1	14.95	0.06
Junction 2						
Finchampstead Road (north)	4.1	12.36	0.81	3.8	11.67	0.80
Finchampstead Road (south)	121.2	546.39	1.30	10.5	49.73	0.94
Molly Millars Lane	0.6	4.04	0.37	1.1	5.74	0.53
2036 with SWDR no SDL						
Junction 1						
Finchampstead Road (n)	4.8	15.16	0.83	2.8	10.10	0.74
SWDR	0.9	5.86	0.46	2.6	11.29	0.73
Finchampstead Road (s)	1.9	7.04	0.66	3.6	11.97	0.79
Landen Court	0.2	10.86	0.15	0.1	17.06	0.07
Junction 2						
Finchampstead Road (north)	4.0	12.30	0.81	4.2	12.81	0.82
Finchampstead Road (south)	123.4	556.97	1.31	14.3	64.34	0.97
Molly Millars Lane	0.6	4.08	0.38	1.1	5.87	0.54
2036 with SWDR and full SDL using WBC approved trip rates						
Junction 1						
Finchampstead Road (n)	4.5	14.60	0.83	3.5	11.75	0.78
SWDR	1.3	7.08	0.57	2.7	11.77	0.74
Finchampstead Road (s)	2.4	8.31	0.71	3.9	12.80	0.80
Landen Court	0.2	12.92	0.18	0.1	18.07	0.08
Junction 2						
Finchampstead Road (north)	4.3	12.86	0.82	4.2	12.90	0.82
Finchampstead Road (south)	116.7	529.14	1.30	38.4	142.97	1.06
Molly Millars Lane	0.8	4.55	0.45	1.3	6.12	0.56

- 2.12. The modelling results indicate that Finchampstead Road South arm of the Molly Millars Roundabout is approaching capacity in the AM peak. All other arms can be considered operational in both junctions. Queueing is unlikely to queue back between either junction.



- 2.13. In the PM peak all arms can be considered operational. In all scenarios queuing between the junctions is minimal and should not impact on operation.

3.0 CONCLUSION

- 3.1. A series of assessment scenarios have been completed as instructed by WBC, for the Molly Millars Lane/ Finchampstead Roundabout for a number of 2026 and 2036 future year scenarios.
- 3.2. Two options have been prepared and are attached as **Appendix B**. Based upon these assessments, the proposed roundabout designs will be operating at or approaching capacity in all of the AM future year scenarios. The Finchampstead Road (south) arm is anticipated to have long queues and excessive delay.
- 3.3. However, in the PM peak period, in all scenarios the roundabout will be operating with spare capacity.
- 3.4. The modelling confirms that the **WMHP-TG-WG2-SK-HI-0209** option will worse queuing and delay than the **WMHP-TG-WG2-SK-HI-0208** option.

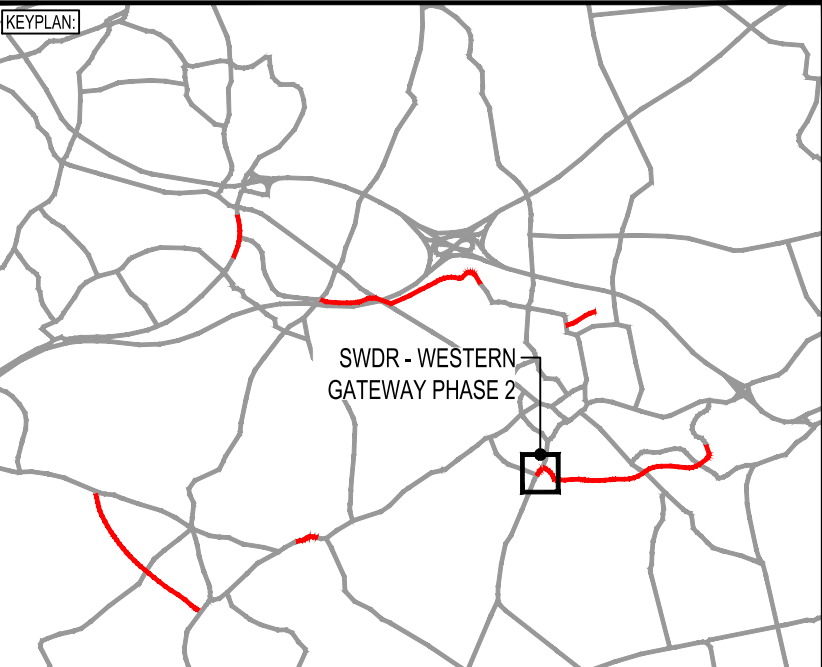
APPENDIX A

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
 2. ALL LEVELS ARE IN METRES AOD UNLESS NOTED OTHERWISE.

LEGEND

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P01	28/02/2024	JB	FOR INFORMATION	JC	JC
REV	DATE	BY	DESCRIPTION	CHK	APP

FOR INFORMATION

S2

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PROJECT:

WOKINGHAM MAJOR HIGHWAYS PROGRAMME
SWDR WESTERN GATEWAY PHASE 2

TITLE:

FINCHAMPSTEAD ROAD EASTERN SIDE
SHARED USE PEDESTRAIN AND CYCLE FACILITY
OPTION 3B - 3.0m EAST, 2.5m WEST, NARROW LANES

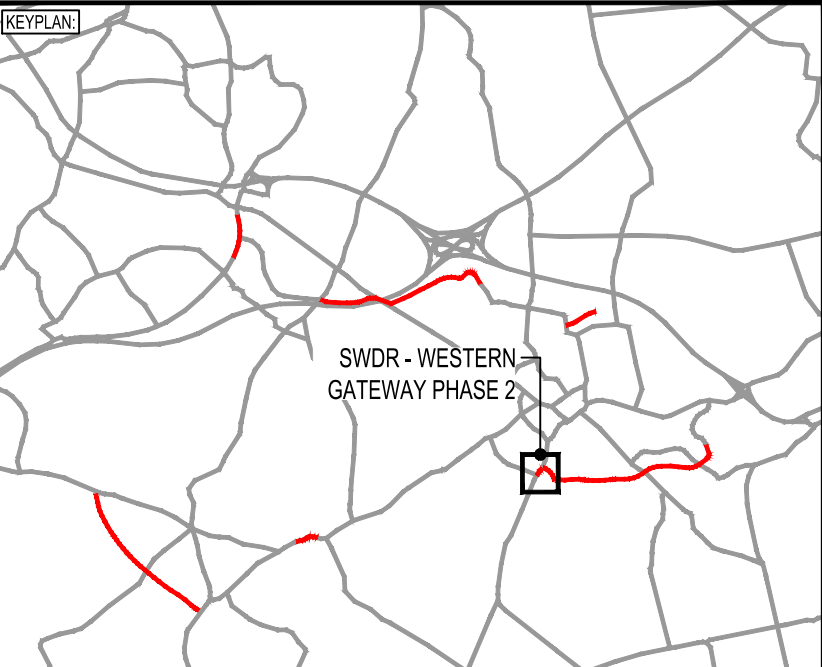
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PROJECT NO:	DESIGNED:	DRAWN:	DATE:
C123061	JB	JB	February 2024
DRAWING No:			REV:
WMHP-TG-WG2-SK-HI-0208			P01

- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
 2. ALL LEVELS ARE IN METRES AOD UNLESS NOTED OTHERWISE.

LEGEND

— NO VERTICAL CONSTRAINT PRESENT

— VERTICAL CONSTRAINT PRESENT



P01	28/02/2024	JB	FOR INFORMATION	JC	JC
REV	DATE	BY	DESCRIPTION	CHK	APP

FOR INFORMATION

S2

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PROJECT:

WOKINGHAM MAJOR HIGHWAYS PROGRAMME
SWDR WESTERN GATEWAY PHASE 2

TITLE:

FINCHAMPSTEAD ROAD EASTERN SIDE
SHARED USE PEDESTRAIN AND CYCLE FACILITY
OPTION 3B - 3.0m EAST, 2.5m WEST, NARROW LANES

SCALE @ 1:	CHECKED:	APPROVED:
1:200	JC	JC
PROJECT NO:	DESIGNED:	DRAWN:
C123061	JB	JB
		DATE:
		February 2024
DRAWING No:		REV:
WMHP-TG-WG2-SK-HI-0209		P01

APPENDIX B

* all the values are in veh

TOTAL

2026 with SWDR no SDL

MODELLED												
Jct Node Number		1106	Road name		TO ARM							Total
					A	B	C	D	E	F	G	
FROM ARM	A	1109	Molly Millars	0	122	362					484	
	B	4416	A321 S	153	0	704					857	
	C	1440	A321 N	561	460	0					1021	
	D											
	E											
	F											
	G											
Total				714	582	1066					2362	

* all the values are in veh

% HDV

2026 with SWDR no SDL

MODELLED												
Jct Node Number		1106	Road name		TO ARM							Total
					A	B	C	D	E	F	G	
FROM ARM	A	1109	Molly Millars	0.0%	1.6%	0.8%					1.0%	
	B	4416	A321 S	9.2%	0.0%	0.0%					1.6%	
	C	1440	A321 N	0.2%	6.7%	0.0%					3.1%	
	D											
	E											
	F											
	G											
Total				2.1%	5.7%	0.3%					2.2%	

* all the values are in veh

TOTAL									
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2026 with SWDR no SDL

MODELLED											
Jct Node Number		1106		TO ARM							Total
		Road name		A	B	C	D	E	F	G	
				1109	4416	1440					
FROM ARM	A	1109	Molly Millars	0	314	330					644
	B	4416	A321 S	66	0	670					736
	C	1440	A321 N	394	666	0					1060
	D										
	E										
	F										
	G										
Total				460	980	1000					2440

* all the values are in veh

% HDV									
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2026 with SWDR no SDL

MODELLED												
Jct Node Number		1106		Road name		TO ARM						Total
				A	B	C	D	E	F	G		
				1109	4416	1440						
FROM ARM	A	1109	Molly Millars	0.0%	0.6%	0.3%					0.5%	
	B	4416	A321 S	12.1%	0.0%	0.0%					1.1%	
	C	1440	A321 N	0.3%	6.3%	0.0%					4.1%	
	D											
	E											
	F											
	G											
Total				2.0%	4.5%	0.1%					2.2%	

* all the values are in veh

TOTAL									

* all the values are in veh

% HDV									
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2026 with SWDR no SDL

MODELLED												
Jct Node Number		1440	Road name		TO ARM					Total		
					A	B	C	D	E		F	G
					4434	2089	1106	4419				
FROM ARM	A	4434	Finchampstead Rd N		0	225	978	4				1207
	B	2089	SWDR		36	0	22	0				58
	C	1106	Finchampstead Rd S		897	167	0	4				1068
	D	4419	Landen Ct		30	2	20	0				52
	E											
	F											
G												
Total					963	394	1020	8				2385

* all the values are in veh

TOTAL

* all the values are in veh

% HDV

2026 with SWDR no SDL

MODELLED									
Jct Node Number		1440							
		Road name				TO ARM			
						A	B	C	D
						4434	2089	1106	4419
						E	F	G	Total
FROM ARM	A	4434	Finchampstead Rd N			0	81	948	40
	B	2089	SWDR			334	0	108	2
	C	1106	Finchampstead Rd S			892	71	0	36
	D	4419	Landen Ct			11	0	4	0
	E								
FROM ARM	F								
	G								
Total						1237	152	1060	78
									2527

2026 with SWDR no SDL

MODELLED									
Jct Node Number		1440							
		Road name				TO ARM			
						A	B	C	D
						4434	2089	1106	4419
						E	F	G	Total
FROM ARM	A	4434	Finchampstead Rd N			0.0%	0.0%	4.4%	0.0%
	B	2089	SWDR			0.3%	0.0%	0.0%	0.0%
	C	1106	Finchampstead Rd S			0.0%	0.0%	0.0%	0.0%
	D	4419	Landen Ct			9.1%	0.0%	0.0%	0.0%
	E								
FROM ARM	F								
	G								
Total						0.2%	0.0%	4.0%	0.0%
									1.7%

* all the values are in veh

TOTAL

* all the values are in veh

% HDV

2036 with SWDR no SDL

MODELLED									
Jct Node Number		Road name		TO ARM					Total
				A	B	C	D	E	
FROM ARM	A	1109	Molly Millars	0	126	365			491
	B	4416	A321 S	156	0	706			862
	C	1440	A321 N	565	468	0			1033
	D								
	E								
	F								
Total				721	594	1071			2386

2036 with SWDR no SDL

MODELLED									
Jct Node Number		Road name		TO ARM					Total
				A	B	C	D	E	
FROM ARM	A	1109	Molly Millars	0.0%	2.4%	1.1%			1.4%
	B	4416	A321 S	8.3%	0.0%	0.0%			1.5%
	C	1440	A321 N	0.2%	6.6%	0.0%			3.1%
	D								
	E								
	F								
Total				1.9%	5.7%	0.4%			2.2%

2036 with SWDR and full SDL using WBC approved trip rates

MODELLED									
Jct Node Number		Road name		TO ARM					Total
				A	B	C	D	E	
FROM ARM	A	1109	Molly Millars	0	152	430			582
	B	4416	A321 S	156	0	685			841
	C	1440	A321 N	675	463	0			1138
	D								
	E								
	F								
Total				831	615	1115			2561

2036 with SWDR and full SDL using WBC approved trip rates

MODELLED									
Jct Node Number		Road name		TO ARM					Total
				A	B	C	D	E	
FROM ARM	A	1109	Molly Millars	0.0%	2.0%	1.4%			1.5%
	B	4416	A321 S	9.0%	0.0%	0.0%			1.7%
	C	1440	A321 N	0.1%	8.0%	0.0%			3.3%
	D								
	E								
	F								
Total				1.8%	6.5%	0.5%			2.4%

* all the values are in veh

TOTAL

* all the values are in veh

% HDV

2036 with SWDR no SDL

MODELLED									
Jct Node Number		Road name		TO ARM				Total	
				A	B	C	D		
FROM ARM	A	1109	Molly Millars	0	333	311			644
	B	4416	A321 S	65	0	694			759
	C	1440	A321 N	400	668	0			1068
	D								
	E								
	F								
Total				465	1001	1005			2471

2036 with SWDR no SDL

MODELLED									
Jct Node Number		Road name		TO ARM				Total	
				A	B	C	D		
FROM ARM	A	1109	Molly Millars	0.0%	0.6%	0.3%			0.5%
	B	4416	A321 S	12.3%	0.0%	0.0%			1.1%
	C	1440	A321 N	0.3%	6.3%	0.0%			4.0%
	D								
	E								
	F								
Total				1.9%	4.4%	0.1%			2.2%

2036 with SWDR and full SDL using WBC approved trip rates

MODELLED									
Jct Node Number		Road name		TO ARM				Total	
				A	B	C	D		
FROM ARM	A	1109	Molly Millars	0	320	355			675
	B	4416	A321 S	109	0	713			822
	C	1440	A321 N	414	672	0			1086
	D								
	E								
	F								
Total				523	992	1068			2583

2036 with SWDR and full SDL using WBC approved trip rates

MODELLED									
Jct Node Number		Road name		TO ARM				Total	
				A	B	C	D		
FROM ARM	A	1109	Molly Millars	0.0%	0.3%	0.8%			0.6%
	B	4416	A321 S	7.3%	0.0%	0.3%			1.2%
	C	1440	A321 N	0.2%	6.4%	0.0%			4.1%
	D								
	E								
	F								
Total				1.7%	4.4%	0.5%			2.2%

* all the values are in veh

TOTAL									
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* all the values are in veh

% HDV									
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2036 with SWDR no SDL

MODELLED									
Jct Node Number		Road name		TO ARM					
				A	B	C	D	E	Total
FROM ARM	A	4434	Finchampstead Rd N	0	230	987	4		1221
	B	2089	Tesco	35	0	25	0		60
	C	1106	Finchampstead Rd S	899	168	0	4		1071
	D	4419	Landen Ct	30	2	22	0		54
	E								
	F								
	G								
Total				964	400	1034	8		2406

2036 with SWDR no SDL

MODELLED									
Jct Node Number		Road name		TO ARM					
				A	B	C	D	E	Total
FROM ARM	A	4434	Finchampstead Rd N	0.0%	0.4%	3.1%	25.0%		2.7%
	B	2089	Tesco	2.9%	0.0%	0.0%	0.0%		1.7%
	C	1106	Finchampstead Rd S	0.0%	1.2%	0.0%	50.0%		0.4%
	D	4419	Landen Ct	3.3%	0.0%	0.0%	0.0%		1.9%
	E								
	F								
	G								
Total				0.2%	0.8%	3.0%	37.5%		1.6%

2036 with SWDR and full SDL using WBC approved trip rates

MODELLED									
Jct Node Number		Road name		TO ARM					
				A	B	C	D	E	Total
FROM ARM	A	4434	Finchampstead Rd N	0	338	710	3		1051
	B	2089	SWDR	213	0	410	1		624
	C	1106	Finchampstead Rd S	676	432	0	4		1112
	D	4419	Landen Ct	17	22	15	0		54
	E								
	F								
	G								
Total				906	792	1135	8		2841

2036 with SWDR and full SDL using WBC approved trip rates

MODELLED									
Jct Node Number		Road name		TO ARM					
				A	B	C	D	E	Total
FROM ARM	A	4434	Finchampstead Rd N	0.0%	0.3%	5.1%	33.3%		3.6%
	B	2089	SWDR	0.9%	0.0%	0.0%	0.0%		0.3%
	C	1106	Finchampstead Rd S	0.0%	0.9%	0.0%	50.0%		0.5%
	D	4419	Landen Ct	5.9%	0.0%	0.0%	0.0%		1.9%
	E								
	F								
	G								
Total				0.3%	0.6%	3.2%	37.5%		1.7%

* all the values are in veh

TOTAL									
-------	--	--	--	--	--	--	--	--	--

2036 with SWDR no SDL

MODELLED														
Jct Node Number			1440		Road name		TO ARM					Total		
							A	B	C	D	E		F	G
							4434	2089	1106	4419				
FROM ARM	A	4434	Finchampstead Rd N				0	84	952	41				1077
	B	2089	Tesco				341	0	112	2				455
	C	1106	Finchampstead Rd S				896	71	0	36				1003
	D	4419	Landen Ct				11	0	4	0				15
	E													
	F													
	G													
Total							1248	155	1068	79				2550

2036 with SWDR and full SDL using WBC approved trip rates

MODELLED											
Jct Node Number			1440	Road name		TO ARM					Total
			A			B	C	D	E	F	
				4434	2089	1106	4419				
FROM ARM	A	4434	Finchampstead Rd N	0	225	736	32				993
	B	2089	SWDR	407	0	345	21				773
	C	1106	Finchampstead Rd S	632	408	0	28				1068
	D	4419	Landen Ct	9	3	3	0				15
	E										
	F										
	G										
Total				1048	636	1084	81				2849

* all the values are in veh

% HDV									
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2036 with SWDR no SDL

MODELLED													
Jct Node Number		1440		Road name		TO ARM					Total		
						A	B	C	D	E		F	G
FROM ARM	A	4434	Finchampstead Rd N	0.0%	0.0%	4.4%	0.0%						3.9%
	B	2089	Tesco	0.3%	0.0%	0.0%	0.0%						0.2%
	C	1106	Finchampstead Rd S	0.0%	0.0%	0.0%	0.0%						0.0%
	D	4419	Landen Ct	9.1%	0.0%	0.0%	0.0%						6.7%
	E												
	F												
	G												
Total				0.2%	0.0%	3.9%	0.0%						1.7%

2036 with SWDR and full SDL using WBC approved trip rates

MODELLED													
Jct Node Number		1440		Road name		TO ARM					Total		
						A	B	C	D	E		F	G
FROM ARM	A	4434	Finchampstead Rd N	0.0%	0.0%	5.8%	0.0%						4.3%
	B	2089	SWDR	0.2%	0.0%	0.0%	0.0%						0.1%
	C	1106	Finchampstead Rd S	0.0%	1.2%	0.0%	0.0%						0.5%
	D	4419	Landen Ct	11.1%	0.0%	0.0%	0.0%						6.7%
	E												
	F												
	G												
Total				0.2%	0.8%	4.0%	0.0%						1.8%

APPENDIX C

Junctions 9		
ARCADY 9 - Roundabout Module		
Version: 9.5.2.1013 © Copyright TRL Limited, 2019		
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Filename: WMHP-TG-WG2-SK-HI-0208.j9

Path: M:\Project\7100 to 7199\7132 - Wokingham Modelling (2)\Calcs\2024.03.01 - Southern Rbt Options

Report generation date: 01/03/2024 09:30:49

- »2026 with SWDR no SDL, AM
- »2026 with SWDR no SDL, PM
- »2036 with SWDR no SDL, AM
- »2036 with SWDR no SDL, PM
- »2036 with SWDR and full SDL using WBC approved trip rate, AM
- »2036 with SWDR and full SDL using WBC approved trip rate, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2026 with SWDR no SDL						
Arm 1	2.8	9.29	0.74	3.6	11.36	0.79
Arm 2	9.1	37.05	0.92	2.7	12.23	0.74
Arm 3	0.7	4.65	0.41	1.1	5.78	0.53
2036 with SWDR no SDL						
Arm 1	3.0	9.61	0.75	4.1	12.54	0.81
Arm 2	9.6	39.10	0.92	3.0	12.98	0.76
Arm 3	0.7	4.71	0.41	1.2	5.95	0.54
2036 with SWDR and full SDL using WBC approved trip rate						
Arm 1	4.5	13.49	0.83	4.3	13.16	0.82
Arm 2	12.1	49.90	0.95	3.9	15.57	0.81
Arm 3	0.9	5.28	0.48	1.3	6.52	0.57

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	Finchampstead Road/ Molly Millars Lane Roundabout WMHP-TG-WG2-SK-HI-0208
Location	Wokingham
Site number	
Date	01/03/2024
Version	
Status	[no status]
Identifier	
Client	

Jobnumber	
Enumerator	SMIRPWD
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	35.00	15.00

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	2026 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	15	✓
D3	2036 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	15	✓
D4	2036 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	15	✓
D5	2036 with SWDR and full SDL using WBC approved trip rate	AM	ONE HOUR	07:45	09:15	15	✓
D6	2036 with SWDR and full SDL using WBC approved trip rate	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2026 with SWDR no SDL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	18.32	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Finchampstead Road (north)	
2	Finchampstead Road (s)	
3	Molly Millars Lane	

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
1	3.16	7.00	27.8	27.5	40.0	26.2	
2	3.10	7.50	9.8	18.0	40.0	40.8	
3	3.05	7.00	41.5	30.0	40.0	35.1	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1	5.00	4.00	1.00	1.00	6.00	11.00	7.00
2	4.00	4.00	1.00	1.00	6.00	9.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.672	1811
2	0.574	1423
3	0.669	1839

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	2026 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	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 (%)
1		ONE HOUR	✓	1021	100.000
2		ONE HOUR	✓	857	100.000
3		ONE HOUR	✓	484	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

	To			
	1	2	3	
From	1	0	460	561
	2	704	0	153
	3	362	122	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	1	7
	2	0	0	9
	3	1	2	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)
1	0.74	9.29	2.8	A	937	1405
2	0.92	37.05	9.1	E	786	1180
3	0.41	4.65	0.7	A	444	666

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	769	192	92	45.17	1511	0.509	765	796	0.0	1.0	4.796	A
2	645	161	420	45.17	1050	0.615	639	436	0.0	1.6	8.635	A
3	364	91	525		1469	0.248	363	534	0.0	0.3	3.249	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	918	229	110	53.94	1508	0.609	916	954	1.0	1.5	6.055	A
2	770	193	503	53.94	1050	0.734	766	522	1.6	2.6	12.500	B
3	435	109	629		1400	0.311	435	640	0.3	0.4	3.726	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1124	281	134	66.06	1511	0.744	1119	1156	1.5	2.8	9.067	A
2	944	236	615	66.06	1029	0.917	922	638	2.6	7.9	29.213	D
3	533	133	758		1315	0.405	532	780	0.4	0.7	4.592	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1124	281	134	66.06	1511	0.744	1124	1170	2.8	2.8	9.287	A
2	944	236	618	66.06	1027	0.918	939	641	7.9	9.1	37.052	E
3	533	133	771		1306	0.408	533	785	0.7	0.7	4.653	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	918	229	110	53.94	1548	0.593	923	981	2.8	1.5	5.810	A
2	770	193	507	53.94	1094	0.704	797	526	9.1	2.5	13.102	B
3	435	109	655		1384	0.314	436	650	0.7	0.5	3.801	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	769	192	92	45.17	1539	0.499	771	806	1.5	1.0	4.693	A
2	645	161	423	45.17	1095	0.589	649	439	2.5	1.5	8.152	A
3	364	91	533		1464	0.249	365	539	0.5	0.3	3.279	A

2026 with SWDR no SDL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	10.15	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
D2	2026 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	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 (%)
1		ONE HOUR	✓	1060	100.000
2		ONE HOUR	✓	736	100.000
3		ONE HOUR	✓	644	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	666	394

	2	670	0	66
	3	330	314	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		1	2	3
	1	0	1	1
	2	0	0	12
	3	1	1	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)
1	0.79	11.36	3.6	B	973	1459
2	0.74	12.23	2.7	B	675	1013
3	0.53	5.78	1.1	A	591	886

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	798	200	235	45.17	1477	0.540	793	748	0.0	1.2	5.230	A
2	554	139	295	45.17	1120	0.495	550	734	0.0	1.0	6.276	A
3	485	121	501		1489	0.326	483	344	0.0	0.5	3.573	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	953	238	282	53.94	1465	0.650	950	897	1.2	1.8	6.956	A
2	662	165	353	53.94	1105	0.599	660	879	1.0	1.5	8.051	A
3	579	145	601		1423	0.407	578	412	0.5	0.7	4.258	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1167	292	345	66.06	1469	0.794	1160	1096	1.8	3.6	11.363	B
2	810	203	431	66.06	1095	0.740	805	1074	1.5	2.7	12.228	B
3	709	177	733		1335	0.531	707	503	0.7	1.1	5.719	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1167	292	346	66.06	1513	0.772	1168	1101	3.6	3.5	10.475	B

2	810	203	434	66.06	1125	0.721	811	1079	2.7	2.6	11.490	B
3	709	177	738		1332	0.532	709	507	1.1	1.1	5.780	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	953	238	283	53.94	1514	0.629	960	904	3.5	1.7	6.570	A
2	662	165	357	53.94	1140	0.581	667	886	2.6	1.4	7.685	A
3	579	145	607		1419	0.408	581	417	1.1	0.7	4.305	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	798	200	237	45.17	1509	0.529	800	755	1.7	1.1	5.096	A
2	554	139	298	45.17	1146	0.483	556	740	1.4	0.9	6.120	A
3	485	121	506		1485	0.326	486	347	0.7	0.5	3.602	A

2036 with SWDR no SDL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	19.15	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
D3	2036 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	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 (%)
1		ONE HOUR	✓	1033	100.000
2		ONE HOUR	✓	862	100.000
3		ONE HOUR	✓	491	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	468	565

	2	706	0	156
	3	365	126	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
	1	0	1	7
	2	0	0	8
	3	1	2	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)
1	0.75	9.61	3.0	A	948	1422
2	0.92	39.10	9.6	E	791	1186
3	0.41	4.71	0.7	A	451	676

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	778	194	95	45.17	1510	0.515	773	800	0.0	1.0	4.860	A
2	649	162	423	45.17	1050	0.618	643	445	0.0	1.6	8.701	A
3	370	92	526		1468	0.252	368	539	0.0	0.3	3.268	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	929	232	113	53.94	1508	0.616	927	959	1.0	1.6	6.167	A
2	775	194	507	53.94	1051	0.737	771	533	1.6	2.7	12.640	B
3	441	110	631		1399	0.315	441	646	0.3	0.5	3.755	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1137	284	138	66.06	1511	0.753	1132	1160	1.6	2.9	9.358	A
2	949	237	619	66.06	1028	0.923	927	651	2.7	8.3	30.297	D
3	541	135	759		1315	0.411	540	787	0.5	0.7	4.639	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1137	284	139	66.06	1511	0.753	1137	1175	2.9	3.0	9.610	A

2	949	237	622	66.06	1026	0.925	944	654	8.3	9.6	39.104	E
3	541	135	773		1305	0.414	541	793	0.7	0.7	4.707	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	929	232	114	53.94	1550	0.599	934	987	3.0	1.5	5.901	A
2	775	194	511	53.94	1093	0.709	803	537	9.6	2.5	13.521	B
3	441	110	658		1381	0.320	442	657	0.7	0.5	3.839	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	778	194	95	45.17	1539	0.505	780	810	1.5	1.0	4.753	A
2	649	162	426	45.17	1096	0.592	653	448	2.5	1.5	8.202	A
3	370	92	535		1463	0.253	370	545	0.5	0.3	3.298	A

2036 with SWDR no SDL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	10.98	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	2036 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	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 (%)
1		ONE HOUR	✓	1068	100.000
2		ONE HOUR	✓	759	100.000
3		ONE HOUR	✓	644	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	668	400

	2	694	0	65
	3	333	311	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
	1	0	6	1
	2	0	0	12
	3	1	1	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)
1	0.81	12.54	4.1	B	980	1470
2	0.76	12.98	3.0	B	696	1045
3	0.54	5.95	1.2	A	591	886

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	804	201	233	45.17	1436	0.560	799	768	0.0	1.3	5.605	A
2	571	143	299	45.17	1120	0.510	567	733	0.0	1.0	6.468	A
3	485	121	519		1477	0.328	483	348	0.0	0.5	3.615	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	960	240	279	53.94	1431	0.671	957	921	1.3	2.0	7.555	A
2	682	171	358	53.94	1106	0.617	680	878	1.0	1.6	8.399	A
3	579	145	622		1409	0.411	578	417	0.5	0.7	4.329	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1176	294	342	66.06	1447	0.813	1168	1125	2.0	4.1	12.538	B
2	836	209	437	66.06	1102	0.758	830	1072	1.6	3.0	12.977	B
3	709	177	759		1318	0.538	707	508	0.7	1.1	5.877	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1176	294	342	66.06	1495	0.787	1177	1131	4.1	3.8	11.389	B

2	836	209	441	66.06	1135	0.736	836	1078	3.0	2.9	12.084	B
3	709	177	764		1314	0.540	709	512	1.1	1.2	5.947	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	960	240	280	53.94	1485	0.647	968	929	3.8	1.9	7.064	A
2	682	171	363	53.94	1145	0.596	688	886	2.9	1.5	7.969	A
3	579	145	629		1404	0.412	581	421	1.2	0.7	4.383	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	804	201	235	45.17	1471	0.546	807	775	1.9	1.2	5.438	A
2	571	143	302	45.17	1147	0.498	573	739	1.5	1.0	6.293	A
3	485	121	524		1473	0.329	486	351	0.7	0.5	3.647	A

2036 with SWDR and full SDL using WBC approved trip rate, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	23.50	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
D5	2036 with SWDR and full SDL using WBC approved trip rate	AM	ONE HOUR	07:45	09:15	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 (%)
1		ONE HOUR	✓	1138	100.000
2		ONE HOUR	✓	841	100.000
3		ONE HOUR	✓	582	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

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From	To			
		1	2	3
	1	0	463	675
	2	685	0	156
	3	430	152	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1	2	3
	1	0	8	1
	2	0	0	9
	3	1	2	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)
1	0.83	13.49	4.5	B	1044	1566
2	0.95	49.90	12.1	E	772	1158
3	0.48	5.28	0.9	A	534	801

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	857	214	114	45.17	1510	0.567	852	833	0.0	1.3	5.428	A
2	633	158	505	45.17	1020	0.621	627	460	0.0	1.6	9.024	A
3	438	110	511		1479	0.296	436	621	0.0	0.4	3.448	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1023	256	136	53.94	1516	0.675	1020	998	1.3	2.0	7.210	A
2	756	189	605	53.94	1017	0.743	751	552	1.6	2.7	13.321	B
3	523	131	612		1412	0.371	523	744	0.4	0.6	4.047	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1253	313	167	66.06	1518	0.826	1244	1204	2.0	4.4	12.710	B
2	926	231	738	66.06	979	0.946	898	673	2.7	9.8	35.657	E
3	641	160	731		1333	0.481	639	904	0.6	0.9	5.183	A

08:30 - 08:45

	Total	Junction	Circulating	Pedestrian				Throughput	Start	End		Unsignalised
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Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	Delay (s)	level of service
1	1253	313	167	66.06	1518	0.826	1252	1220	4.4	4.5	13.486	B
2	926	231	743	66.06	976	0.948	917	677	9.8	12.1	49.898	E
3	641	160	747		1323	0.485	641	913	0.9	0.9	5.280	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1023	256	137	53.94	1559	0.656	1033	1034	4.5	2.0	6.982	A
2	756	189	613	53.94	1050	0.720	794	557	12.1	2.7	15.874	C
3	523	131	646		1389	0.377	525	760	0.9	0.6	4.170	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	857	214	115	45.17	1547	0.554	860	844	2.0	1.3	5.262	A
2	633	158	510	45.17	1068	0.593	638	464	2.7	1.5	8.466	A
3	438	110	520		1473	0.298	439	628	0.6	0.4	3.486	A

2036 with SWDR and full SDL using WBC approved trip rate, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	12.21	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	2036 with SWDR and full SDL using WBC approved trip rate	PM	ONE HOUR	16:45	18:15	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 (%)
1		ONE HOUR	✓	1086	100.000
2		ONE HOUR	✓	822	100.000
3		ONE HOUR	✓	675	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

--	--

From	To			
		1	2	3
	1	0	672	414
	2	713	0	109
	3	355	320	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1	2	3
	1	0	6	1
	2	1	0	7
	3	1	1	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)
1	0.82	13.16	4.3	B	997	1495
2	0.81	15.57	3.9	C	754	1131
3	0.57	6.52	1.3	A	619	929

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	818	204	240	45.17	1434	0.570	812	799	0.0	1.3	5.743	A
2	619	155	310	45.17	1110	0.557	614	743	0.0	1.2	7.183	A
3	508	127	532		1464	0.347	506	391	0.0	0.5	3.749	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	976	244	287	53.94	1430	0.683	973	957	1.3	2.1	7.824	A
2	739	185	371	53.94	1106	0.668	736	889	1.2	2.0	9.659	A
3	607	152	638		1393	0.435	606	469	0.5	0.8	4.565	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1196	299	351	66.06	1452	0.824	1187	1168	2.1	4.3	13.156	B
2	905	226	452	66.06	1121	0.807	897	1086	2.0	3.9	15.571	C
3	743	186	778		1300	0.572	741	571	0.8	1.3	6.415	A

17:30 - 17:45

	Total	Junction	Circulating	Pedestrian				Throughput	Start	End		Unsignalised
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Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	Delay (s)	level of service
1	1196	299	352	66.06	1503	0.796	1197	1176	4.3	4.1	11.841	B
2	905	226	456	66.06	1138	0.795	905	1093	3.9	3.9	15.429	C
3	743	186	785		1295	0.574	743	576	1.3	1.3	6.515	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	976	244	289	53.94	1488	0.656	985	968	4.1	2.0	7.272	A
2	739	185	375	53.94	1160	0.637	747	898	3.9	1.8	8.896	A
3	607	152	648		1387	0.437	609	474	1.3	0.8	4.641	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	818	204	241	45.17	1470	0.556	820	807	2.0	1.3	5.560	A
2	619	155	313	45.17	1143	0.541	621	749	1.8	1.2	6.930	A
3	508	127	539		1460	0.348	509	395	0.8	0.5	3.788	A

Junctions 9		
ARCADY 9 - Roundabout Module		
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Filename: WMHP-TG-WG2-SK-HI-0209.j9

Path: M:\Project\7100 to 7199\7132 - Wokingham Modelling (2)\Calcs\2024.03.01 - Southern Rbt Options

Report generation date: 01/03/2024 09:54:28

- »2026 with SWDR no SDL, AM
- »2026 with SWDR no SDL, PM
- »2036 with SWDR no SDL, AM
- »2036 with SWDR no SDL, PM
- »2036 with SWDR and full SDL using WBC approved trip rate, AM
- »2036 with SWDR and full SDL using WBC approved trip rate, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2026 with SWDR no SDL						
Arm 1	2.8	9.29	0.74	3.6	11.36	0.79
Arm 2	105.9	451.02	1.25	10.3	48.77	0.93
Arm 3	0.6	4.11	0.38	1.1	5.74	0.53
2036 with SWDR no SDL						
Arm 1	3.0	9.61	0.75	4.1	12.54	0.81
Arm 2	109.6	469.89	1.26	14.3	64.46	0.97
Arm 3	0.6	4.14	0.38	1.1	5.87	0.54
2036 with SWDR and full SDL using WBC approved trip rate						
Arm 1	4.5	13.49	0.83	4.3	13.16	0.82
Arm 2	120.7	550.42	1.31	39.3	146.15	1.07
Arm 3	0.8	4.53	0.45	1.3	6.11	0.56

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	Finchampstead Road/ Molly Millars Lane Roundabout WMHP-TG-WG2-SK-HI-0209
Location	Wokingham
Site number	
Date	01/03/2024
Version	
Status	[no status]
Identifier	
Client	

Jobnumber	
Enumerator	SMIRPWD
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	35.00	15.00

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	2026 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	15	✓
D3	2036 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	15	✓
D4	2036 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	15	✓
D5	2036 with SWDR and full SDL using WBC approved trip rate	AM	ONE HOUR	07:45	09:15	15	✓
D6	2036 with SWDR and full SDL using WBC approved trip rate	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2026 with SWDR no SDL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	166.81	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Finchampstead Road (north)	
2	Finchampstead Road (s)	
3	Molly Millars Lane	

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
1	3.16	7.00	27.8	27.5	40.0	26.2	
2	3.10	4.50	5.3	18.0	40.0	46.2	
3	3.05	7.00	41.5	30.0	40.0	35.1	

Pelican/Puffin Crossings

Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1	5.00	4.00	1.00	1.00	6.00	11.00	7.00
2	4.00	4.00	1.00	1.00	6.00	9.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.672	1811
2	0.503	1097
3	0.669	1839

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	2026 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	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 (%)
1		ONE HOUR	✓	1021	100.000
2		ONE HOUR	✓	857	100.000
3		ONE HOUR	✓	484	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

	To			
	1	2	3	
From	1	0	460	561
	2	704	0	153
	3	362	122	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	1	2	3	
From	1	0	1	7
	2	0	0	9
	3	1	2	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)
1	0.74	9.29	2.8	A	937	1405
2	1.25	451.02	105.9	F	786	1180
3	0.38	4.11	0.6	A	444	666

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	769	192	92	45.17	1511	0.509	765	791	0.0	1.0	4.796	A
2	645	161	420	45.17	826	0.781	632	436	0.0	3.3	17.580	C
3	364	91	519		1473	0.247	363	533	0.0	0.3	3.241	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	918	229	110	53.94	1508	0.609	916	937	1.0	1.5	6.055	A
2	770	193	503	53.94	813	0.948	745	522	3.3	9.5	42.381	E
3	435	109	612		1411	0.308	435	636	0.3	0.4	3.683	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1124	281	134	66.06	1511	0.744	1119	1014	1.5	2.8	9.067	A
2	944	236	615	66.06	754	1.252	750	638	9.5	58.0	175.729	F
3	533	133	616		1409	0.378	532	749	0.4	0.6	4.102	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1124	281	134	66.06	1511	0.744	1124	1016	2.8	2.8	9.287	A
2	944	236	618	66.06	752	1.254	752	641	58.0	105.9	393.473	F
3	533	133	618		1408	0.378	533	752	0.6	0.6	4.113	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	918	229	110	53.94	1548	0.593	923	986	2.8	1.5	5.810	A
2	770	193	507	53.94	811	0.950	803	526	105.9	97.7	451.015	F
3	435	109	660		1380	0.315	436	651	0.6	0.5	3.812	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	769	192	92	45.17	1539	0.499	771	968	1.5	1.0	4.693	A
2	645	161	423	45.17	855	0.754	847	439	97.7	47.4	311.203	F
3	364	91	695		1357	0.269	365	575	0.5	0.4	3.630	A

2026 with SWDR no SDL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	21.17	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
D2	2026 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	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 (%)
1		ONE HOUR	✓	1060	100.000
2		ONE HOUR	✓	736	100.000
3		ONE HOUR	✓	644	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	666	394

	2	670	0	66
	3	330	314	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
	1	0	1	1
	2	0	0	12
	3	1	1	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)
1	0.79	11.36	3.6	B	973	1459
2	0.93	48.77	10.3	E	675	1013
3	0.53	5.74	1.1	A	591	886

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	798	200	235	45.17	1477	0.540	793	746	0.0	1.2	5.230	A
2	554	139	295	45.17	867	0.639	547	734	0.0	1.7	11.054	B
3	485	121	498		1491	0.325	483	344	0.0	0.5	3.566	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	953	238	282	53.94	1465	0.650	950	895	1.2	1.8	6.956	A
2	662	165	353	53.94	891	0.743	658	879	1.7	2.7	15.157	C
3	579	145	599		1424	0.407	578	412	0.5	0.7	4.252	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1167	292	345	66.06	1469	0.794	1160	1079	1.8	3.6	11.364	B
2	810	203	431	66.06	868	0.933	787	1074	2.7	8.6	36.468	E
3	709	177	716		1346	0.527	707	502	0.7	1.1	5.621	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1167	292	346	66.06	1513	0.772	1168	1095	3.6	3.5	10.473	B

2	810	203	434	66.06	867	0.935	804	1079	8.6	10.3	48.772	E
3	709	177	732		1336	0.531	709	506	1.1	1.1	5.739	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	953	238	283	53.94	1515	0.629	960	927	3.5	1.7	6.572	A
2	662	165	357	53.94	906	0.730	691	886	10.3	2.9	18.771	C
3	579	145	629		1404	0.412	581	419	1.1	0.7	4.381	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	798	200	237	45.17	1509	0.529	800	758	1.7	1.1	5.094	A
2	554	139	298	45.17	919	0.603	559	740	2.9	1.6	10.166	B
3	485	121	509		1483	0.327	486	348	0.7	0.5	3.610	A

2036 with SWDR no SDL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	172.86	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
D3	2036 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	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 (%)
1		ONE HOUR	✓	1033	100.000
2		ONE HOUR	✓	862	100.000
3		ONE HOUR	✓	491	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	468	565

	2	706	0	156
	3	365	126	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
	1	0	1	7
	2	0	0	8
	3	1	2	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)
1	0.75	9.61	3.0	A	948	1422
2	1.26	469.89	109.6	F	791	1186
3	0.38	4.14	0.6	A	451	676

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	778	194	95	45.17	1510	0.515	773	794	0.0	1.0	4.860	A
2	649	162	423	45.17	827	0.785	636	445	0.0	3.3	17.784	C
3	370	92	521		1472	0.251	368	538	0.0	0.3	3.257	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	929	232	113	53.94	1508	0.616	927	941	1.0	1.6	6.167	A
2	775	194	507	53.94	812	0.954	748	533	3.3	10.0	43.893	E
3	441	110	613		1411	0.313	441	642	0.3	0.5	3.708	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1137	284	139	66.06	1511	0.753	1132	1015	1.6	2.9	9.358	A
2	949	237	619	66.06	753	1.261	749	651	10.0	60.0	181.768	F
3	541	135	613		1411	0.383	540	755	0.5	0.6	4.131	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1137	284	139	66.06	1511	0.753	1137	1017	2.9	3.0	9.610	A

2	949	237	622	66.06	751	1.263	751	654	60.0	109.6	407.006	F
3	541	135	615		1410	0.383	541	758	0.6	0.6	4.141	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	929	232	113	53.94	1550	0.599	934	986	3.0	1.5	5.903	A
2	775	194	511	53.94	810	0.957	803	537	109.6	102.7	469.894	F
3	441	110	657		1382	0.319	442	656	0.6	0.5	3.835	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	778	194	95	45.17	1539	0.505	780	969	1.5	1.0	4.753	A
2	649	162	426	45.17	855	0.759	847	448	102.7	53.2	333.755	F
3	370	92	693		1358	0.272	370	580	0.5	0.4	3.644	A

2036 with SWDR no SDL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	26.56	D

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	2036 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	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 (%)
1		ONE HOUR	✓	1068	100.000
2		ONE HOUR	✓	759	100.000
3		ONE HOUR	✓	644	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

	To			
		1	2	3
From	1	0	668	400

	2	694	0	65
	3	333	311	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
	1	0	6	1
	2	0	0	12
	3	1	1	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)
1	0.81	12.54	4.1	B	980	1470
2	0.97	64.46	14.3	F	696	1045
3	0.54	5.87	1.1	A	591	886

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	804	201	233	45.17	1436	0.560	799	765	0.0	1.3	5.605	A
2	571	143	299	45.17	868	0.659	564	733	0.0	1.9	11.588	B
3	485	121	516		1479	0.328	483	348	0.0	0.5	3.608	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	960	240	279	53.94	1431	0.671	957	919	1.3	2.0	7.555	A
2	682	171	358	53.94	898	0.760	678	878	1.9	3.0	16.036	C
3	579	145	620		1410	0.411	578	417	0.5	0.7	4.322	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1176	294	342	66.06	1447	0.813	1168	1100	2.0	4.1	12.539	B
2	836	209	437	66.06	866	0.965	803	1072	3.0	11.1	43.687	E
3	709	177	734		1334	0.531	707	506	0.7	1.1	5.727	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1176	294	342	66.06	1495	0.787	1177	1119	4.1	3.8	11.386	B

2	836	209	441	66.06	864	0.967	823	1078	11.1	14.3	64.464	F
3	709	177	752		1322	0.536	709	511	1.1	1.1	5.867	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	960	240	280	53.94	1485	0.647	968	964	3.8	1.9	7.064	A
2	682	171	363	53.94	903	0.755	726	886	14.3	3.3	24.370	C
3	579	145	664		1381	0.419	581	425	1.1	0.7	4.507	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	804	201	235	45.17	1471	0.546	807	780	1.9	1.2	5.438	A
2	571	143	302	45.17	928	0.616	578	739	3.3	1.6	10.493	B
3	485	121	529		1471	0.330	486	352	0.7	0.5	3.661	A

2036 with SWDR and full SDL using WBC approved trip rate, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	186.29	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
D5	2036 with SWDR and full SDL using WBC approved trip rate	AM	ONE HOUR	07:45	09:15	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 (%)
1		ONE HOUR	✓	1138	100.000
2		ONE HOUR	✓	841	100.000
3		ONE HOUR	✓	582	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

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From	To			
		1	2	3
	1	0	463	675
	2	685	0	156
	3	430	152	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1	2	3
	1	0	8	1
	2	0	0	9
	3	1	2	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)
1	0.83	13.49	4.5	B	1044	1566
2	1.31	550.42	120.7	F	772	1158
3	0.45	4.53	0.8	A	534	801

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	857	214	114	45.17	1510	0.567	852	827	0.0	1.3	5.428	A
2	633	158	505	45.17	801	0.790	620	460	0.0	3.4	18.619	C
3	438	110	505		1483	0.296	436	620	0.0	0.4	3.435	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1023	256	136	53.94	1516	0.675	1020	976	1.3	2.0	7.210	A
2	756	189	605	53.94	776	0.974	724	552	3.4	11.4	50.170	F
3	523	131	590		1426	0.367	523	739	0.4	0.6	3.980	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1253	313	167	66.06	1518	0.826	1244	1049	2.0	4.4	12.710	B
2	926	231	738	66.06	710	1.304	708	673	11.4	66.0	210.637	F
3	641	160	576		1435	0.446	640	869	0.6	0.8	4.522	A

08:30 - 08:45

	Total	Junction	Circulating	Pedestrian				Throughput	Start	End		Unsignalised
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Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	Delay (s)	level of service
1	1253	313	167	66.06	1518	0.826	1252	1050	4.4	4.5	13.486	B
2	926	231	743	66.06	708	1.308	707	677	66.0	120.7	470.727	F
3	641	160	576		1435	0.446	641	874	0.8	0.8	4.530	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1023	256	137	53.94	1559	0.656	1033	1011	4.5	2.0	6.982	A
2	756	189	613	53.94	773	0.979	766	557	120.7	118.2	550.418	F
3	523	131	624		1404	0.373	524	755	0.8	0.6	4.097	A

09:00 - 09:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	857	214	115	45.17	1547	0.554	860	990	2.0	1.3	5.262	A
2	633	158	510	45.17	824	0.768	817	464	118.2	72.2	420.946	F
3	438	110	666		1376	0.318	439	661	0.6	0.5	3.841	A

2036 with SWDR and full SDL using WBC approved trip rate, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	53.35	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	2036 with SWDR and full SDL using WBC approved trip rate	PM	ONE HOUR	16:45	18:15	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 (%)
1		ONE HOUR	✓	1086	100.000
2		ONE HOUR	✓	822	100.000
3		ONE HOUR	✓	675	100.000

Demand overview (Pedestrians)

Arm	Profile type	Average pedestrian flow (Ped/hr)
1	[ONEHOUR]	60.00
2	[ONEHOUR]	60.00
3		

Origin-Destination Data

Demand (Veh/hr)

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From	To			
		1	2	3
	1	0	672	414
	2	713	0	109
	3	355	320	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1	2	3
	1	0	6	1
	2	1	0	7
	3	1	1	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)
1	0.82	13.16	4.3	B	997	1495
2	1.07	146.15	39.3	F	754	1131
3	0.56	6.11	1.3	A	619	929

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	818	204	240	45.17	1434	0.570	812	795	0.0	1.3	5.743	A
2	619	155	310	45.17	867	0.714	609	743	0.0	2.4	13.533	B
3	508	127	529		1467	0.346	506	390	0.0	0.5	3.738	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	976	244	287	53.94	1430	0.683	973	953	1.3	2.1	7.824	A
2	739	185	371	53.94	892	0.828	731	889	2.4	4.3	21.337	C
3	607	152	634		1396	0.435	606	468	0.5	0.8	4.549	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1196	299	351	66.06	1452	0.824	1187	1107	2.1	4.3	13.159	B
2	905	226	452	66.06	852	1.063	827	1086	4.3	23.7	75.655	F
3	743	186	718		1341	0.554	741	562	0.8	1.2	5.990	A

17:30 - 17:45

	Total	Junction	Circulating	Pedestrian				Throughput	Start	End		Unsignalised
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Arm	Demand (Veh/hr)	Arrivals (Veh)	flow (Veh/hr)	demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	(exit side) (Veh/hr)	queue (Veh)	queue (Veh)	Delay (s)	level of service
1	1196	299	352	66.06	1503	0.796	1197	1122	4.3	4.1	11.841	B
2	905	226	456	66.06	850	1.065	843	1093	23.7	39.3	146.148	F
3	743	186	731		1332	0.558	743	568	1.2	1.3	6.115	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	976	244	288	53.94	1488	0.656	985	1072	4.1	2.0	7.272	A
2	739	185	375	53.94	890	0.830	867	898	39.3	7.4	103.953	F
3	607	152	752		1318	0.460	608	490	1.3	0.9	5.085	A

18:00 - 18:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	818	204	242	45.17	1470	0.556	820	823	2.0	1.3	5.563	A
2	619	155	313	45.17	921	0.672	640	749	7.4	2.1	13.666	B
3	508	127	555		1449	0.351	509	398	0.9	0.5	3.837	A

APPENDIX D

Junctions 9		
ARCADY 9 - Roundabout Module		
Version: 9.5.2.1013 © Copyright TRL Limited, 2019		
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Filename: WMHP-TG-WG2-SK-HI-0208 - linked.j9

Path: M:\Project\7100 to 7199\7132 - Wokingham Modelling (2)\Calcs\2024.03.01 - Southern Rbt Options

Report generation date: 01/03/2024 10:34:45

»2026 with SWDR no SDL, AM

»2026 with SWDR no SDL, PM

»2036 with SWDR no SDL, AM

»2036 with SWDR no SDL, PM

»2036 with SWDR and full SDL using WBC approved trip rates, AM

»2036 with SWDR and full SDL using WBC approved trip rates, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2026 with SWDR no SDL						
Junction 1 - Arm 1	4.8	15.74	0.83	2.4	8.68	0.71
Junction 1 - Arm 2	0.9	5.90	0.46	2.0	9.14	0.67
Junction 1 - Arm 3	3.1	9.92	0.76	3.4	11.23	0.78
Junction 1 - Arm 4	0.2	13.89	0.18	0.1	15.13	0.06
Junction 2 - Arm 1	4.1	12.34	0.81	3.8	11.67	0.80
Junction 2 - Arm 2	12.1	49.06	0.95	2.7	12.28	0.74
Junction 2 - Arm 3	0.7	4.64	0.41	1.1	5.78	0.53
2036 with SWDR no SDL						
Junction 1 - Arm 1	5.7	18.31	0.86	2.9	10.19	0.75
Junction 1 - Arm 2	0.9	5.86	0.46	2.6	11.29	0.73
Junction 1 - Arm 3	3.2	10.06	0.77	3.9	12.59	0.81
Junction 1 - Arm 4	0.2	13.96	0.19	0.1	17.49	0.07
Junction 2 - Arm 1	4.0	12.27	0.81	4.2	12.81	0.82
Junction 2 - Arm 2	12.6	50.50	0.95	3.0	12.97	0.76
Junction 2 - Arm 3	0.7	4.69	0.41	1.2	5.95	0.54
2036 with SWDR and full SDL using WBC approved trip rates						
Junction 1 - Arm 1	5.3	17.27	0.85	3.6	12.27	0.79
Junction 1 - Arm 2	1.3	7.07	0.57	2.7	11.76	0.74
Junction 1 - Arm 3	3.8	11.69	0.80	4.6	14.47	0.84
Junction 1 - Arm 4	0.3	17.30	0.22	0.1	20.27	0.09
Junction 2 - Arm 1	4.3	12.83	0.82	4.2	12.89	0.82
Junction 2 - Arm 2	11.2	46.59	0.94	3.8	15.48	0.81
Junction 2 - Arm 3	0.9	5.28	0.48	1.3	6.52	0.57

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	Finchampstead Road/ SWDR/ Landen Court and Finchampstead Road/ Molly Millars Lane Linked Roundabouts WMHP-TG-WG2-SK-HI-0208
Location	Wokingham
Site number	
Date	15/04/2021
Version	
Status	[no status]
Identifier	
Client	
Jobnumber	
Enumerator	SMRPWD
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	35.00	15.00

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	2026 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	15	✓
D3	2036 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	15	✓
D4	2036 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	15	✓
D5	2036 with SWDR and full SDL using WBC approved trip rates	AM	ONE HOUR	07:45	09:15	15	✓
D6	2036 with SWDR and full SDL using WBC approved trip rates	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2026 with SWDR no SDL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	11.61	B
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	23.54	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description
1	1	Finchampstead Road (n)	
	2	SWDR	
	3	Finchampstead Road (link)	
	4	Landen Court	
2	1	Finchampstead Road (link)	
	2	Finchampstead Road (s)	
	3	Molly Millars Lane	

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	1	3.25	7.00	24.9	22.0	35.4	32.0	
	2	3.65	7.00	16.7	35.0	35.4	29.4	
	3	3.08	7.50	31.7	22.0	35.4	35.5	
	4	3.14	5.13	1.8	11.0	35.4	64.8	
2	1	3.16	7.00	27.8	27.5	40.0	26.2	
	2	3.10	7.50	9.8	18.0	40.0	40.8	
	3	3.05	7.00	41.5	30.0	40.0	35.1	

Pelican/Puffin Crossings

Junction	Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1	3	7.00	3.00	2.90	1.00	10.00	6.00	7.00
2	1	5.00	4.00	1.00	1.00	6.00	11.00	7.00
	2	4.00	4.00	1.00	1.00	6.00	9.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1	1	0.660	1747
	2	0.671	1764
	3	0.673	1832
	4	0.442	910
2	1	0.672	1811
	2	0.574	1423
	3	0.669	1839

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	2026 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	1033	100.000
	2		ONE HOUR	✓	478	100.000
	3	✓				
	4		ONE HOUR	✓	52	100.000
2	1	✓				
	2		ONE HOUR	✓	857	100.000
	3		ONE HOUR	✓	484	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)	
Junction 1	To
	1 2 3 4

From	1	0	254	776	3
	2	153	0	324	1
	3	0.60	0.39	0	0.01
	4	15	21	16	0

Demand (Veh/hr)

Junction 2

	To			
		1	2	3
	1	0	0.45	0.55
	2	704	0	153
	3	362	122	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

	To				
		1	2	3	4
	1	0	1	5	38
	2	1	0	1	0
	3	0	1	0	40
	4	8	0	2	0

Heavy Vehicle Percentages

Junction 2

	To			
		1	2	3
	1	0	1	7
	2	0	0	9
	3	1	2	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.83	15.74	4.8	C	948	1422
	2	0.46	5.90	0.9	A	439	658
	3	0.76	9.92	3.1	A	973	1459
	4	0.18	13.89	0.2	B	48	72
2	1	0.81	12.34	4.1	B	1018	1528
	2	0.95	49.06	12.1	E	786	1180
	3	0.41	4.64	0.7	A	444	666

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	778	194	335		1464	0.531	773	599	0.0	1.1	5.181	A
	2	360	90	595		1331	0.270	358	513	0.0	0.4	3.696	A

2	3	793	198	118	45.17	1543	0.514	789	836	0.0	1.0	4.747	A
	4	39	10	895		498	0.079	39	11	0.0	0.1	7.832	A
	1	832	208	92	45.17	1515	0.549	827	796	0.0	1.2	5.198	A
	2	645	161	455	45.17	1032	0.625	639	464	0.0	1.6	9.003	A
	3	364	91	525		1469	0.248	363	569	0.0	0.3	3.249	A

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	929	232	403		1420	0.654	926	719	1.1	1.8	7.233	A
	2	430	107	712		1249	0.344	429	616	0.4	0.5	4.387	A
	3	950	237	141	53.94	1532	0.620	948	1001	1.0	1.6	6.138	A
	4	47	12	1076		420	0.111	47	13	0.1	0.1	9.625	A
2	1	996	249	110	53.94	1520	0.655	993	954	1.2	1.9	6.801	A
	2	770	193	546	53.94	1032	0.747	766	556	1.6	2.8	13.279	B
	3	435	109	629		1400	0.311	435	683	0.3	0.4	3.725	A

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1137	284	485		1368	0.832	1127	868	1.8	4.5	14.333	B
	2	526	132	867		1141	0.461	525	745	0.5	0.8	5.830	A
	3	1145	286	172	66.06	1522	0.753	1140	1220	1.6	2.9	9.300	A
	4	57	14	1296		325	0.176	57	16	0.1	0.2	13.401	B
2	1	1214	303	134	66.06	1511	0.803	1206	1150	1.9	3.8	11.504	B
	2	944	236	663	66.06	1000	0.944	916	677	2.8	9.7	34.892	D
	3	533	133	752		1319	0.404	532	827	0.4	0.7	4.569	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1137	284	493		1363	0.835	1136	881	4.5	4.8	15.739	C
	2	526	132	875		1136	0.463	526	755	0.8	0.9	5.902	A
	3	1161	290	173	66.06	1522	0.763	1160	1228	2.9	3.1	9.918	A
	4	57	14	1317		316	0.181	57	16	0.2	0.2	13.887	B
2	1	1222	305	134	66.06	1511	0.809	1221	1166	3.8	4.1	12.342	B
	2	944	236	672	66.06	995	0.949	934	684	9.7	12.1	49.063	E
	3	533	133	767		1309	0.407	533	838	0.7	0.7	4.637	A

08:45 - 09:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	929	232	420		1409	0.659	940	746	4.8	2.0	7.842	A
	2	430	107	723		1242	0.346	431	636	0.9	0.5	4.449	A
	3	985	246	142	53.94	1571	0.627	991	1013	3.1	1.7	6.264	A
	4	47	12	1119		402	0.116	47	14	0.2	0.1	10.157	B
2	1	1008	252	110	53.94	1552	0.649	1017	990	4.1	1.9	6.827	A
	2	770	193	559	53.94	1062	0.725	808	567	12.1	2.8	15.999	C
	3	435	109	664		1378	0.316	436	703	0.7	0.5	3.825	A

09:00 - 09:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	778	194	342		1459	0.533	781	610	2.0	1.2	5.334	A
	2	360	90	601		1327	0.271	360	522	0.5	0.4	3.729	A
	3	803	201	118	45.17	1575	0.510	806	843	1.7	1.1	4.696	A
	4	39	10	913		490	0.080	39	11	0.1	0.1	7.986	A
	1	839	210	92	45.17	1551	0.541	842	807	1.9	1.2	5.098	A

2	2	645	161	463	45.17	1080	0.597	650	471	2.8	1.5	8.470	A
	3	364	91	534		1463	0.249	365	579	0.5	0.3	3.278	A

2026 with SWDR no SDL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	9.79	A
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	10.31	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
D2	2026 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	924	100.000
	2		ONE HOUR	✓	739	100.000
	3	✓				
	4		ONE HOUR	✓	15	100.000
2	1	✓				
	2		ONE HOUR	✓	736	100.000
	3		ONE HOUR	✓	644	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1		To				
	From		1	2	3	4
		1	0	189	706	29
		2	341	0	376	22
		3	0.57	0.40	0	0.03
		4	9	3	3	0

Demand (Veh/hr)

Junction 2		To			
	From		1	2	3
		1	0	0.63	0.37
		2	670	0	66
		3	330	314	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1		To				
	From		1	2	3	4
		1	0	6	0	1
		2	1	0	1	0
		3	0	1	0	1
		4	8	1	4	0

Heavy Vehicle Percentages

Junction 2

	To			
From		1	2	3
	1	0	1	1
	2	0	0	12
	3	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.71	8.68	2.4	A	848	1272
	2	0.67	9.14	2.0	A	678	1017
	3	0.78	11.23	3.4	B	916	1374
	4	0.06	15.13	0.1	C	14	21
	1	0.80	11.67	3.8	B	989	1483

2	2	0.74	12.28	2.7	B	675	1013
	3	0.53	5.78	1.1	A	591	886

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	696	174	302		1527	0.456	692	686	0.0	0.8	4.297	A
	2	556	139	553		1379	0.403	554	441	0.0	0.7	4.346	A
	3	748	187	294	45.17	1445	0.517	743	813	0.0	1.1	5.102	A
	4	11	3	977		450	0.025	11	61	0.0	0.0	8.200	A
2	1	808	202	235	45.17	1478	0.547	803	748	0.0	1.2	5.300	A
	2	554	139	297	45.17	1119	0.495	550	741	0.0	1.0	6.287	A
	3	485	121	501		1489	0.326	483	346	0.0	0.5	3.573	A

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	831	208	363		1487	0.559	829	823	0.8	1.2	5.459	A
	2	664	166	662		1307	0.508	663	530	0.7	1.0	5.579	A
	3	896	224	352	53.94	1418	0.632	893	973	1.1	1.7	6.831	A
	4	13	3	1172		368	0.037	13	73	0.0	0.0	10.155	B
2	1	967	242	282	53.94	1467	0.659	964	897	1.2	1.9	7.118	A
	2	662	165	357	53.94	1103	0.600	660	889	1.0	1.5	8.085	A
	3	579	145	600		1423	0.407	578	416	0.5	0.7	4.258	A

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1017	254	442		1435	0.709	1013	1003	1.2	2.4	8.444	A
	2	814	203	809		1209	0.673	810	646	1.0	2.0	8.927	A
	3	1094	274	430	66.06	1401	0.781	1088	1189	1.7	3.4	11.232	B
	4	17	4	1429		260	0.063	16	89	0.0	0.1	14.753	B
2	1	1182	295	345	66.06	1475	0.801	1174	1096	1.9	3.8	11.669	B
	2	810	203	434	66.06	1093	0.741	805	1085	1.5	2.7	12.282	B
	3	709	177	733		1335	0.531	707	507	0.7	1.1	5.718	A

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1017	254	447		1431	0.711	1017	1013	2.4	2.4	8.681	A
	2	814	203	812		1207	0.674	814	652	2.0	2.0	9.145	A
	3	1100	275	432	66.06	1442	0.763	1100	1194	3.4	3.3	10.569	B
	4	17	4	1443		254	0.065	17	89	0.1	0.1	15.133	C
2	1	1187	297	346	66.06	1521	0.780	1187	1101	3.8	3.7	10.823	B
	2	810	203	439	66.06	1123	0.722	811	1094	2.7	2.7	11.564	B
	3	709	177	738		1332	0.532	709	512	1.1	1.1	5.779	A

17:45 - 18:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
	1	831	208	369		1482	0.560	835	835	2.4	1.3	5.602	A
	2	664	166	667		1303	0.510	668	538	2.0	1.1	5.701	A

1	3	903	226	354	53.94	1464	0.617	910	981	3.3	1.6	6.569	A
	4	13	3	1191		360	0.037	14	73	0.1	0.0	10.396	B
2	1	975	244	283	53.94	1520	0.641	982	904	3.7	1.8	6.774	A
	2	662	165	363	53.94	1137	0.582	667	902	2.7	1.4	7.736	A
	3	579	145	607		1419	0.408	581	423	1.1	0.7	4.304	A

18:00 - 18:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	696	174	307		1523	0.457	697	695	1.3	0.8	4.369	A
	2	556	139	557		1377	0.404	558	448	1.1	0.7	4.404	A
	3	754	189	296	45.17	1475	0.511	757	819	1.6	1.1	5.030	A
	4	11	3	991		444	0.025	11	61	0.0	0.0	8.323	A
2	1	814	203	237	45.17	1512	0.538	816	755	1.8	1.2	5.195	A
	2	554	139	302	45.17	1144	0.484	556	751	1.4	1.0	6.142	A
	3	485	121	506		1485	0.326	486	352	0.7	0.5	3.602	A

2036 with SWDR no SDL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	12.74	B
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	24.00	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
D3	2036 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	1063	100.000
	2		ONE HOUR	✓	479	100.000
	3	✓				
	4		ONE HOUR	✓	54	100.000
2	1	✓				
	2		ONE HOUR	✓	862	100.000
	3		ONE HOUR	✓	491	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1

		To			
		1	2	3	4
From	1	0	292	768	3
	2	148	0	330	1
	3	0.60	0.39	0	0.01
	4	15	22	17	0

Demand (Veh/hr)

Junction 2

		To		
		1	2	3
From	1	0	0.45	0.55
	2	706	0	156
	3	365	126	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		1	2	3	4
From	1	0	1	5	29
	2	1	0	1	0
	3	0	1	0	45
	4	8	0	2	0

Heavy Vehicle Percentages

Junction 2

		To		
		1	2	3
From	1	0	1	7
	2	0	0	8
	3	1	2	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.86	18.31	5.7	C	975	1463
	2	0.46	5.86	0.9	A	440	659
	3	0.77	10.06	3.2	B	977	1465
	4	0.19	13.96	0.2	B	50	74
	1	0.81	12.27	4.0	B	1017	1526

2	2	0.95	50.50	12.6	F	791	1186
	3	0.41	4.69	0.7	A	451	676

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	800	200	338		1464	0.547	796	597	0.0	1.2	5.350	A
	2	361	90	590		1335	0.270	359	544	0.0	0.4	3.684	A
	3	796	199	114	45.17	1545	0.515	792	835	0.0	1.1	4.755	A
	4	41	10	895		499	0.082	40	11	0.0	0.1	7.848	A
2	1	831	208	95	45.17	1513	0.549	826	800	0.0	1.2	5.203	A
	2	649	162	454	45.17	1035	0.627	642	466	0.0	1.6	9.036	A
	3	370	92	526		1468	0.252	368	570	0.0	0.3	3.267	A

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	956	239	406		1420	0.673	952	717	1.2	2.0	7.640	A
	2	431	108	706		1254	0.343	430	652	0.4	0.5	4.367	A
	3	954	238	136	53.94	1534	0.622	952	1000	1.1	1.6	6.158	A
	4	49	12	1075		421	0.115	48	13	0.1	0.1	9.657	A
2	1	994	249	113	53.94	1518	0.655	992	959	1.2	1.9	6.811	A
	2	775	194	545	53.94	1035	0.749	770	559	1.6	2.8	13.352	B
	3	441	110	631		1399	0.315	441	685	0.3	0.5	3.754	A

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1170	293	489		1367	0.856	1157	865	2.0	5.3	16.214	C
	2	527	132	858		1148	0.459	526	788	0.5	0.8	5.778	A
	3	1149	287	167	66.06	1521	0.756	1144	1217	1.6	3.0	9.415	A
	4	59	15	1295		326	0.182	59	16	0.1	0.2	13.469	B
2	1	1211	303	138	66.06	1511	0.801	1203	1155	1.9	3.8	11.410	B
	2	949	237	662	66.06	1002	0.947	920	680	2.8	10.0	35.495	E
	3	541	135	754		1318	0.410	540	828	0.5	0.7	4.619	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1170	293	497		1362	0.859	1169	878	5.3	5.7	18.306	C
	2	527	132	866		1142	0.462	527	799	0.8	0.9	5.857	A
	3	1165	291	167	66.06	1521	0.766	1164	1226	3.0	3.2	10.058	B
	4	59	15	1316		317	0.187	59	16	0.2	0.2	13.965	B
2	1	1220	305	139	66.06	1511	0.808	1219	1171	3.8	4.0	12.266	B
	2	949	237	671	66.06	997	0.952	939	687	10.0	12.6	50.497	F
	3	541	135	769		1308	0.413	541	841	0.7	0.7	4.691	A

08:45 - 09:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
	1	956	239	424		1409	0.678	970	745	5.7	2.2	8.445	A
	2	431	108	719		1245	0.346	432	675	0.9	0.5	4.433	A

1	3	990	248	137	53.94	1570	0.631	996	1014	3.2	1.7	6.330	A
	4	49	12	1120		402	0.121	49	14	0.2	0.1	10.211	B
2	1	1008	252	114	53.94	1552	0.650	1017	995	4.0	1.9	6.831	A
	2	775	194	559	53.94	1064	0.728	814	571	12.6	2.8	16.408	C
	3	441	110	667		1376	0.321	442	707	0.7	0.5	3.862	A

09:00 - 09:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	800	200	345		1459	0.548	804	609	2.2	1.2	5.525	A
	2	361	90	596		1331	0.271	361	553	0.5	0.4	3.715	A
	3	807	202	115	45.17	1577	0.512	810	843	1.7	1.1	4.707	A
	4	41	10	913		491	0.083	41	11	0.1	0.1	8.004	A
2	1	838	210	95	45.17	1549	0.541	841	811	1.9	1.2	5.105	A
	2	649	162	463	45.17	1083	0.599	654	474	2.8	1.5	8.493	A
	3	370	92	536		1462	0.253	370	581	0.5	0.3	3.297	A

2036 with SWDR no SDL, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	11.42	B
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	11.10	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	2036 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	939	100.000
	2		ONE HOUR	✓	777	100.000
	3	✓				
	4		ONE HOUR	✓	15	100.000
2	1	✓				
	2		ONE HOUR	✓	759	100.000
	3		ONE HOUR	✓	644	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1	From	To				
			1	2	3	4
		1	0	194	716	29
		2	383	0	371	23
		3	0.59	0.38	0	0.03
		4	9	3	3	0

Demand (Veh/hr)

Junction 2	From	To			
			1	2	3
		1	0	0.63	0.37
		2	694	0	65
		3	333	311	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1	From	To				
			1	2	3	4
		1	0	6	5	1
		2	1	0	1	0
		3	0	1	0	1
		4	8	1	5	0

Heavy Vehicle Percentages

Junction 2	From	To			
			1	2	3
		1	0	6	1
		2	0	0	12
		3	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.75	10.19	2.9	B	862	1292
	2	0.73	11.29	2.6	B	713	1069
	3	0.81	12.59	3.9	B	941	1411
	4	0.07	17.49	0.1	C	14	21
	1	0.82	12.81	4.2	B	995	1492

2	2	0.76	12.97	3.0	B	696	1045
	3	0.54	5.95	1.2	A	591	886

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	707	177	294		1476	0.479	703	744	0.0	0.9	4.639	A
	2	585	146	560		1357	0.431	582	438	0.0	0.8	4.630	A
	3	768	192	326	45.17	1428	0.538	763	816	0.0	1.1	5.381	A
	4	11	3	1027		428	0.026	11	62	0.0	0.0	8.633	A
2	1	812	203	233	45.17	1437	0.565	807	768	0.0	1.3	5.675	A
	2	571	143	299	45.17	1120	0.510	567	742	0.0	1.0	6.468	A
	3	485	121	519		1477	0.328	483	347	0.0	0.5	3.615	A

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	844	211	354		1438	0.587	842	893	0.9	1.4	6.022	A
	2	699	175	671		1280	0.546	697	525	0.8	1.2	6.158	A
	3	920	230	390	53.94	1402	0.656	917	978	1.1	1.9	7.383	A
	4	13	3	1233		342	0.039	13	74	0.0	0.0	10.962	B
2	1	973	243	279	53.94	1432	0.679	970	921	1.3	2.1	7.724	A
	2	682	171	359	53.94	1106	0.617	680	890	1.0	1.6	8.406	A
	3	579	145	622		1409	0.411	578	417	0.5	0.7	4.329	A

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1034	258	431		1390	0.744	1028	1087	1.4	2.8	9.813	A
	2	855	214	819		1176	0.727	850	640	1.2	2.6	10.853	B
	3	1124	281	476	66.06	1394	0.806	1116	1193	1.9	3.9	12.589	B
	4	17	4	1501		229	0.072	16	90	0.0	0.1	16.882	C
2	1	1187	297	342	66.06	1452	0.818	1179	1125	2.1	4.2	12.808	B
	2	836	209	436	66.06	1102	0.758	830	1084	1.6	3.0	12.966	B
	3	709	177	759		1318	0.538	707	507	0.7	1.1	5.877	A

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1034	258	436		1386	0.746	1034	1099	2.8	2.9	10.195	B
	2	855	214	823		1173	0.729	855	646	2.6	2.6	11.292	B
	3	1130	283	479	66.06	1441	0.784	1131	1200	3.9	3.8	11.658	B
	4	17	4	1518		222	0.074	17	91	0.1	0.1	17.489	C
2	1	1194	298	342	66.06	1502	0.795	1195	1131	4.2	4.0	11.751	B
	2	836	209	442	66.06	1134	0.737	836	1095	3.0	2.9	12.112	B
	3	709	177	764		1314	0.540	709	514	1.1	1.2	5.947	A

17:45 - 18:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
	1	844	211	361		1434	0.589	850	908	2.9	1.5	6.227	A
	2	699	175	677		1275	0.548	704	534	2.6	1.2	6.364	A

1	3	928	232	394	53.94	1455	0.638	936	987	3.8	1.8	7.039	A
	4	13	3	1255		333	0.041	14	75	0.1	0.0	11.294	B
2	1	982	246	280	53.94	1491	0.659	990	929	4.0	2.0	7.299	A
	2	682	171	366	53.94	1143	0.597	688	904	2.9	1.5	8.004	A
	3	579	145	629		1404	0.412	581	425	1.2	0.7	4.381	A

18:00 - 18:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	707	177	300		1472	0.480	709	755	1.5	0.9	4.728	A
	2	585	146	565		1353	0.432	587	444	1.2	0.8	4.706	A
	3	775	194	329	45.17	1460	0.531	777	823	1.8	1.1	5.294	A
	4	11	3	1043		421	0.027	11	63	0.0	0.0	8.783	A
2	1	819	205	235	45.17	1474	0.556	822	775	2.0	1.3	5.545	A
	2	571	143	304	45.17	1146	0.499	573	752	1.5	1.0	6.306	A
	3	485	121	524		1473	0.329	486	353	0.7	0.5	3.650	A

2036 with SWDR and full SDL using WBC approved trip rates, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	12.90	B
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	22.17	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
D5	2036 with SWDR and full SDL using WBC approved trip rates	AM	ONE HOUR	07:45	09:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	1051	100.000
	2		ONE HOUR	✓	624	100.000
	3	✓				
	4		ONE HOUR	✓	54	100.000
	1	✓				

2	2		ONE HOUR	✓	841	100.000
	3		ONE HOUR	✓	582	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1

		To			
		1	2	3	4
From	1	0	338	710	3
	2	213	0	410	1
	3	0.61	0.38	0	0.01
	4	17	22	15	0

Demand (Veh/hr)

Junction 2

		To		
		1	2	3
From	1	0	0.41	0.59
	2	685	0	156
	3	430	152	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		1	2	3	4
From	1	0	1	5	33
	2	1	0	0	0
	3	0	1	0	50
	4	6	0	0	0

Heavy Vehicle Percentages

Junction 2

		To		
		1	2	3
From	1	0	8	1
	2	0	0	9
	3	1	2	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
	1	0.85	17.27	5.3	C	964	1447

1	2	0.57	7.07	1.3	A	573	859
	3	0.80	11.69	3.8	B	1017	1526
	4	0.22	17.30	0.3	C	50	74
2	1	0.82	12.83	4.3	B	1033	1550
	2	0.94	46.59	11.2	E	772	1158
	3	0.48	5.28	0.9	A	534	801

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	791	198	341		1465	0.540	787	675	0.0	1.2	5.274	A
	2	470	117	545		1375	0.342	468	583	0.0	0.5	3.958	A
	3	829	207	163	45.17	1518	0.546	824	850	0.0	1.2	5.156	A
	4	41	10	976		468	0.087	40	11	0.0	0.1	8.407	A
2	1	844	211	114	45.17	1509	0.559	839	833	0.0	1.3	5.336	A
	2	633	158	495	45.17	1024	0.618	627	458	0.0	1.6	8.923	A
	3	438	110	511		1479	0.296	436	611	0.0	0.4	3.448	A

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	945	236	410		1421	0.665	942	811	1.2	1.9	7.468	A
	2	561	140	652		1300	0.432	560	699	0.5	0.8	4.860	A
	3	993	248	195	53.94	1509	0.658	991	1018	1.2	1.9	6.906	A
	4	49	12	1172		383	0.127	48	13	0.1	0.1	10.758	B
2	1	1010	253	136	53.94	1514	0.667	1007	998	1.3	2.0	7.071	A
	2	756	189	594	53.94	1021	0.741	752	550	1.6	2.7	13.142	B
	3	523	131	612		1412	0.371	523	734	0.4	0.6	4.047	A

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1157	289	494		1367	0.847	1145	980	1.9	5.0	15.459	C
	2	687	172	793		1201	0.572	685	846	0.8	1.3	6.944	A
	3	1200	300	238	66.06	1513	0.793	1193	1240	1.9	3.6	10.991	B
	4	59	15	1415		277	0.215	59	16	0.1	0.3	16.479	C
2	1	1231	308	167	66.06	1517	0.811	1223	1206	2.0	4.0	11.892	B
	2	926	231	721	66.06	988	0.937	900	668	2.7	9.2	33.734	D
	3	641	160	733		1332	0.481	639	888	0.6	0.9	5.192	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1157	289	502		1361	0.850	1156	994	5.0	5.3	17.266	C
	2	687	172	801		1196	0.575	687	857	1.3	1.3	7.073	A
	3	1215	304	239	66.06	1520	0.799	1214	1249	3.6	3.8	11.693	B
	4	59	15	1436		267	0.222	59	17	0.3	0.3	17.297	C
2	1	1240	310	167	66.06	1517	0.817	1239	1221	4.0	4.3	12.834	B
	2	926	231	731	66.06	983	0.942	918	675	9.2	11.2	46.588	E
	3	641	160	747		1322	0.485	641	901	0.9	0.9	5.283	A

08:45 - 09:00

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Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	945	236	426		1410	0.670	958	838	5.3	2.1	8.180	A
	2	561	140	663		1292	0.434	563	721	1.3	0.8	4.953	A
	3	1026	257	196	53.94	1567	0.655	1034	1031	3.8	1.9	6.836	A
	4	49	12	1216		364	0.133	49	14	0.3	0.2	11.461	B
2	1	1023	256	137	53.94	1558	0.657	1033	1031	4.3	2.0	6.966	A
	2	756	189	609	53.94	1052	0.719	790	560	11.2	2.7	15.378	C
	3	523	131	644		1391	0.376	525	756	0.9	0.6	4.162	A

09:00 - 09:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	791	198	348		1460	0.542	795	688	2.1	1.2	5.440	A
	2	470	117	551		1371	0.343	471	592	0.8	0.5	4.003	A
	3	840	210	164	45.17	1554	0.540	843	858	1.9	1.2	5.084	A
	4	41	10	995		460	0.088	41	11	0.2	0.1	8.601	A
2	1	851	213	115	45.17	1546	0.551	854	844	2.0	1.2	5.225	A
	2	633	158	504	45.17	1070	0.592	638	465	2.7	1.5	8.422	A
	3	438	110	520		1473	0.298	439	622	0.6	0.4	3.486	A

2036 with SWDR and full SDL using WBC approved trip rates, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	12.99	B
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	12.06	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	2036 with SWDR and full SDL using WBC approved trip rates	PM	ONE HOUR	16:45	18:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	993	100.000
	2		ONE HOUR	✓	773	100.000
	3	✓				
	4		ONE HOUR	✓	15	100.000
	1	✓				

2	2		ONE HOUR	✓	822	100.000
	3		ONE HOUR	✓	675	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1

	To				
From		1	2	3	4
	1	0	225	736	32
	2	407	0	345	21
	3	0.59	0.38	0	0.03
	4	9	3	3	0

Demand (Veh/hr)

Junction 2		To			
	From		1	2	3
		1	0	0.62	0.38
		2	713	0	109
		3	355	320	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1	From	To				
			1	2	3	4
		1	0	0	6	0
		2	1	0	0	0
		3	0	1	0	40
		4	11	0	0	0

Heavy Vehicle Percentages

Junction 2

	To			
From		1	2	3
	1	0	6	1
	2	1	0	7
	3	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
	1	0.79	12.27	3.6	B	911	1367

1	2	0.74	11.76	2.7	B	709	1064
	3	0.84	14.47	4.6	B	974	1460
	4	0.09	20.27	0.1	C	14	21
2	1	0.82	12.89	4.2	B	994	1491
	2	0.81	15.48	3.8	C	754	1131
	3	0.57	6.52	1.3	A	619	929

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	748	187	304		1479	0.506	744	777	0.0	1.0	4.871	A
	2	582	145	577		1347	0.432	579	471	0.0	0.8	4.668	A
	3	794	199	345	45.17	1403	0.566	789	812	0.0	1.3	5.814	A
	4	11	3	1070		408	0.028	11	63	0.0	0.0	9.076	A
2	1	812	203	240	45.17	1434	0.566	806	799	0.0	1.3	5.693	A
	2	619	155	306	45.17	1112	0.557	614	740	0.0	1.2	7.164	A
	3	508	127	533		1464	0.347	506	388	0.0	0.5	3.749	A

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	893	223	366		1439	0.620	890	932	1.0	1.6	6.526	A
	2	695	174	691		1267	0.549	693	565	0.8	1.2	6.256	A
	3	952	238	412	53.94	1383	0.688	948	972	1.3	2.1	8.215	A
	4	13	3	1285		318	0.042	13	76	0.0	0.0	11.801	B
2	1	972	243	287	53.94	1429	0.680	969	957	1.3	2.1	7.766	A
	2	739	185	368	53.94	1107	0.668	736	888	1.2	1.9	9.635	A
	3	607	152	638		1393	0.435	606	466	0.5	0.8	4.565	A

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1093	273	444		1389	0.787	1086	1134	1.6	3.5	11.574	B
	2	851	213	843		1160	0.734	845	687	1.2	2.6	11.247	B
	3	1162	290	503	66.06	1391	0.835	1152	1185	2.1	4.6	14.474	B
	4	17	4	1562		203	0.081	16	93	0.0	0.1	19.293	C
2	1	1185	296	351	66.06	1448	0.819	1177	1168	2.1	4.2	12.885	B
	2	905	226	447	66.06	1123	0.806	897	1081	1.9	3.8	15.476	C
	3	743	186	778		1300	0.572	741	566	0.8	1.3	6.416	A

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1093	273	451		1385	0.789	1093	1148	3.5	3.6	12.267	B
	2	851	213	848		1156	0.736	851	696	2.6	2.7	11.764	B
	3	1169	292	506	66.06	1447	0.808	1170	1193	4.6	4.4	13.108	B
	4	17	4	1583		194	0.085	16	93	0.1	0.1	20.266	C
2	1	1193	298	352	66.06	1499	0.796	1193	1176	4.2	4.0	11.844	B
	2	905	226	453	66.06	1139	0.794	905	1092	3.8	3.8	15.344	C
	3	743	186	785		1295	0.574	743	573	1.3	1.3	6.515	A

17:45 - 18:00

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Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	893	223	375		1434	0.623	900	951	3.6	1.7	6.849	A
	2	695	174	699		1261	0.551	701	576	2.7	1.2	6.487	A
	3	963	241	417	53.94	1446	0.666	972	983	4.4	2.0	7.740	A
	4	13	3	1312		307	0.044	14	77	0.1	0.0	12.281	B
2	1	983	246	289	53.94	1488	0.660	991	968	4.0	2.0	7.358	A
	2	739	185	377	53.94	1158	0.638	747	903	3.8	1.8	8.920	A
	3	607	152	648		1387	0.437	609	476	1.3	0.8	4.639	A

18:00 - 18:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	748	187	310		1475	0.507	750	789	1.7	1.0	4.987	A
	2	582	145	582		1344	0.433	584	478	1.2	0.8	4.749	A
	3	802	201	347	45.17	1440	0.557	805	819	2.0	1.3	5.695	A
	4	11	3	1088		400	0.028	11	64	0.0	0.0	9.260	A
2	1	819	205	241	45.17	1471	0.556	822	807	2.0	1.3	5.565	A
	2	619	155	312	45.17	1143	0.541	621	751	1.8	1.2	6.929	A
	3	508	127	539		1460	0.348	509	395	0.8	0.5	3.791	A

Junctions 9						
ARCADY 9 - Roundabout Module						
Version: 9.5.2.1013 © Copyright TRL Limited, 2019						
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Filename: WMHP-TG-WG2-SK-HI-0209 - linked.j9

Path: M:\Project\7100 to 7199\7132 - Wokingham Modelling (2)\Calcs\2024.03.01 - Southern Rbt Options

Report generation date: 01/03/2024 10:37:47

- »2026 with SWDR no SDL, AM
- »2026 with SWDR no SDL, PM
- »2036 with SWDR no SDL, AM
- »2036 with SWDR no SDL, PM
- »2036 with SWDR and full SDL using WBC approved trip rates, AM
- »2036 with SWDR and full SDL using WBC approved trip rates, PM

Summary of junction performance

	AM			PM		
	Queue (Veh)	Delay (s)	RFC	Queue (Veh)	Delay (s)	RFC
2026 with SWDR no SDL						
Junction 1 - Arm 1	4.1	13.34	0.81	2.4	8.64	0.71
Junction 1 - Arm 2	0.9	5.90	0.46	2.0	9.14	0.67
Junction 1 - Arm 3	1.9	7.04	0.66	3.2	10.85	0.77
Junction 1 - Arm 4	0.2	10.84	0.15	0.1	14.95	0.06
Junction 2 - Arm 1	4.1	12.36	0.81	3.8	11.67	0.80
Junction 2 - Arm 2	121.2	546.39	1.30	10.5	49.73	0.94
Junction 2 - Arm 3	0.6	4.04	0.37	1.1	5.74	0.53
2036 with SWDR no SDL						
Junction 1 - Arm 1	4.8	15.16	0.83	2.8	10.10	0.74
Junction 1 - Arm 2	0.9	5.86	0.46	2.6	11.29	0.73
Junction 1 - Arm 3	1.9	7.04	0.66	3.6	11.97	0.79
Junction 1 - Arm 4	0.2	10.86	0.15	0.1	17.06	0.07
Junction 2 - Arm 1	4.0	12.30	0.81	4.2	12.81	0.82
Junction 2 - Arm 2	123.4	556.97	1.31	14.3	64.34	0.97
Junction 2 - Arm 3	0.6	4.08	0.38	1.1	5.87	0.54
2036 with SWDR and full SDL using WBC approved trip rates						
Junction 1 - Arm 1	4.5	14.60	0.83	3.5	11.75	0.78
Junction 1 - Arm 2	1.3	7.08	0.57	2.7	11.77	0.74
Junction 1 - Arm 3	2.4	8.31	0.71	3.9	12.80	0.80
Junction 1 - Arm 4	0.2	12.92	0.18	0.1	18.07	0.08
Junction 2 - Arm 1	4.3	12.86	0.82	4.2	12.90	0.82
Junction 2 - Arm 2	116.7	529.14	1.30	38.4	142.97	1.06
Junction 2 - Arm 3	0.8	4.55	0.45	1.3	6.12	0.56

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	Finchampstead Road/ SWDR/ Landen Court and Finchampstead Road/ Molly Millars Lane Linked Roundabouts WMHP-TG-WG2-SK-HI-0208
Location	Wokingham
Site number	
Date	15/04/2021
Version	
Status	[no status]
Identifier	
Client	
Jobnumber	
Enumerator	SMRPWD
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	35.00	15.00

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	2026 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	15	✓
D2	2026 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	15	✓
D3	2036 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	15	✓
D4	2036 with SWDR no SDL	PM	ONE HOUR	16:45	18:15	15	✓
D5	2036 with SWDR and full SDL using WBC approved trip rates	AM	ONE HOUR	07:45	09:15	15	✓
D6	2036 with SWDR and full SDL using WBC approved trip rates	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2026 with SWDR no SDL, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	9.48	A
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	195.40	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description
1	1	Finchampstead Road (n)	
	2	SWDR	
	3	Finchampstead Road (link)	
	4	Landen Court	
2	1	Finchampstead Road (link)	
	2	Finchampstead Road (s)	
	3	Molly Millars Lane	

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	1	3.25	7.00	24.9	22.0	35.4	32.0	
	2	3.65	7.00	16.7	35.0	35.4	29.4	
	3	3.08	7.50	31.7	22.0	35.4	35.5	
	4	3.14	5.13	1.8	11.0	35.4	64.8	
2	1	3.16	7.00	27.8	27.5	40.0	26.2	
	2	3.10	4.50	5.3	18.0	40.0	46.2	
	3	3.05	7.00	41.5	30.0	40.0	35.1	

Pelican/Puffin Crossings

Junction	Arm	Space between crossing and junc. entry (Signalised) (PCU)	Amber time preceding red (s)	Amber time regarded as green (s)	Time from traffic red start to green man start (s)	Time period green man shown (s)	Clearance Period (s)	Traffic minimum green (s)
1	3	7.00	3.00	2.90	1.00	10.00	6.00	7.00
2	1	5.00	4.00	1.00	1.00	6.00	11.00	7.00
	2	4.00	4.00	1.00	1.00	6.00	9.00	7.00

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Junction	Arm	Final slope	Final intercept (PCU/hr)
1	1	0.660	1747
	2	0.671	1764
	3	0.673	1832
	4	0.442	910
2	1	0.672	1811
	2	0.503	1097
	3	0.669	1839

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	2026 with SWDR no SDL	AM	ONE HOUR	07:45	09:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	1033	100.000
	2		ONE HOUR	✓	478	100.000
	3	✓				
	4		ONE HOUR	✓	52	100.000
2	1	✓				
	2		ONE HOUR	✓	857	100.000
	3		ONE HOUR	✓	484	100.000

Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)	
Junction 1	To
	1 2 3 4
	1 0 254 776 3

From	2	153	0	324	1
	3	0.60	0.39	0	0.01
	4	15	21	16	0

Demand (Veh/hr)

Junction 2

From	To			
		1	2	3
	1	0	0.45	0.55
	2	704	0	153
	3	362	122	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

From	To				
		1	2	3	4
	1	0	1	5	38
	2	1	0	1	0
	3	0	1	0	40
	4	8	0	2	0

Heavy Vehicle Percentages

Junction 2

From	To			
		1	2	3
	1	0	1	7
	2	0	0	9
	3	1	2	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.81	13.34	4.1	B	948	1422
	2	0.46	5.90	0.9	A	439	658
	3	0.66	7.04	1.9	A	934	1400
	4	0.15	10.84	0.2	B	48	72
2	1	0.81	12.36	4.1	B	1018	1527
	2	1.30	546.39	121.2	F	786	1180
	3	0.37	4.04	0.6	A	444	666

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	778	194	333		1465	0.531	773	595	0.0	1.1	5.170	A
	2	360	90	595		1331	0.270	358	511	0.0	0.4	3.696	A
	3	787	197	118	45.17	1543	0.510	783	836	0.0	1.0	4.711	A
	4	39	10	889		501	0.078	39	11	0.0	0.1	7.789	A

2	1	832	208	92	45.17	1515	0.549	827	790	0.0	1.2	5.198	A
	2	645	161	455	45.17	814	0.793	631	464	0.0	3.5	18.564	C
	3	364	91	519		1473	0.247	363	567	0.0	0.3	3.240	A

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	929	232	394		1426	0.651	926	706	1.1	1.8	7.155	A
	2	430	107	713		1249	0.344	429	607	0.4	0.5	4.387	A
	3	927	232	141	53.94	1530	0.606	925	1001	1.0	1.5	5.937	A
	4	47	12	1053		430	0.109	47	13	0.1	0.1	9.389	A
2	1	996	249	110	53.94	1520	0.655	993	931	1.2	1.9	6.802	A
	2	770	193	546	53.94	790	0.975	738	556	3.5	11.6	49.949	E
	3	435	109	606		1416	0.307	435	678	0.3	0.4	3.667	A

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1137	284	426		1405	0.809	1129	778	1.8	4.0	12.634	B
	2	526	132	869		1140	0.462	525	686	0.5	0.8	5.841	A
	3	990	248	172	66.06	1498	0.661	988	1221	1.5	1.9	7.044	A
	4	57	14	1147		390	0.147	57	14	0.1	0.2	10.814	B
2	1	1215	304	134	66.06	1511	0.804	1207	994	1.9	3.9	11.560	B
	2	944	236	664	66.06	728	1.296	725	678	11.6	66.2	206.581	F
	3	533	133	596		1423	0.375	532	794	0.4	0.6	4.041	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1137	284	427		1405	0.809	1137	778	4.0	4.1	13.343	B
	2	526	132	875		1136	0.463	526	688	0.8	0.9	5.905	A
	3	989	247	173	66.06	1508	0.656	989	1228	1.9	1.9	6.944	A
	4	57	14	1148		389	0.147	57	14	0.2	0.2	10.842	B
2	1	1222	306	134	66.06	1511	0.809	1222	993	3.9	4.1	12.364	B
	2	944	236	672	66.06	724	1.303	724	684	66.2	121.2	463.110	F
	3	533	133	594		1423	0.374	533	801	0.6	0.6	4.042	A

08:45 - 09:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	929	232	408		1417	0.655	937	728	4.1	1.9	7.635	A
	2	430	107	721		1243	0.346	431	624	0.9	0.5	4.439	A
	3	960	240	142	53.94	1552	0.619	962	1011	1.9	1.7	6.112	A
	4	47	12	1090		414	0.113	47	13	0.2	0.1	9.804	A
2	1	1006	251	110	53.94	1552	0.648	1015	965	4.1	1.9	6.803	A
	2	770	193	558	53.94	784	0.982	778	566	121.2	119.3	546.389	F
	3	435	109	639		1394	0.312	436	697	0.6	0.5	3.760	A

09:00 - 09:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	778	194	398		1424	0.546	781	696	1.9	1.2	5.624	A
	2	360	90	601		1327	0.271	360	578	0.5	0.4	3.728	A
	3	948	237	118	45.17	1583	0.599	949	843	1.7	1.5	5.683	A
	4	39	10	1054		430	0.091	39	13	0.1	0.1	9.227	A
2	1	839	210	92	45.17	1551	0.541	842	953	1.9	1.2	5.095	A
	2	645	161	463	45.17	835	0.773	828	471	119.3	73.7	421.484	F
	3	364	91	680		1367	0.267	365	611	0.5	0.4	3.595	A

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1

		To			
		1	2	3	4
From	1	0	189	706	29
	2	341	0	376	22
	3	0.57	0.40	0	0.03
	4	9	3	3	0

Demand (Veh/hr)

Junction 2

		To		
		1	2	3
From	1	0	0.63	0.37
	2	670	0	66
	3	330	314	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		1	2	3	4
From	1	0	6	0	1
	2	1	0	1	0
	3	0	1	0	1
	4	8	1	4	0

Heavy Vehicle Percentages

Junction 2

		To		
		1	2	3
From	1	0	1	1
	2	0	0	12
	3	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.71	8.64	2.4	A	848	1272
	2	0.67	9.14	2.0	A	678	1017
	3	0.77	10.85	3.2	B	916	1373
	4	0.06	14.95	0.1	B	14	21
2	1	0.80	11.67	3.8	B	989	1483
	2	0.94	49.73	10.5	E	675	1013

	3	0.53	5.74	1.1	A	591	886
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Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	696	174	301		1527	0.455	692	684	0.0	0.8	4.293	A
	2	556	139	553		1379	0.403	554	440	0.0	0.7	4.346	A
	3	745	186	294	45.17	1445	0.516	741	813	0.0	1.1	5.083	A
	4	11	3	974		451	0.025	11	60	0.0	0.0	8.179	A
2	1	808	202	235	45.17	1478	0.547	803	746	0.0	1.2	5.300	A
	2	554	139	297	45.17	866	0.640	547	741	0.0	1.7	11.074	B
	3	485	121	498		1491	0.325	483	346	0.0	0.5	3.566	A

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	831	208	362		1487	0.559	829	822	0.8	1.2	5.455	A
	2	664	166	662		1307	0.508	663	529	0.7	1.0	5.579	A
	3	894	223	352	53.94	1417	0.631	892	973	1.1	1.7	6.811	A
	4	13	3	1171		369	0.037	13	72	0.0	0.0	10.133	B
2	1	967	242	282	53.94	1467	0.659	964	895	1.2	1.9	7.118	A
	2	662	165	357	53.94	890	0.744	658	889	1.7	2.7	15.216	C
	3	579	145	599		1424	0.407	578	416	0.5	0.7	4.252	A

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1017	254	435		1439	0.707	1013	994	1.2	2.3	8.363	A
	2	814	203	809		1209	0.673	810	639	1.0	2.0	8.928	A
	3	1077	269	430	66.06	1397	0.771	1071	1189	1.7	3.2	10.852	B
	4	17	4	1413		267	0.062	16	88	0.0	0.1	14.362	B
2	1	1182	295	345	66.06	1475	0.801	1174	1078	1.9	3.8	11.669	B
	2	810	203	434	66.06	867	0.935	787	1085	2.7	8.7	36.794	E
	3	709	177	716		1346	0.527	707	505	0.7	1.1	5.619	A

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1017	254	444		1433	0.710	1017	1009	2.3	2.4	8.641	A
	2	814	203	812		1207	0.674	814	649	2.0	2.0	9.144	A
	3	1093	273	432	66.06	1435	0.762	1093	1194	3.2	3.2	10.531	B
	4	17	4	1436		257	0.064	17	89	0.1	0.1	14.952	B
2	1	1187	297	346	66.06	1521	0.780	1187	1094	3.8	3.7	10.822	B
	2	810	203	439	66.06	865	0.937	803	1094	8.7	10.5	49.734	E
	3	709	177	731		1336	0.531	709	511	1.1	1.1	5.736	A

17:45 - 18:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	831	208	378		1476	0.563	835	848	2.4	1.3	5.650	A
	2	664	166	667		1304	0.510	668	546	2.0	1.1	5.703	A
	3	926	232	354	53.94	1465	0.632	932	981	3.2	1.8	6.828	A

	4	13	3	1213		351	0.038	14	74	0.1	0.0	10.672	B
2	1	975	244	283	53.94	1521	0.641	982	927	3.7	1.8	6.771	A
	2	662	165	363	53.94	903	0.733	692	902	10.5	2.9	19.165	C
	3	579	145	630		1403	0.413	581	425	1.1	0.7	4.385	A

18:00 - 18:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	696	174	309		1522	0.457	697	698	1.3	0.8	4.373	A
	2	556	139	557		1377	0.404	558	449	1.1	0.7	4.404	A
	3	757	189	296	45.17	1477	0.513	760	819	1.8	1.1	5.043	A
	4	11	3	995		442	0.026	11	61	0.0	0.0	8.352	A
2	1	814	203	237	45.17	1512	0.538	816	758	1.8	1.2	5.193	A
	2	554	139	302	45.17	918	0.604	560	751	2.9	1.6	10.199	B
	3	485	121	509		1483	0.327	486	352	0.7	0.5	3.613	A

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1

		To			
		1	2	3	4
From	1	0	292	768	3
	2	148	0	330	1
	3	0.60	0.39	0	0.01
	4	15	22	17	0

Demand (Veh/hr)

Junction 2

		To		
		1	2	3
From	1	0	0.45	0.55
	2	706	0	156
	3	365	126	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		1	2	3	4
From	1	0	1	5	29
	2	1	0	1	0
	3	0	1	0	45
	4	8	0	2	0

Heavy Vehicle Percentages

Junction 2

		To		
		1	2	3
From	1	0	1	7
	2	0	0	8
	3	1	2	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.83	15.16	4.8	C	975	1463
	2	0.46	5.86	0.9	A	440	659
	3	0.66	7.04	1.9	A	936	1405
	4	0.15	10.86	0.2	B	50	74
2	1	0.81	12.30	4.0	B	1017	1526
	2	1.31	556.97	123.4	F	791	1186

	3	0.38	4.08	0.6	A	451	676
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Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	800	200	336		1465	0.546	796	594	0.0	1.2	5.338	A
	2	361	90	590		1335	0.270	359	541	0.0	0.4	3.684	A
	3	790	197	114	45.17	1544	0.512	786	835	0.0	1.0	4.721	A
	4	41	10	889		501	0.081	40	11	0.0	0.1	7.804	A
2	1	831	208	95	45.17	1513	0.549	826	794	0.0	1.2	5.203	A
	2	649	162	454	45.17	816	0.795	635	466	0.0	3.5	18.675	C
	3	370	92	520		1472	0.251	368	569	0.0	0.3	3.255	A

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	956	239	397		1426	0.670	952	703	1.2	2.0	7.550	A
	2	431	108	706		1254	0.343	430	643	0.4	0.5	4.367	A
	3	930	233	136	53.94	1532	0.607	928	1000	1.0	1.5	5.945	A
	4	49	12	1052		431	0.113	48	13	0.1	0.1	9.406	A
2	1	995	249	113	53.94	1518	0.655	992	935	1.2	1.9	6.812	A
	2	775	194	546	53.94	792	0.978	741	559	3.5	12.0	51.071	F
	3	441	110	607		1415	0.312	441	680	0.3	0.5	3.693	A

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1170	293	429		1405	0.833	1160	774	2.0	4.6	14.109	B
	2	527	132	860		1146	0.460	526	729	0.5	0.8	5.792	A
	3	993	248	167	66.06	1501	0.662	991	1219	1.5	1.9	7.041	A
	4	59	15	1144		391	0.152	59	14	0.1	0.2	10.836	B
2	1	1213	303	139	66.06	1511	0.803	1205	997	1.9	3.8	11.479	B
	2	949	237	663	66.06	730	1.300	727	681	12.0	67.4	209.936	F
	3	541	135	596		1423	0.380	540	794	0.5	0.6	4.076	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1170	293	430		1405	0.833	1170	774	4.6	4.8	15.155	C
	2	527	132	867		1142	0.462	527	732	0.8	0.9	5.861	A
	3	992	248	167	66.06	1510	0.656	992	1227	1.9	1.9	6.939	A
	4	59	15	1145		391	0.152	59	14	0.2	0.2	10.860	B
2	1	1221	305	139	66.06	1511	0.808	1220	996	3.8	4.0	12.295	B
	2	949	237	671	66.06	726	1.308	725	688	67.4	123.4	470.340	F
	3	541	135	594		1424	0.380	541	802	0.6	0.6	4.076	A

08:45 - 09:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	956	239	412		1416	0.675	966	727	4.8	2.1	8.174	A
	2	431	108	716		1247	0.345	432	662	0.9	0.5	4.425	A
	3	965	241	137	53.94	1554	0.621	966	1011	1.9	1.7	6.137	A

	4	49	12	1090		414	0.117	49	13	0.2	0.1	9.849	A
2	1	1006	251	113	53.94	1552	0.648	1014	970	4.0	1.9	6.803	A
	2	775	194	558	53.94	786	0.987	783	570	123.4	121.3	556.967	F
	3	441	110	642		1392	0.317	442	700	0.6	0.5	3.793	A

09:00 - 09:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	800	200	400		1424	0.562	804	693	2.1	1.3	5.830	A
	2	361	90	596		1331	0.271	361	608	0.5	0.4	3.714	A
	3	949	237	115	45.17	1585	0.599	950	842	1.7	1.5	5.675	A
	4	41	10	1052		431	0.094	41	13	0.1	0.1	9.229	A
2	1	838	210	95	45.17	1549	0.541	841	954	1.9	1.2	5.104	A
	2	649	162	462	45.17	836	0.776	829	473	121.3	76.2	430.239	F
	3	370	92	679		1367	0.270	370	613	0.5	0.4	3.610	A

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1

		To			
		1	2	3	4
From	1	0	194	716	29
	2	383	0	371	23
	3	0.59	0.38	0	0.03
	4	9	3	3	0

Demand (Veh/hr)

Junction 2

		To		
		1	2	3
From	1	0	0.63	0.37
	2	694	0	65
	3	333	311	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		1	2	3	4
From	1	0	6	5	1
	2	1	0	1	0
	3	0	1	0	1
	4	8	1	5	0

Heavy Vehicle Percentages

Junction 2

		To		
		1	2	3
From	1	0	6	1
	2	0	0	12
	3	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.74	10.10	2.8	B	862	1292
	2	0.73	11.29	2.6	B	713	1069
	3	0.79	11.97	3.6	B	940	1411
	4	0.07	17.06	0.1	C	14	21
2	1	0.82	12.81	4.2	B	995	1492
	2	0.97	64.34	14.3	F	696	1045

	3	0.54	5.87	1.1	A	591	886
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Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	707	177	293		1477	0.479	703	742	0.0	0.9	4.635	A
	2	585	146	560		1357	0.431	582	436	0.0	0.8	4.630	A
	3	765	191	326	45.17	1428	0.536	760	816	0.0	1.1	5.358	A
	4	11	3	1024		429	0.026	11	62	0.0	0.0	8.608	A
2	1	812	203	233	45.17	1437	0.565	807	765	0.0	1.3	5.675	A
	2	571	143	299	45.17	868	0.658	564	742	0.0	1.9	11.570	B
	3	485	121	516		1479	0.328	483	347	0.0	0.5	3.608	A

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	844	211	353		1439	0.587	842	891	0.9	1.4	6.017	A
	2	699	175	671		1280	0.546	697	524	0.8	1.2	6.158	A
	3	918	229	390	53.94	1401	0.655	915	978	1.1	1.9	7.358	A
	4	13	3	1231		343	0.039	13	74	0.0	0.0	10.934	B
2	1	973	243	279	53.94	1432	0.679	970	919	1.3	2.1	7.724	A
	2	682	171	359	53.94	898	0.760	678	890	1.9	3.0	16.028	C
	3	579	145	620		1410	0.411	578	417	0.5	0.7	4.322	A

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1034	258	422		1395	0.741	1028	1073	1.4	2.8	9.677	A
	2	855	214	819		1176	0.727	850	631	1.2	2.6	10.856	B
	3	1100	275	476	66.06	1386	0.793	1093	1193	1.9	3.6	11.975	B
	4	17	4	1479		239	0.069	16	90	0.0	0.1	16.178	C
2	1	1187	297	342	66.06	1452	0.818	1179	1101	2.1	4.2	12.813	B
	2	836	209	436	66.06	867	0.964	804	1084	3.0	11.0	43.432	E
	3	709	177	735		1334	0.532	707	505	0.7	1.1	5.728	A

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1034	258	431		1389	0.744	1034	1091	2.8	2.8	10.104	B
	2	855	214	823		1173	0.729	855	642	2.6	2.6	11.291	B
	3	1118	279	479	66.06	1430	0.782	1118	1200	3.6	3.6	11.547	B
	4	17	4	1506		228	0.073	16	91	0.1	0.1	17.060	C
2	1	1194	298	342	66.06	1502	0.795	1195	1119	4.2	4.0	11.746	B
	2	836	209	442	66.06	864	0.968	823	1095	11.0	14.3	64.343	F
	3	709	177	752		1322	0.536	709	512	1.1	1.1	5.866	A

17:45 - 18:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	844	211	374		1425	0.592	850	927	2.8	1.5	6.310	A
	2	699	175	677		1275	0.548	704	547	2.6	1.2	6.360	A
	3	963	241	394	53.94	1456	0.661	969	987	3.6	2.0	7.490	A

	4	13	3	1287		319	0.042	14	76	0.1	0.0	11.790	B
2	1	982	245	280	53.94	1491	0.659	990	964	4.0	2.0	7.299	A
	2	682	171	366	53.94	902	0.757	726	904	14.3	3.4	24.558	C
	3	579	145	664		1381	0.419	581	428	1.1	0.7	4.508	A

18:00 - 18:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	707	177	302		1471	0.481	709	758	1.5	0.9	4.739	A
	2	585	146	565		1353	0.432	587	446	1.2	0.8	4.706	A
	3	779	195	329	45.17	1464	0.532	783	823	2.0	1.2	5.309	A
	4	11	3	1048		419	0.027	11	63	0.0	0.0	8.827	A
2	1	819	205	235	45.17	1474	0.556	822	780	2.0	1.3	5.544	A
	2	571	143	304	45.17	927	0.616	578	752	3.4	1.7	10.501	B
	3	485	121	529		1470	0.330	486	354	0.7	0.5	3.661	A

2036 with SWDR and full SDL using WBC approved trip rates, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	10.53	B
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	179.87	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	2036 with SWDR and full SDL using WBC approved trip rates	AM	ONE HOUR	07:45	09:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	1051	100.000
	2		ONE HOUR	✓	624	100.000
	3	✓				
	4		ONE HOUR	✓	54	100.000
2	1	✓				
	2		ONE HOUR	✓	841	100.000

	3		ONE HOUR	✓	582	100.000
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Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1

		To			
		1	2	3	4
From	1	0	338	710	3
	2	213	0	410	1
	3	0.61	0.38	0	0.01
	4	17	22	15	0

Demand (Veh/hr)

Junction 2

		To		
		1	2	3
From	1	0	0.41	0.59
	2	685	0	156
	3	430	152	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		1	2	3	4
From	1	0	1	5	33
	2	1	0	0	0
	3	0	1	0	50
	4	6	0	0	0

Heavy Vehicle Percentages

Junction 2

		To		
		1	2	3
From	1	0	8	1
	2	0	0	9
	3	1	2	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.83	14.60	4.5	B	964	1447
	2	0.57	7.08	1.3	A	573	859
	3	0.71	8.31	2.4	A	982	1473

	4	0.18	12.92	0.2	B	50	74
2	1	0.82	12.86	4.3	B	1033	1550
	2	1.30	529.14	116.7	F	772	1158
	3	0.45	4.55	0.8	A	534	801

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	791	198	339		1466	0.540	787	672	0.0	1.2	5.263	A
	2	470	117	545		1375	0.342	468	580	0.0	0.5	3.958	A
	3	823	206	163	45.17	1517	0.543	819	850	0.0	1.2	5.118	A
	4	41	10	970		471	0.086	40	11	0.0	0.1	8.360	A
2	1	844	211	114	45.17	1509	0.559	839	827	0.0	1.3	5.336	A
	2	633	158	495	45.17	805	0.787	620	458	0.0	3.3	18.313	C
	3	438	110	505		1482	0.296	436	610	0.0	0.4	3.435	A

08:00 - 08:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	945	236	402		1426	0.663	942	798	1.2	1.9	7.394	A
	2	561	140	652		1300	0.432	560	691	0.5	0.8	4.860	A
	3	973	243	195	53.94	1506	0.646	970	1018	1.2	1.8	6.684	A
	4	49	12	1152		391	0.124	48	13	0.1	0.1	10.488	B
2	1	1010	253	136	53.94	1514	0.667	1007	977	1.3	2.0	7.071	A
	2	756	189	594	53.94	782	0.967	726	550	3.3	10.8	48.073	E
	3	523	131	591		1425	0.367	523	729	0.4	0.6	3.985	A

08:15 - 08:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1157	289	439		1402	0.826	1147	892	1.9	4.4	13.651	B
	2	687	172	795		1200	0.573	685	791	0.8	1.3	6.959	A
	3	1051	263	238	66.06	1479	0.710	1048	1241	1.8	2.4	8.306	A
	4	59	15	1272		339	0.175	59	15	0.1	0.2	12.844	B
2	1	1233	308	167	66.06	1517	0.812	1224	1055	2.0	4.1	11.950	B
	2	926	231	722	66.06	718	1.289	715	669	10.8	63.6	201.029	F
	3	641	160	582		1431	0.448	640	855	0.6	0.8	4.545	A

08:30 - 08:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1157	289	440		1401	0.826	1156	894	4.4	4.5	14.597	B
	2	687	172	801		1195	0.575	687	795	1.3	1.3	7.077	A
	3	1050	263	239	66.06	1494	0.703	1050	1249	2.4	2.4	8.113	A
	4	59	15	1274		338	0.176	59	15	0.2	0.2	12.918	B
2	1	1240	310	167	66.06	1517	0.817	1239	1055	4.1	4.3	12.860	B
	2	926	231	731	66.06	714	1.297	713	675	63.6	116.7	452.056	F
	3	641	160	581		1432	0.447	641	864	0.8	0.8	4.549	A

08:45 - 09:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service

1	1	945	236	417		1416	0.667	955	824	4.5	2.1	7.973	A
	2	561	140	661		1294	0.434	563	711	1.3	0.8	4.945	A
	3	1008	252	196	53.94	1536	0.656	1010	1029	2.4	1.9	6.869	A
	4	49	12	1192		374	0.130	49	14	0.2	0.2	11.084	B
2	1	1021	255	137	53.94	1558	0.655	1031	1013	4.3	1.9	6.937	A
	2	756	189	608	53.94	775	0.975	769	559	116.7	113.5	529.145	F
	3	523	131	626		1402	0.373	524	751	0.8	0.6	4.102	A

09:00 - 09:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	791	198	403		1425	0.555	794	776	2.1	1.3	5.742	A
	2	470	117	550		1372	0.343	471	647	0.8	0.5	4.000	A
	3	987	247	164	45.17	1565	0.631	988	857	1.9	1.7	6.248	A
	4	41	10	1138		397	0.102	41	13	0.2	0.1	10.100	B
2	1	851	213	115	45.17	1546	0.551	854	992	1.9	1.2	5.224	A
	2	633	158	504	45.17	827	0.765	820	465	113.5	66.8	397.543	F
	3	438	110	668		1375	0.319	439	656	0.6	0.5	3.849	A

2036 with SWDR and full SDL using WBC approved trip rates, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Junction 1 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	Junction 2 - Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Finchampstead Road/ SWDR/ Landen Court Roundabout	Standard Roundabout		1, 2, 3, 4	12.18	B
2	Finchampstead Road/ Molly Millars Lane Roundabout	Standard Roundabout		1, 2, 3	52.29	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
D6	2036 with SWDR and full SDL using WBC approved trip rates	PM	ONE HOUR	16:45	18:15	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	3	2	1	Queue limited	Normal	0	100.00	17.00
2	1	1	3	Queue limited	Normal	0	100.00	17.00

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1	1		ONE HOUR	✓	993	100.000
	2		ONE HOUR	✓	773	100.000
	3	✓				
	4		ONE HOUR	✓	15	100.000
2	1	✓				
	2		ONE HOUR	✓	822	100.000

	3		ONE HOUR	✓	675	100.000
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Demand overview (Pedestrians)

Junction	Arm	Profile type	Average pedestrian flow (Ped/hr)
1	1		
	2		
	3	[ONEHOUR]	60.00
	4		
2	1	[ONEHOUR]	60.00
	2	[ONEHOUR]	60.00
	3		

Origin-Destination Data

Demand (Veh/hr)

Junction 1

		To			
From		1	2	3	4
	1	0	225	736	32
	2	407	0	345	21
	3	0.59	0.38	0	0.03
	4	9	3	3	0

Demand (Veh/hr)

Junction 2

		To		
From		1	2	3
	1	0	0.62	0.38
	2	713	0	109
	3	355	320	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
From		1	2	3	4
	1	0	0	6	0
	2	1	0	0	0
	3	0	1	0	40
	4	11	0	0	0

Heavy Vehicle Percentages

Junction 2

		To		
From		1	2	3
	1	0	6	1
	2	1	0	7
	3	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	1	0.78	11.75	3.5	B	911	1367
	2	0.74	11.77	2.7	B	709	1064
	3	0.80	12.80	3.9	B	973	1460

	4	0.08	18.07	0.1	C	14	21
2	1	0.82	12.90	4.2	B	994	1491
	2	1.06	142.97	38.4	F	754	1131
	3	0.56	6.12	1.3	A	619	929

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	748	187	303		1480	0.505	744	775	0.0	1.0	4.865	A
	2	582	145	577		1347	0.432	579	469	0.0	0.8	4.668	A
	3	790	198	345	45.17	1403	0.563	785	812	0.0	1.3	5.780	A
	4	11	3	1066		409	0.028	11	63	0.0	0.0	9.040	A
2	1	812	203	240	45.17	1434	0.566	806	795	0.0	1.3	5.693	A
	2	619	155	306	45.17	868	0.713	609	740	0.0	2.4	13.460	B
	3	508	127	529		1467	0.346	506	387	0.0	0.5	3.738	A

17:00 - 17:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	893	223	364		1440	0.620	890	930	1.0	1.6	6.515	A
	2	695	174	691		1267	0.549	693	563	0.8	1.2	6.256	A
	3	948	237	412	53.94	1382	0.686	944	972	1.3	2.1	8.158	A
	4	13	3	1281		320	0.042	13	76	0.0	0.0	11.740	B
2	1	972	243	287	53.94	1429	0.680	969	953	1.3	2.1	7.766	A
	2	739	185	368	53.94	894	0.826	731	888	2.4	4.2	21.137	C
	3	607	152	634		1396	0.435	606	465	0.5	0.8	4.549	A

17:15 - 17:30

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1093	273	423		1403	0.779	1086	1102	1.6	3.3	11.129	B
	2	851	213	843		1159	0.734	845	666	1.2	2.6	11.258	B
	3	1103	276	503	66.06	1370	0.805	1096	1186	2.1	3.9	12.800	B
	4	17	4	1508		225	0.073	16	91	0.0	0.1	17.228	C
2	1	1185	296	351	66.06	1448	0.819	1177	1109	2.1	4.2	12.899	B
	2	905	226	447	66.06	855	1.059	829	1081	4.2	23.2	74.187	F
	3	743	186	719		1339	0.555	741	557	0.8	1.2	6.000	A

17:30 - 17:45

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	1093	273	431		1398	0.782	1093	1117	3.3	3.5	11.755	B
	2	851	213	848		1156	0.736	851	675	2.6	2.7	11.767	B
	3	1117	279	506	66.06	1413	0.790	1117	1193	3.9	3.8	12.190	B
	4	17	4	1531		216	0.077	16	92	0.1	0.1	18.071	C
2	1	1193	298	352	66.06	1499	0.796	1193	1123	4.2	4.0	11.841	B
	2	905	226	453	66.06	851	1.063	844	1092	23.2	38.4	142.969	F
	3	743	186	732		1331	0.558	743	565	1.2	1.3	6.123	A

17:45 - 18:00

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service

1	1	893	223	411		1411	0.633	900	1007	3.5	1.8	7.137	A
	2	695	174	698		1262	0.551	701	612	2.7	1.2	6.482	A
	3	1063	266	417	53.94	1451	0.732	1067	982	3.8	2.8	9.470	A
	4	13	3	1404		269	0.050	14	80	0.1	0.1	14.120	B
2	1	982	245	288	53.94	1488	0.660	990	1069	4.0	2.0	7.344	A
	2	739	185	376	53.94	890	0.830	864	902	38.4	7.2	100.942	F
	3	607	152	749		1319	0.460	608	491	1.3	0.9	5.076	A

18:00 - 18:15

Junction	Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Pedestrian demand (Ped/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	1	748	187	318		1470	0.509	750	800	1.8	1.0	5.020	A
	2	582	145	583		1343	0.433	584	485	1.2	0.8	4.750	A
	3	818	204	347	45.17	1456	0.562	824	819	2.8	1.3	5.751	A
	4	11	3	1106		393	0.029	11	65	0.1	0.0	9.443	A
2	1	819	205	242	45.17	1471	0.557	822	822	2.0	1.3	5.570	A
	2	619	155	312	45.17	922	0.671	639	751	7.2	2.1	13.558	B
	3	508	127	554		1450	0.351	509	397	0.9	0.5	3.835	A