

Technical Note

Project: Land North of Bryn lane, Wrexham

Planning Reference Number: P/2023 /0497

Date: 8th April 2024

Introduction

This Technical Note provides additional information to assist Wrexham Council with the traffic impact assessment for the KSS2, KSS3 and Kingsmoor planning applications.

The objective of this technical note is to identify the likely highway improvement works required for each eventuality. The scenarios assessed are as follows:

- 1) If it is only KSS3 Phase 1 is developed.**
- 2) If it is only KSS3 Phase 1 & 2 is developed.**
- 3) If KSS3 and Kingsmoor is developed.**
- 4) If KSS2 and Kingsmoor is developed.**
- 5) If KSS3 and KSS2 is developed.**
- 6) If KSS3, KSS2 and Kingsmoor is developed.**

Appendix A and **B** provides the traffic figures for the 2030 and 2037 assessment years respectively.

Junction assessments have been carried out to ascertain the resultant junction operation for each scenario.

Junction 1 - Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way

Table 1 provides the junction capacity assessment of the existing roundabout for the Base, Scenarios 1 and Scenario 4. **Appendix C** provides the full ARCADY output.

Scenario 1 assumes that access for KSS3 Phase 1 would be via Bryn Lane whilst the Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way roundabout would remain as existing.

Table 1: Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way (Existing Junction)

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base										
1 - Bryn Lane	D1	0.3	4.75	0.23	A	D2	0.3	3.00	0.22	A
2 - Ash Road North		0.1	3.15	0.13	A		1.4	6.11	0.59	A
3 - Abenbury Way		0.3	3.95	0.23	A		3.2	20.31	0.77	C
4 - Industrial Estate Road		1.7	3.82	0.62	A		0.2	1.79	0.20	A
2030 Base										
1 - Bryn Lane	D3	0.3	5.14	0.26	A	D4	0.3	3.08	0.23	A
2 - Ash Road North		0.2	3.25	0.14	A		1.7	6.89	0.63	A
3 - Abenbury Way		0.3	4.06	0.25	A		5.1	31.97	0.85	D
4 - Industrial Estate Road		1.9	4.24	0.66	A		0.3	1.81	0.21	A
2030 Base + Committed (KSS2 & Kingmoor)										
1 - Bryn Lane	D5	0.6	6.87	0.38	A	D6	0.5	3.59	0.32	A
2 - Ash Road North		0.2	3.59	0.19	A		3.5	12.11	0.78	B
3 - Abenbury Way		0.4	4.41	0.26	A		27.1	149.69	1.06	F
4 - Industrial Estate Road		3.3	6.29	0.77	A		0.4	1.99	0.28	A
2030 Base + Development (Phase 1)										
1 - Bryn Lane	D11	0.5	5.91	0.35	A	D12	0.5	3.58	0.34	A
2 - Ash Road North		0.2	3.40	0.14	A		2.0	8.29	0.67	A
3 - Abenbury Way		0.3	4.28	0.26	A		11.9	73.20	0.96	F
4 - Industrial Estate Road		2.7	5.40	0.73	A		0.3	1.91	0.25	A

Table 1 shows that if the KSS3 Phase 1 scheme was developed, (Scenario 1) no improvement would be required at the Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way roundabout as the junction would still operate within the theoretical capacity.

If KSS2 and Kingsmoor was developed (Scenario 3), improvements would be required as the junction would operate over capacity.

For KSS3 Phase 2, the roundabout would be improved to provide a new arm to gain access into the full development.

Table 2 provides the junction capacity assessment of the improved roundabout for Scenarios 2, 3, 4, 5 and 6. **Appendix C** provides the full ARCADY output.

Table 2: Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way (Improved Junction)

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2037 Base + Development (Phase 1 + 2)									
1 - Bryn Lane	D23	0.5	4.71	0.33	A	D24	0.6	3.52	0.36	A
2 - Ash Road North		0.2	3.22	0.14	A		3.0	11.81	0.76	B
3 - Abenbury Way		0.2	2.23	0.16	A		1.6	9.05	0.62	A
4 - Industrial Estate Road		4.9	8.40	0.83	A		0.5	2.23	0.34	A
5 - Proposed Site Access		0.7	5.72	0.41	A		0.6	3.26	0.36	A
	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]									
1 - Bryn Lane	D15	0.7	5.34	0.40	A	D16	0.8	4.00	0.44	A
2 - Ash Road North		0.2	3.38	0.15	A		4.1	15.92	0.81	C
3 - Abenbury Way		0.2	2.45	0.17	A		2.0	11.39	0.67	B
4 - Industrial Estate Road		6.8	11.26	0.88	B		0.6	2.37	0.37	A
5 - Proposed Site Access		0.9	6.71	0.47	A		0.6	3.43	0.37	A
	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]									
1 - Bryn Lane	D19	0.6	5.49	0.36	A	D20	0.6	3.69	0.37	A
2 - Ash Road North		0.2	3.45	0.19	A		6.9	23.98	0.89	C
3 - Abenbury Way		0.2	2.43	0.17	A		2.1	11.82	0.68	B
4 - Industrial Estate Road		8.5	13.91	0.90	B		0.6	2.35	0.37	A
5 - Proposed Site Access		0.9	7.18	0.49	A		0.6	3.40	0.37	A
	2037 Base + Committed + Development (Phase 1 + 2)									
1 - Bryn Lane	D11	0.8	6.21	0.43	A	D12	0.8	4.21	0.45	A
2 - Ash Road North		0.2	3.59	0.20	A		10.6	36.90	0.93	E
3 - Abenbury Way		0.2	2.51	0.18	A		2.7	15.20	0.73	C
4 - Industrial Estate Road		13.5	21.37	0.94	C		0.7	2.50	0.41	A
5 - Proposed Site Access		1.0	8.07	0.51	A		0.6	3.58	0.38	A

Table 2 shows that the improved roundabout junction would operate within capacity for all assessment scenario.

A contribution should be made towards the roundabout improvement from the KSS2 and Kingsmoor scheme in order to mitigate their impact.

Junction 2 - A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane

Table 3 provides the junction capacity assessment of the roundabout for the Base, Scenarios 1 and 2. **Appendix D** provides the full ARCADY output.

Table 3: A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane (KSS3 Phase 1 and 2 Only)

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030 Base									
1 - Borrás Hall Lane	D3	0.4	7.89	0.29	A	D4	0.0	3.73	0.04	A
2 - A534 Wrexham Road (East)		1.9	12.63	0.67	B		0.7	4.42	0.40	A
3 - Industrial Estate Road		0.3	2.09	0.25	A		4.1	8.30	0.81	A
4 - Sandy Lane		0.0	3.61	0.04	A		0.1	9.38	0.07	A
5 - A534 (West)		1.9	4.01	0.66	A		0.5	2.21	0.33	A
	2037 Base									
1 - Borrás Hall Lane	D5	0.5	9.06	0.33	A	D6	0.0	3.86	0.04	A
2 - A534 Wrexham Road (East)		2.8	17.13	0.74	C		0.7	4.68	0.43	A
3 - Industrial Estate Road		0.4	2.15	0.26	A		6.0	11.73	0.86	B
4 - Sandy Lane		0.0	3.72	0.04	A		0.1	11.36	0.09	B
5 - A534 (West)		2.3	4.54	0.70	A		0.5	2.30	0.35	A
	2030 Base + Development (Phase 1)									
1 - Borrás Hall Lane	D19	0.5	9.79	0.35	A	D20	0.0	3.94	0.04	A
2 - A534 Wrexham Road (East)		2.9	18.97	0.75	C		0.7	4.74	0.42	A
3 - Industrial Estate Road		0.4	2.21	0.29	A		6.9	13.12	0.88	B
4 - Sandy Lane		0.0	3.77	0.04	A		0.1	11.69	0.09	B
5 - A534 (West)		2.5	4.94	0.72	A		0.6	2.37	0.37	A
	2037 Base + Development (Phase 1 + 2)									
1 - Borrás Hall Lane	D21	1.0	17.16	0.50	C	D22	0.1	4.46	0.06	A
2 - A534 Wrexham Road (East)		15.8	91.60	0.99	F		0.9	5.56	0.47	A
3 - Industrial Estate Road		0.6	2.50	0.37	A		47.3	70.90	1.02	F
4 - Sandy Lane		0.0	4.18	0.05	A		0.2	19.57	0.14	C
5 - A534 (West)		4.9	8.37	0.83	A		0.8	2.75	0.46	A

Table 3 shows that if the KSS3 Phase 1 scheme was developed (Scenario 1) no improvements would be required at the A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane junction as it would still operate within the theoretical capacity.

For KSS3 Phase 2, the roundabout may need to be improved in order to reduce the impact.

Table 4 provides the junction capacity assessment of Scenarios 3, 4, 5 and 6. **Appendix D** provides the full ARCADY output.

Table 4: A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2]									
1 - Borras Hall Lane	D25	1.4	24.30	0.59	C	D26	0.1	4.73	0.06	A
2 - A534 Wrexham Road (East)		33.9	175.51	1.09	F		1.0	6.20	0.51	A
3 - Industrial Estate Road		0.7	2.62	0.40	A		104.0	137.26	1.08	F
4 - Sandy Lane		0.0	4.31	0.05	A		0.2	20.46	0.15	C
5 - A534 (West)		7.1	11.71	0.88	B		1.0	2.95	0.49	A
	2037 Base + Committed									
1 - Borras Hall Lane	D9	0.8	13.97	0.44	B	D10	0.1	4.26	0.05	A
2 - A534 Wrexham Road (East)		7.8	49.17	0.91	E		0.9	5.43	0.47	A
3 - Industrial Estate Road		0.5	2.36	0.32	A		27.7	46.61	0.99	E
4 - Sandy Lane		0.0	4.00	0.04	A		0.2	18.45	0.14	C
5 - A534 (West)		4.1	7.15	0.81	A		0.7	2.60	0.43	A
	2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor]									
1 - Borras Hall Lane	D29	1.7	29.96	0.64	D	D30	0.1	4.67	0.06	A
2 - A534 Wrexham Road (East)		47.7	243.92	1.16	F		1.1	6.30	0.52	A
3 - Industrial Estate Road		0.6	2.58	0.39	A		121.2	158.30	1.10	F
4 - Sandy Lane		0.0	4.25	0.05	A		0.2	20.89	0.15	C
5 - A534 (West)		9.3	14.94	0.91	B		1.0	2.92	0.49	A
	2037 Base + Committed + Developement (Phase 1 + 2)									
1 - Borras Hall Lane	D17	2.6	46.81	0.75	E	D18	0.1	4.93	0.07	A
2 - A534 Wrexham Road (East)		70.9	365.69	1.28	F		1.2	6.88	0.54	A
3 - Industrial Estate Road		0.7	2.69	0.42	A		181.6	255.39	1.15	F
4 - Sandy Lane		0.1	4.37	0.05	A		0.2	20.99	0.15	C
5 - A534 (West)		14.5	22.76	0.95	C		1.1	3.12	0.52	A

The above table shows that for all Scenarios 3, 4, 5 and 6, the roundabout may need to be improved in order to reduce the impact.

Junction 3 - A534/A5156/A534 Holt Road

Table 5 provides the junction capacity assessment of the A534/A5156/A534 Holt Road Junction for the Scenarios 1, 2 and 3 assuming KSS2 was not developed. **Appendix E** provides the full ARCADY output.

Table 5: A534/A5156/A534 Holt Road Existing Layout (Without KSS2)

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2023 Base									
1 - Golf Site Access	D1	0.4	7.65	0.26	A	D2	0.2	4.39	0.14	A
2 - A534 (East)		0.5	2.16	0.34	A		2.8	5.52	0.74	A
3 - A534 Holt Road (West)		1.0	4.86	0.49	A		1.1	7.65	0.53	A
4 - A5156		1.5	3.49	0.60	A		0.5	1.97	0.32	A
	2030 Base									
1 - Golf Site Access	D3	0.4	8.62	0.30	A	D4	0.2	4.58	0.16	A
2 - A534 (East)		0.6	2.25	0.36	A		3.6	6.77	0.79	A
3 - A534 Holt Road (West)		1.1	5.29	0.52	A		1.4	9.07	0.58	A
4 - A5156		1.8	3.90	0.64	A		0.5	2.03	0.34	A
	2037 Base									
1 - Golf Site Access	D5	0.5	9.95	0.34	A	D6	0.2	4.78	0.17	A
2 - A534 (East)		0.6	2.34	0.38	A		4.9	8.80	0.83	A
3 - A534 Holt Road (West)		1.3	5.81	0.56	A		1.8	11.30	0.65	B
4 - A5156		2.1	4.44	0.68	A		0.6	2.11	0.36	A
	2030 Base + Development (Phase 1)									
1 - Golf Site Access	D7	0.5	10.28	0.33	B	D8	0.2	4.82	0.16	A
2 - A534 (East)		0.6	2.36	0.39	A		5.0	8.94	0.84	A
3 - A534 Holt Road (West)		1.2	5.74	0.55	A		1.7	10.92	0.63	B
4 - A5156		2.3	4.69	0.70	A		0.6	2.14	0.37	A
	2037 Base + Development (Phase 1 + 2)									
1 - Golf Site Access	D9	0.8	16.46	0.46	C	D10	0.2	5.51	0.19	A
2 - A534 (East)		0.9	2.71	0.47	A		19.3	30.93	0.97	D
3 - A534 Holt Road (West)		1.7	7.39	0.63	A		3.4	20.87	0.78	C
4 - A5156		4.1	7.45	0.81	A		0.8	2.44	0.44	A
	2030 Base + Committed + Development (Phase 1) [Without KSS2]									
1 - Golf Site Access	D11	0.6	11.64	0.36	B	D12	0.2	5.06	0.17	A
2 - A534 (East)		0.7	2.48	0.42	A		7.1	12.20	0.88	B
3 - A534 Holt Road (West)		1.3	6.14	0.57	A		2.0	13.22	0.68	B
4 - A5156		2.7	5.35	0.74	A		0.7	2.26	0.40	A
	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]									
1 - Golf Site Access	D13	1.0	20.19	0.51	C	D14	0.2	5.82	0.20	A
2 - A534 (East)		1.0	2.86	0.49	A		46.6	63.82	1.02	F
3 - A534 Holt Road (West)		1.9	8.03	0.65	A		4.2	26.22	0.82	D
4 - A5156		5.3	9.23	0.85	A		0.9	2.58	0.47	A

Table 5 shows that if KSS2 was not developed, the existing roundabout could theoretically accommodate the two developments without improvements.

In order to gain access to KSS2 the roundabout would need improving.

Table 6 provides the junction capacity assessment of the A534/A5156/A534 Holt Road junction for the Scenarios 4, 5 and 6 which includes the KSS2 development.

Table 6: A534/A5156/A534 Holt Road (With KSS2)

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030 Base + Committed (KSS2 & Kingmoor)									
1 - A5156	D1	4.5	9.13	0.82	A	D2	1.0	3.23	0.51	A
2 - Wrexham Golf Club Access		1.4	29.52	0.59	D		0.4	9.45	0.28	A
3 - A534 (East)		0.9	3.26	0.48	A		135.0	193.09	1.13	F
4 - KSS2 Site Access		1.5	7.88	0.60	A		0.8	9.26	0.46	A
5 - A534 Holt Road (West)		2.4	10.09	0.71	B		6.2	29.71	0.88	D
	2037 Base + Committed (KSS2 & Kingmoor)									
1 - A5156	D3	6.4	12.55	0.87	B	D4	1.1	3.41	0.54	A
2 - Wrexham Golf Club Access		2.4	48.13	0.72	E		0.4	10.16	0.30	B
3 - A534 (East)		1.0	3.46	0.51	A		196.9	316.72	1.19	F
4 - KSS2 Site Access		1.6	8.55	0.62	A		0.9	9.47	0.47	A
5 - A534 Holt Road (West)		3.0	12.15	0.75	B		8.4	38.74	0.91	E
	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]									
1 - A5156	D19	23.5	41.07	0.98	E	D20	1.5	3.97	0.60	A
2 - Wrexham Golf Club Access		10.2	189.00	1.05	F		0.5	11.94	0.34	B
3 - A534 (East)		1.3	3.98	0.58	A		327.7	565.32	1.30	F
4 - KSS2 Site Access		1.9	10.00	0.66	A		0.9	9.62	0.47	A
5 - A534 Holt Road (West)		4.4	17.38	0.82	C		10.3	46.65	0.93	E
	2037 Base + Committed + Development (Phase 1 + 2)									
1 - A5156	D11	45.3	69.61	1.02	F	D12	1.7	4.35	0.63	A
2 - Wrexham Golf Club Access		15.0	271.00	1.15	F		0.5	13.17	0.36	B
3 - A534 (East)		1.5	4.27	0.61	A		420.2	705.02	1.35	F
4 - KSS2 Site Access		2.0	10.79	0.67	B		0.9	9.69	0.47	A
5 - A534 Holt Road (West)		5.2	20.85	0.85	C		11.5	51.54	0.94	F

As part of the works associated with the KSS2 scheme, it is also proposed to widen the A5156 and A534 arms, so they comprise a third lane. **Table 6** shows that if the KSS2 site was to be developed then these improvements are not sufficient to ensure that the junction operates satisfactorily

As part of the KSS2 site proposals to gain access from this roundabout, improvements have been put forward to signalise the roundabout.

It is suggested that a proportionate contribution will be provided between all the sites for the signal improvements.

Junction 4: A5156/Borras Park Road

Table 7 provides the junction capacity assessment of the A5156/Borras Park Road for the Base with Scenarios 1 and 4. **Appendix F** provides the full ARCADY output.

Table 7: A5156/Borras Park Road (Scenarios 1 and 4)

AM						PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base										
1 - Borras Road	D1	0.1	12.05	0.10	B	D2	0.1	5.19	0.05	A
2 - A5156 (East)		0.9	3.05	0.47	A		3.5	7.36	0.78	A
3 - Borras Park Road		1.1	12.36	0.53	B		1.3	24.56	0.57	C
4 - A5156 (East)		3.2	6.62	0.77	A		0.8	2.81	0.46	A
2030 Base										
1 - Borras Road	D3	0.1	14.94	0.12	B	D4	0.1	5.48	0.06	A
2 - A5156 (East)		1.0	3.24	0.50	A		4.7	9.55	0.83	A
3 - Borras Park Road		1.4	14.94	0.59	B		2.1	40.25	0.70	E
4 - A5156 (East)		4.2	8.26	0.81	A		0.9	2.96	0.48	A
2037 Base										
1 - Borras Road	D5	0.2	20.06	0.17	C	D6	0.1	5.80	0.06	A
2 - A5156 (East)		1.1	3.48	0.54	A		7.0	13.62	0.88	B
3 - Borras Park Road		1.9	18.93	0.66	C		5.2	95.47	0.89	F
4 - A5156 (East)		5.9	11.11	0.86	B		1.0	3.13	0.51	A
2030 Base + Development (Phase 1)										
1 - Borras Road	D19	0.2	21.74	0.17	C	D20	0.1	5.89	0.06	A
2 - A5156 (East)		1.2	3.48	0.54	A		7.5	14.36	0.89	B
3 - Borras Park Road		1.7	18.01	0.64	C		5.3	102.46	0.90	F
4 - A5156 (East)		6.6	12.18	0.87	B		1.1	3.18	0.52	A
2030 Base + Committed (KSS2 & Kingmoor)										
1 - Borras Road	D7	0.2	23.94	0.19	C	D8	0.1	6.97	0.07	A
2 - A5156 (East)		1.7	4.36	0.63	A		11.1	20.87	0.93	C
3 - Borras Park Road		3.3	35.90	0.78	E		13.8	227.74	1.10	F
4 - A5156 (East)		7.3	13.50	0.89	B		1.5	3.79	0.60	A
2037 Base + Committed (KSS2 & Kingmoor)										
1 - Borras Road	D9	0.4	38.95	0.28	E	D10	0.1	7.43	0.08	A
2 - A5156 (East)		1.9	4.79	0.66	A		23.5	41.02	0.98	E
3 - Borras Park Road		6.0	63.28	0.89	F		34.4	527.79	1.50	F
4 - A5156 (East)		12.2	21.63	0.93	C		1.6	4.03	0.62	A

The results show that the existing roundabout without any developments is approaching capacity at the 2037 year of assessment.

If Phase 1 of the KSS3 site was developed first, the roundabout would still operate within capacity in the 2030 year.

If the KSS2 and the Kingsmoor site was developed, improvement would be required at the junction from the offset.

Table 8 provides the junction capacity assessment of the A534/A5156/A534 Holt Road for Scenarios 2, 3, 5 and 6.

Table 8: A5156/Borras Park Road (Scenarios 2, 3, 5, and 6)

		AM					PM				
		Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2023 Base											
2037 Base + Development (Phase 1 + 2)											
1 - Borras Road	D21	0.9	93.81	0.50	F	D22	0.1	6.99	0.08		
2 - A5156 (East)		1.6	4.26	0.62	A		40.1	63.00	1.01	F	
3 - Borras Park Road		3.8	39.11	0.81	E		43.4	719.02	1.71	F	
4 - A5156 (East)		28.4	45.66	0.99	E		1.5	3.78	0.60	A	
2030 Base + Committed + Development (Phase 1) [Without KSS2]											
1 - Borras Road	D23	0.3	29.94	0.22	D	D24	0.1	6.28	0.07	A	
2 - A5156 (East)		1.3	3.71	0.57	A		12.7	23.66	0.94	C	
3 - Borras Park Road		2.0	21.37	0.68	C		17.3	277.47	1.17	F	
4 - A5156 (East)		9.4	16.92	0.91	C		1.2	3.40	0.55	A	
2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]											
1 - Borras Road	D25	1.5	163.72	0.68	F	D26	0.1	8.70	0.09	A	
2 - A5156 (East)		1.8	4.57	0.65	A		86.1	117.86	1.07	F	
3 - Borras Park Road		5.4	55.87	0.87	F		70.5	1249.32	1.91	F	
4 - A5156 (East)		54.2	76.42	1.03	F		2.1	4.73	0.68	A	
2030 Base + Committed + Development (Phase 1) [Without Kingmoor]											
1 - Borras Road	D27	0.3	30.31	0.22	D	D28	0.1	7.03	0.07	A	
2 - A5156 (East)		1.7	4.43	0.64	A		13.3	24.67	0.94	C	
3 - Borras Park Road		3.6	39.07	0.80	E		18.5	296.75	1.19	F	
4 - A5156 (East)		9.5	17.15	0.91	C		1.5	3.82	0.60	A	
2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]											
1 - Borras Road	D29	1.4	155.26	0.66	F	D30	0.1	8.70	0.09	A	
2 - A5156 (East)		2.5	5.73	0.72	A		87.1	119.03	1.07	F	
3 - Borras Park Road		19.8	180.87	1.06	F		68.6	1241.23	1.89	F	
4 - A5156 (East)		52.9	74.72	1.03	F		2.1	4.73	0.68	A	

The above table shows that for the remaining scenarios the junction would need to be improved were replacing the junction with a four arm signal controlled junction could be an option.

Conclusion

The summary of the traffic assessment is provided below.

1) If it is only KSS3 Phase 1 is developed:

No improvements within the highway network would be required only the requirement for the Bryn Lane access.

2) If it is only KSS3 Phase 1 & 2 is developed:

Improvements would be required at the following junctions:

- a) Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way; and
- b) A5156/Borras Park Road.

3) If KSS3 and Kingsmoor is developed:

Improvements would be required at the following junctions:

- a) Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way;
- b) A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane; and
- c) A5156/Borras Park Road.

4) If KSS2 and Kingsmoor is developed:

Improvements would be required at the following junctions:

- a) Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way;
- b) A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane;
- c) Widening and signalisation of A534/A5156/A534 Holt Road; and
- d) A5156/Borras Park Road.

5) If KSS3 and KSS2 is developed:

Improvements would be required at the following junctions:

- a) Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way;
- b) A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane;
- c) Widening and signalisation of A534/A5156/A534 Holt Road; and
- d) A5156/Borras Park Road.

6) If KSS3, KSS2 and Kingsmoor is developed:

Improvements would be required at the following junctions:

- a) Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way;
- b) A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane;
- c) Widening and signalisation of A534/A5156/A534 Holt Road; and
- d) A5156/Borras Park Road.

Appendix A – 2030 Traffic Figures

Figure 1 - 2023 Surveyed Traffic Flows
AM Peak: 0800-0900

Notes:

123

 Total Vehicles

123

 HGVs

--

 Flows Taken from Kingmoor TA

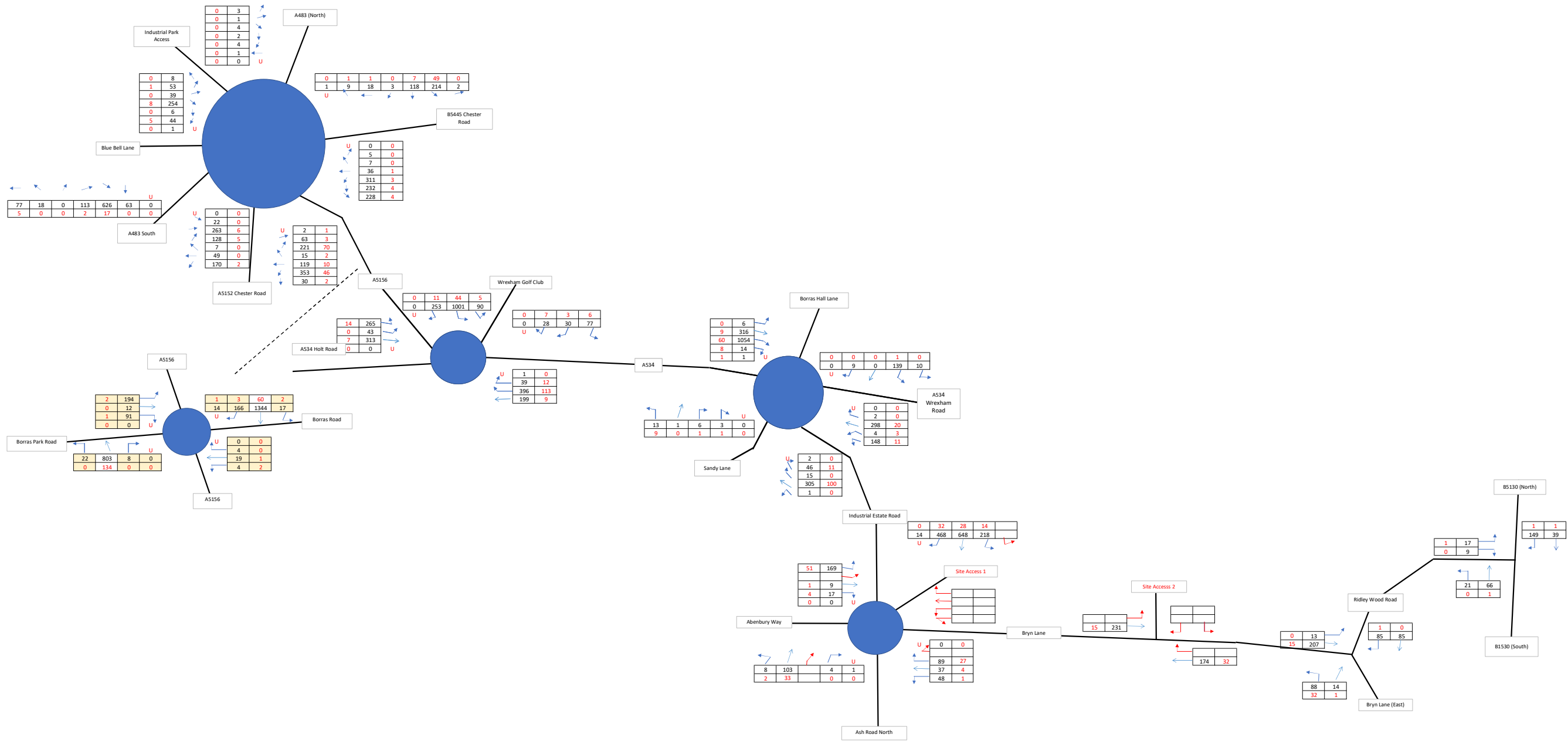


Figure 2 - 2023 Surveyed Traffic Flows
PM Peak: 1630-1730

Notes:

123	Total Vehicles
123	HGVs
	Flows Taken from Kingmoor TA

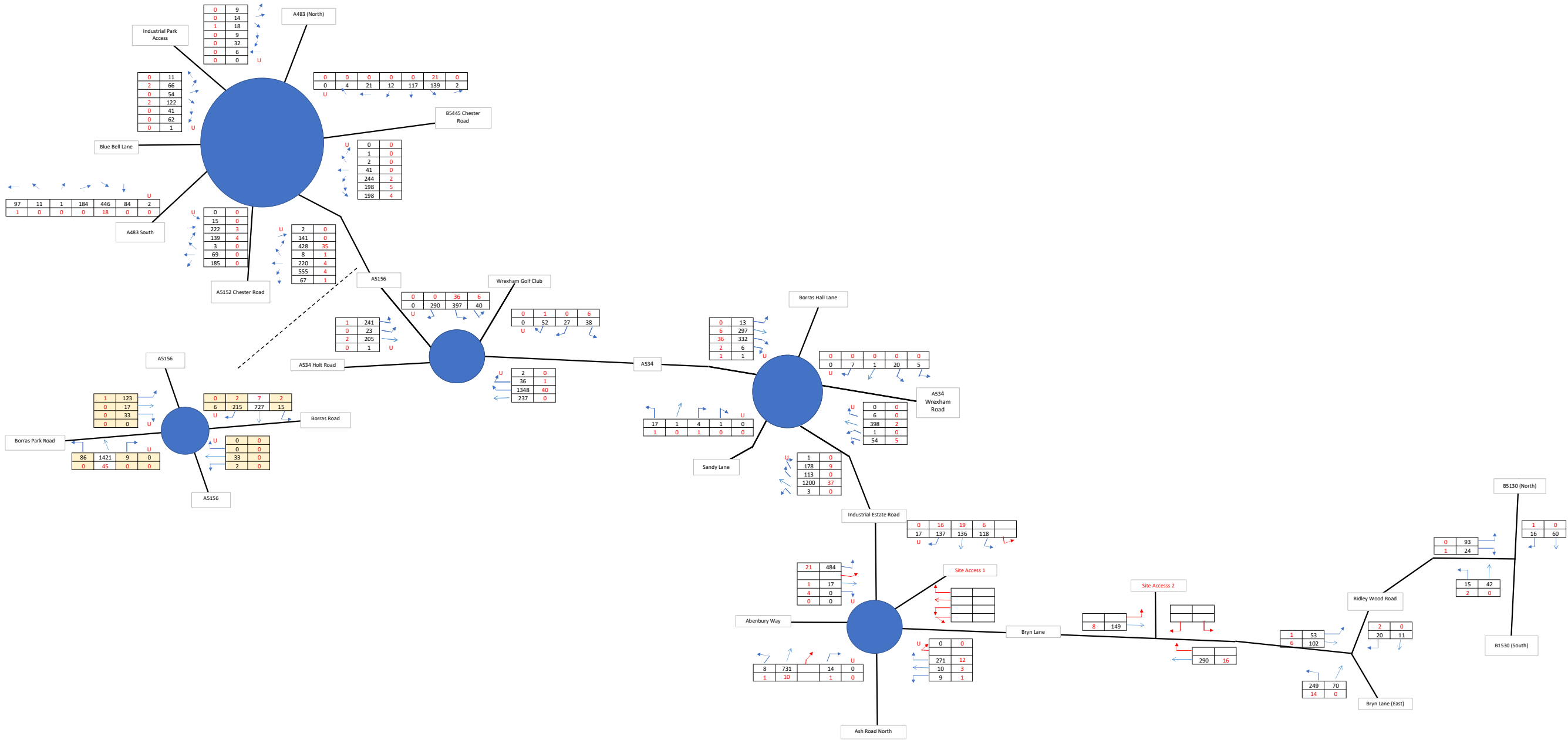


Figure 3 - 2023 Surveyed Traffic Flows
AM Peak: 0800-0900

Notes:

123

 PCUs

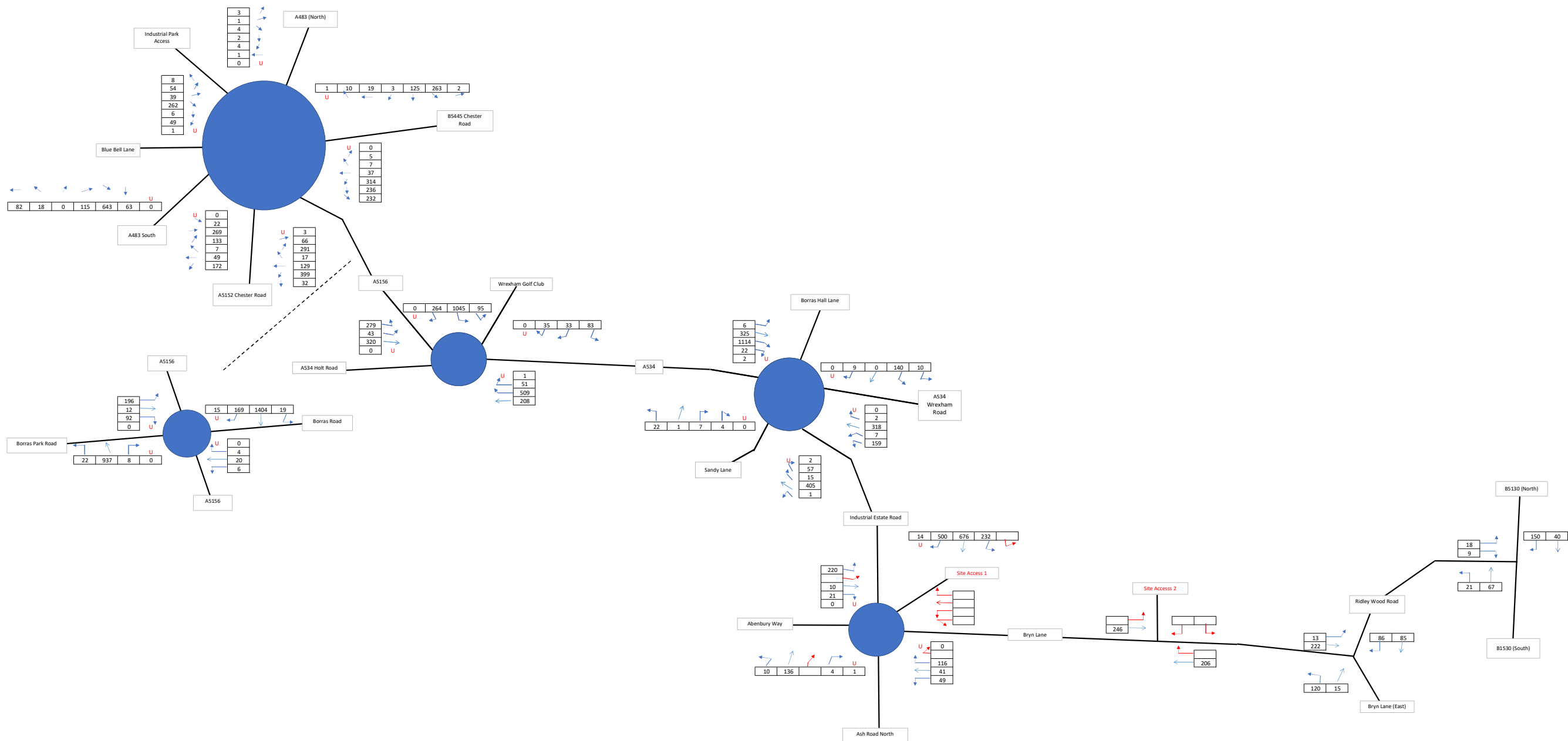


Figure 4 - 2023 Surveyed Traffic Flows
PM Peak: 1630-1730

Notes:

123

 PCUs

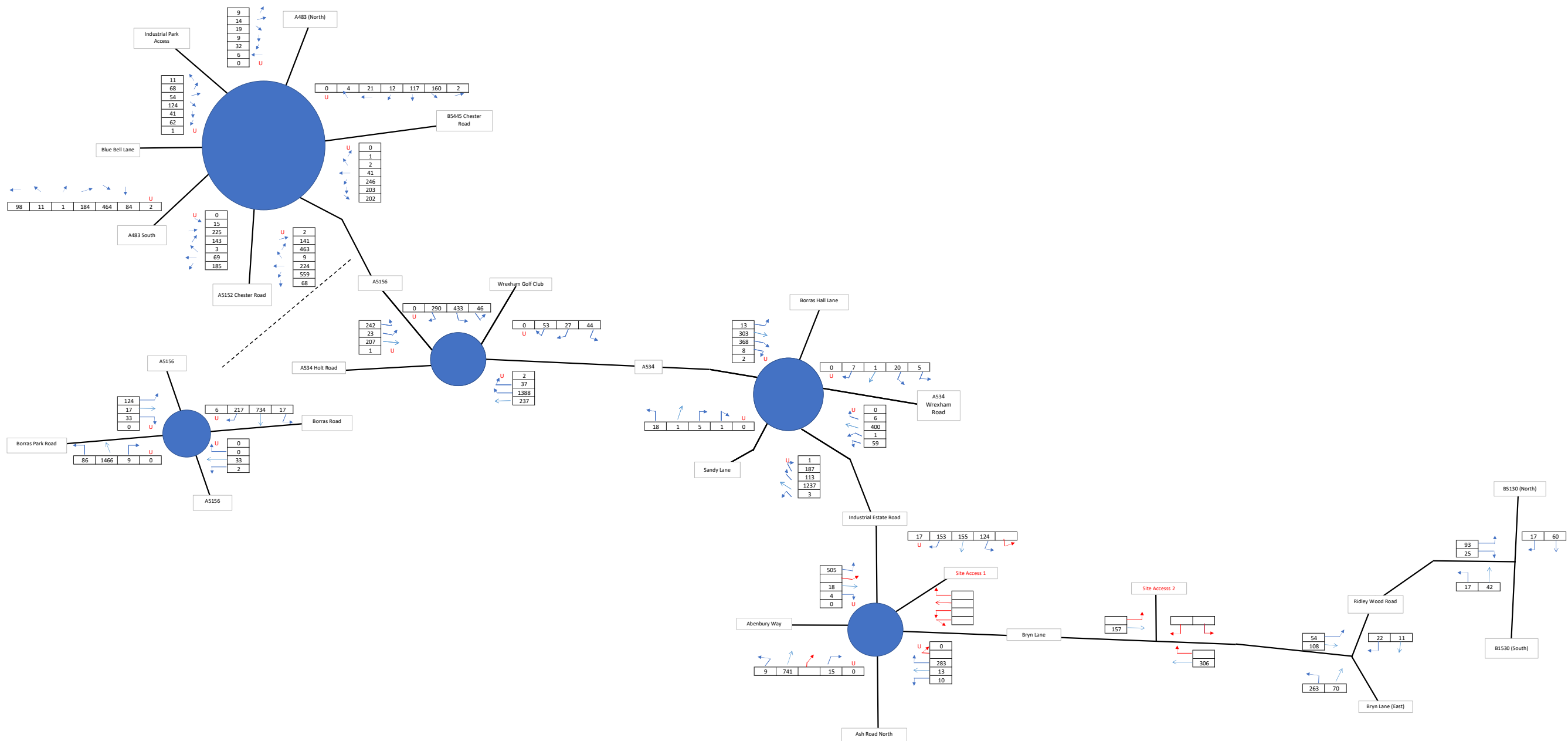


Figure 5 - 2037 Growthed Traffic Flows
AM Peak: 0800-0900

Notes:

123

 PCUs

1.0587

 Growth Factor

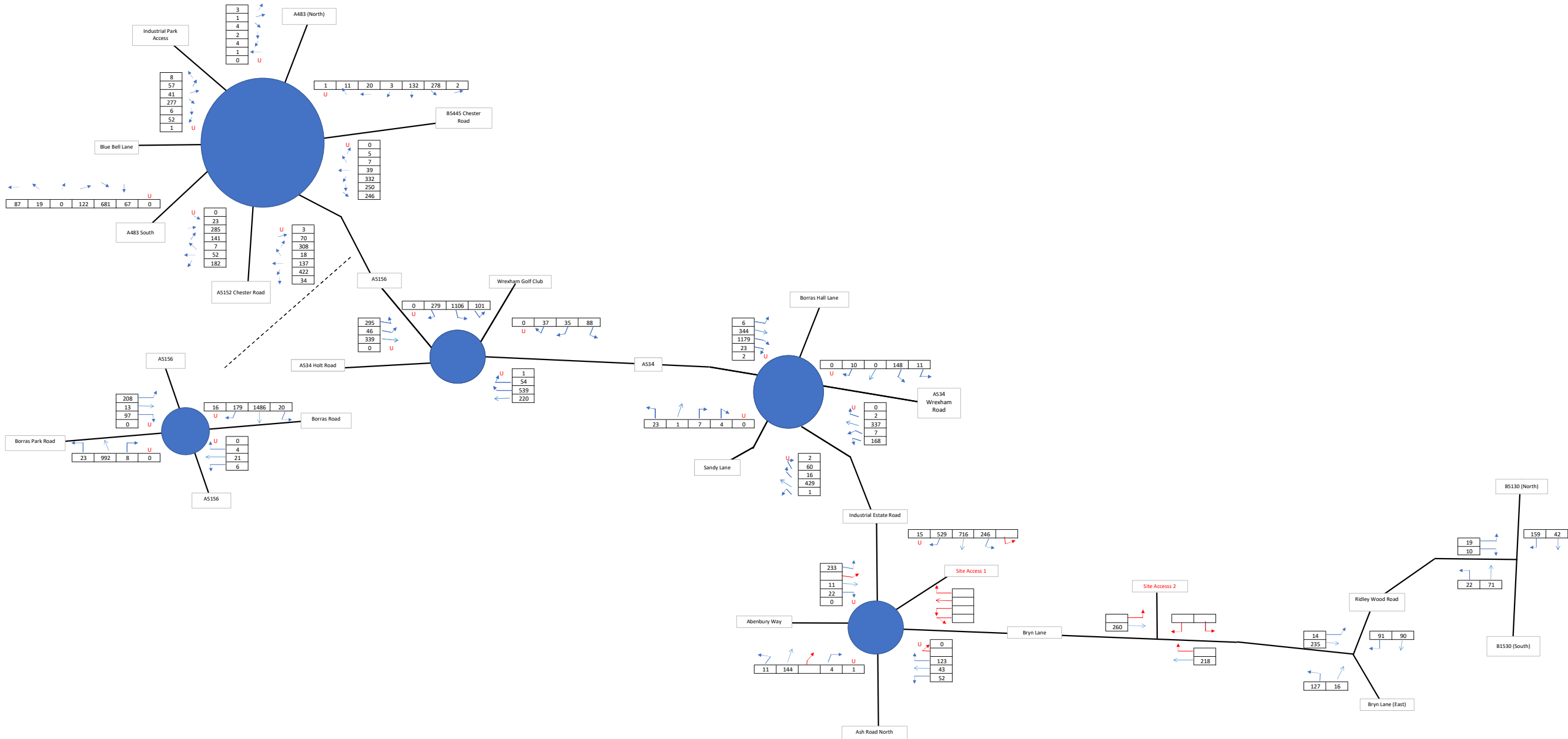


Figure 6 - 2030 Growthed Traffic Flows
PM Peak: 1630-1730

Notes:

123

 PCUs

1.0587

 Growth Factor

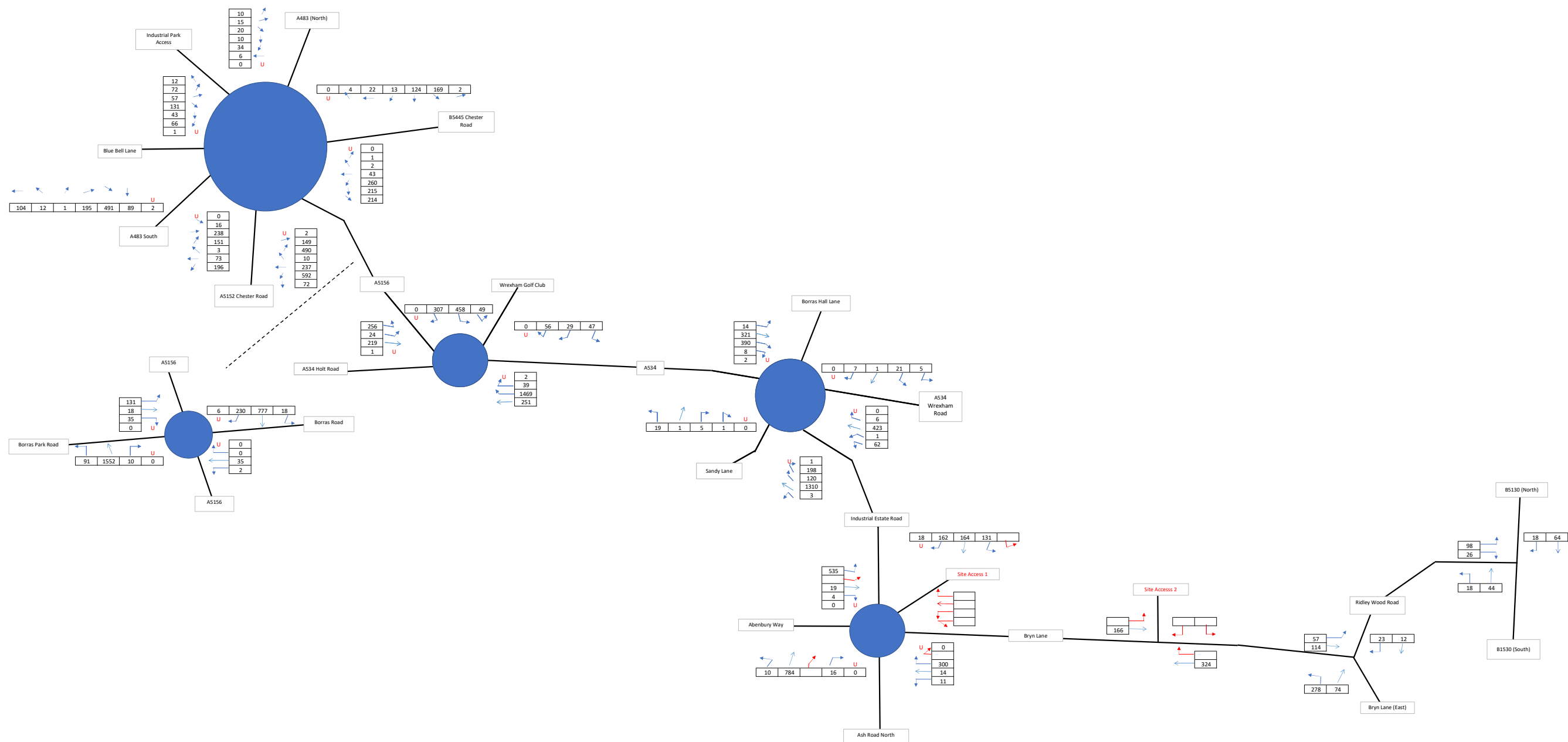


Figure 7a - Development Traffic Distribution (Lights) [Phase 1]
AM Peak

Notes:

%	Arrivals (Lights)
%	Departures (Lights)

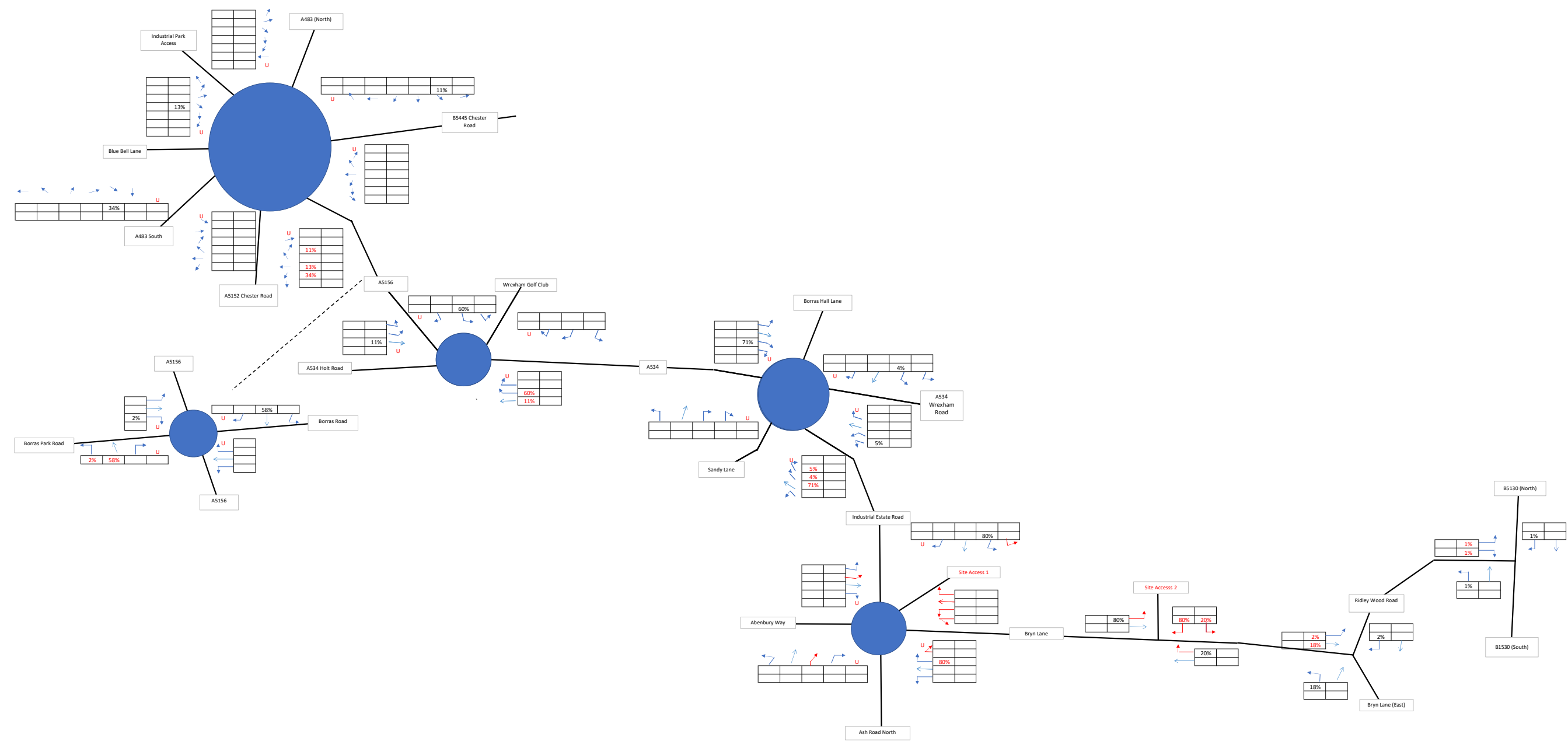


Figure 7b - Development Traffic Distribution (Lights) [Phase 1]
PM Peak

Notes:

%	Arrivals (Lights)
%	Departures (Lights)

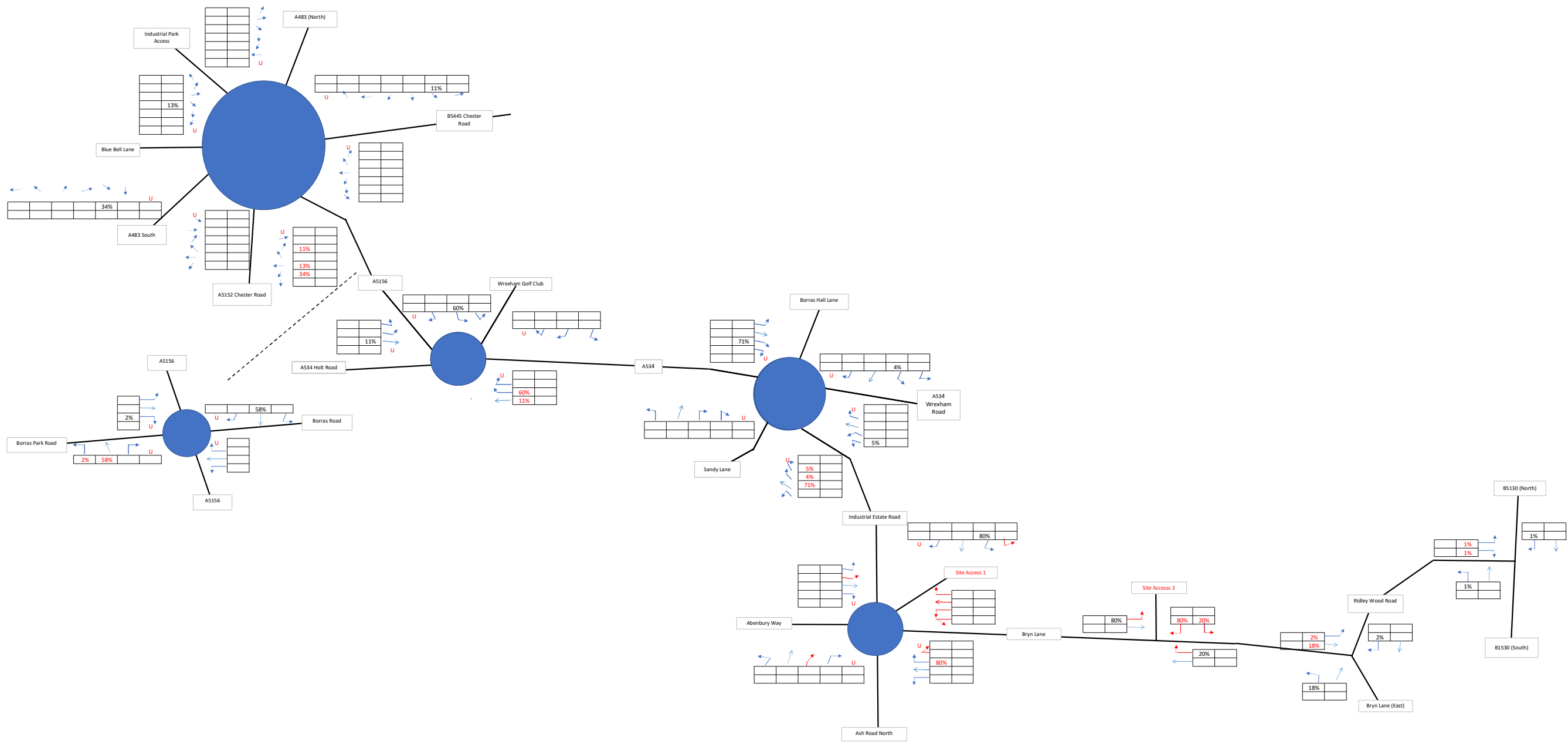


Figure 7c - Development Traffic Distribution (HGVs) [Phase 1]
AM Peak

Notes:

%	Arrivals (HGVs)
%	Departures (HGVs)

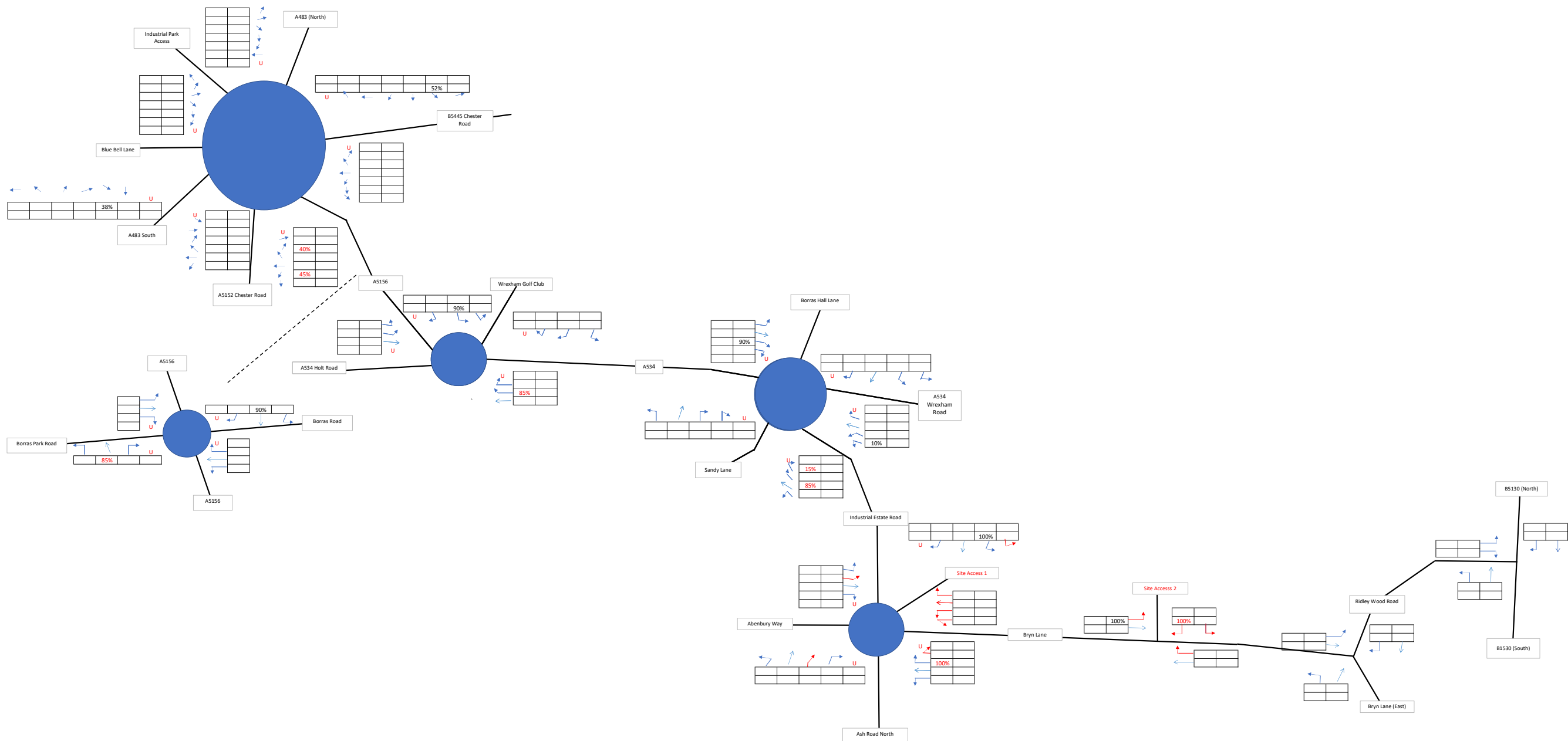


Figure 7d - Development Traffic Distribution (HGVs) [Phase 1]
PM Peak

Notes:

%	Arrivals (HGVs)
%	Departures (HGVs)

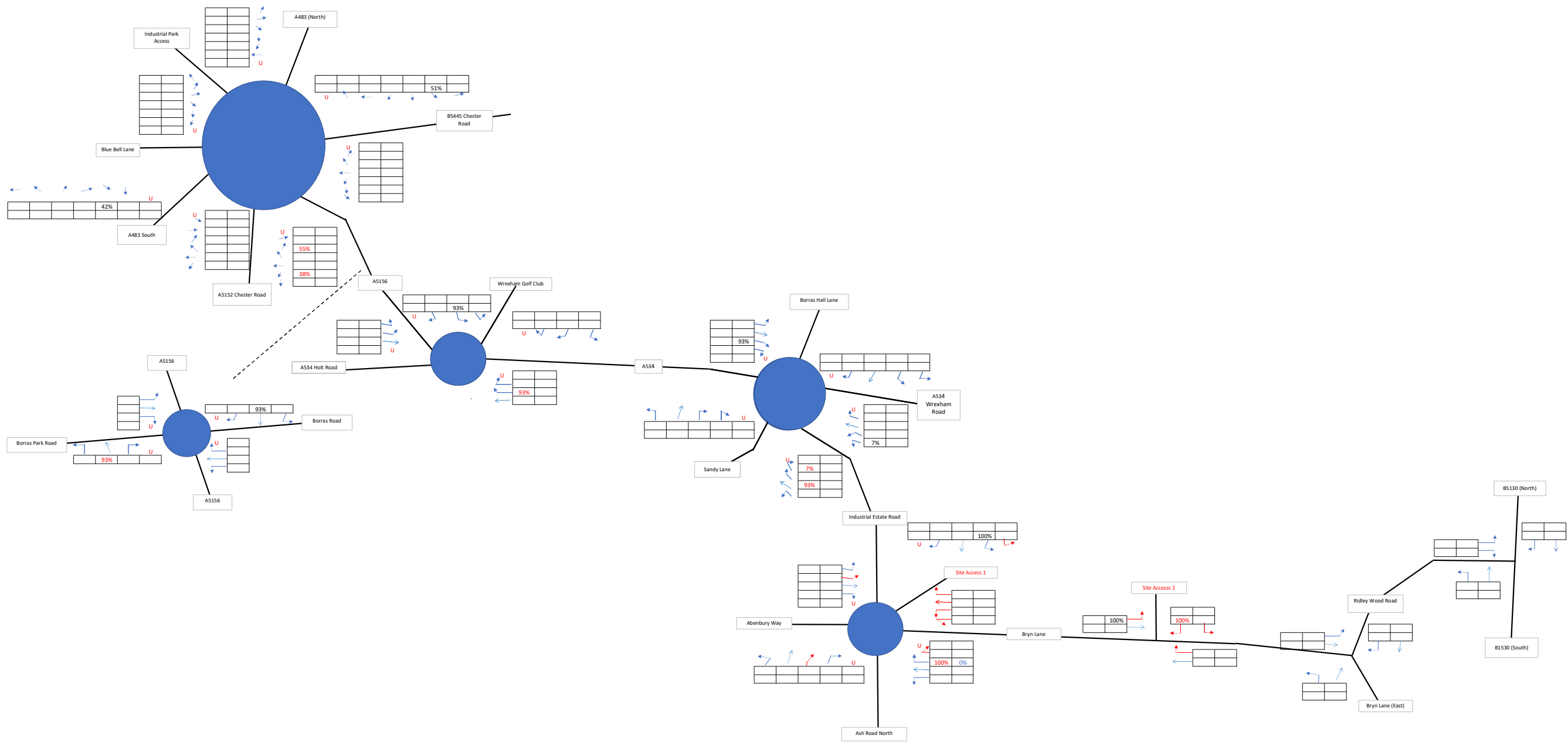


Figure 7e - Development Traffic Distribution (Lights) [Phase 2]
AM Peak

Notes: % Arrivals (Lights)
% Departures (Lights)
% Retail / Mixed Use (Lights)

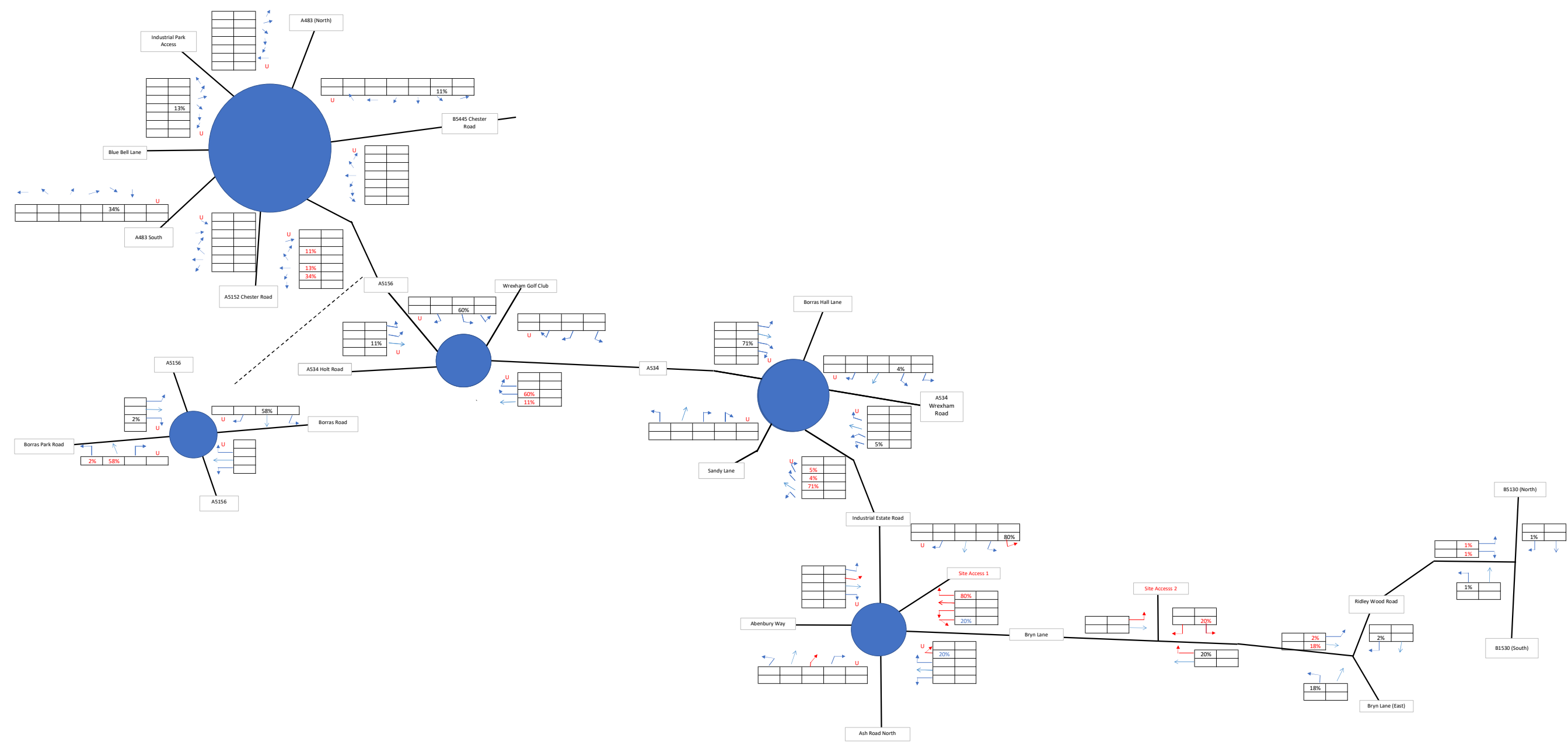


Figure 7f - Development Traffic Distribution (Lights) [Phase 2]
PM Peak

Notes:

%	Arrivals (Lights)
%	Departures (Lights)
%	Retail / Mixed Use (Lights)

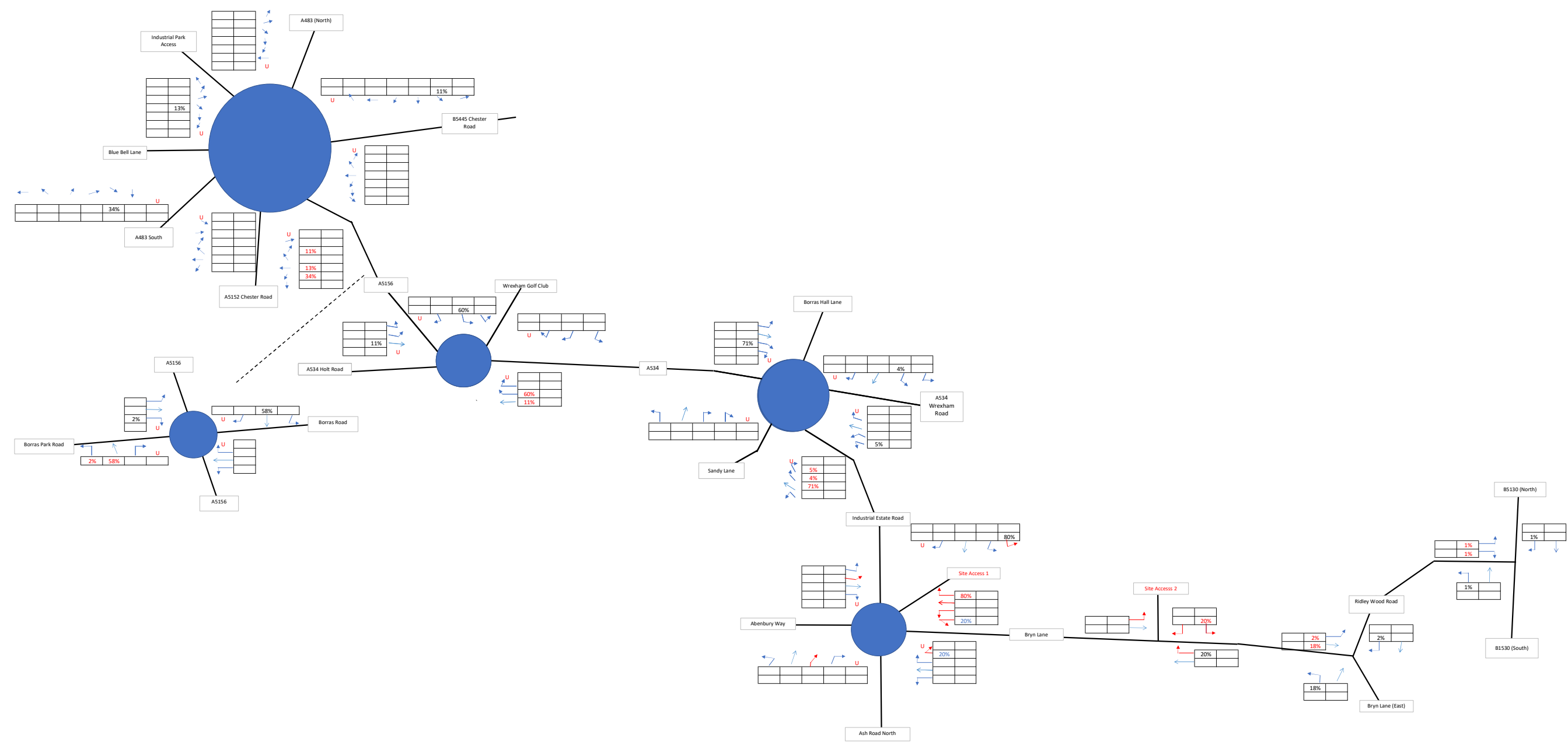


Figure 7g - Development Traffic Distribution (HGVs) [Phase 2]
AM Peak

Notes:

%	Arrivals (HGVs)
%	Departures (HGVs)

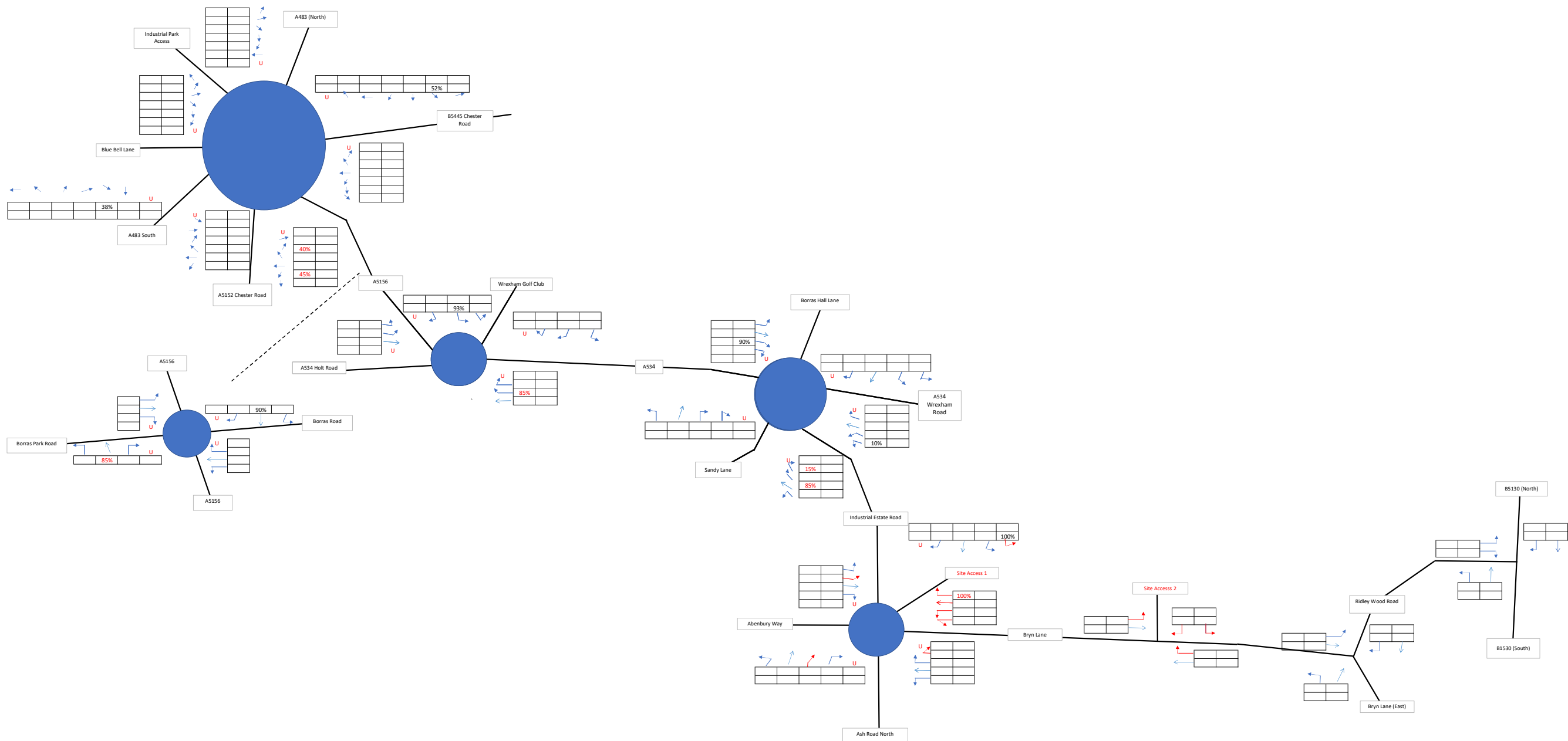


**Figure 7g - Development Traffic Distribution (HGVs) [Phase 2]
PM Peak**

Notes:

%
%

 Arrivals (HGVs)
Departures (HGVs)

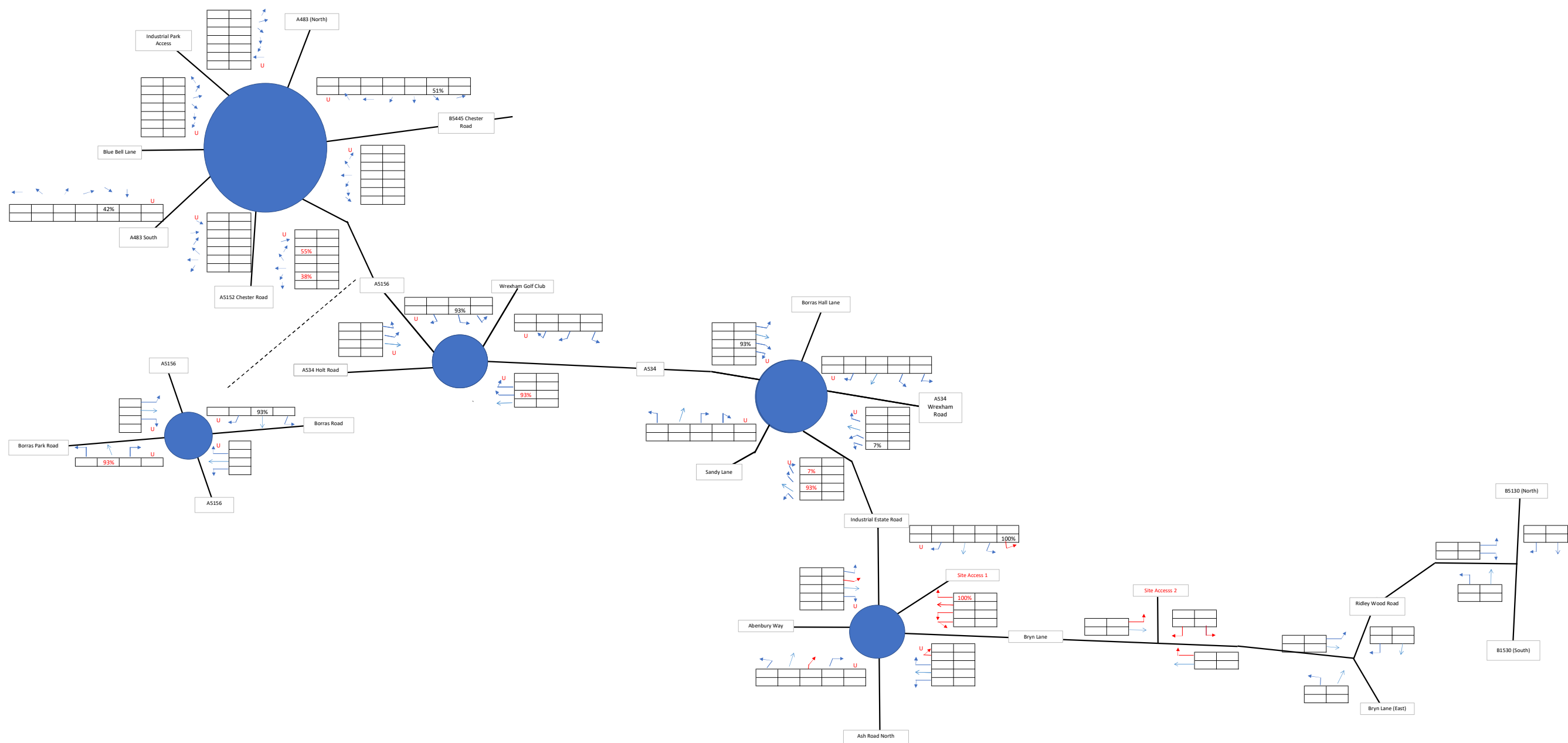


Figure 8a - Industrial Estate Development Trips (Lights) [Phase 1]
AM Peak: 0800-0900

Notes:

160

 Arrivals

38

 Departures

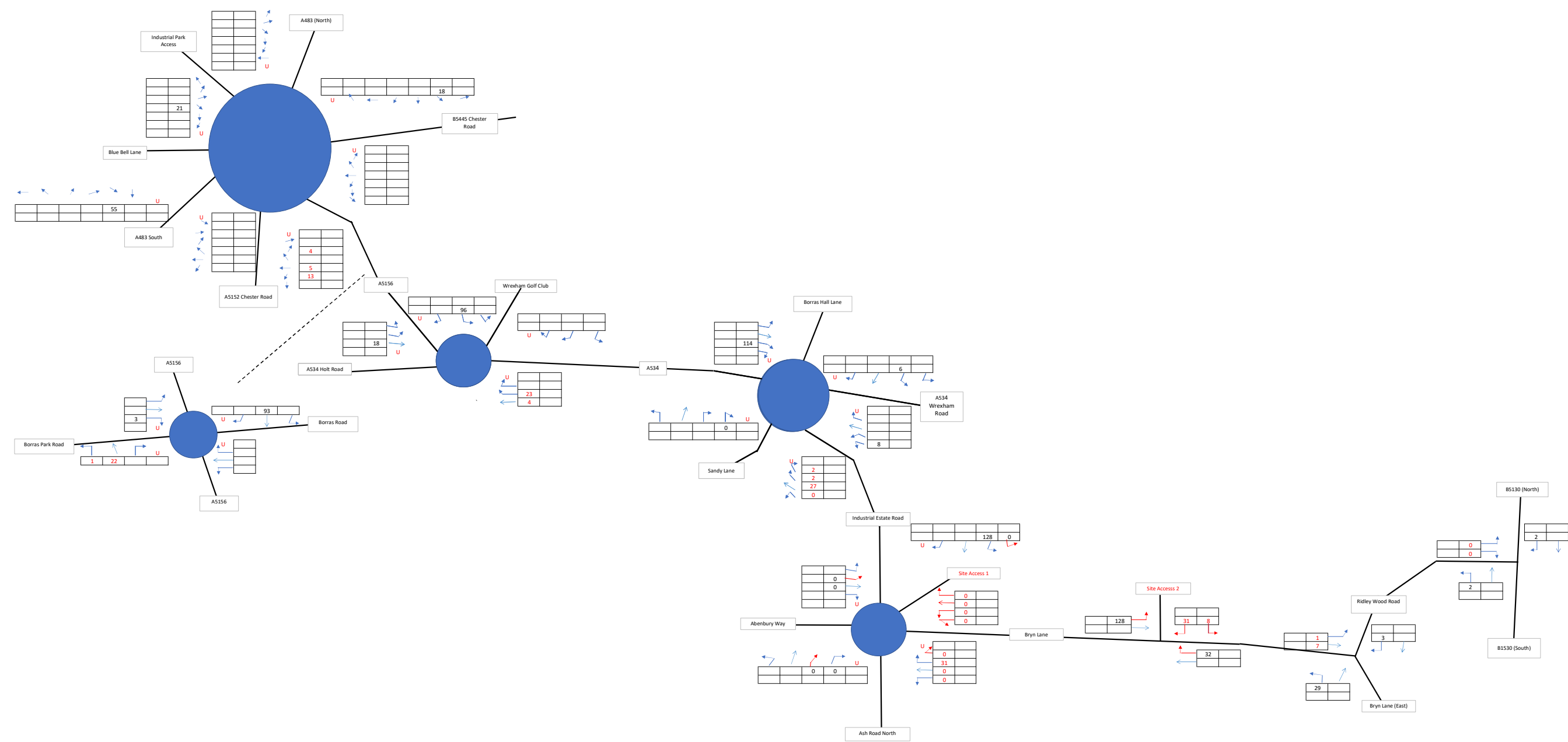


Figure 8b - Industrial Estate Development Trips (Lights) [Phase 1]
PM Peak: 1630-1730

Notes:

52	Arrivals
139	Departures

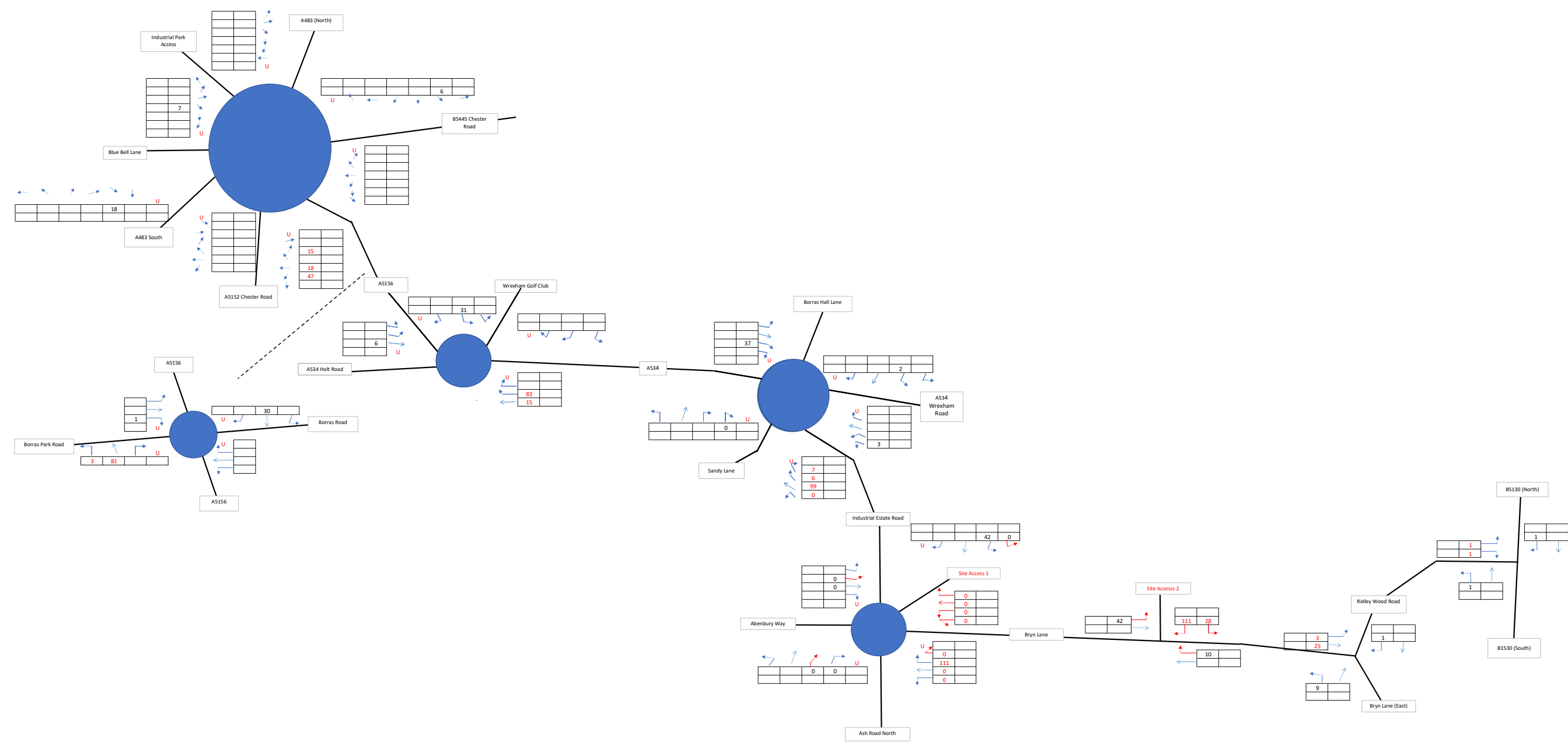


Figure 8c - Industrial Estate Development Trips (HGVs) [Phase 1]
AM Peak: 0800-0900

Notes:

18	Arrivals
26	Departures

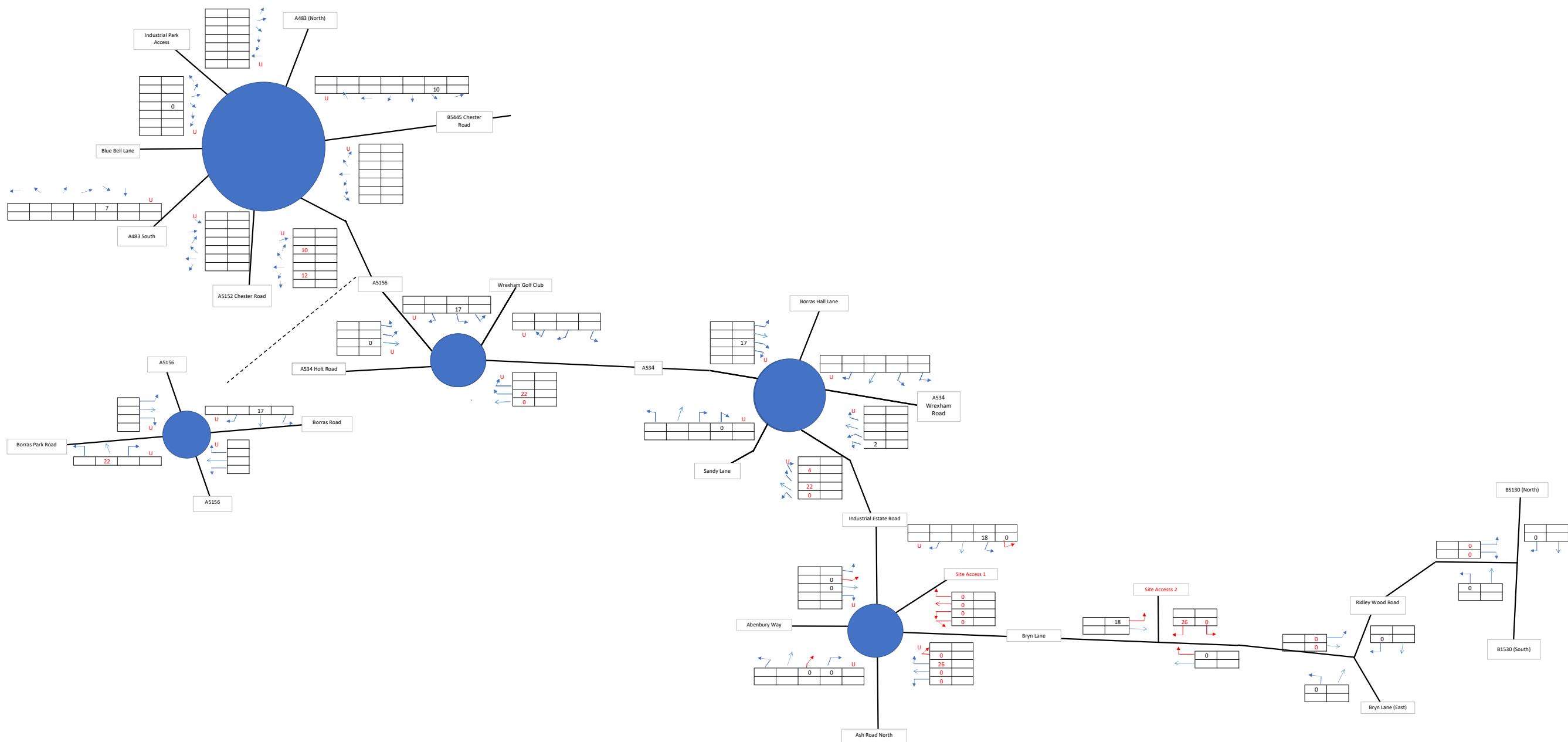


Figure 8d - Industrial Estate Development Trips (HGVs) [Phase 1]
PM Peak: 1630-1730

Notes:

26	Arrivals
19	Departures

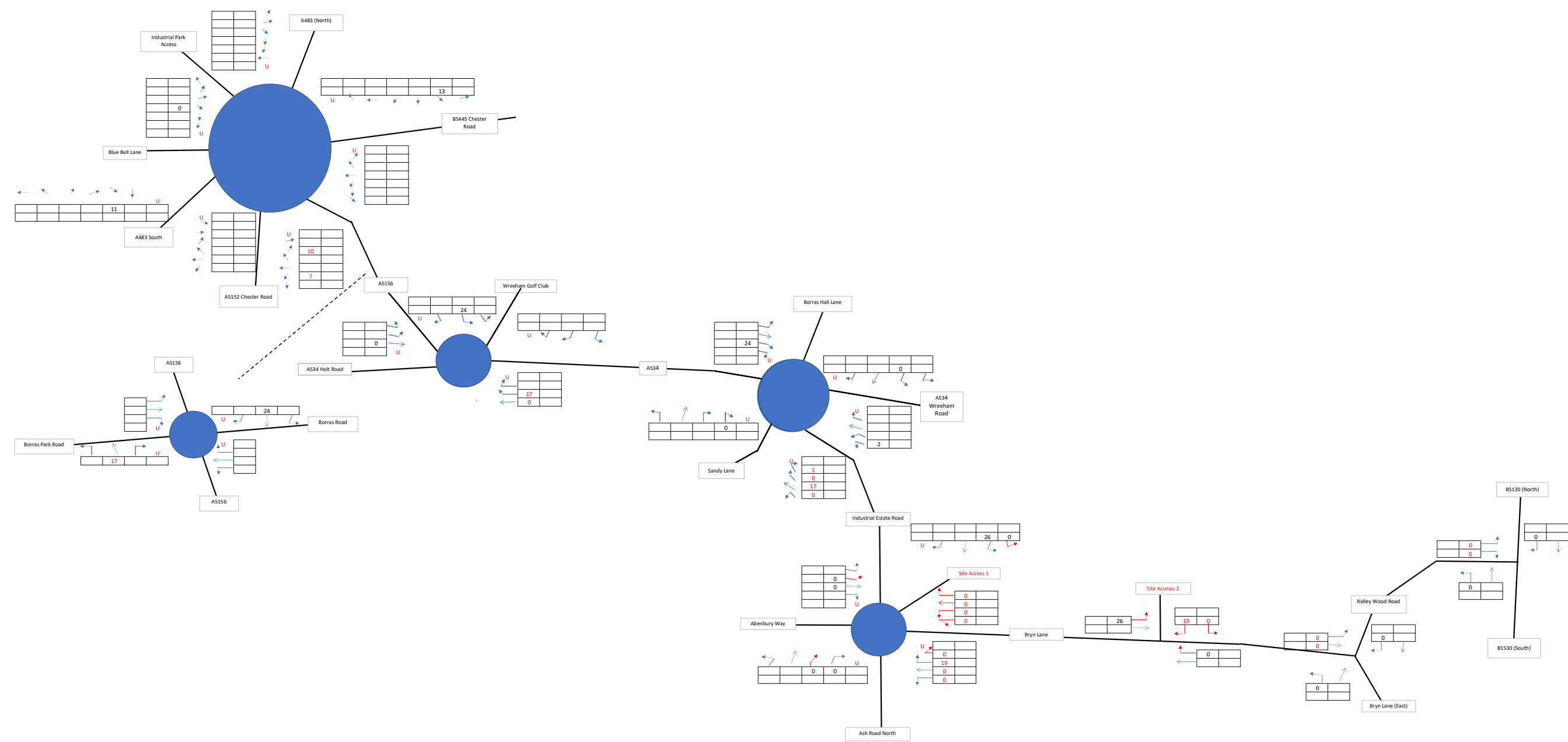
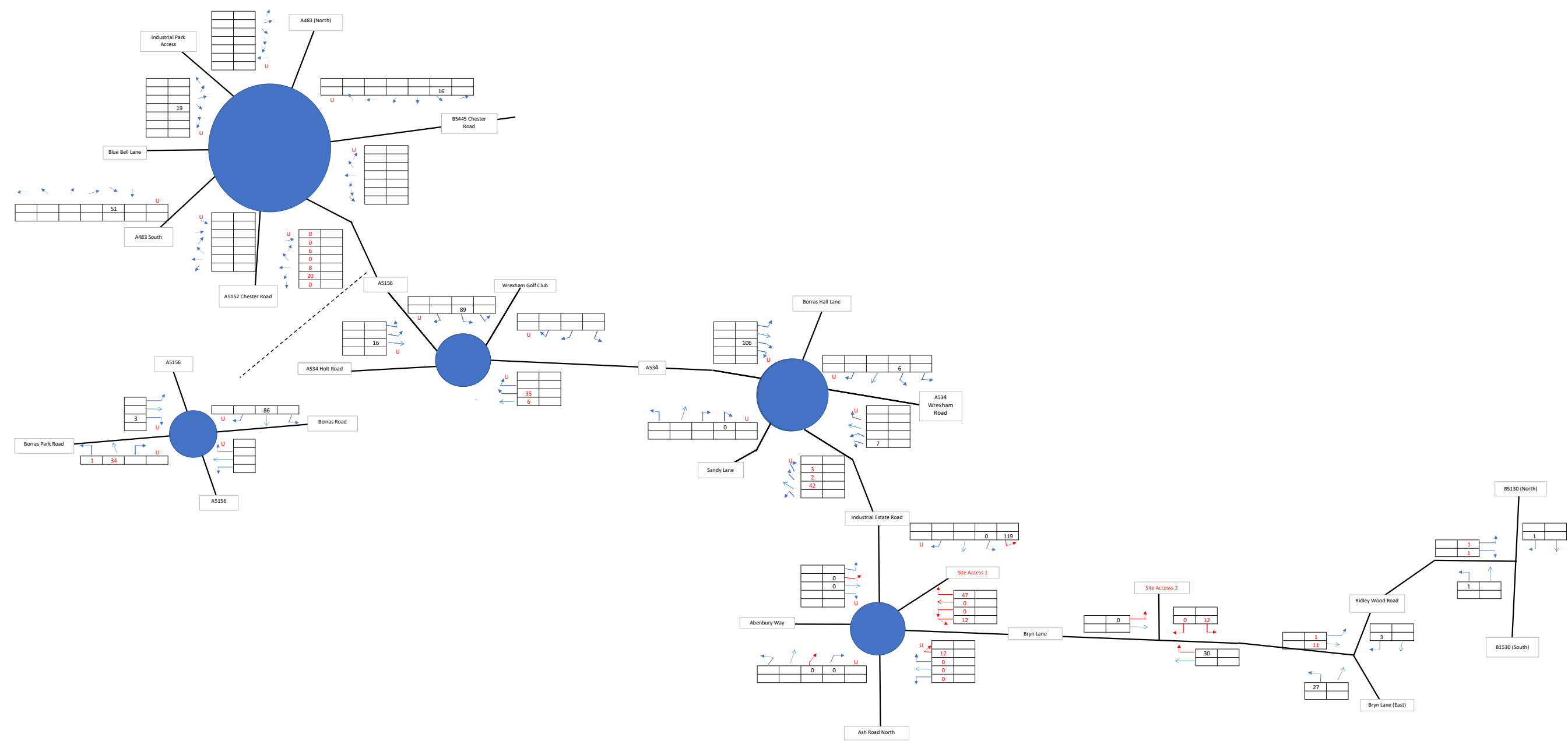


Figure 8e - Industrial Estate Development Trips (Lights) [Phase 2]
AM Peak: 0800-0900

Notes: 149 Arrivals
58 Departures



Notes:

69
132

 Arrivals
Departures

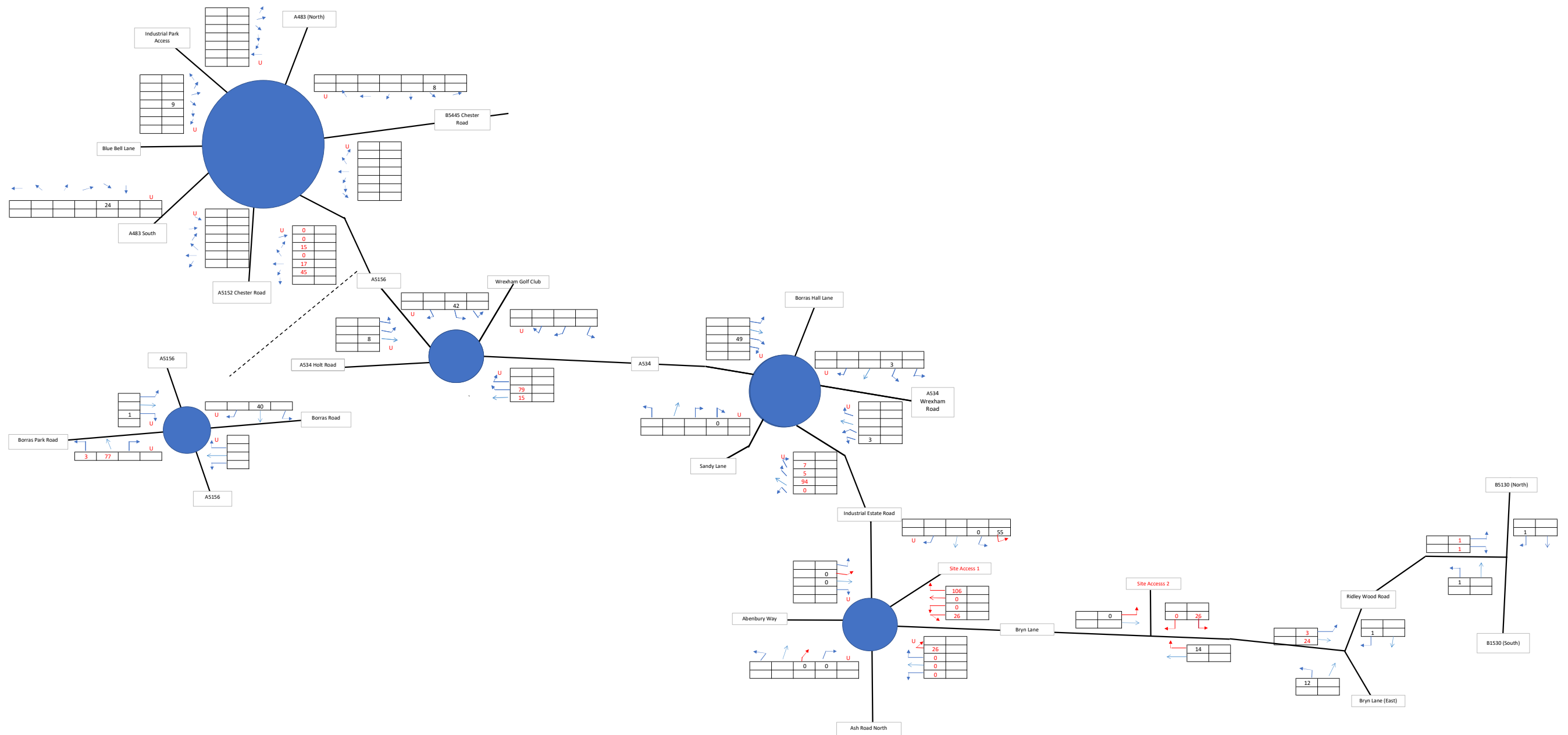


Figure 8g - Industrial Estate Development Trips (HGVs) [Phase 2]
AM Peak: 0800-0900

Notes:

17	Arrivals
25	Departures

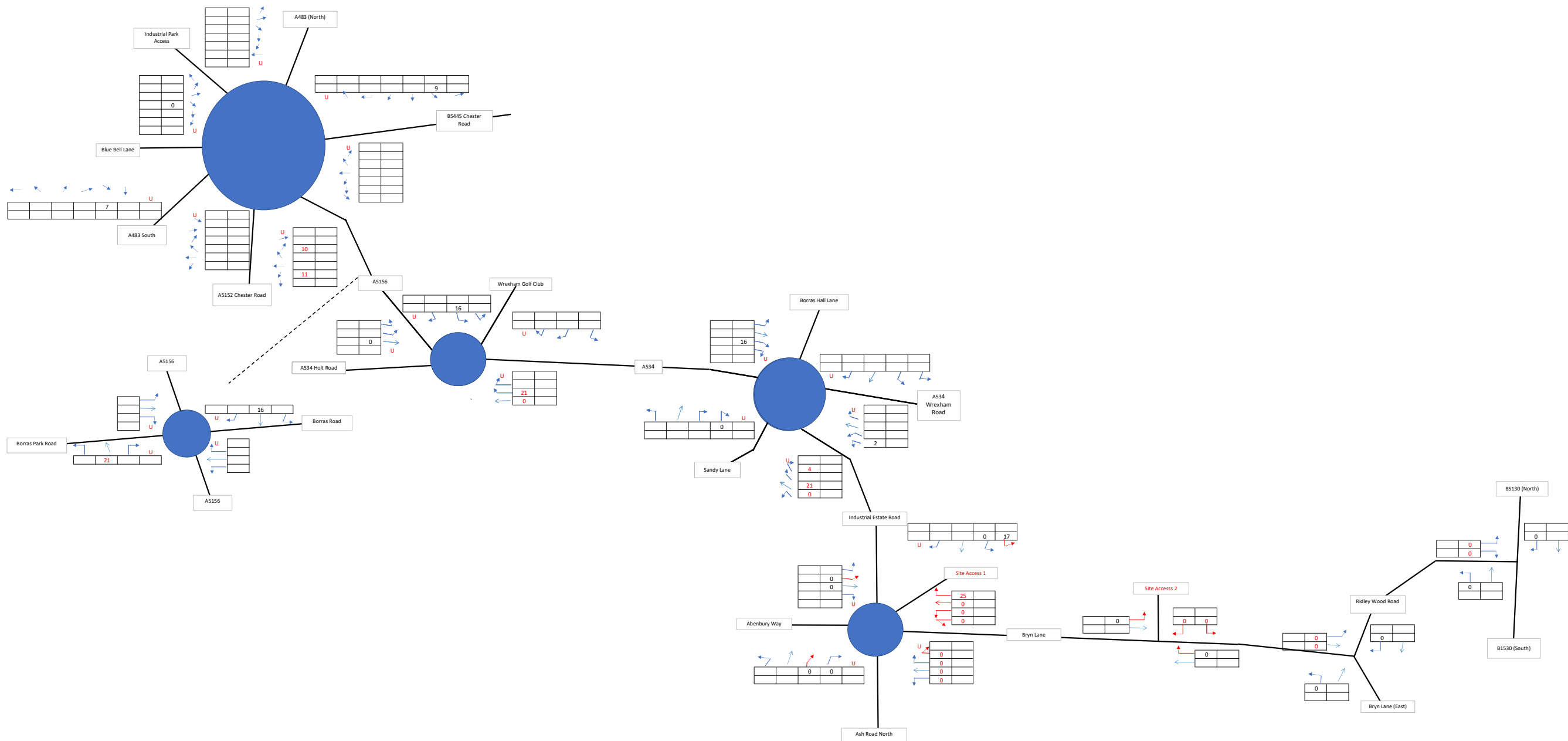


Figure 8h - Industrial Estate Development Trips (HGVs) [Phase 2]
PM Peak: 1630-1730

Notes: 25 Arrivals
18 Departures

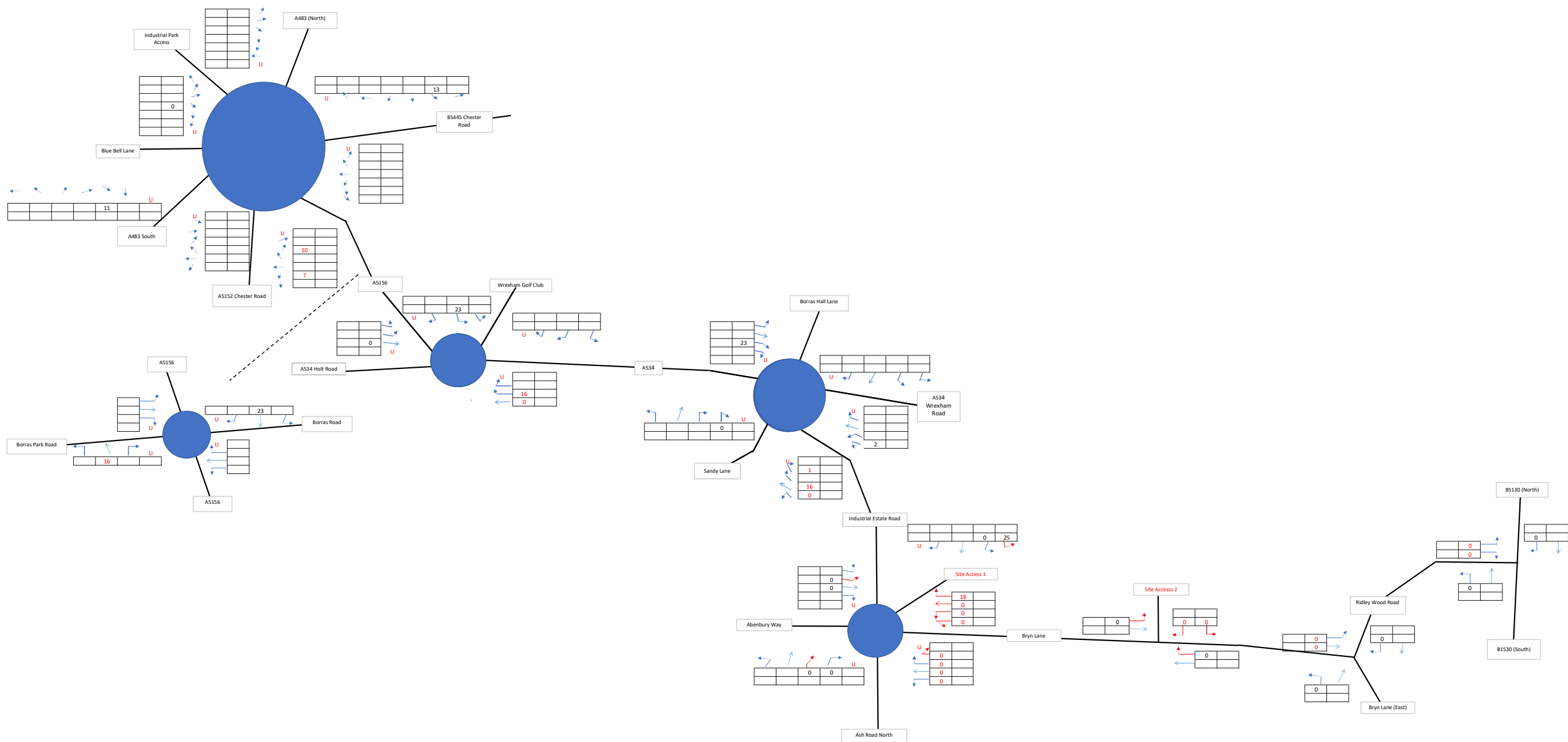


Figure 9 - Dummy Figure

Notes:

#REF!	Arrivals
#REF!	Departures

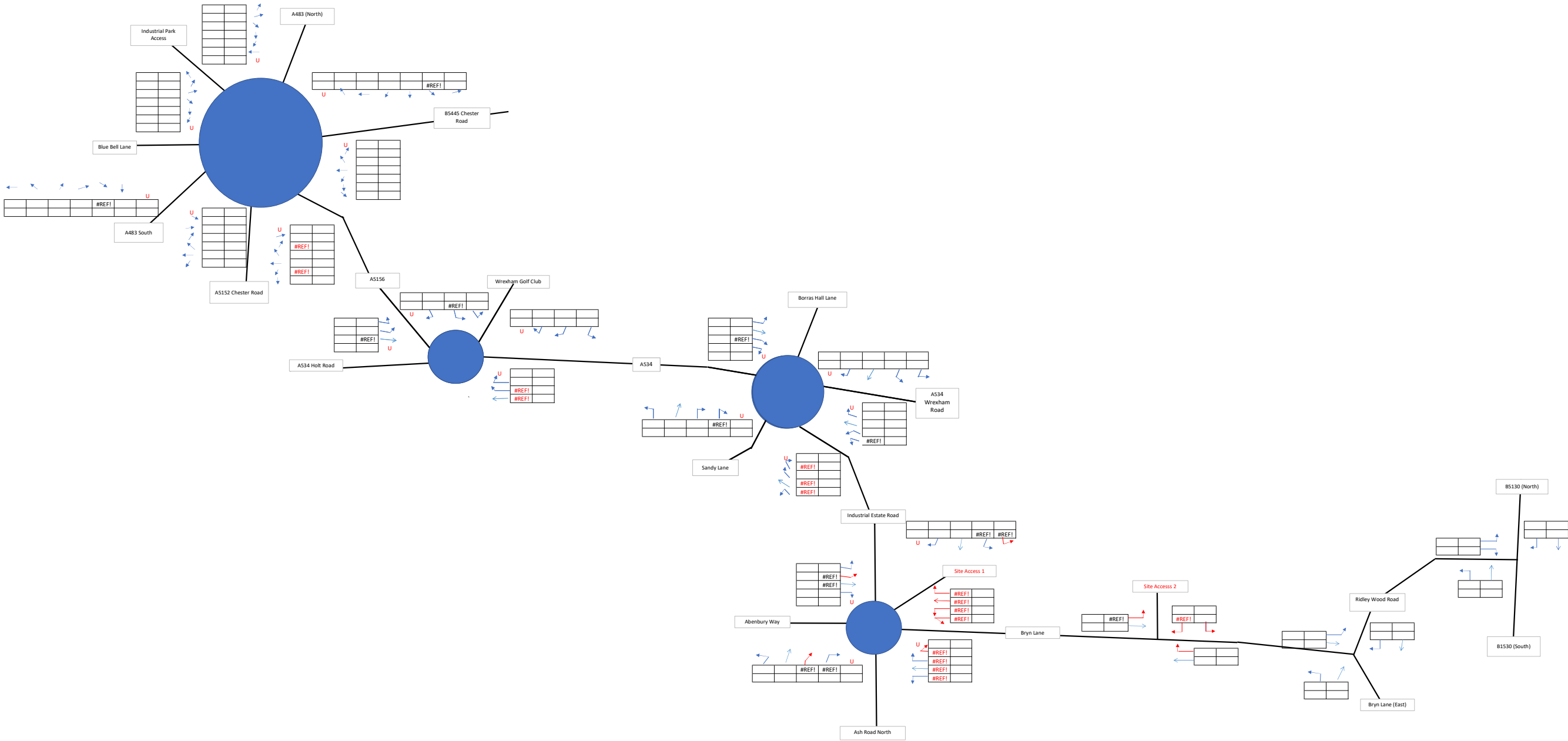


Figure 10 - Hotel Development Trips
AM Peak: 0800-0900

Notes:

9	Arrivals
18	Departures

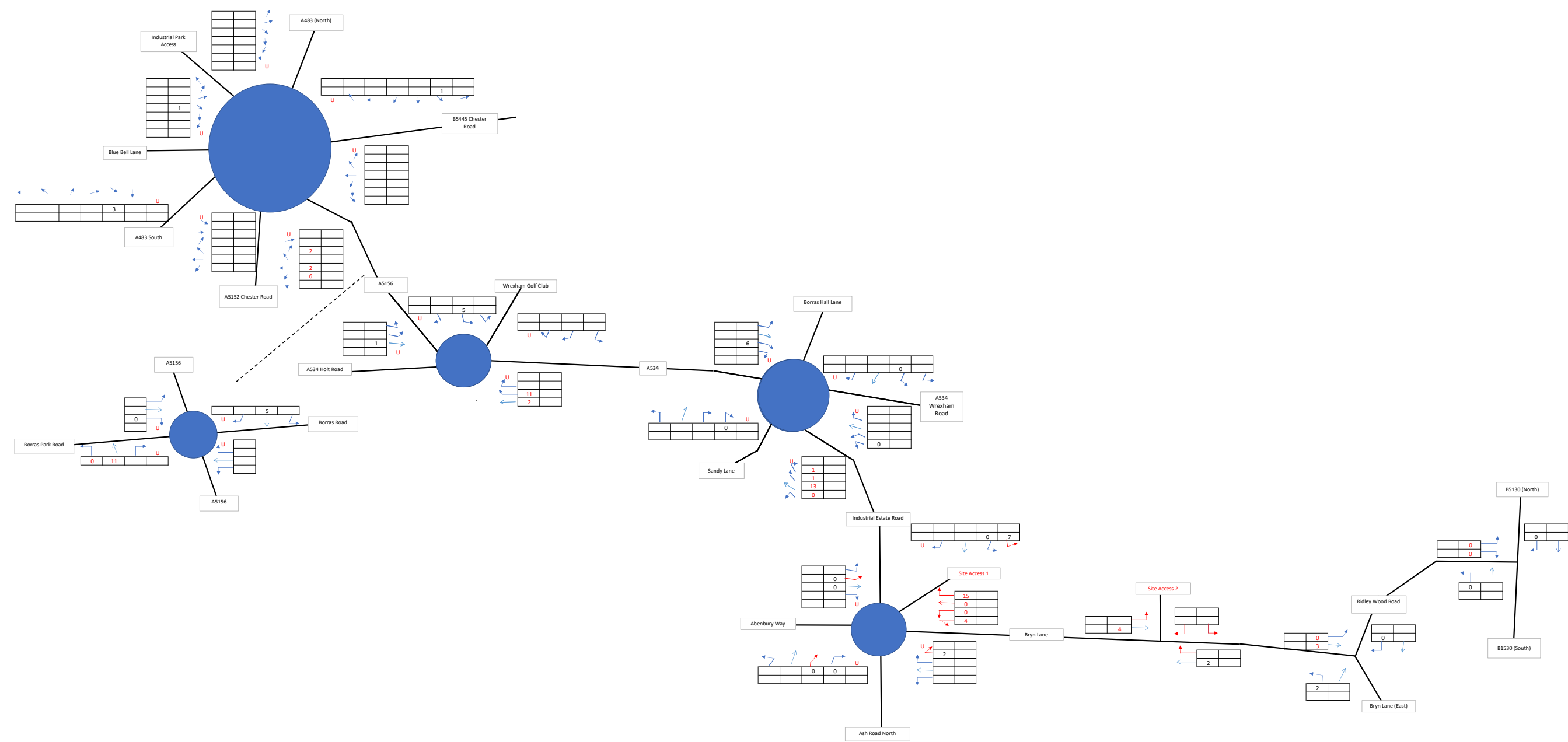


Figure 11 - Hotel Development Trips
PM Peak: 1630-1730

Notes:

13	Arrivals
8	Departures

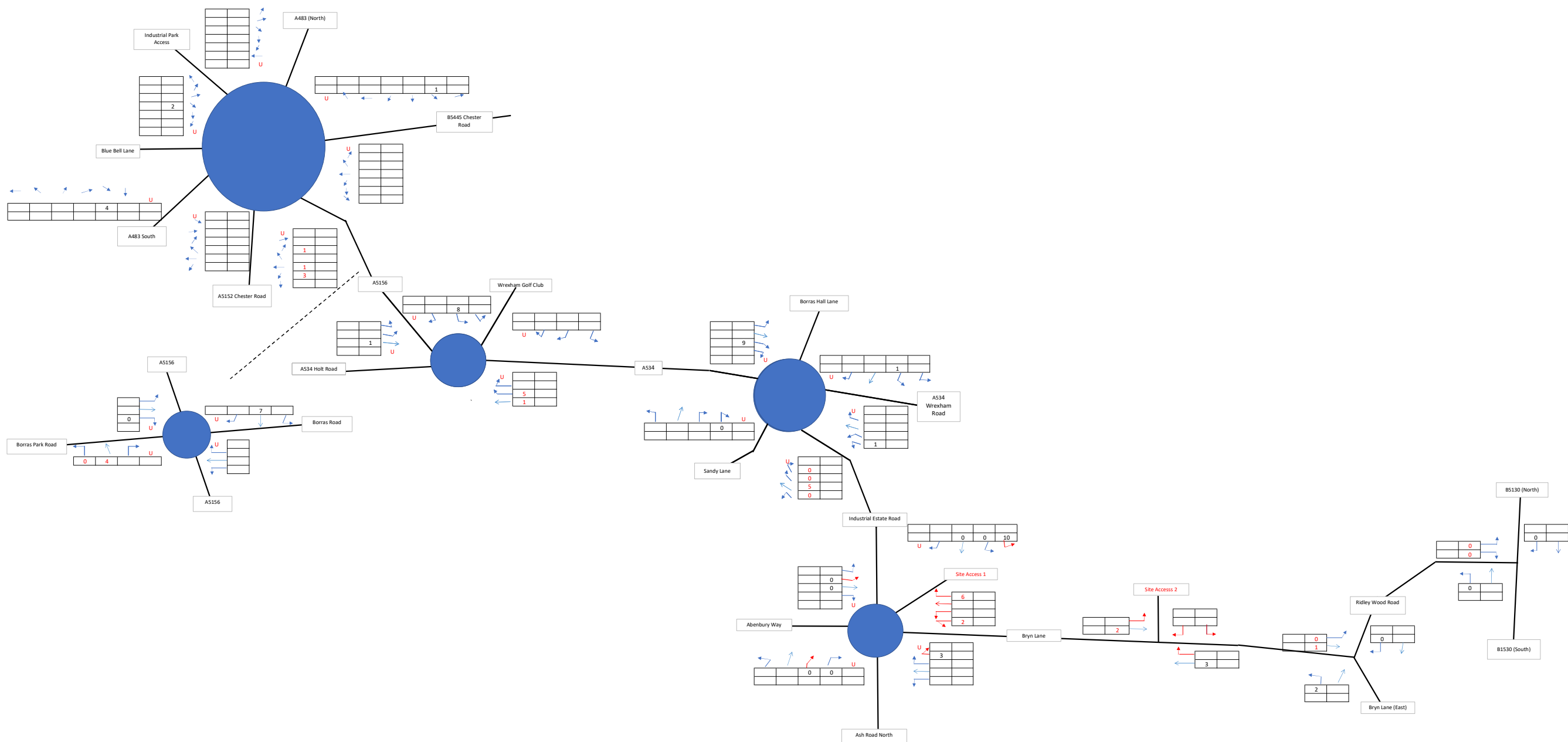


Figure 12 - Pass-By Trips (Local Centre, Drive-Thru & PFS)
AM Peak: 0800-0900

Notes:

283

 Arrivals

270

 Departures

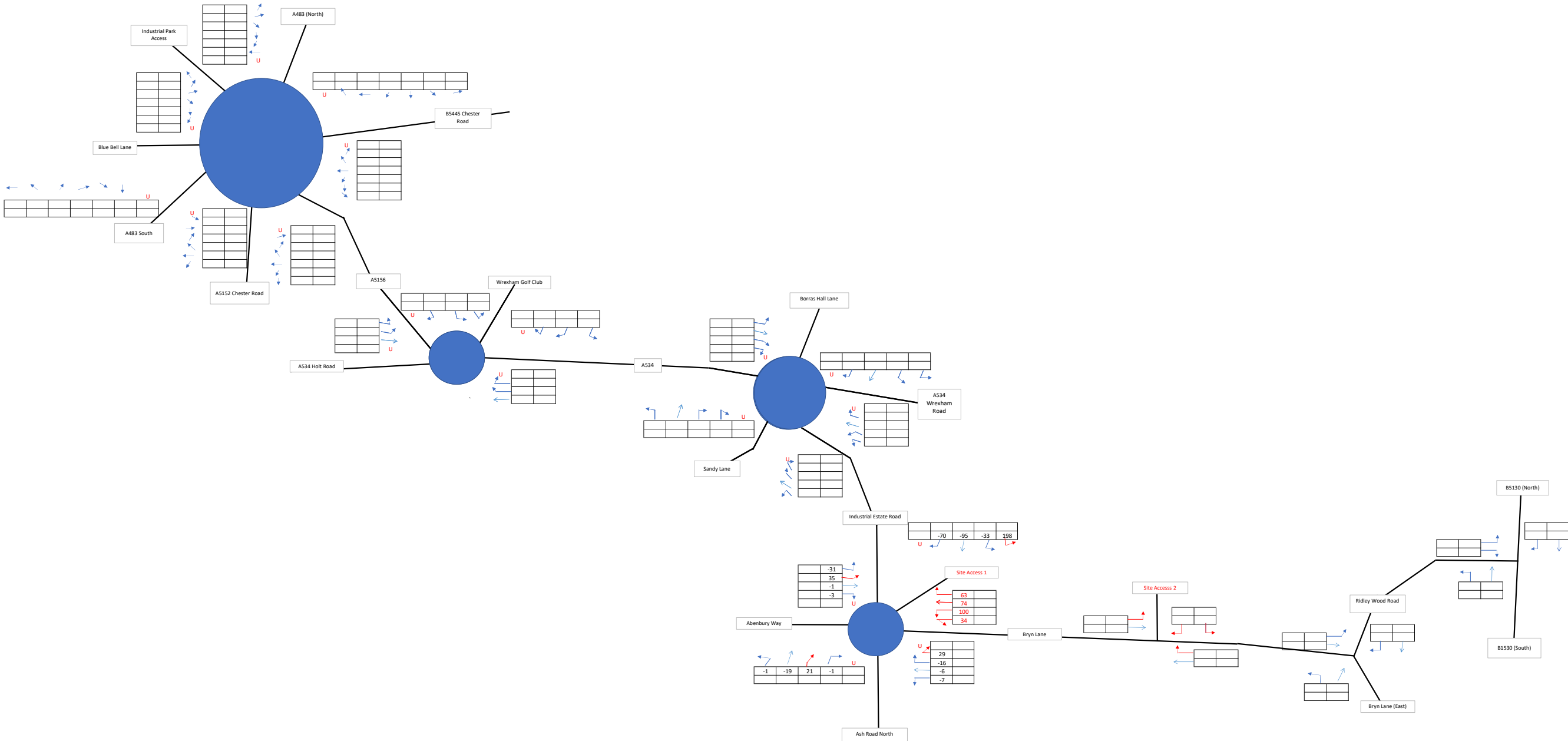


Figure 13 - Pass-By Trips (Local Centre, Drive-Thru & PFS)
PM Peak: 1630-1730

Notes:

332

 Arrivals

343

 Departures

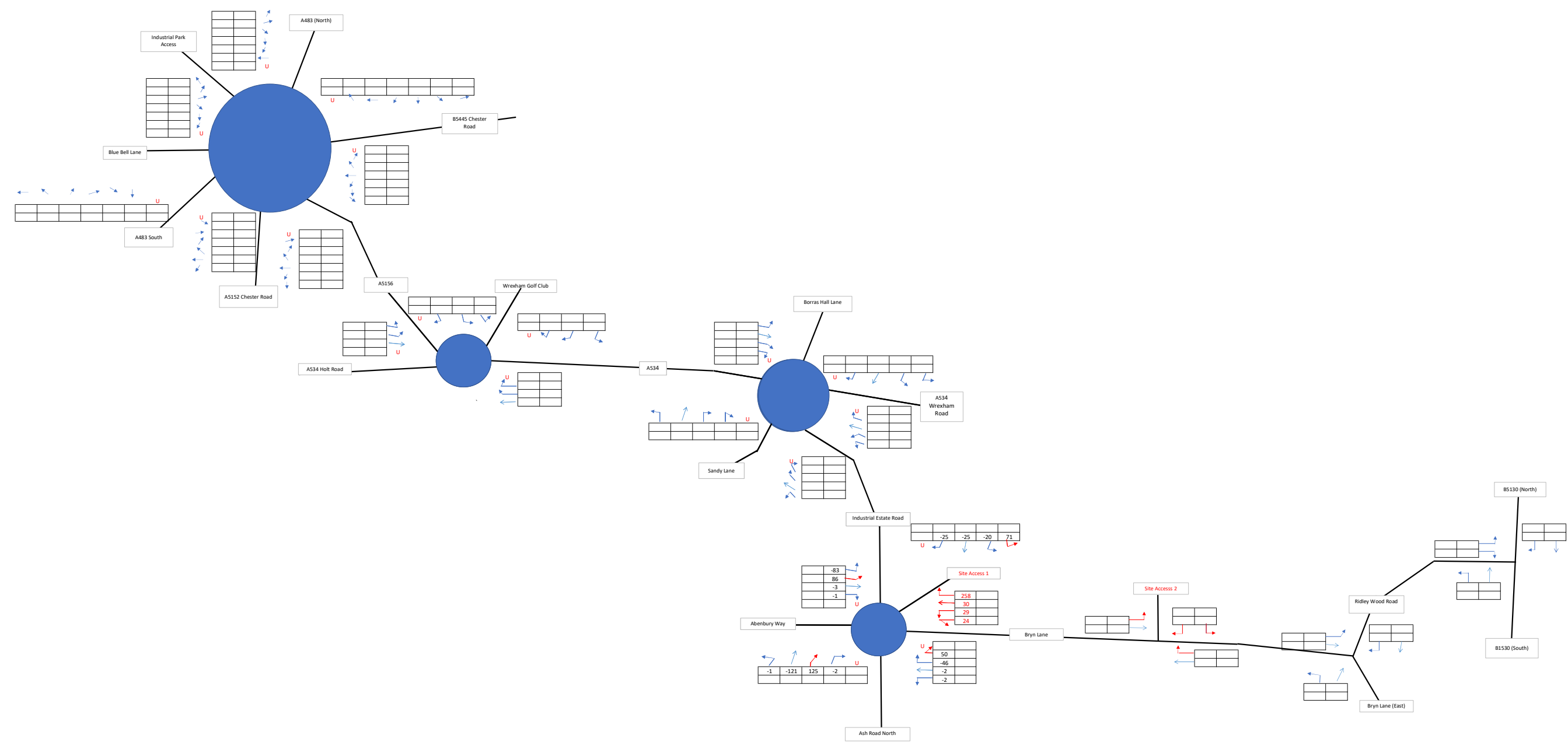


Figure 14 - New Trips (Local Centre, Drive-Thru & PFS)
AM Peak: 0800-0900

Notes:

31	Arrivals
30	Departures

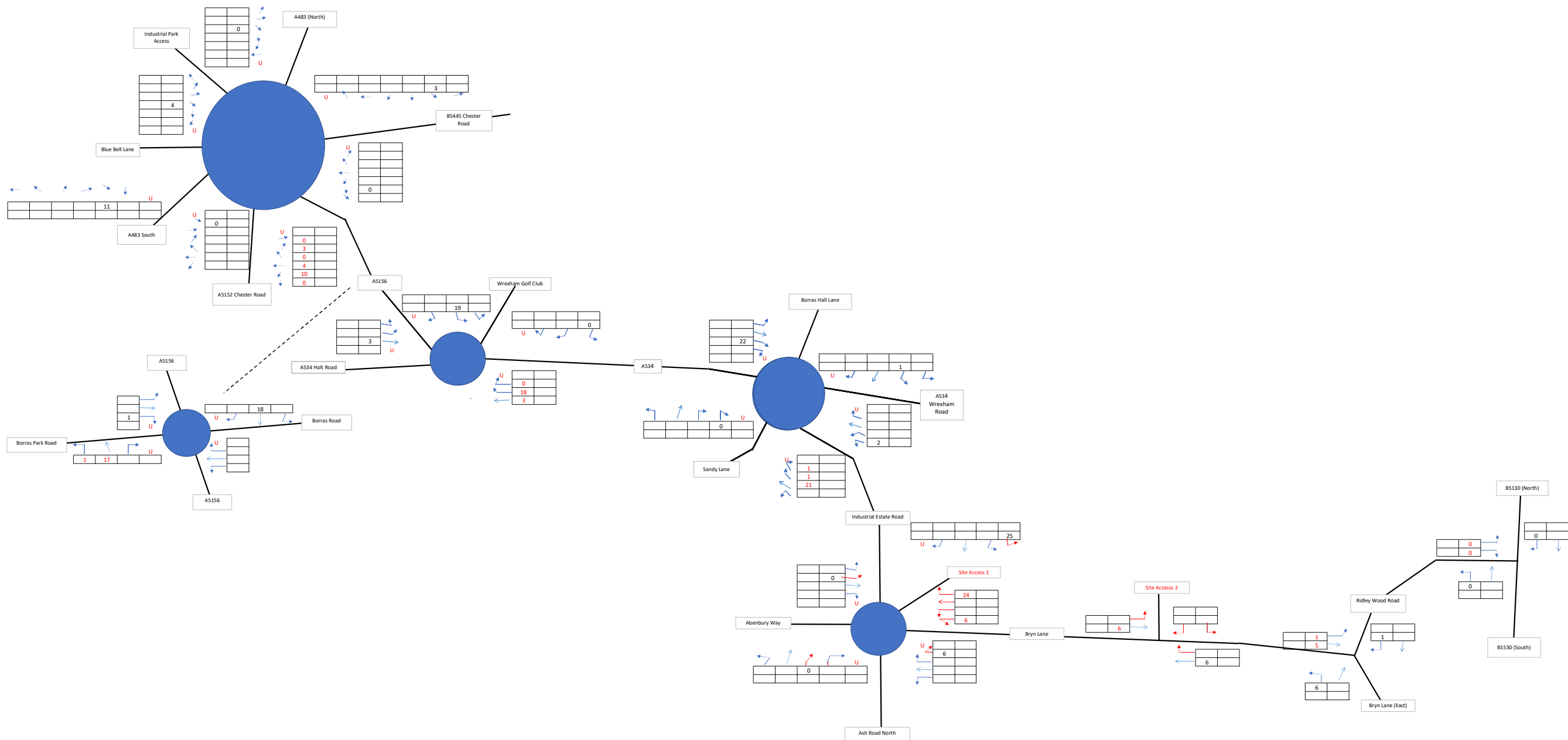
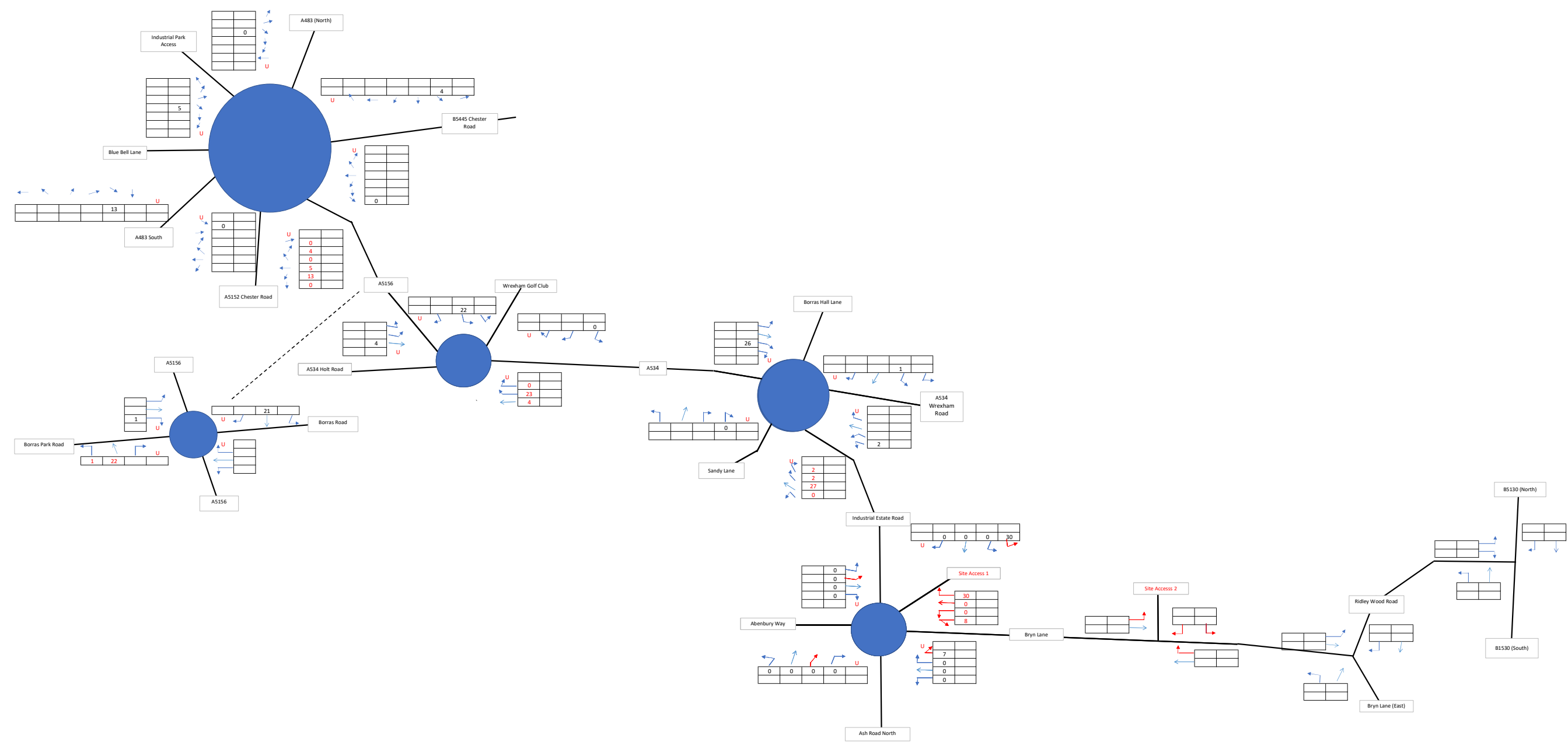


Figure 15 - New Trips (Local Centre, Drive-Thru & PFS)
PM Peak: 1630-1730

Notes:

37	Arrivals
38	Departures



Notes:

123

 PCUs

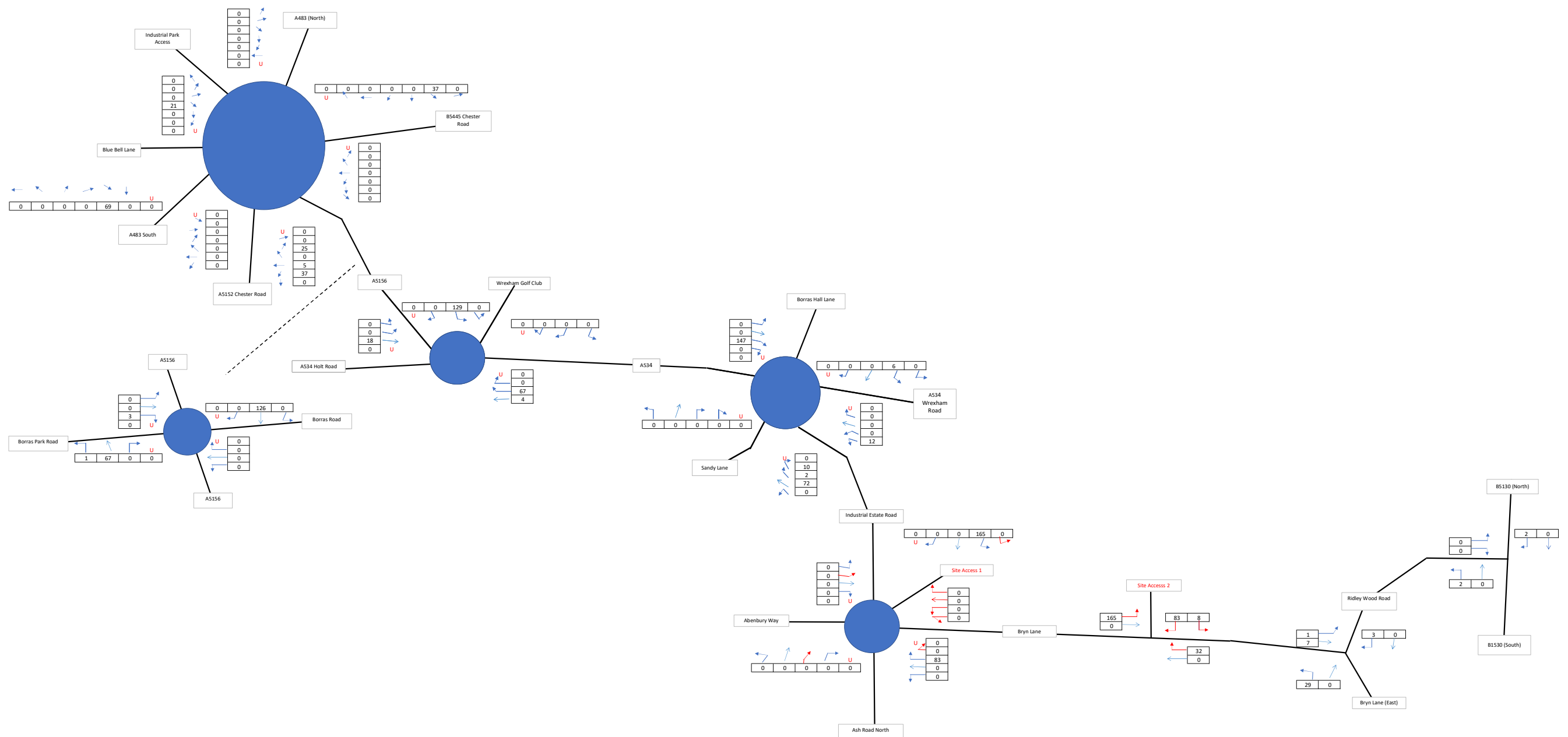
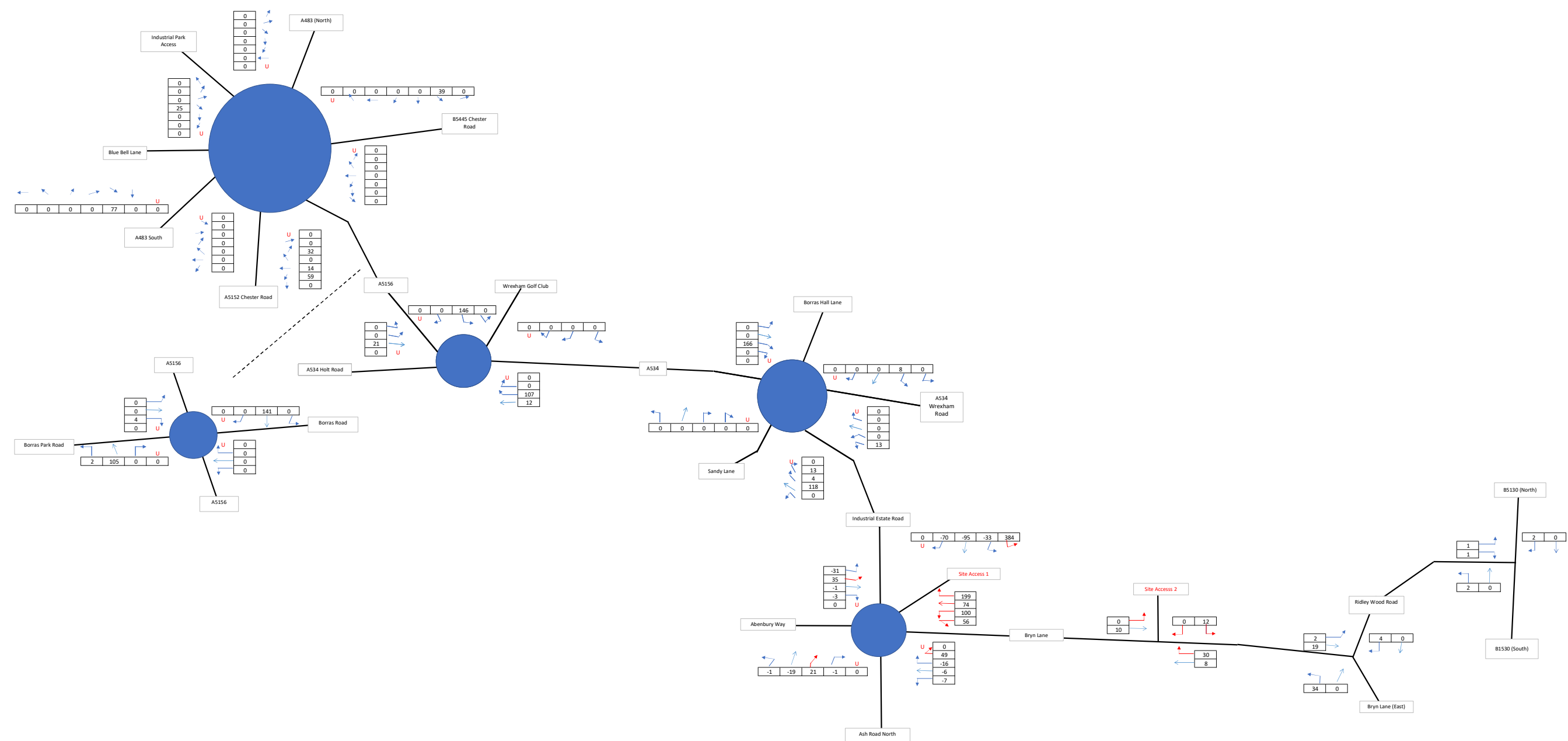


Figure 16a - Total Development Trips [Phase 1 + 2]
AM Peak: 0800-0900

Notes:

-123

 PCUs



Notes:

123

 PCUs

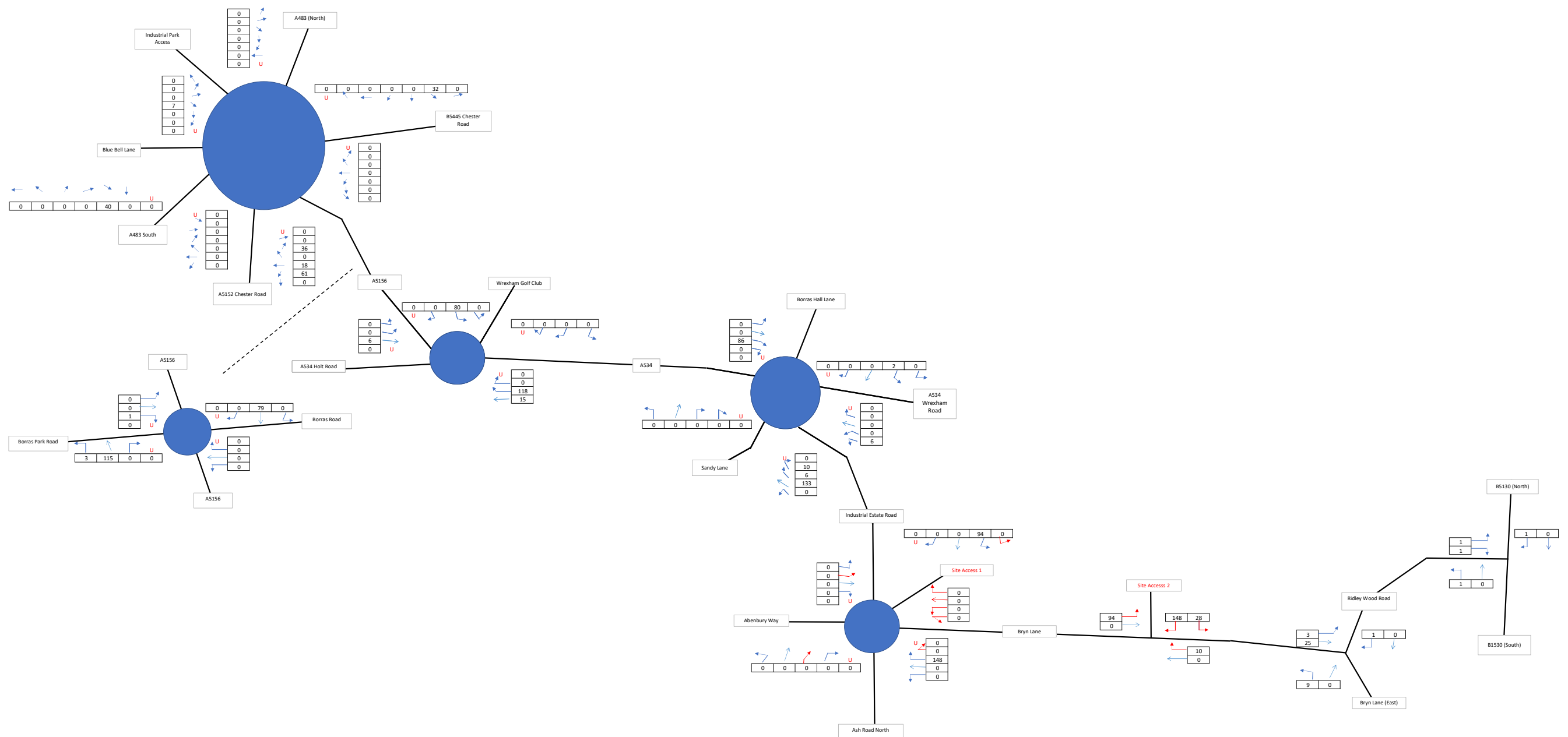


Figure 17a - Total Development Trips [Phase 1 + 2]
PM Peak: 1630-1730

Notes:

-123

 PCUs

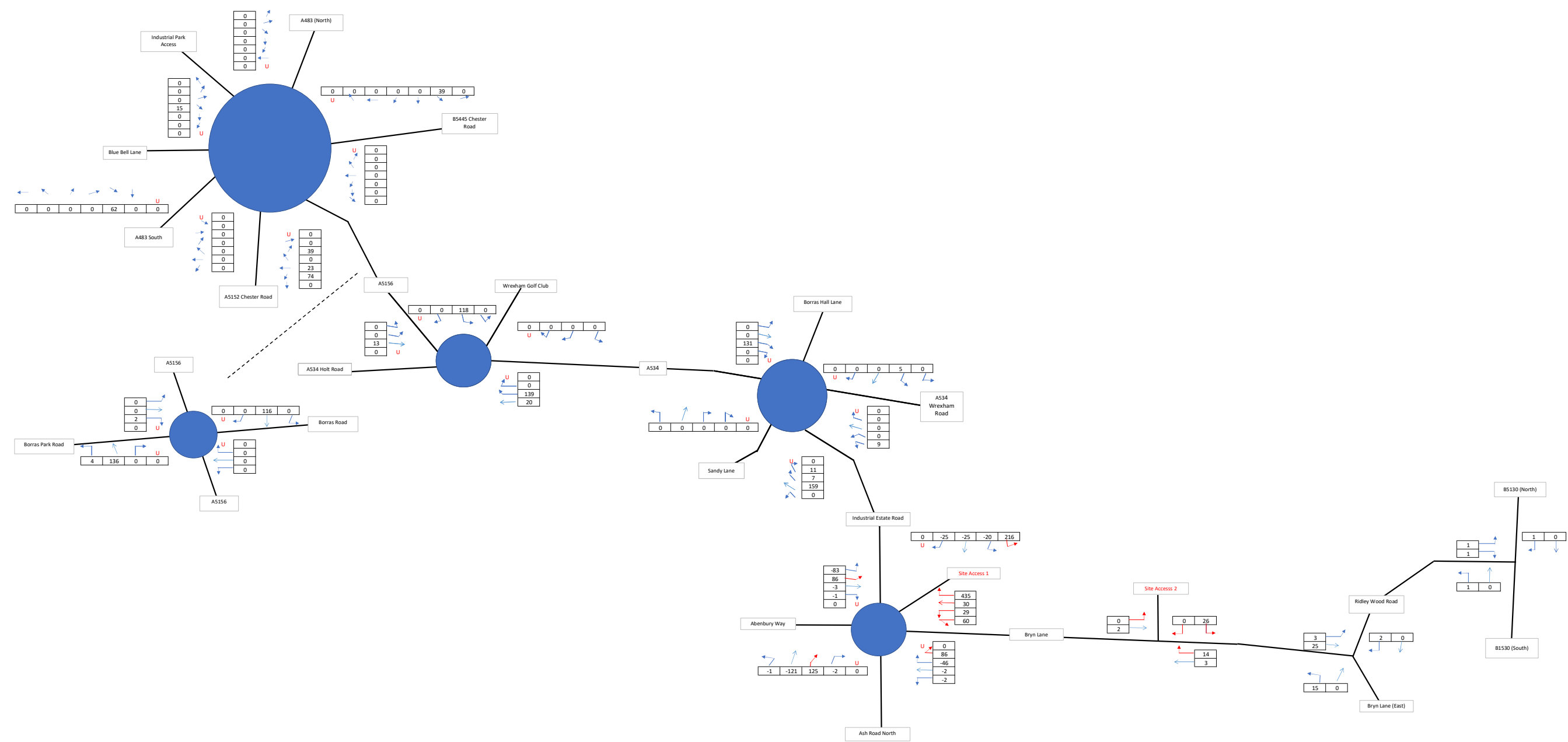


Figure 18 - Pacific Park Committed Traffic
AM Peak

Notes:

6	Arrivals
1	Departures

GFA 2567 sqm
Arr 0.228
Dep 0.028

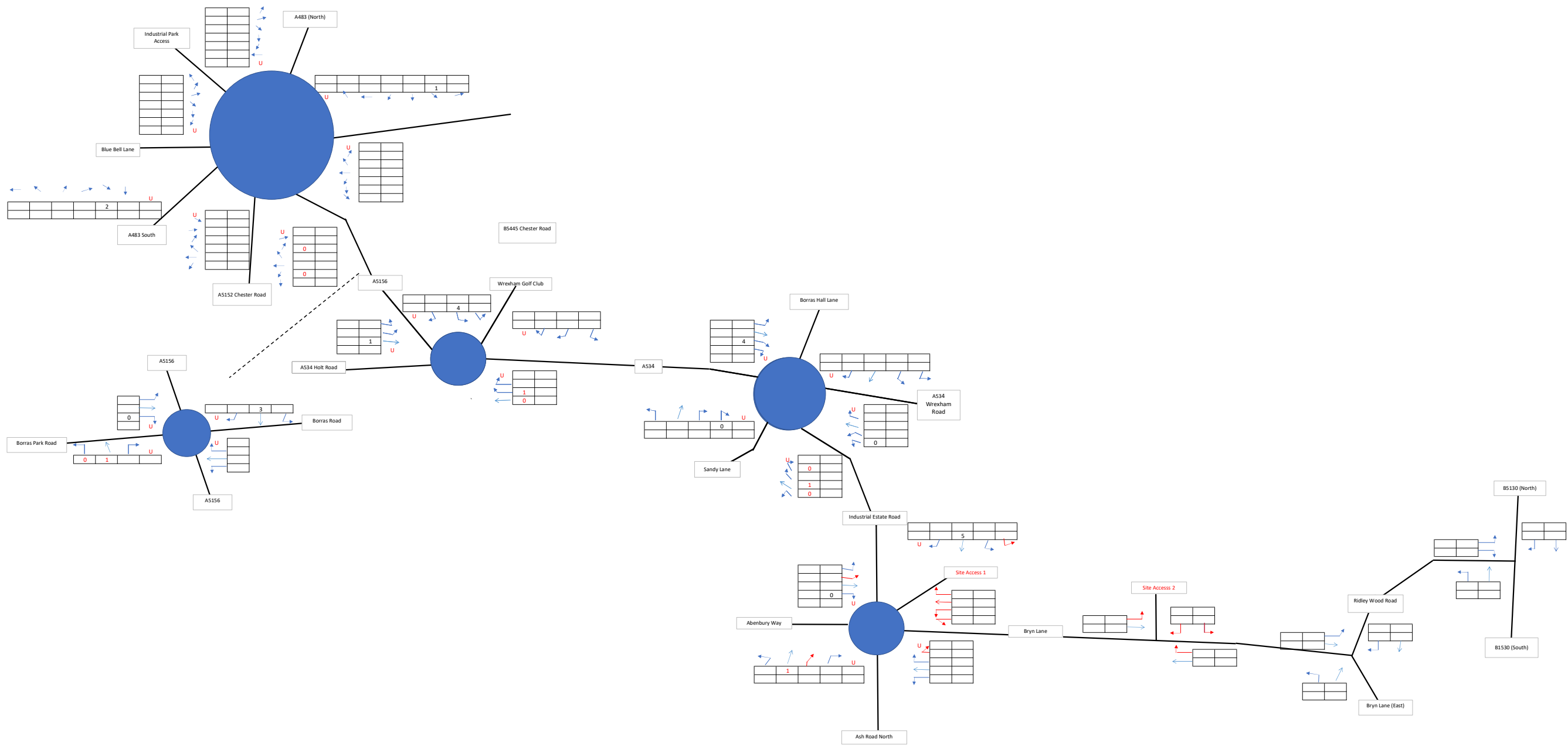


Figure 19 - Pacific Park Committed Traffic
PM Peak

Notes:

1	Arrivals
9	Departures

GFA 2567 sqm
Arr 0.039
Dep 0.361

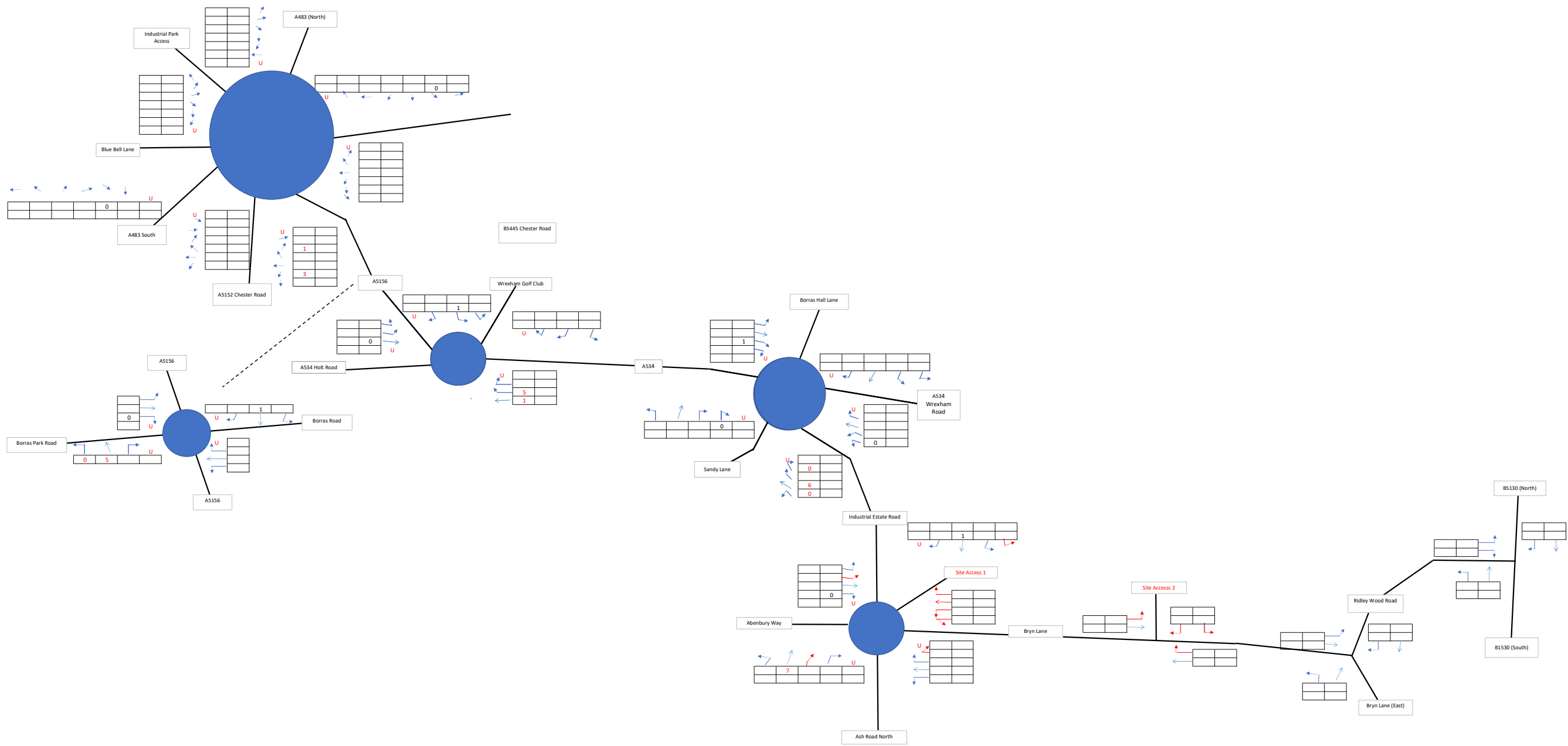


Figure 20 - Ash Road Committed Traffic
AM Peak

Notes:

6	Arrivals
1	Departures

GFA 2605 sqm
Arr 0.228
Dep 0.028

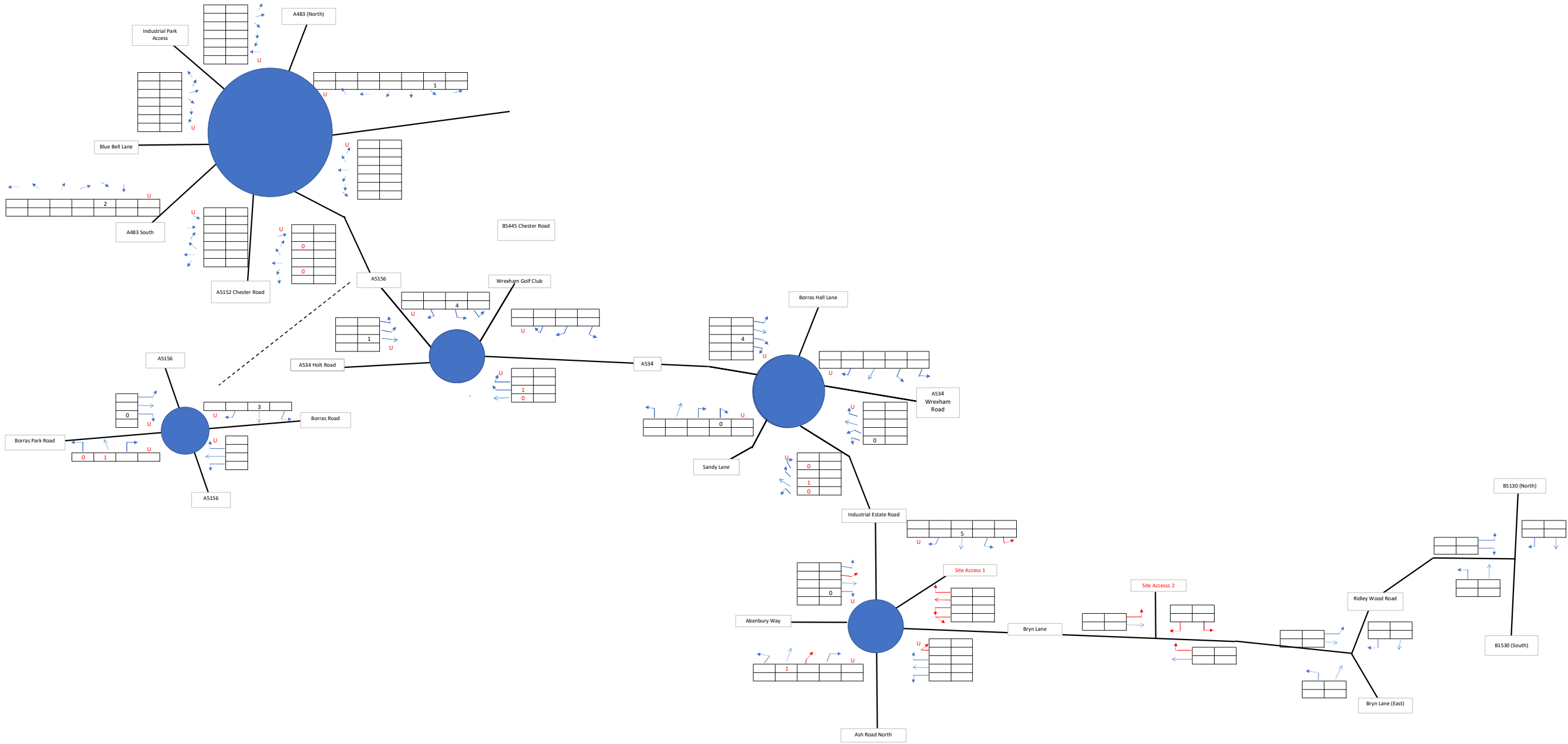


Figure 21 - Ash Road Committed Traffic
PM Peak

Notes:

1	Arrivals
9	Departures

GFA 2605 sqm
Arr 0.039
Dep 0.361

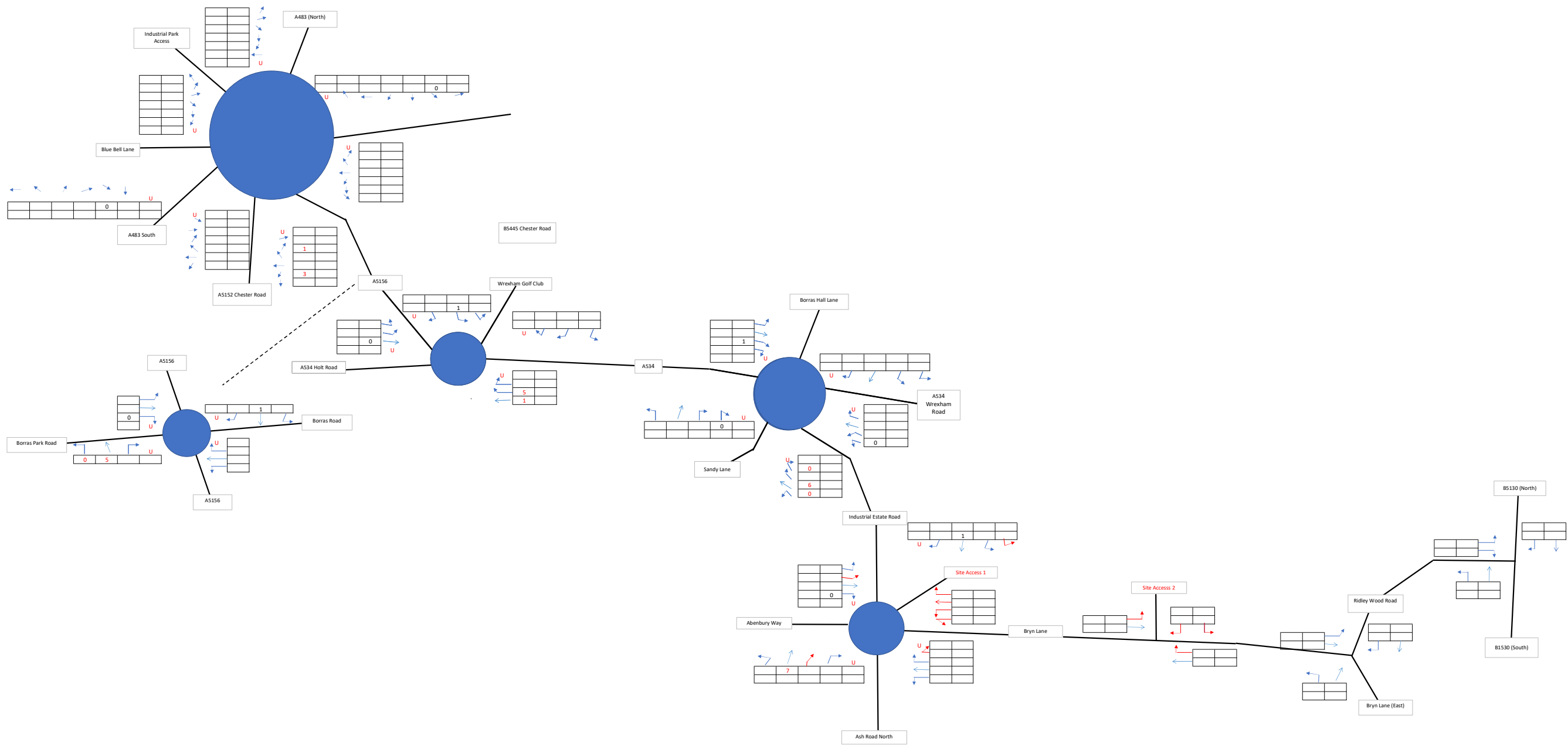


Figure 22 - KSS2 Development Traffic Distribution

Notes:

%	Arrivals
%	Departures

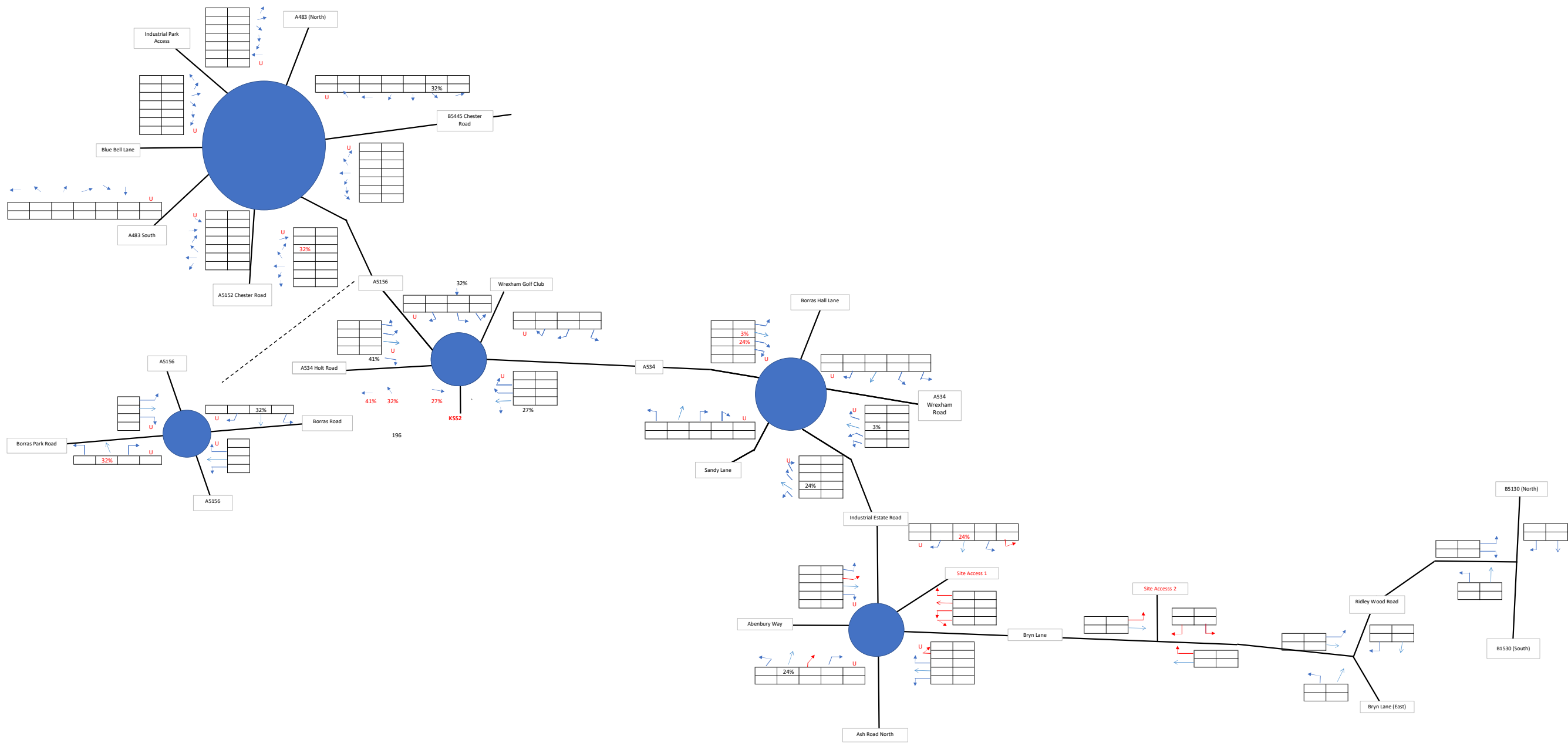


Figure 23 - KSS2 Development Trips
AM Peak

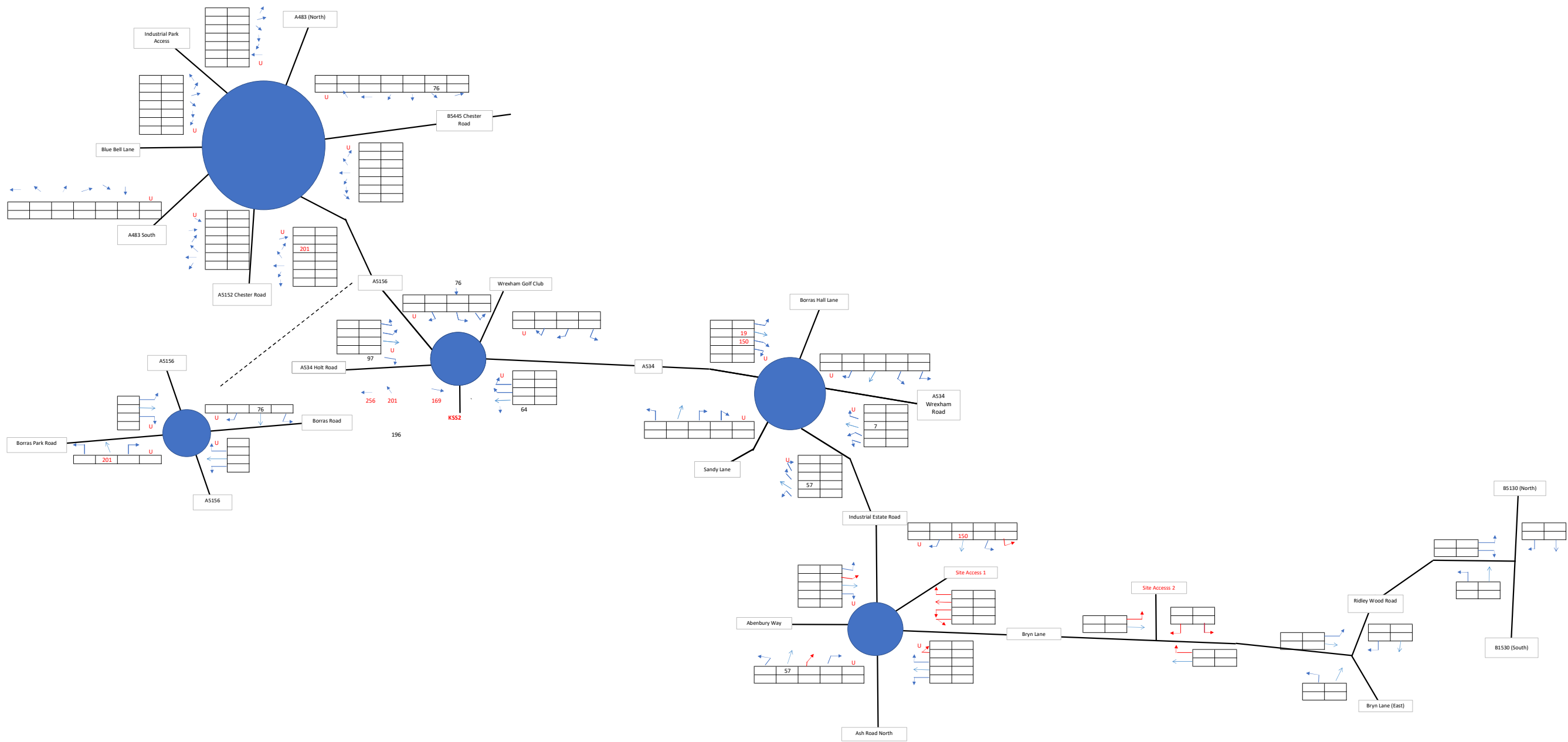
Notes:

237

 Arrivals

626

 Departures



Notes:

547
301

 Arrivals
Depatures

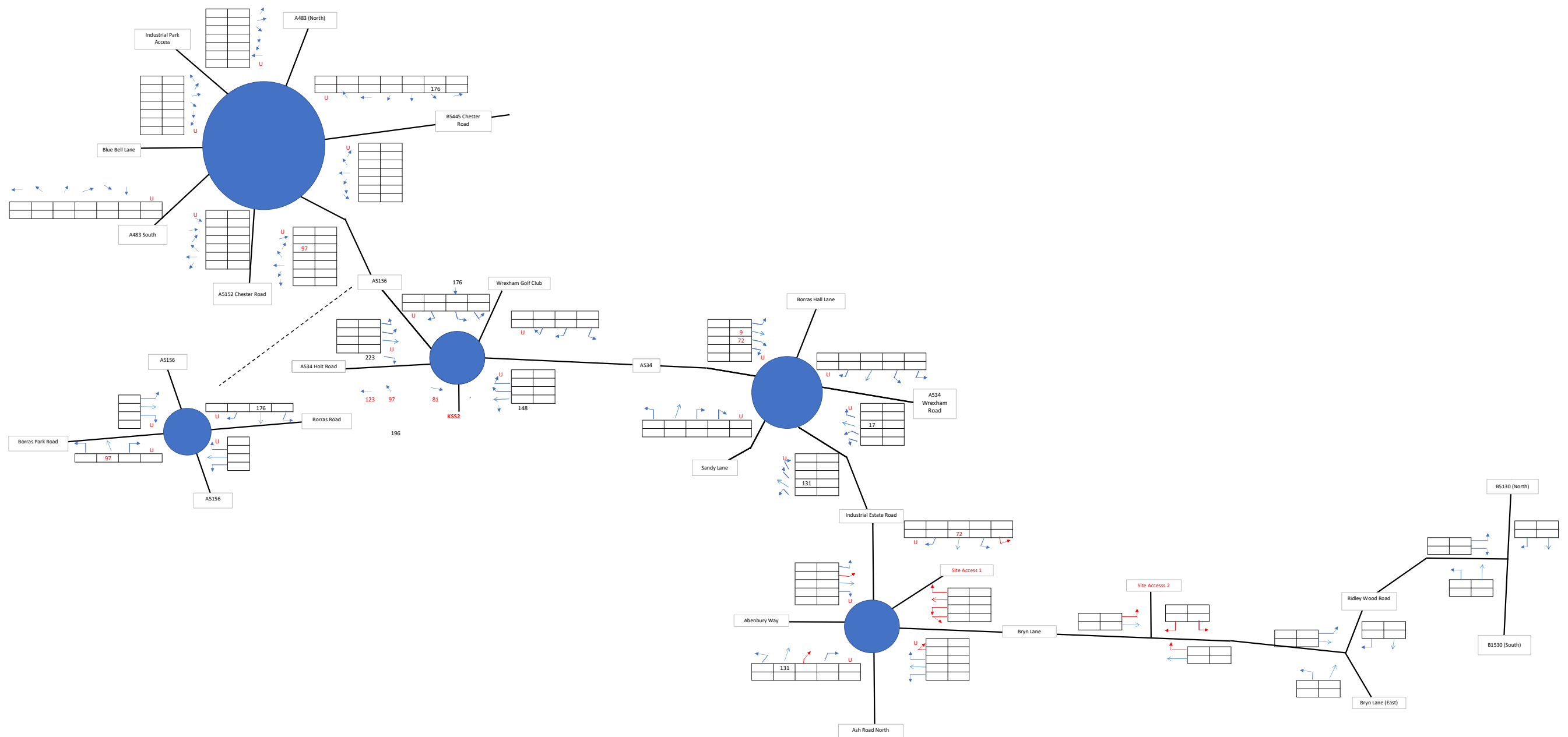


Figure 25 - Kingmoor Development Trips
AM Peak

Notes:

75	Arrivals (Lights)
50	Departures (Lights)

16	Arrivals (HGVs)
15	Departures (HGVs)

*Converted into PCUs

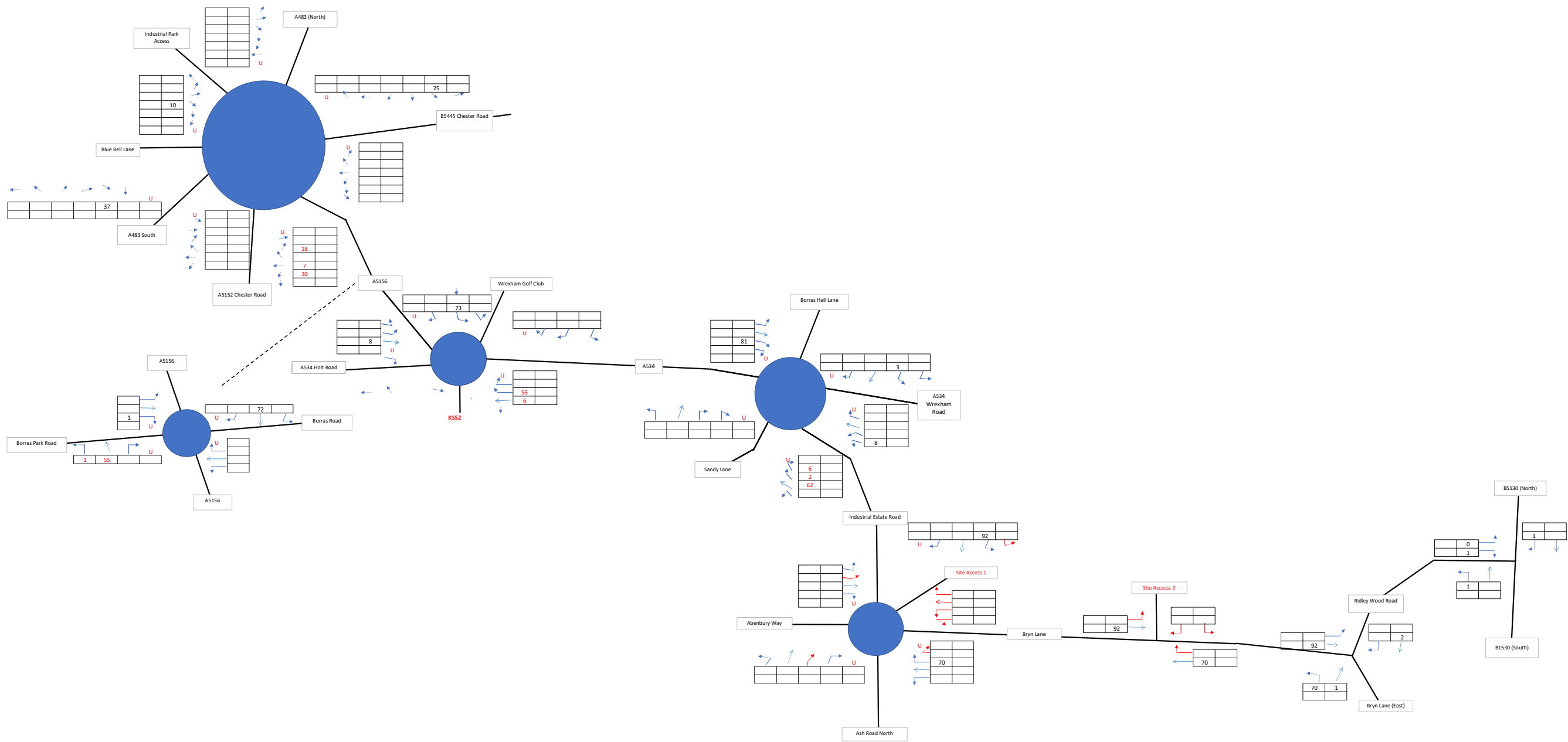


Figure 26 - Kingmoor Development Trips
PM Peak

Notes:

60	Arrivals (Lights)
98	Departures (Lights)

18	Arrivals (HGVs)
16	Departures (HGVs)

*Converted into PCUs

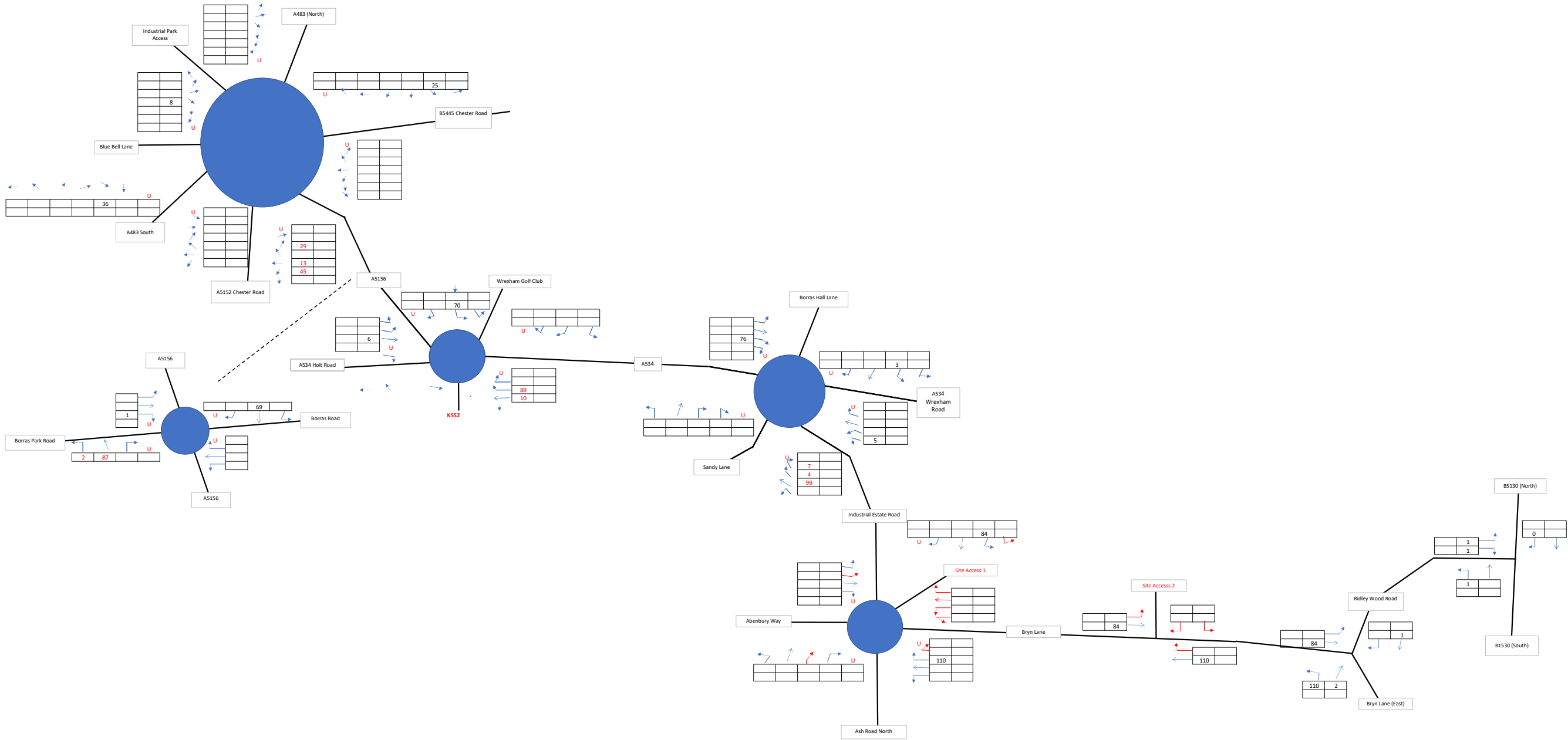
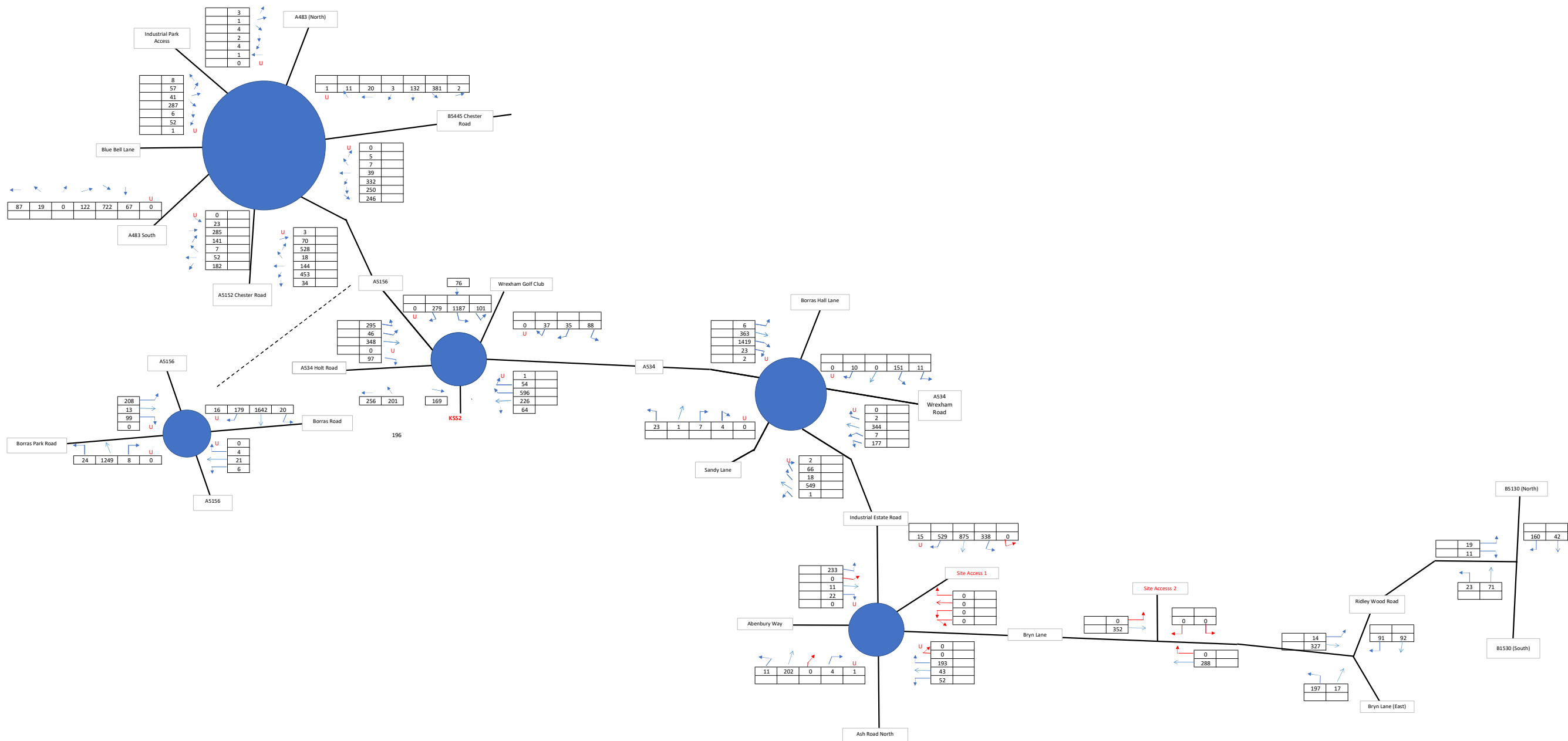


Figure 27 - 2030 Base + Committed
AM Peak: 0800-0900

Notes:

123

 PCUs



Notes:

123

 PCUs

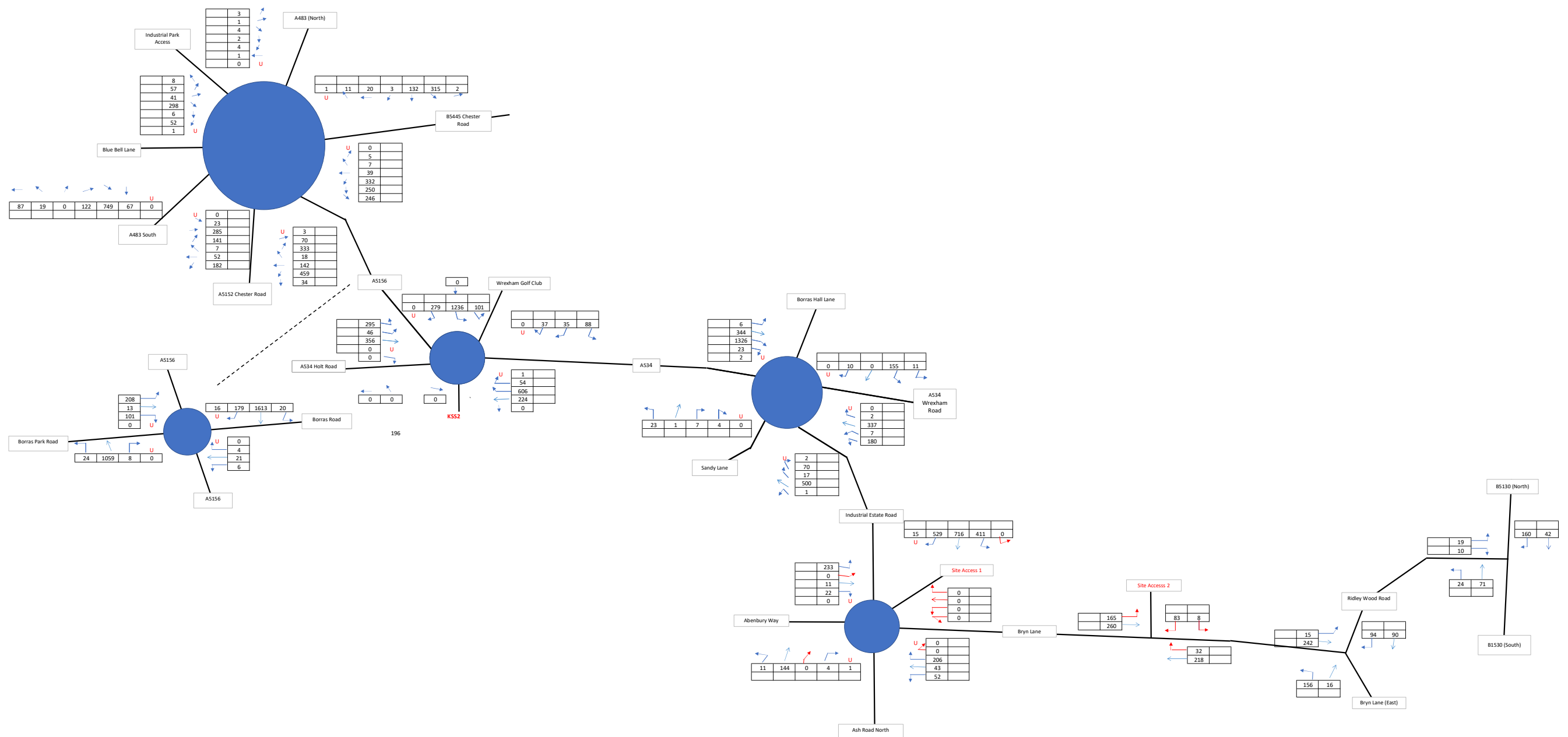
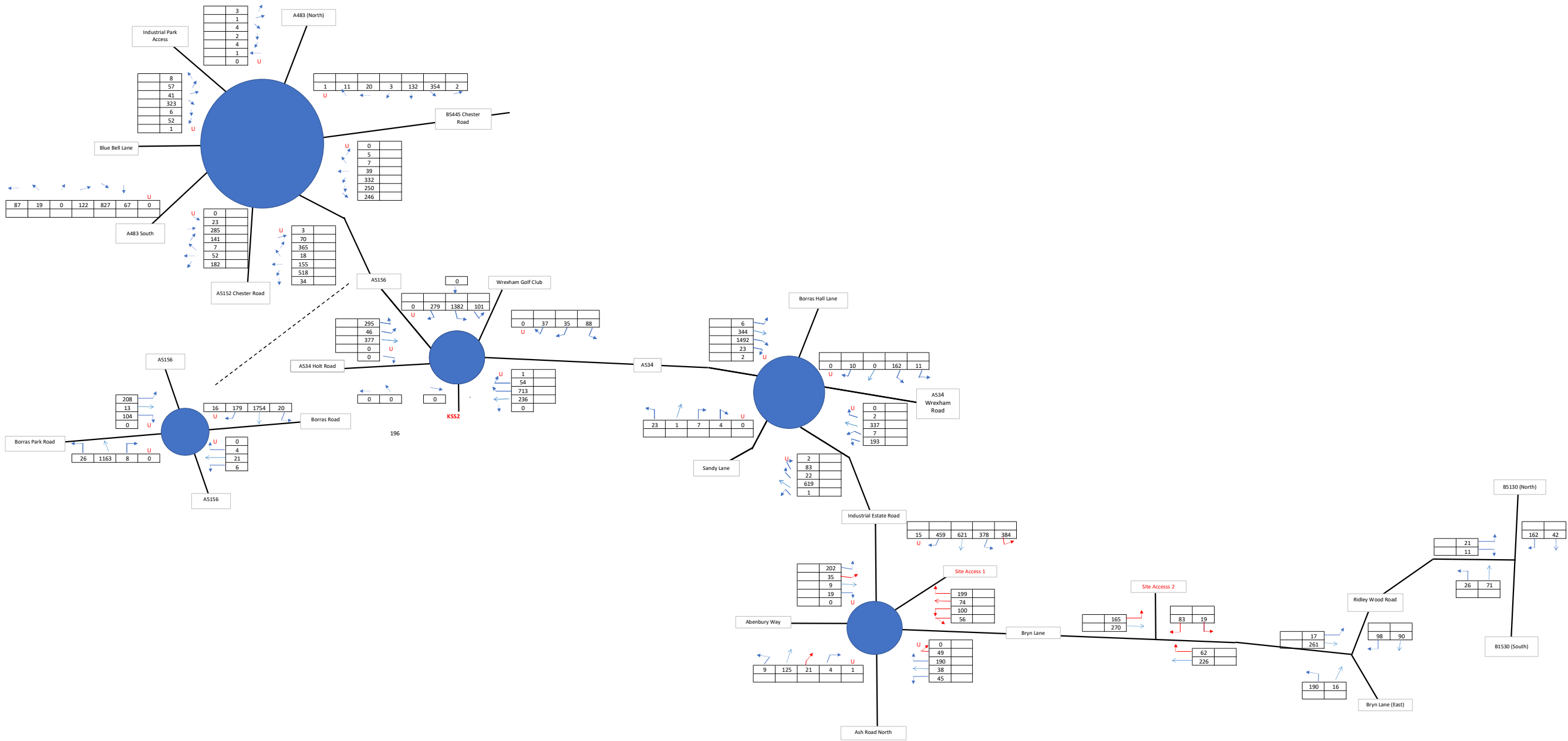


Figure 27b - 2030 Base + Development (Phase 1 + 2)
AM Peak: 0800-0900

Notes:

123

 PCUs



Notes:

123

 PCUs

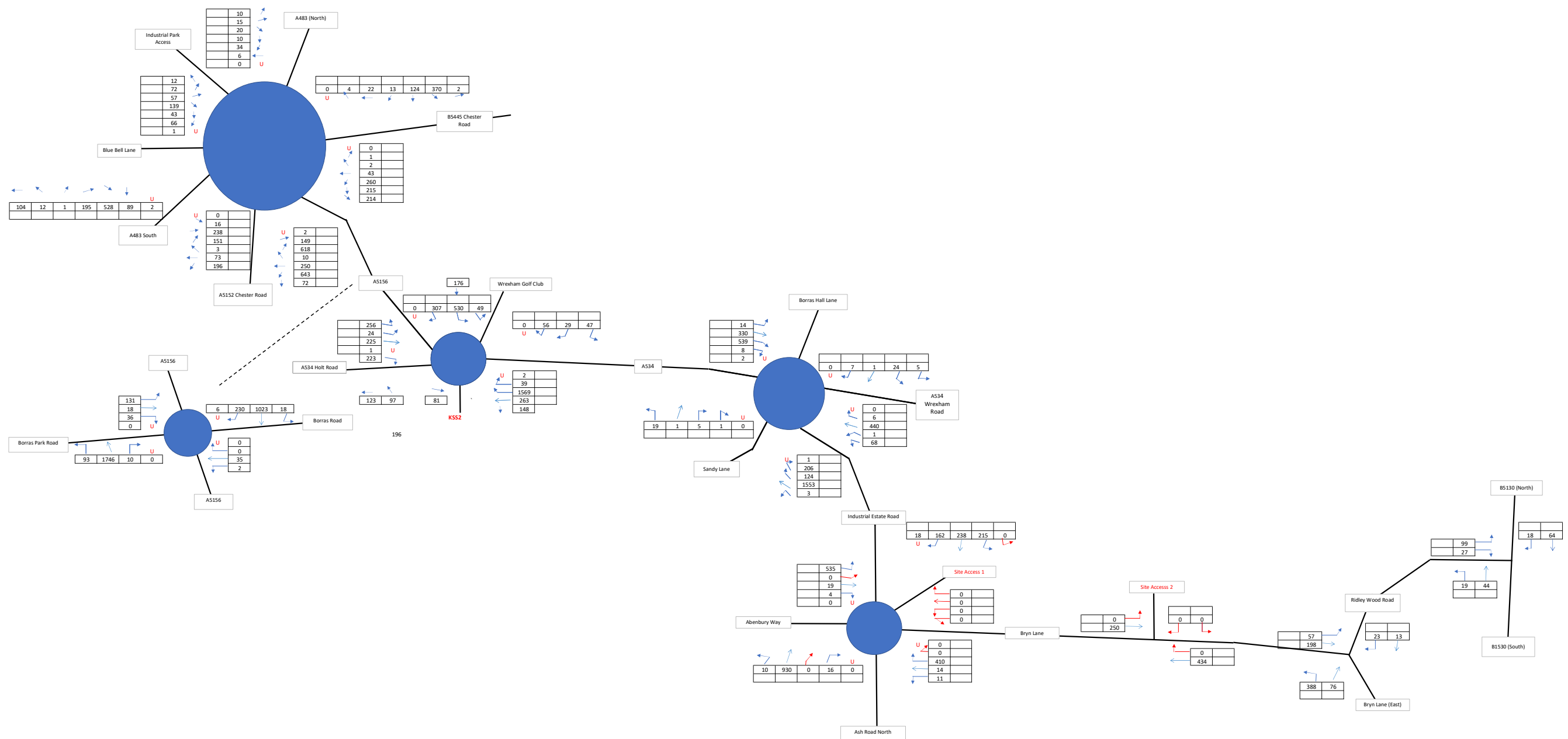


Figure 28a - 2030 Base + Development (Phase 1)
PM Peak: 1630-1730

Notes:

123

 PCUs

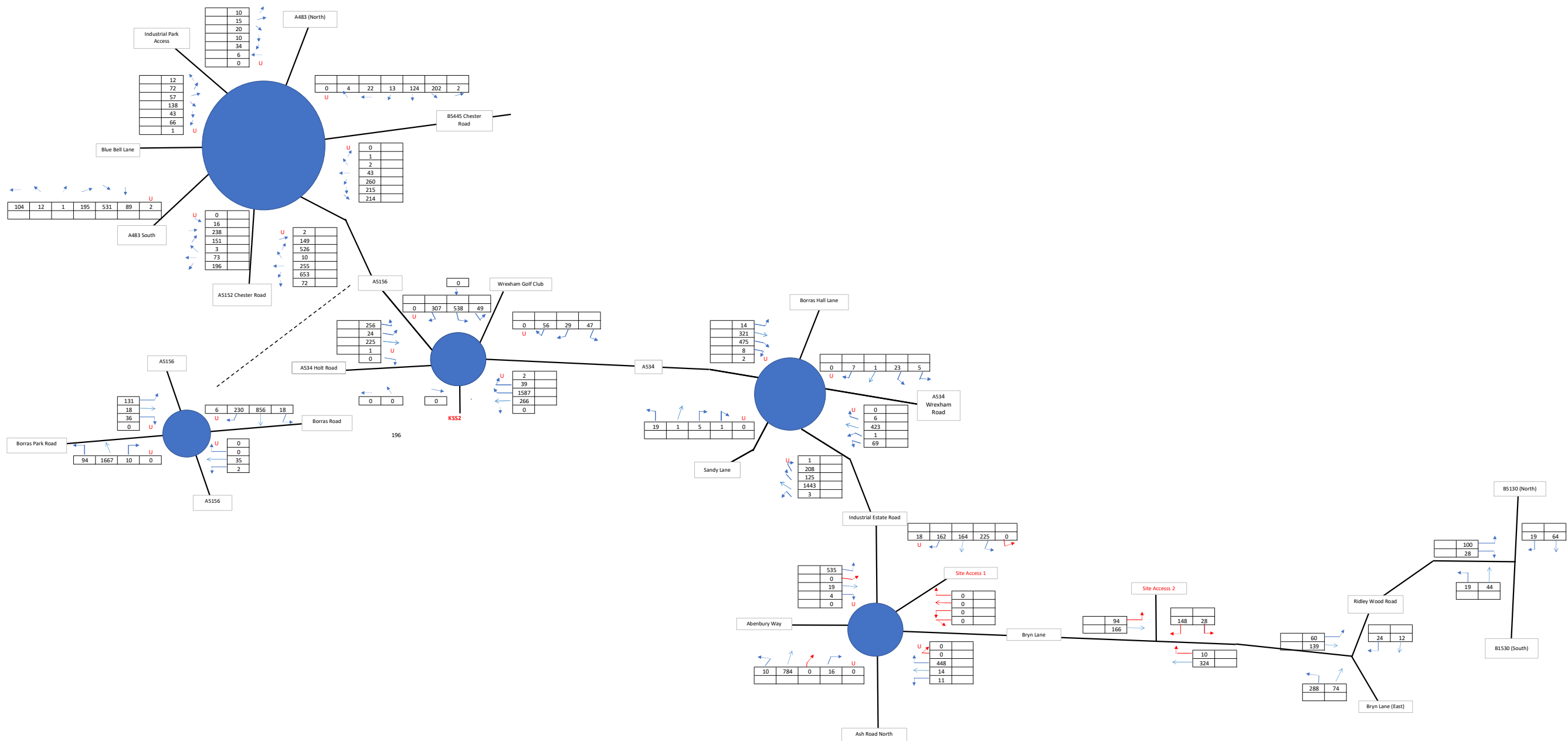


Figure 28b - 2030 Base + Development (Phase 1 + 2)
PM Peak: 1630-1730

Notes:

123

 PCUs

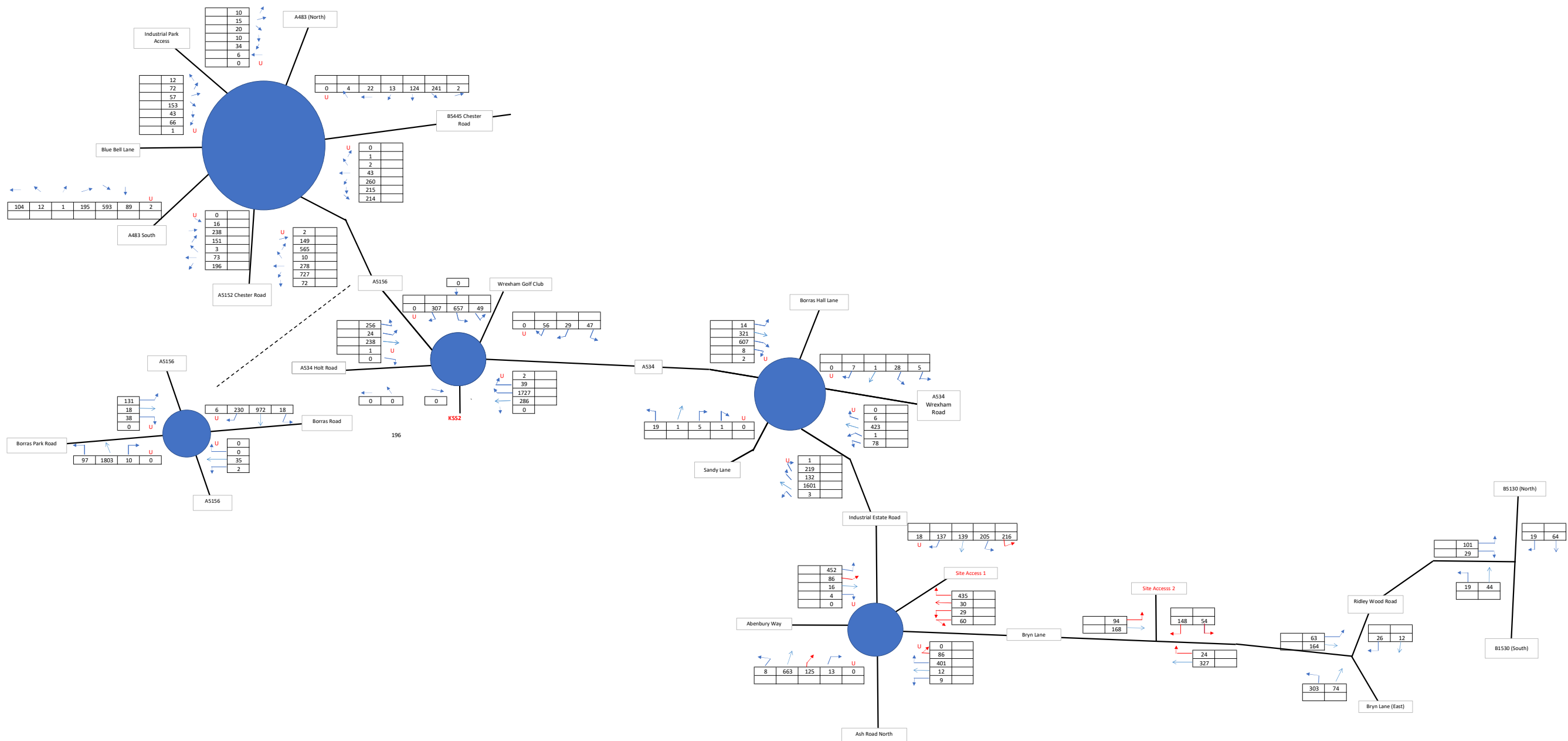


Figure 29 - 2030 Base + Development [Phase 1] + Committed
AM Peak: 0800-0900

Notes:

123

 PCUs

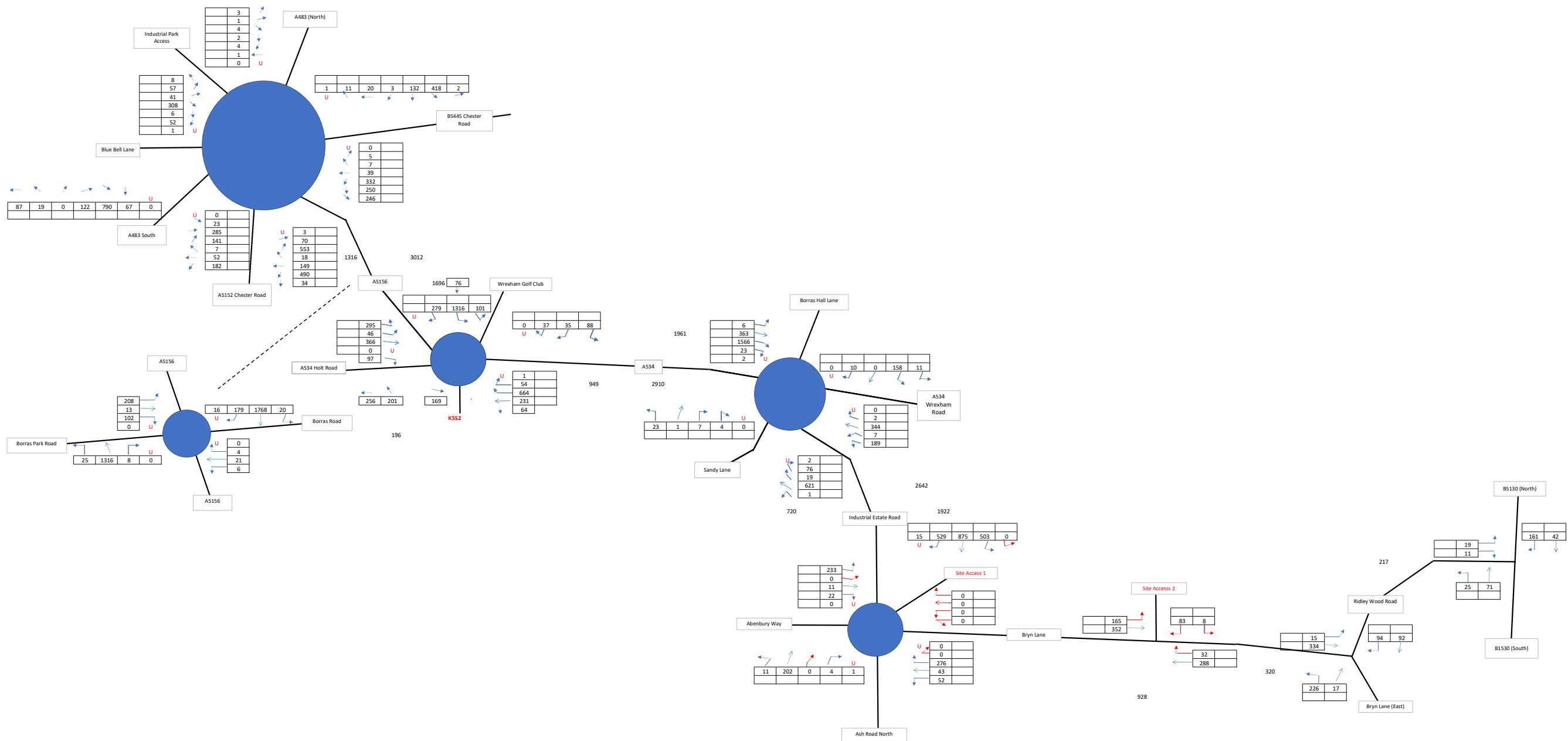


Figure 29a - 2030 Base + Development [Phase 1 + 2] + Committed
AM Peak: 0800-0900

Notes:

123

 PCUs

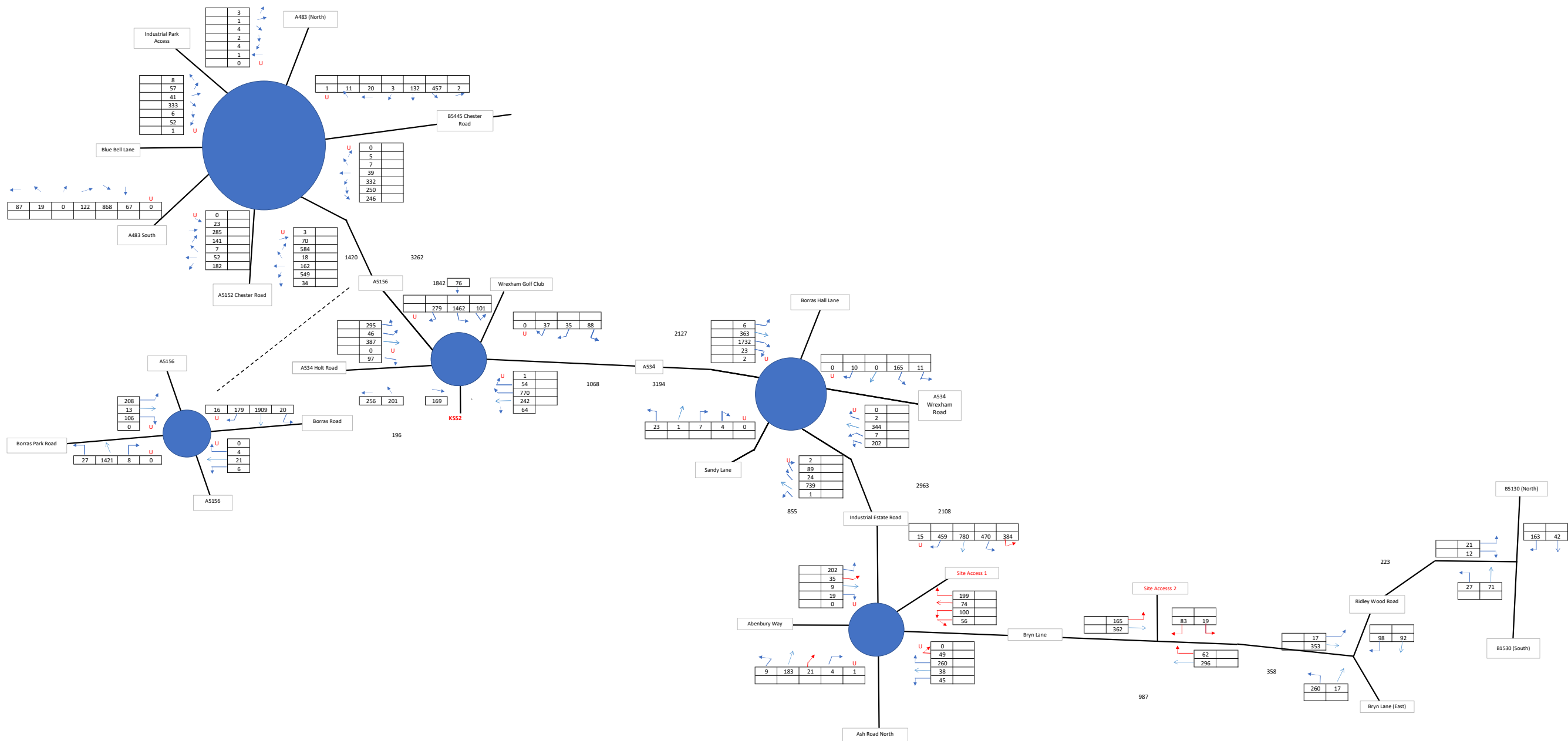


Figure 29b - 2030 Base + Development [Phase 1] + Committed [Without KSS2]
AM Peak: 0800-0900

Notes:

123

 PCUs

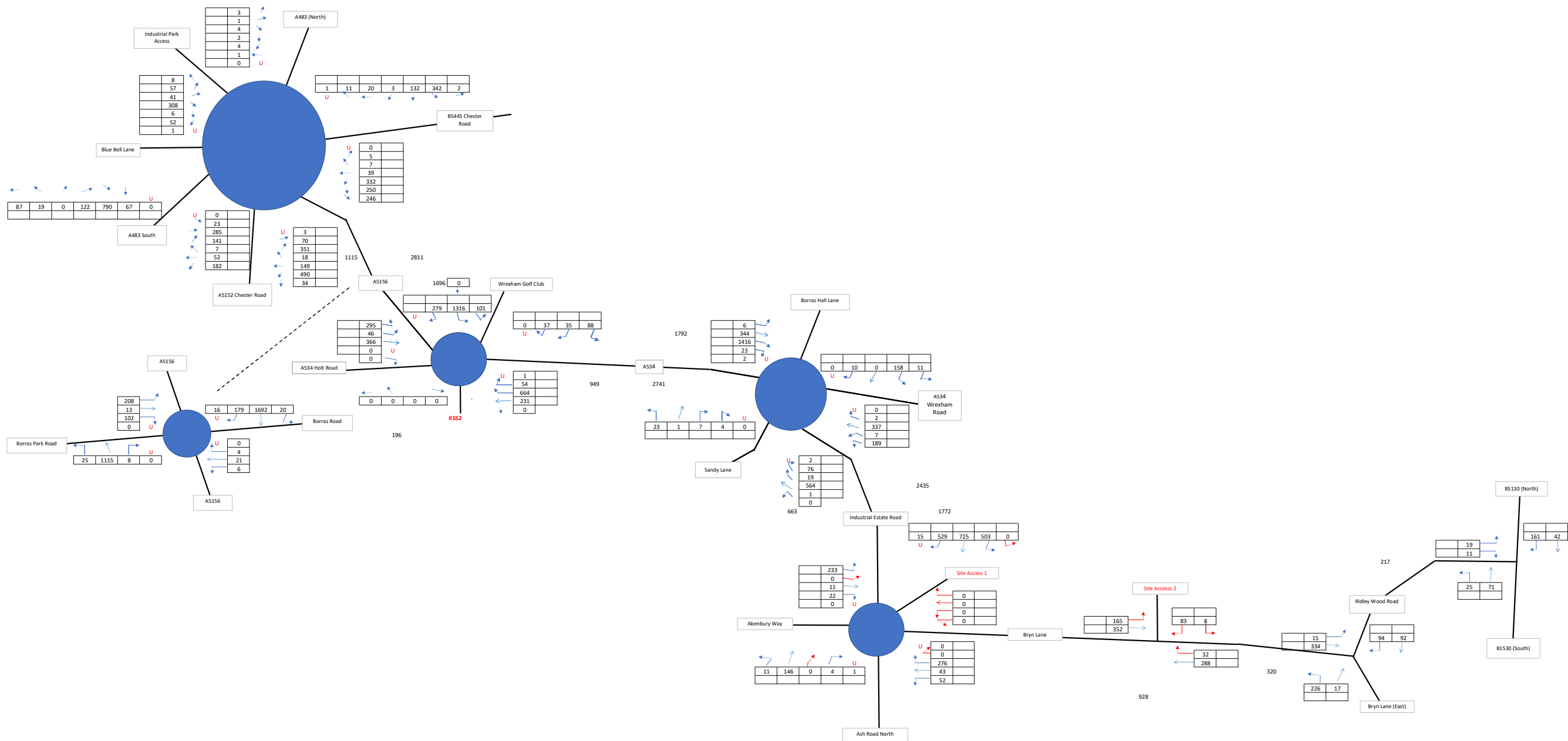


Figure 29c - 2030 Base + Development [Phase 1 + 2] + Committed [Without Kingmoor]
AM Peak: 0800-0900

Notes:

123

 PCUs

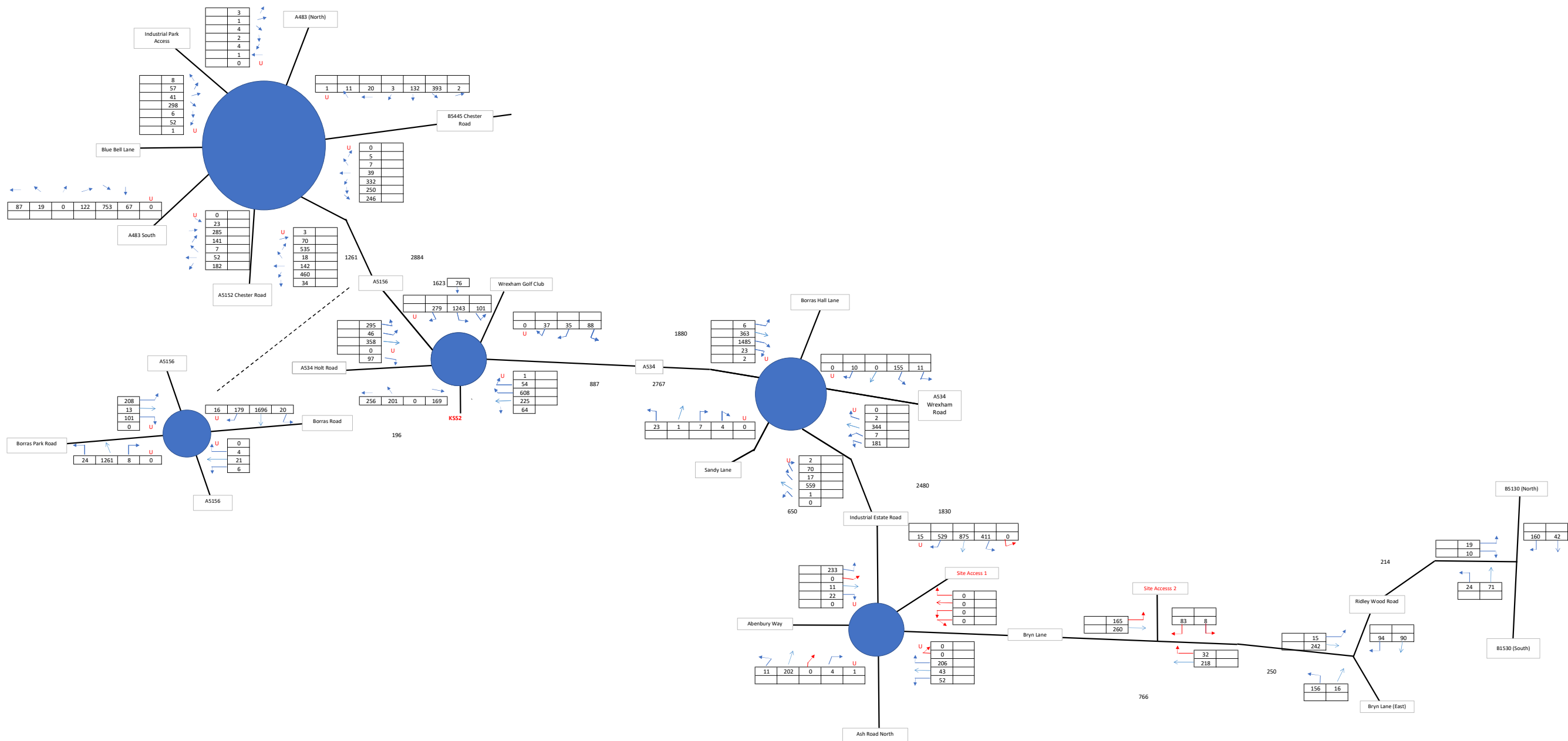


Figure 30 - 2030 Base + Development [Phase 1] + Committed
PM Peak: 1630-1730

Notes:

123

 PCUs

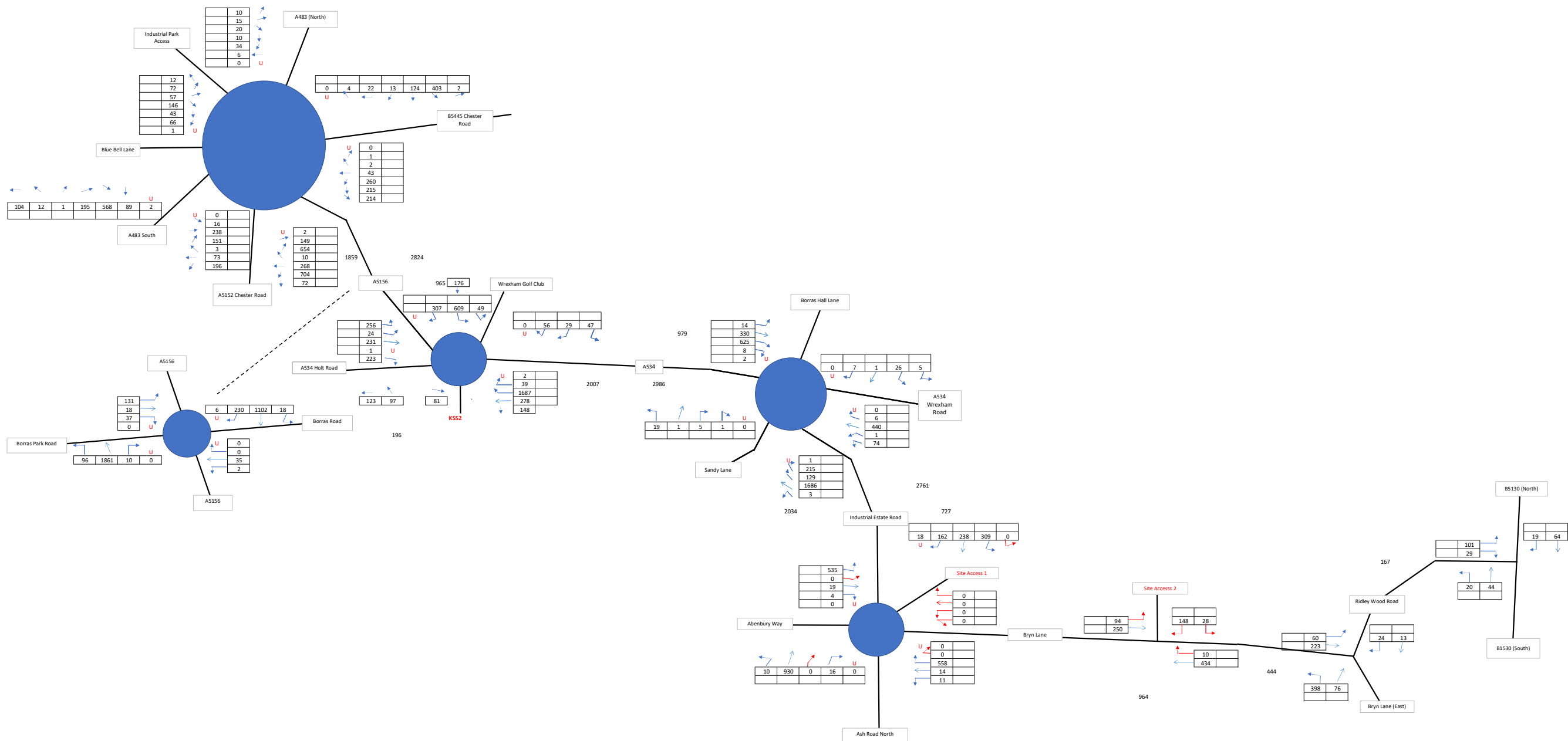


Figure 30a - 2030 Base + Development [Phase 1 + 2] + Committed
PM Peak: 1630-1730

Notes:

123

 PCUs

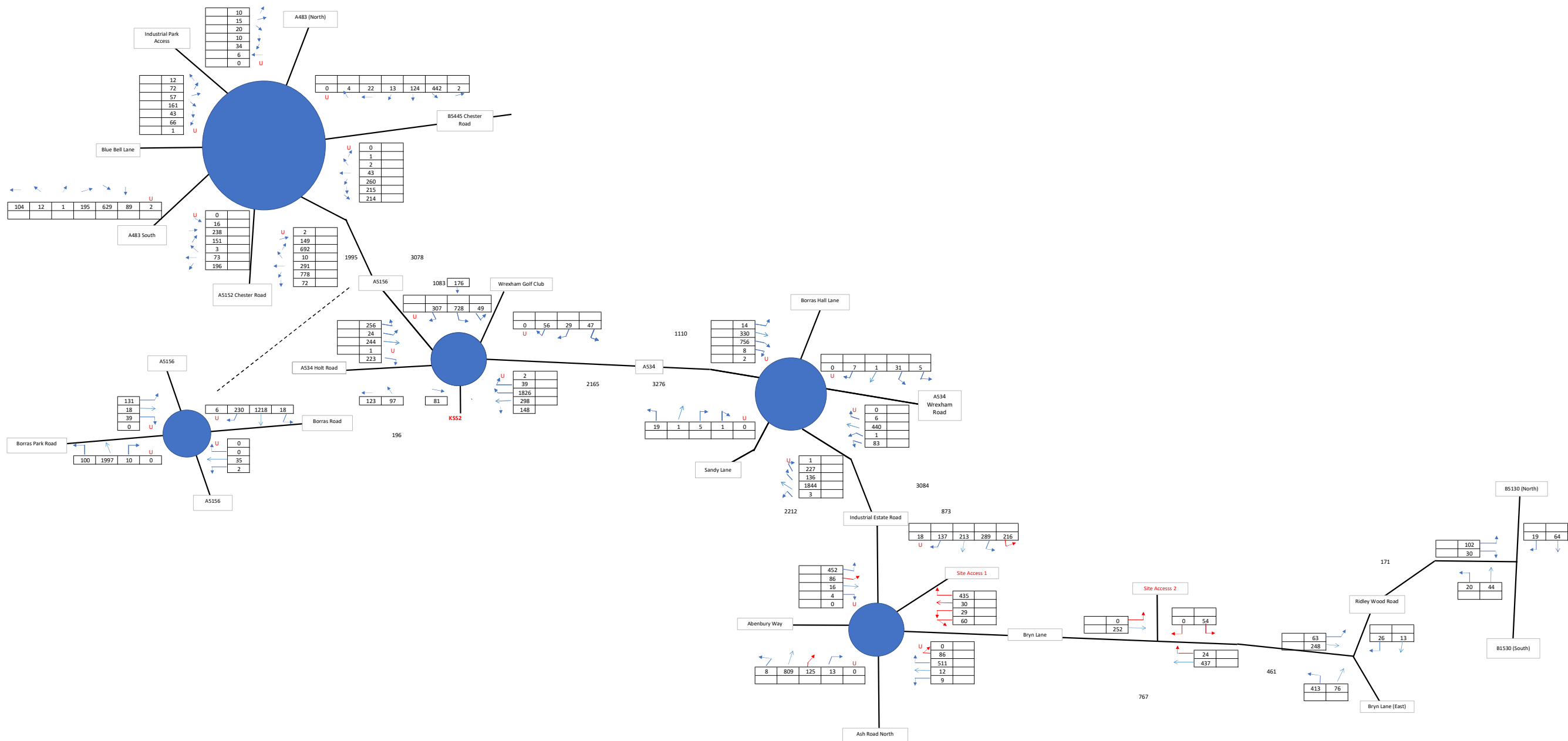


Figure 30b- 2030 Base + Development [Phase 1] + Committed [Without KSS2]
PM Peak: 1630-1730

Notes:

123

 PCUs

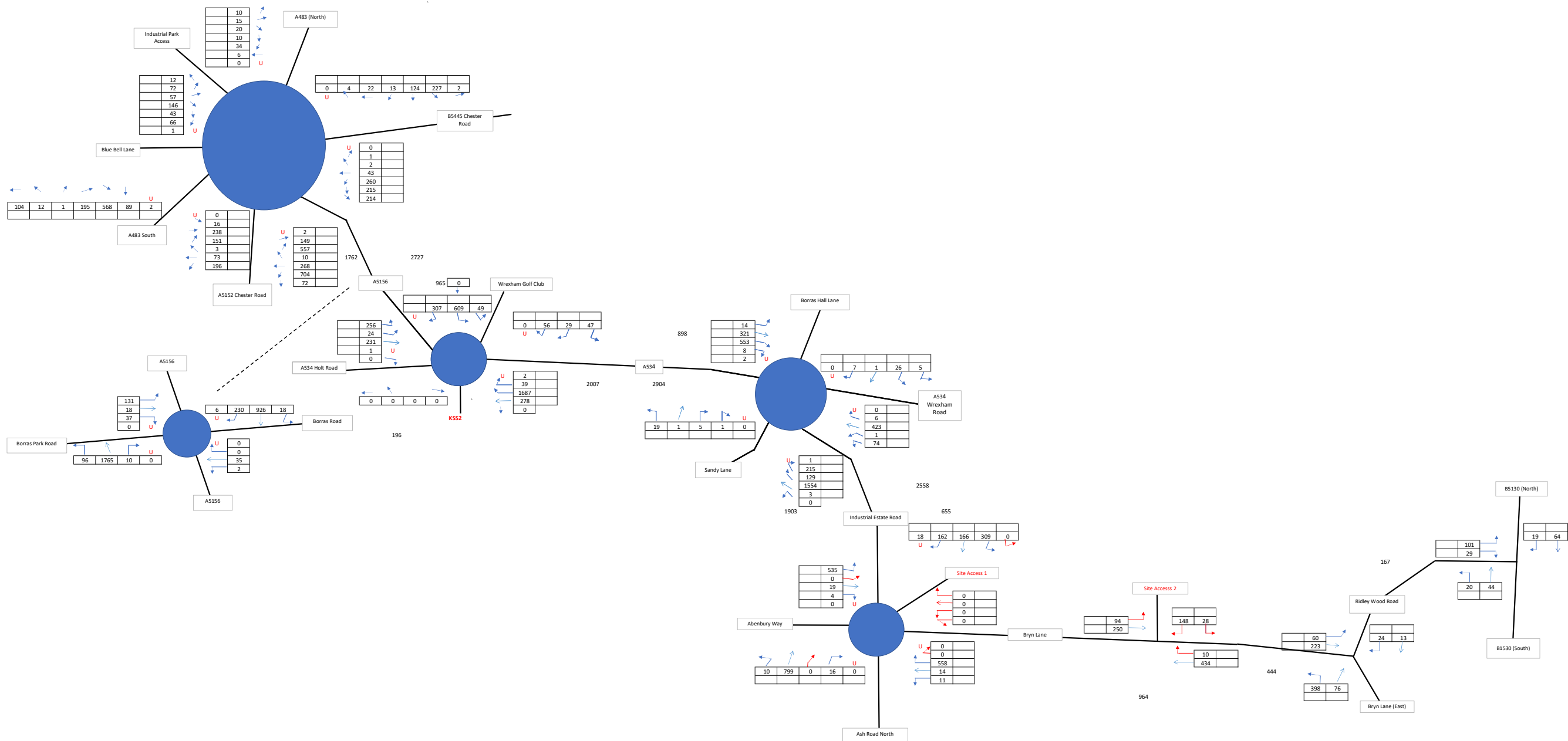
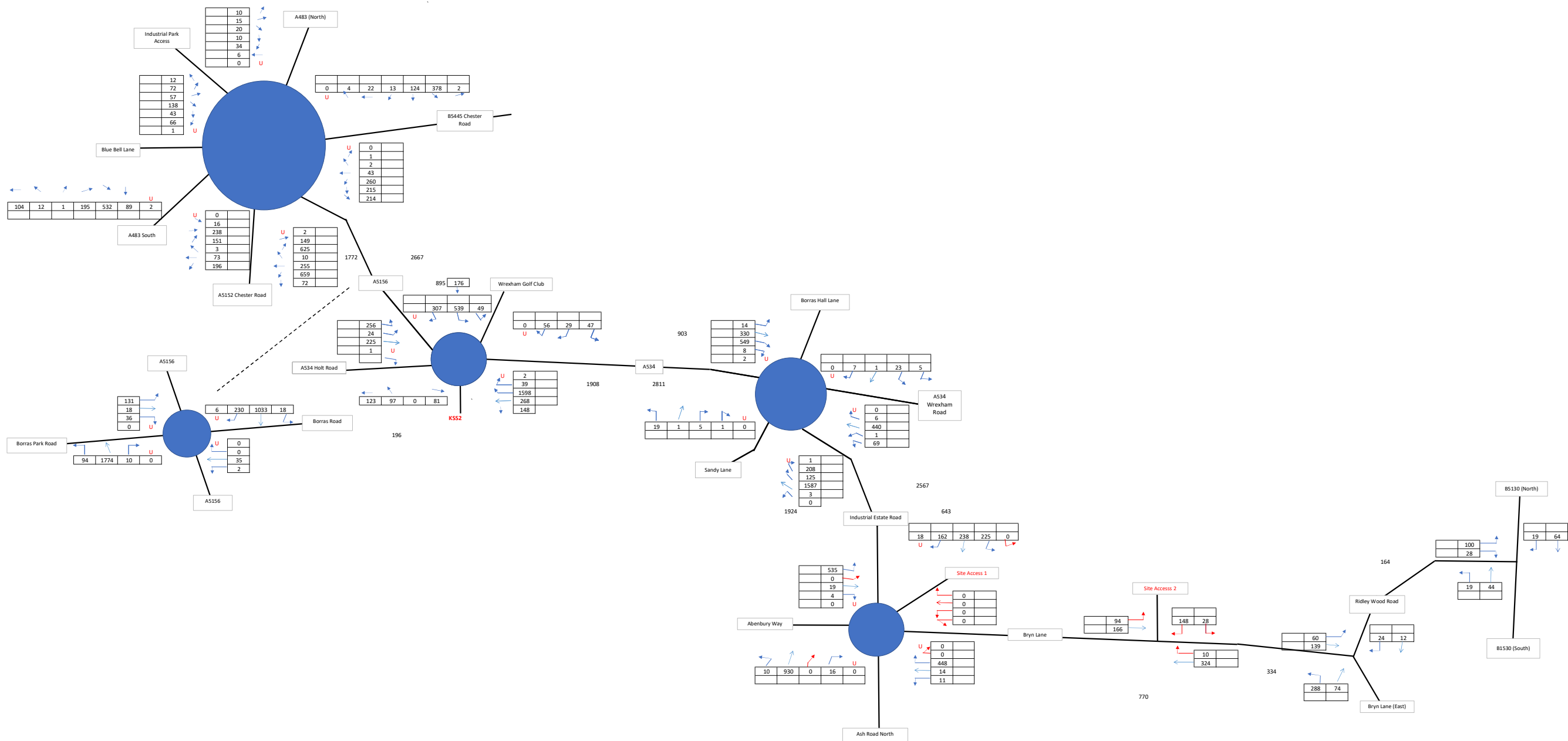


Figure 30c - 2030 Base + Development [Phase 1] + Committed [Without Kingmoor]
PM Peak: 1630-1730

Notes:

123

 PCUs



Appendix B – 2037 Traffic Figures

Figure 1 - 2023 Surveyed Traffic Flows
AM Peak: 0800-0900

Notes:

123

 Total Vehicles

123

 HGVs

--

 Flows Taken from Kingmoor TA

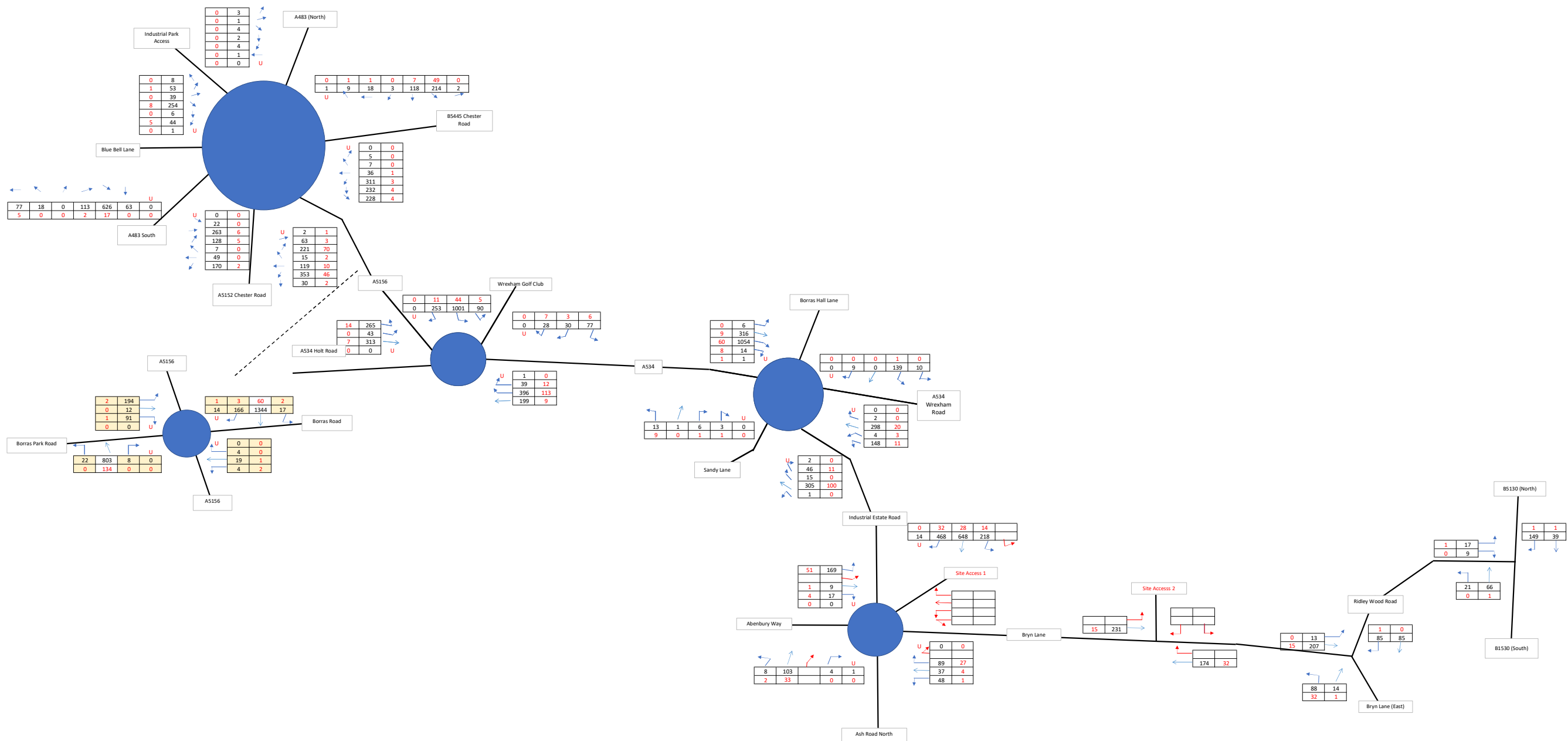


Figure 2 - 2023 Surveyed Traffic Flows
PM Peak: 1630-1730

Notes:

123	Total Vehicles
123	HGVs
	Flows Taken from Kingmoor TA

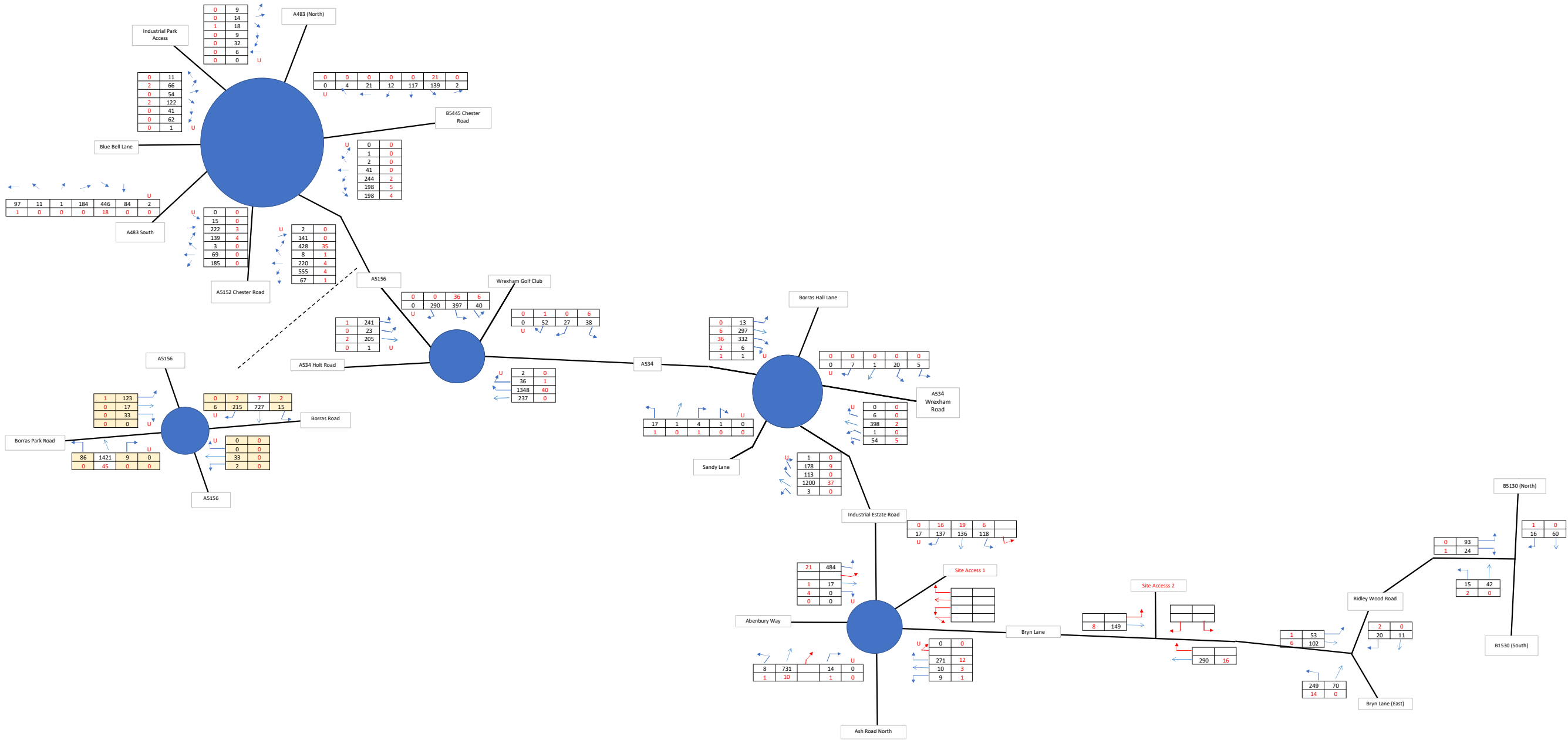


Figure 3 - 2023 Surveyed Traffic Flows
AM Peak: 0800-0900

Notes:

123

 PCUs

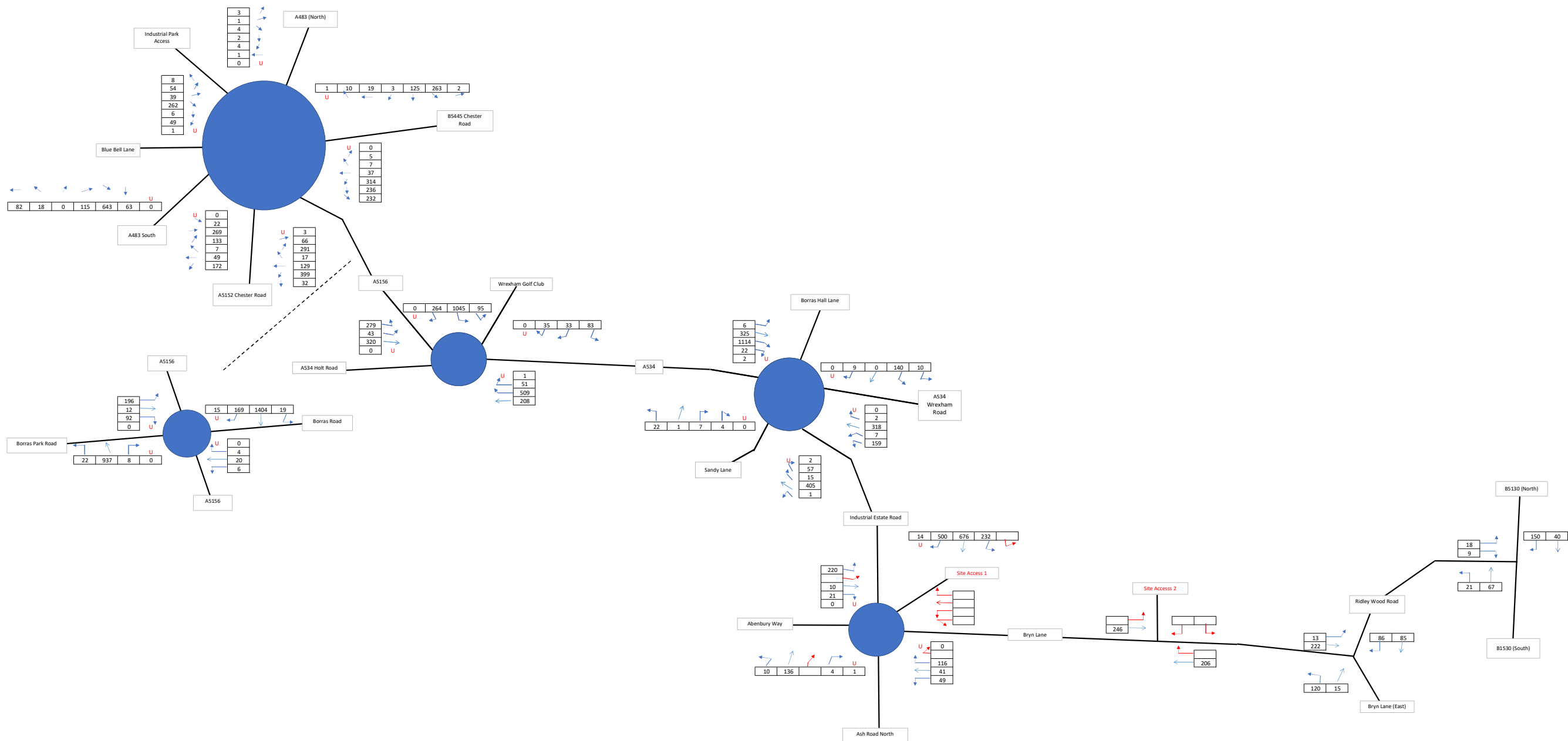


Figure 4 - 2023 Surveyed Traffic Flows
PM Peak: 1630-1730

Notes:

123

 PCUs

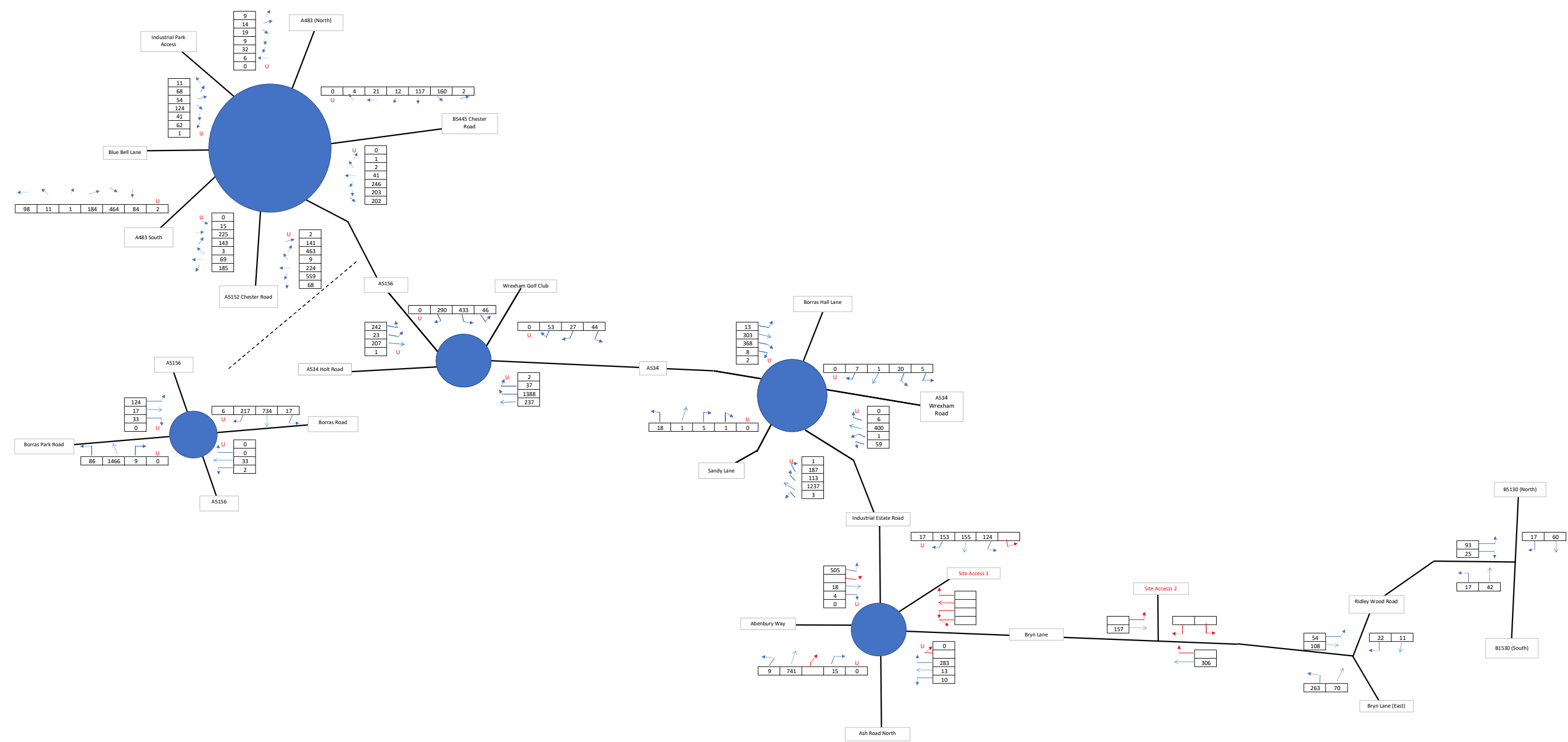


Figure 5 - 2037 Growthed Traffic Flows
AM Peak: 0800-0900

Notes:

123

 PCUs

1.1196

 Growth Factor

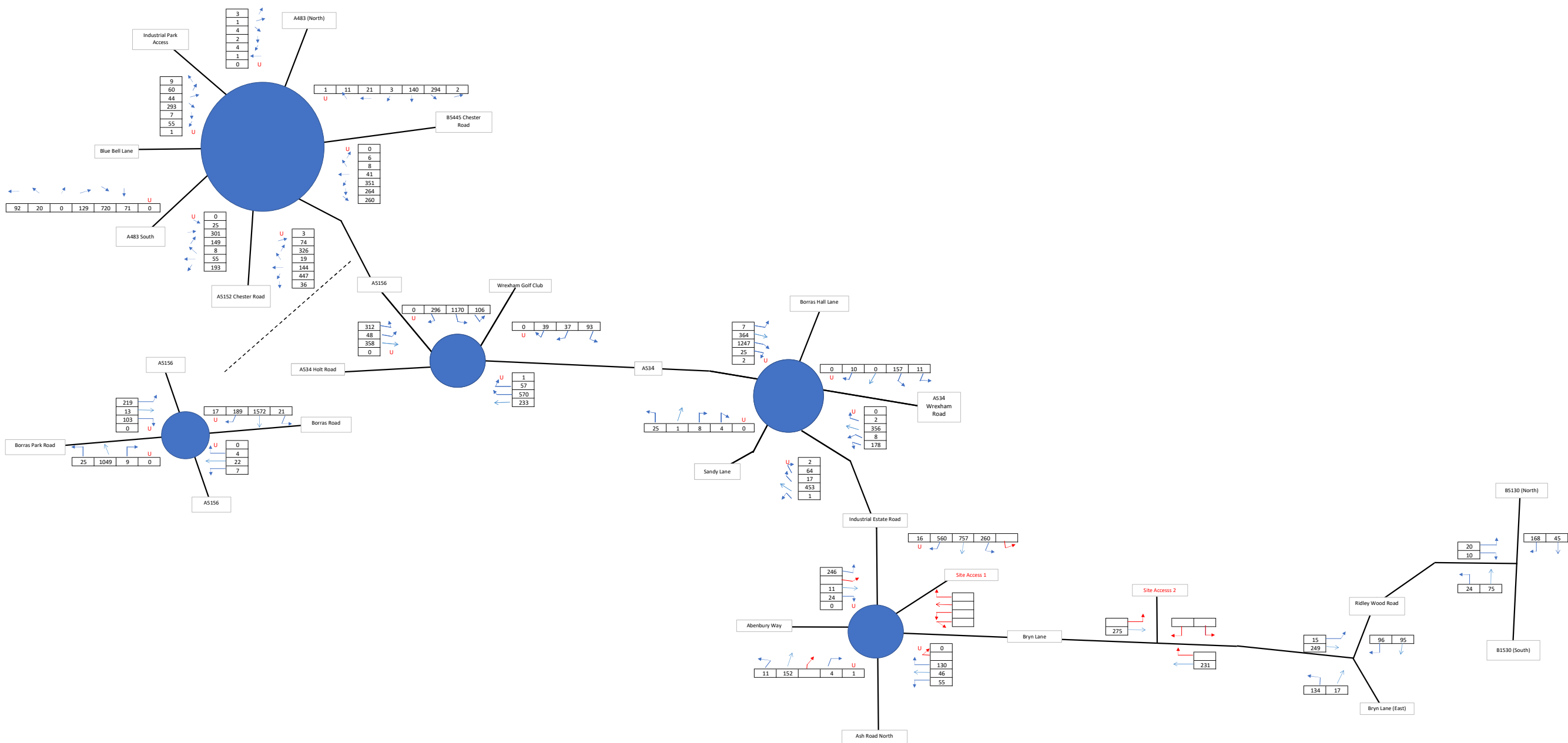


Figure 6 - 2037 Growth Traffic Flows
PM Peak: 1630-1730

Notes:

123

 PCUs

1.1196

 Growth Factor

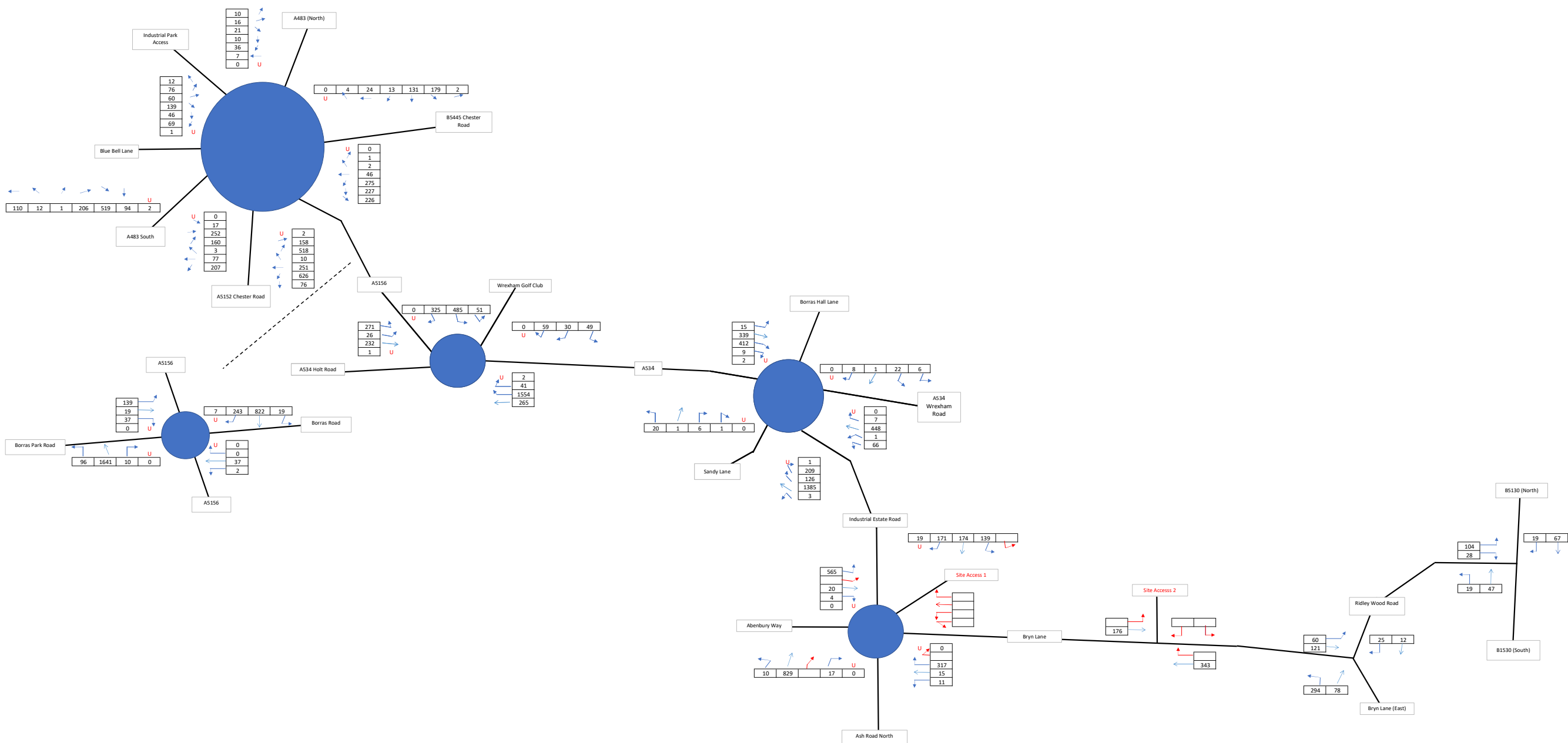


Figure 7a - Development Traffic Distribution (Lights) [Phase 1]
AM Peak

Notes:

%	Arrivals (Lights)
%	Departures (Lights)

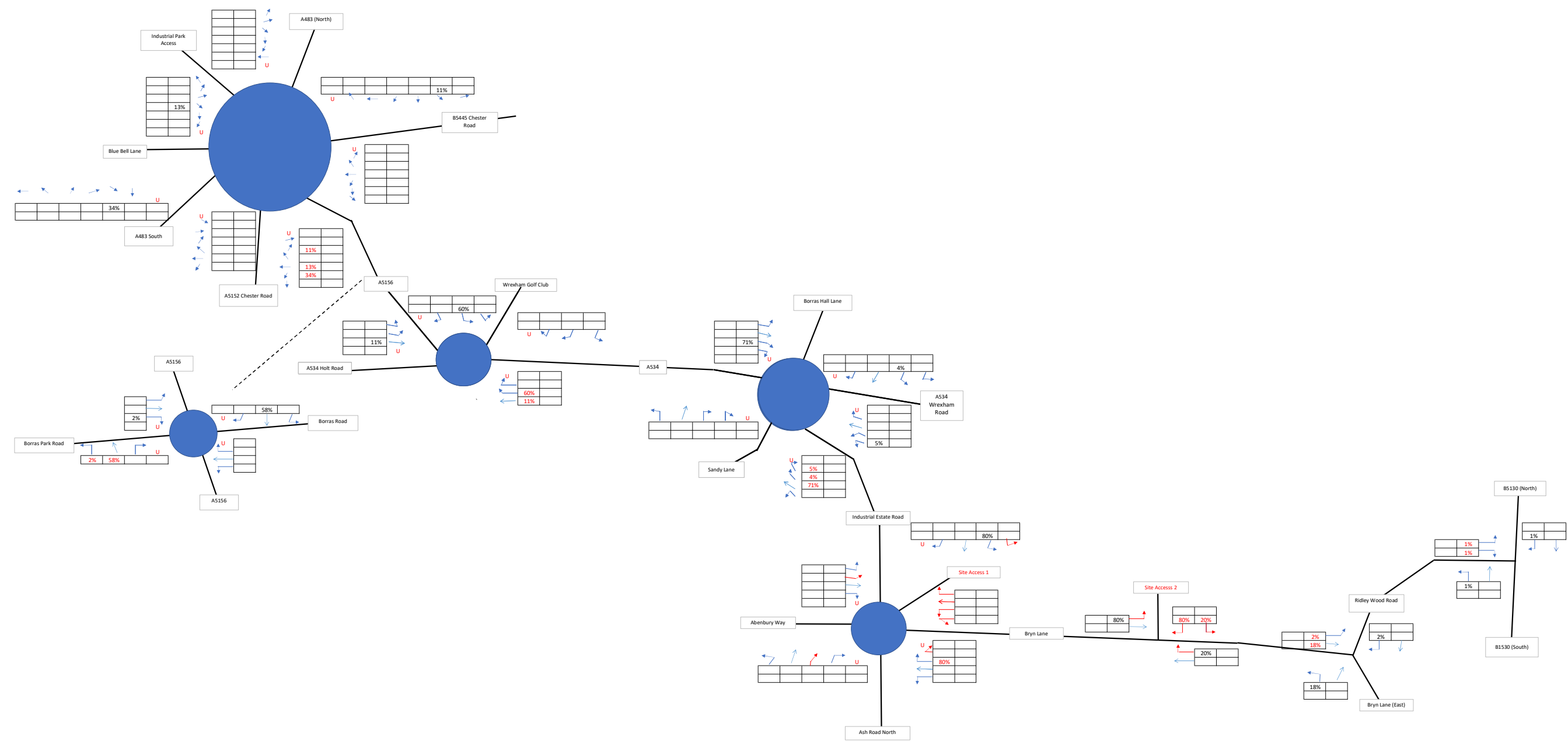


Figure 7b - Development Traffic Distribution (Lights) [Phase 1]
PM Peak

Notes:

%	Arrivals (Lights)
%	Departures (Lights)

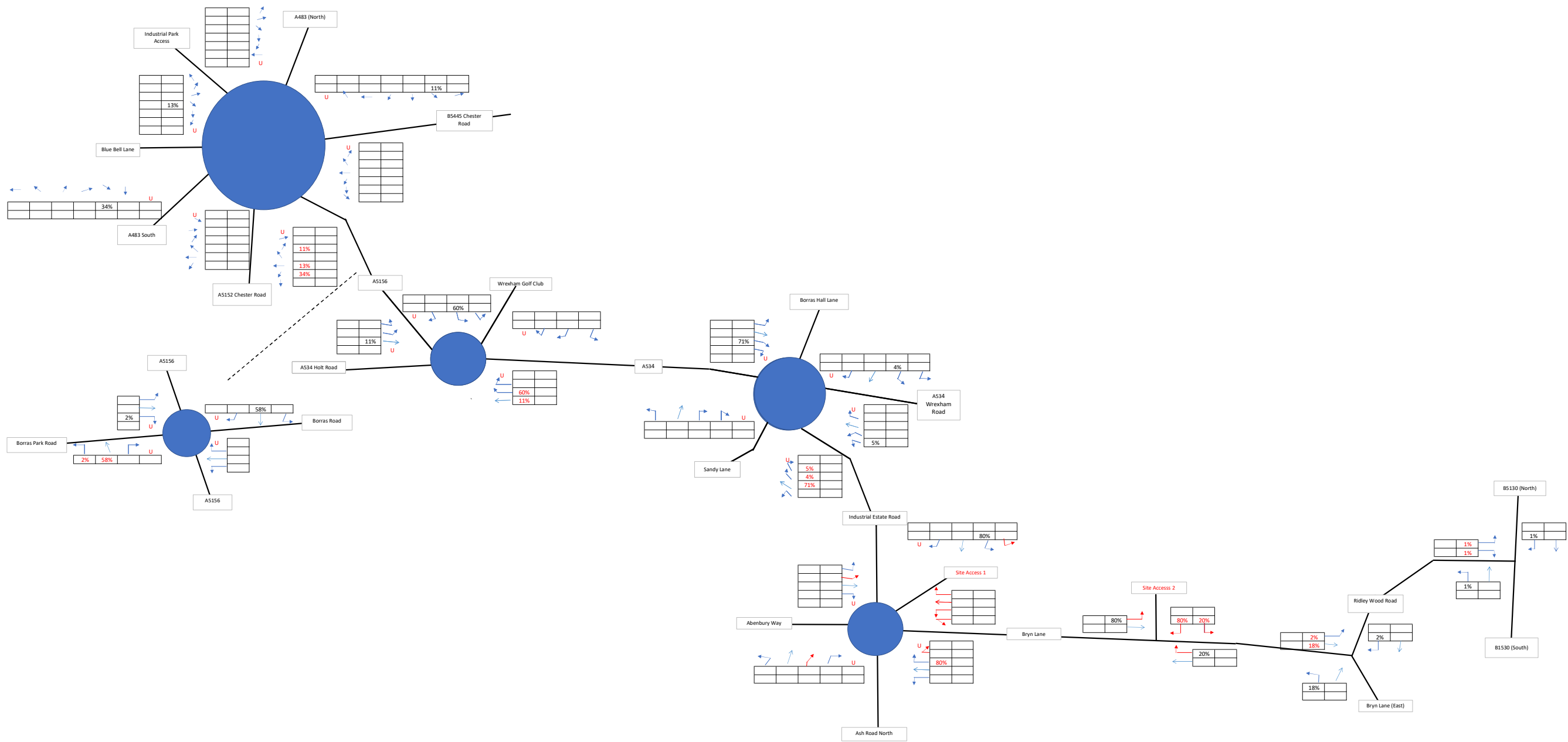


Figure 7c - Development Traffic Distribution (HGVs) [Phase 1]
AM Peak

Notes:

%	Arrivals (HGVs)
%	Departures (HGVs)

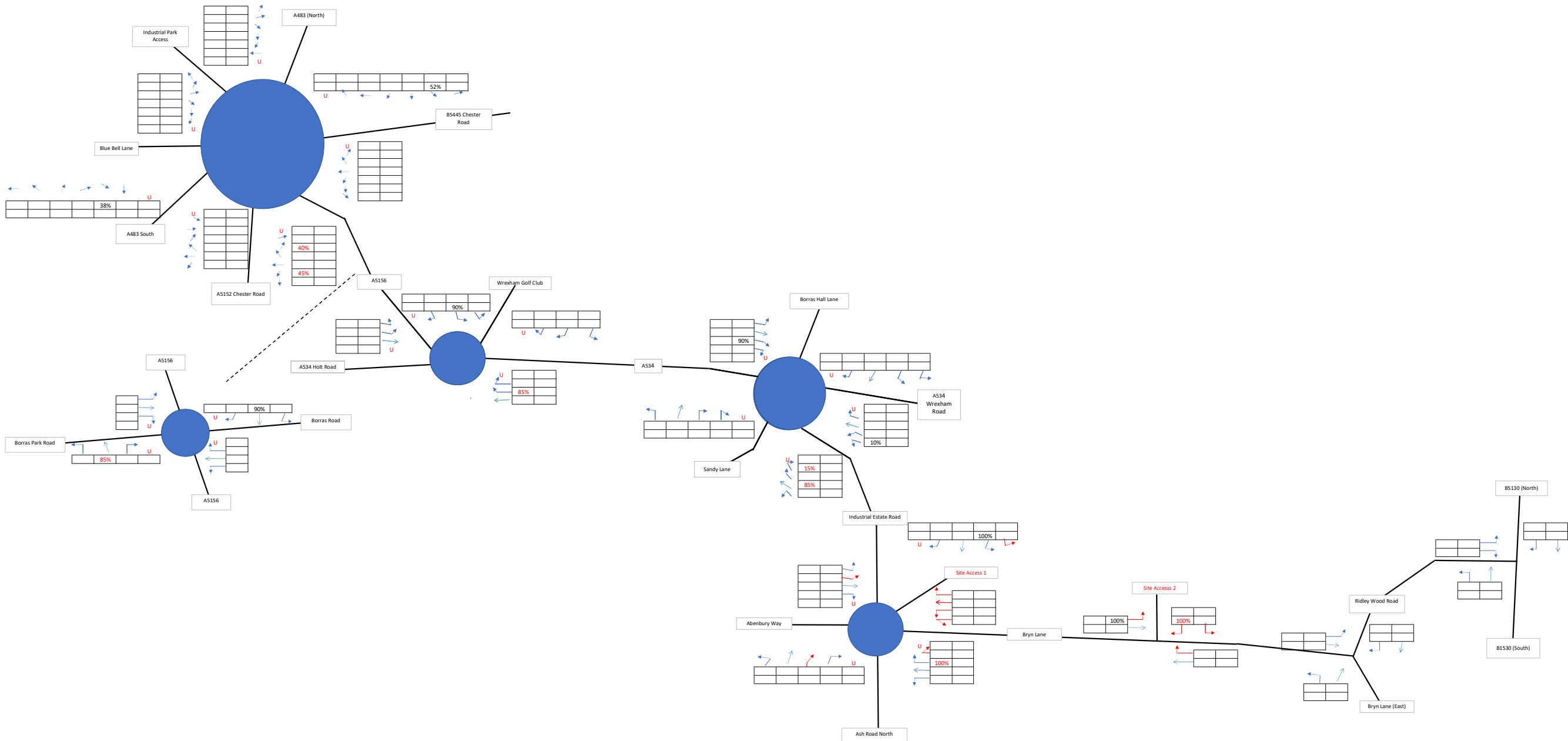


Figure 7d - Development Traffic Distribution (HGVs) [Phase 1]
PM Peak

Notes:

%	Arrivals (HGVs)
%	Departures (HGVs)

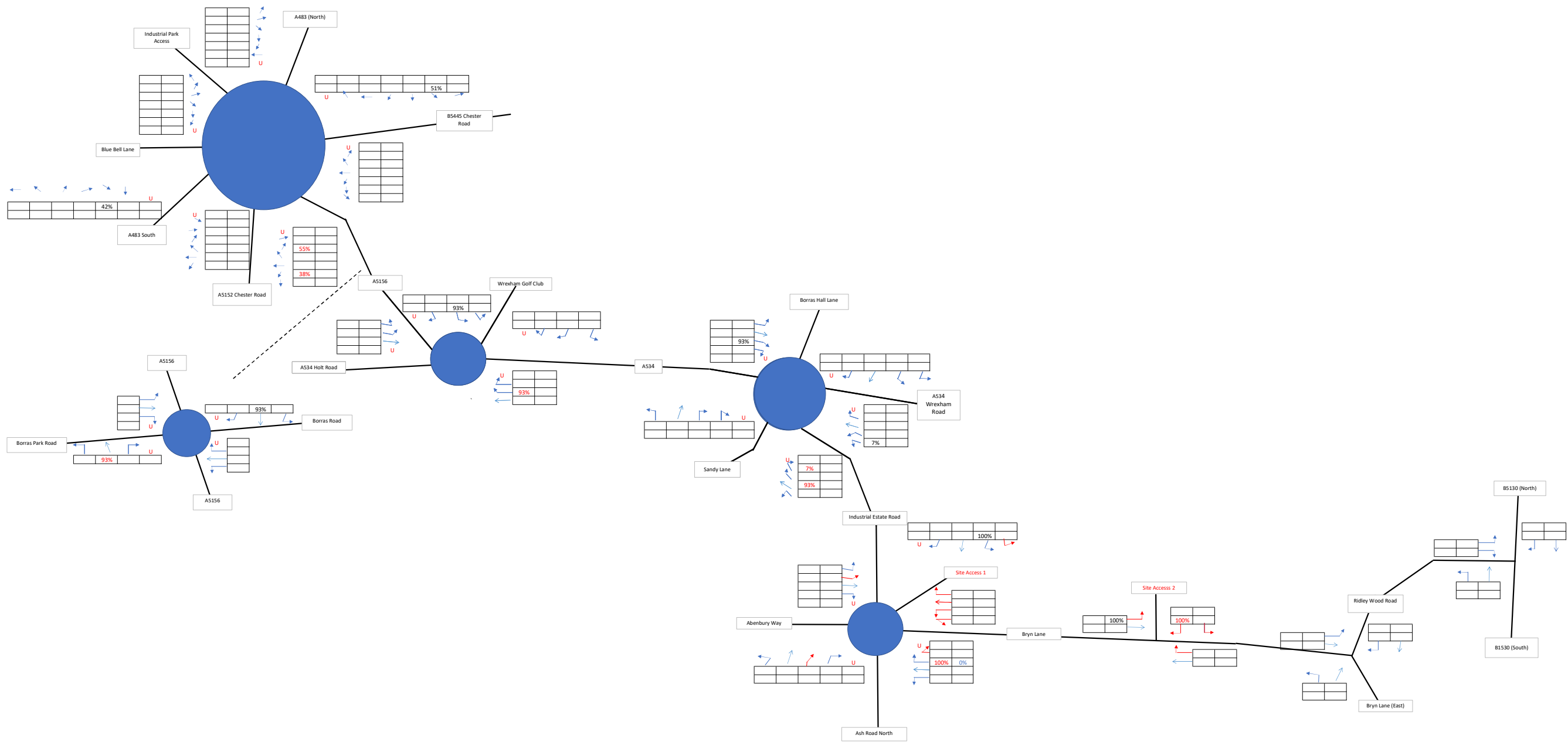


Figure 7e - Development Traffic Distribution (Lights) [Phase 2]
AM Peak

Notes: % Arrivals (Lights)
% Departures (Lights)
% Retail / Mixed Use (Lights)

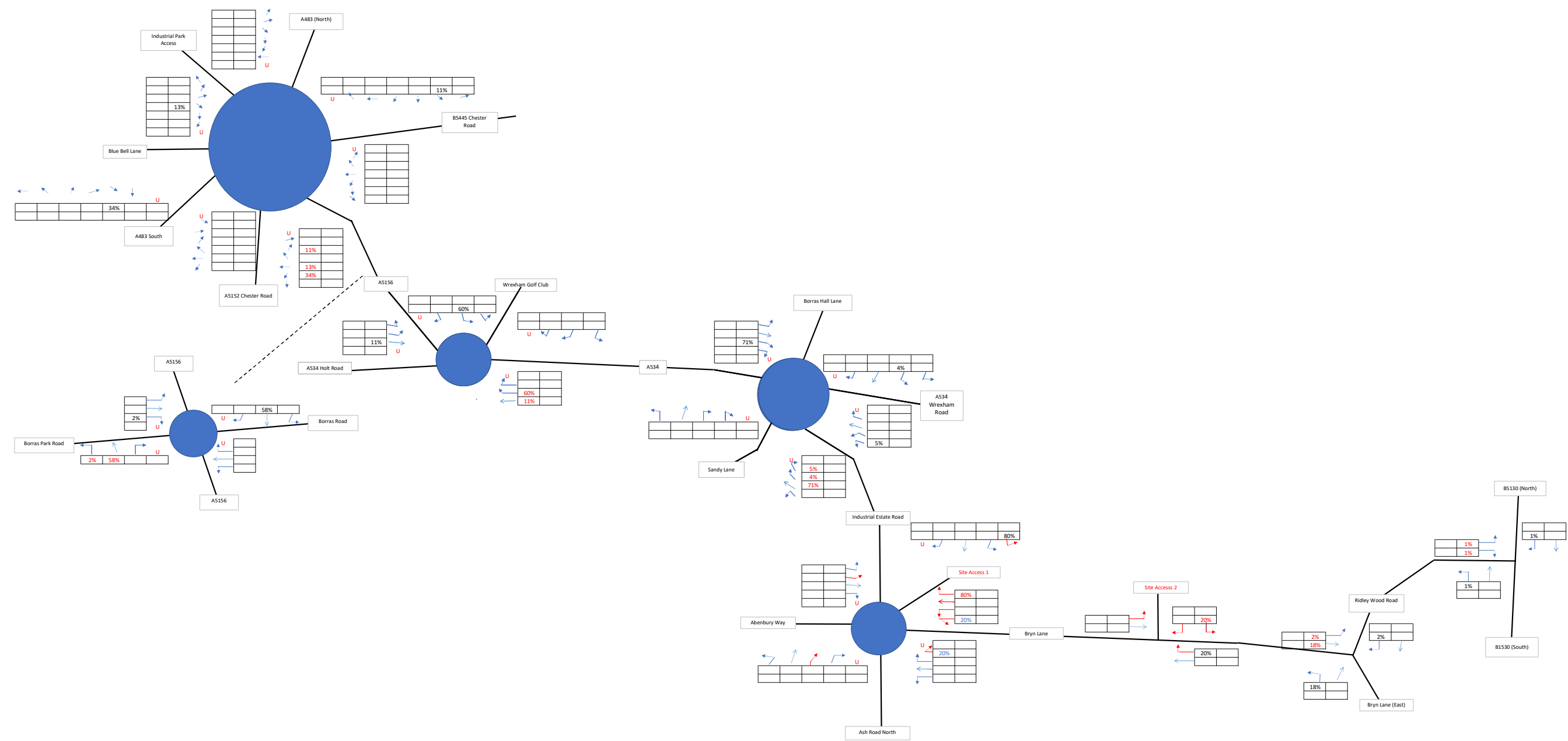


Figure 7f - Development Traffic Distribution (Lights) [Phase 2]
PM Peak

Notes:

%	Arrivals (Lights)
%	Departures (Lights)
%	Retail / Mixed Use (Lights)

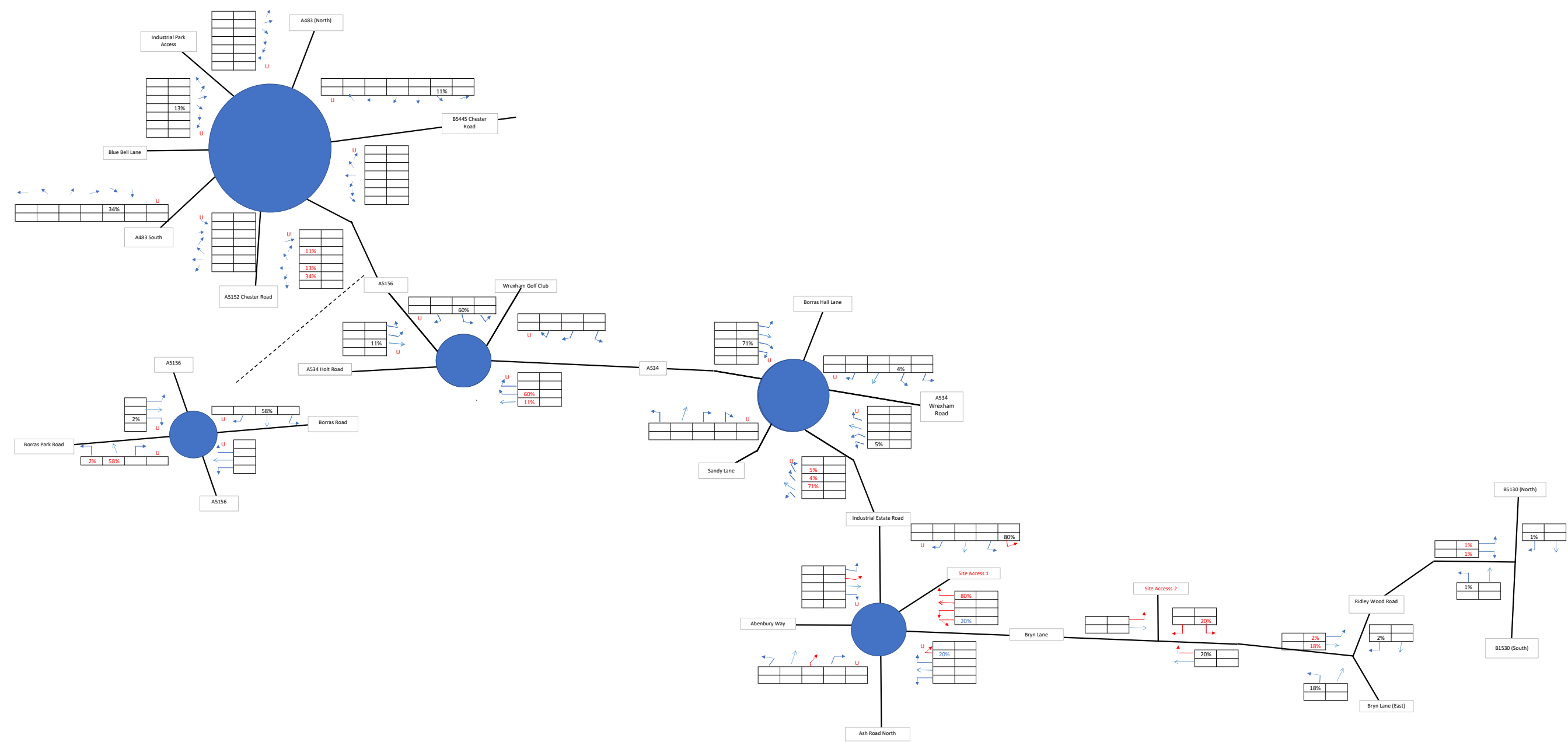


Figure 7g - Development Traffic Distribution (HGVs) [Phase 2]
AM Peak

Notes:

%	Arrivals (HGVs)
%	Departures (HGVs)

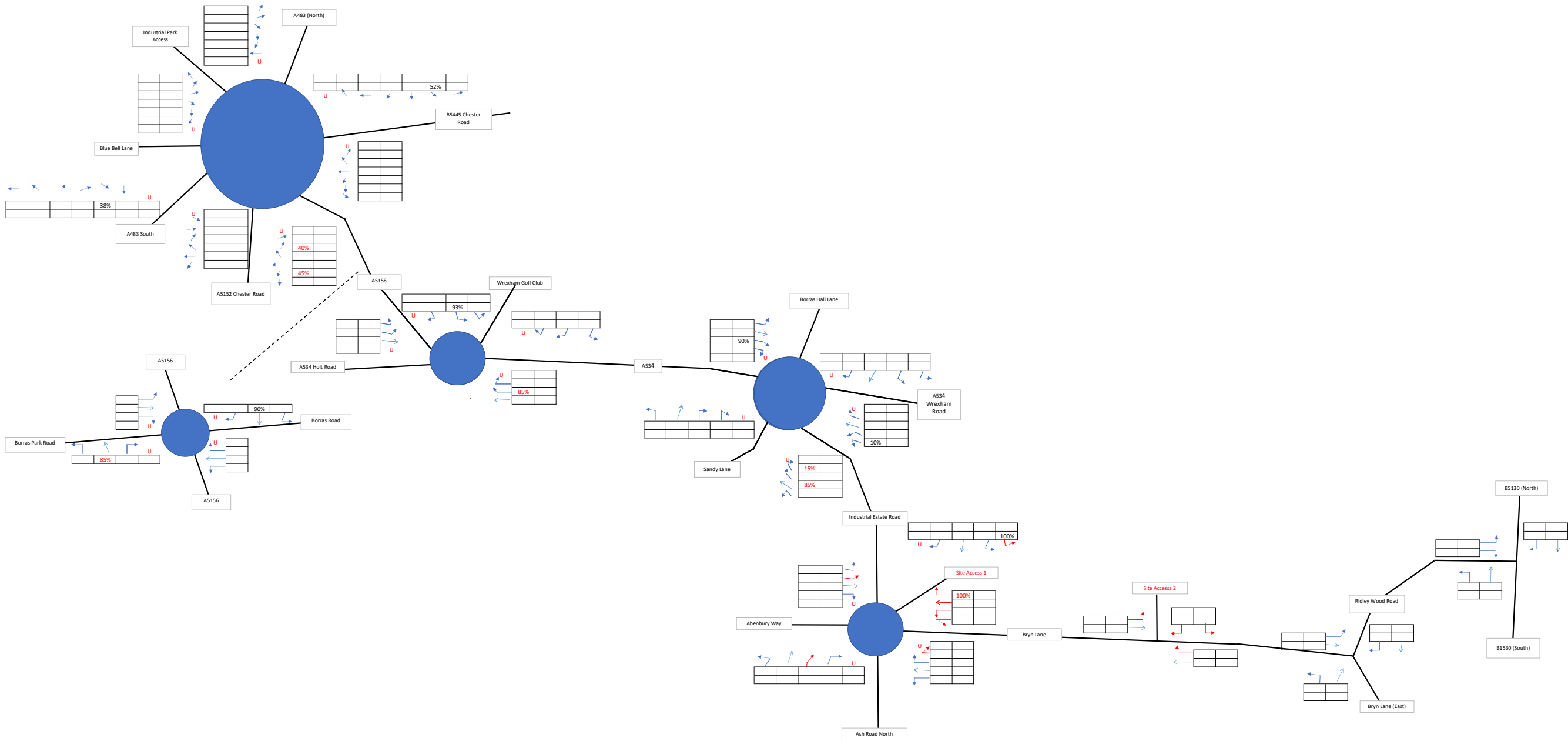


Figure 7g - Development Traffic Distribution (HGVs) [Phase 2]
PM Peak

Notes:

%	Arrivals (HGVs)
%	Departures (HGVs)

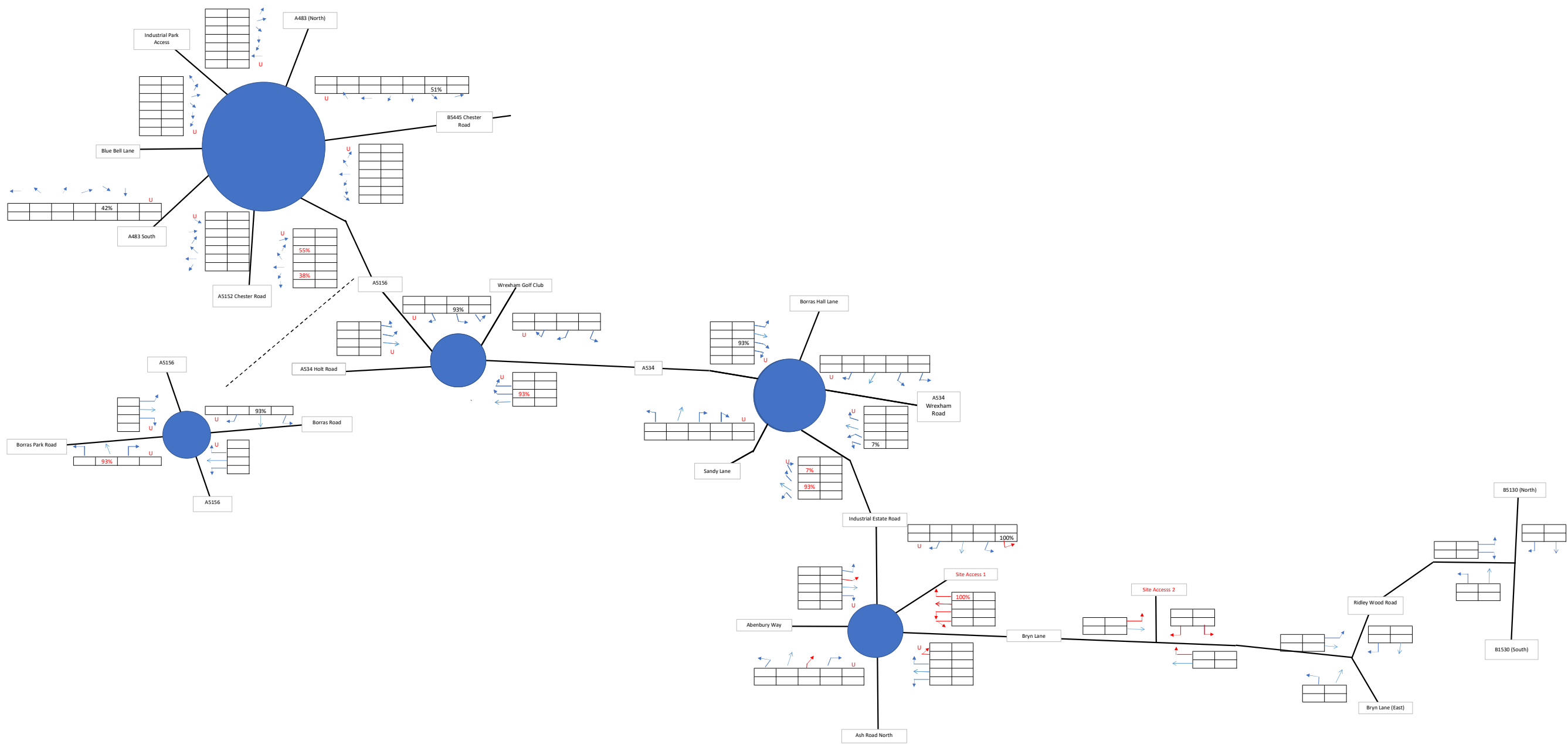


Figure 8a - Industrial Estate Development Trips (Lights) [Phase 1]
AM Peak: 0800-0900

Notes:

160

 Arrivals

38

 Departures

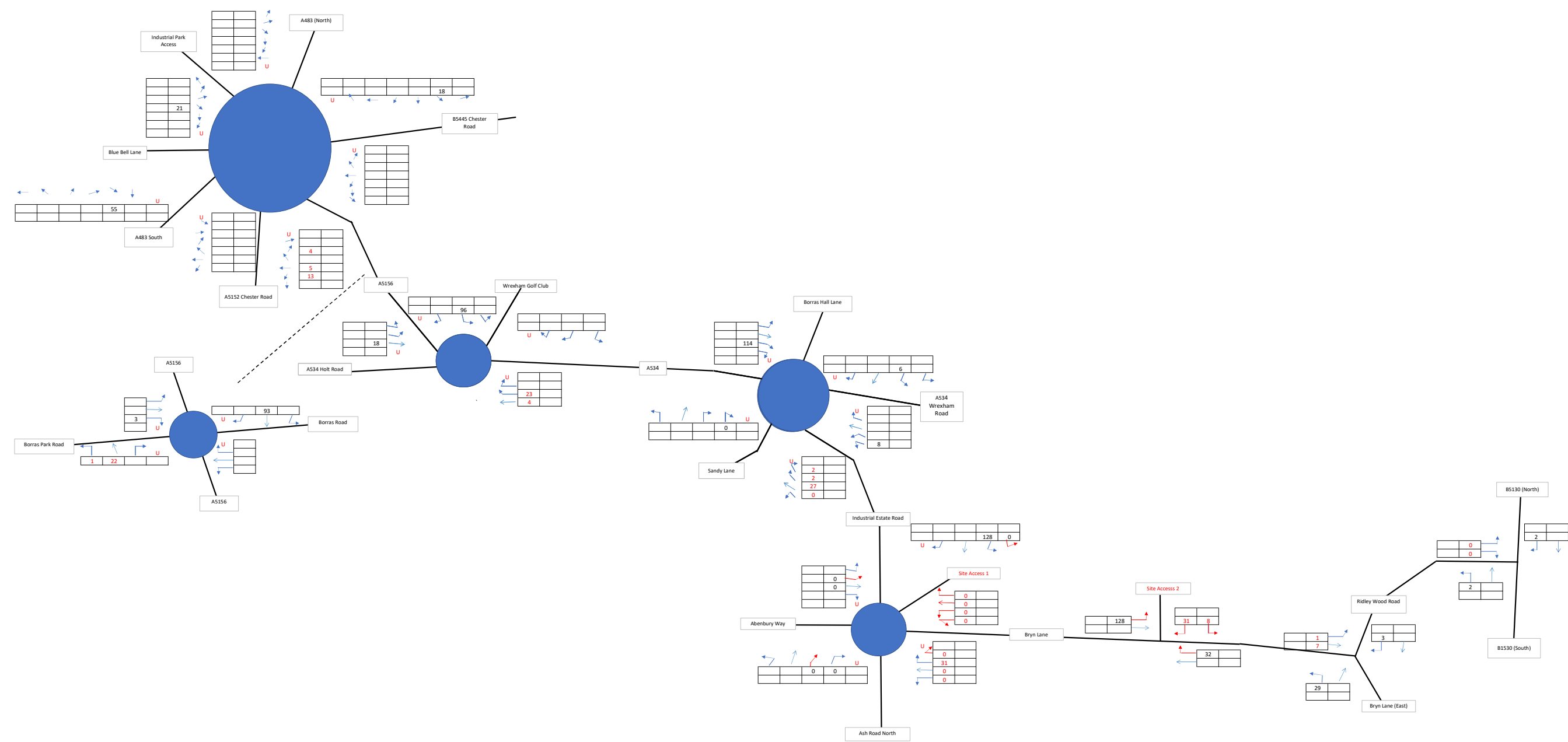


Figure 8b - Industrial Estate Development Trips (Lights) [Phase 1]
PM Peak: 1630-1730

Notes:

52

 Arrivals

139

 Departures

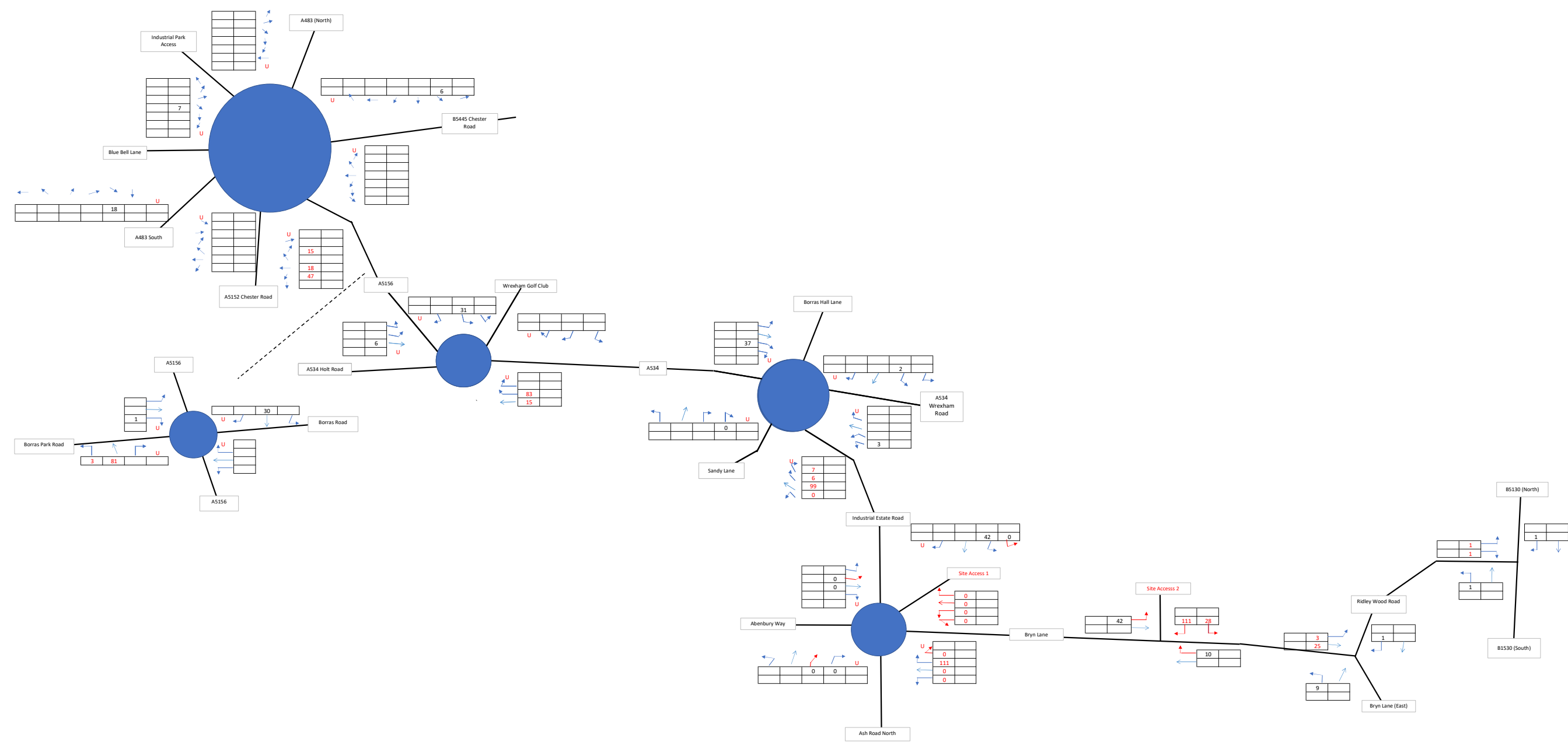


Figure 8c - Industrial Estate Development Trips (HGVs) [Phase 1]
AM Peak: 0800-0900

Notes:

18	Arrivals
26	Departures

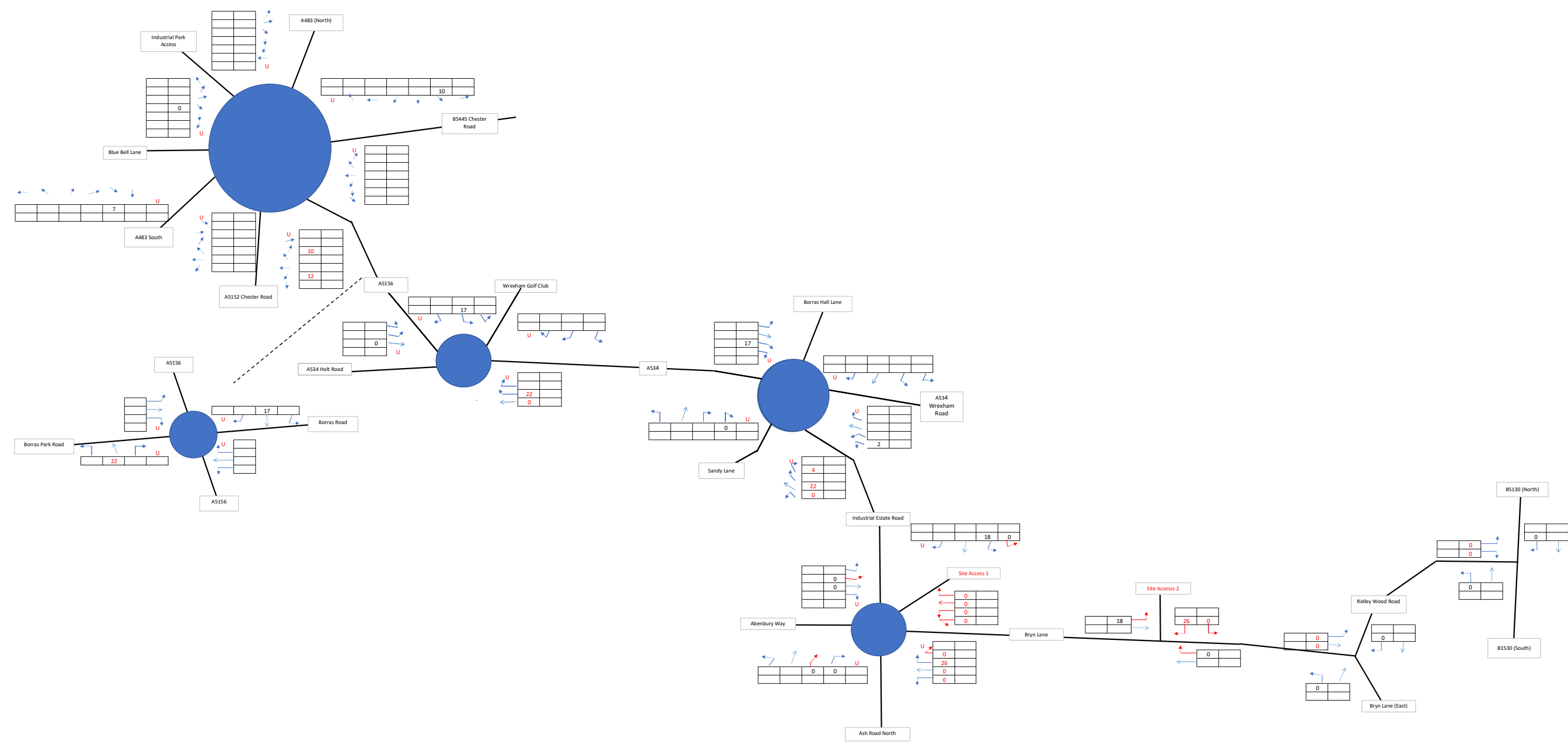


Figure 8d - Industrial Estate Development Trips (HGVs) [Phase 1]
PM Peak: 1630-1730

Notes:

26	Arrivals
19	Departures

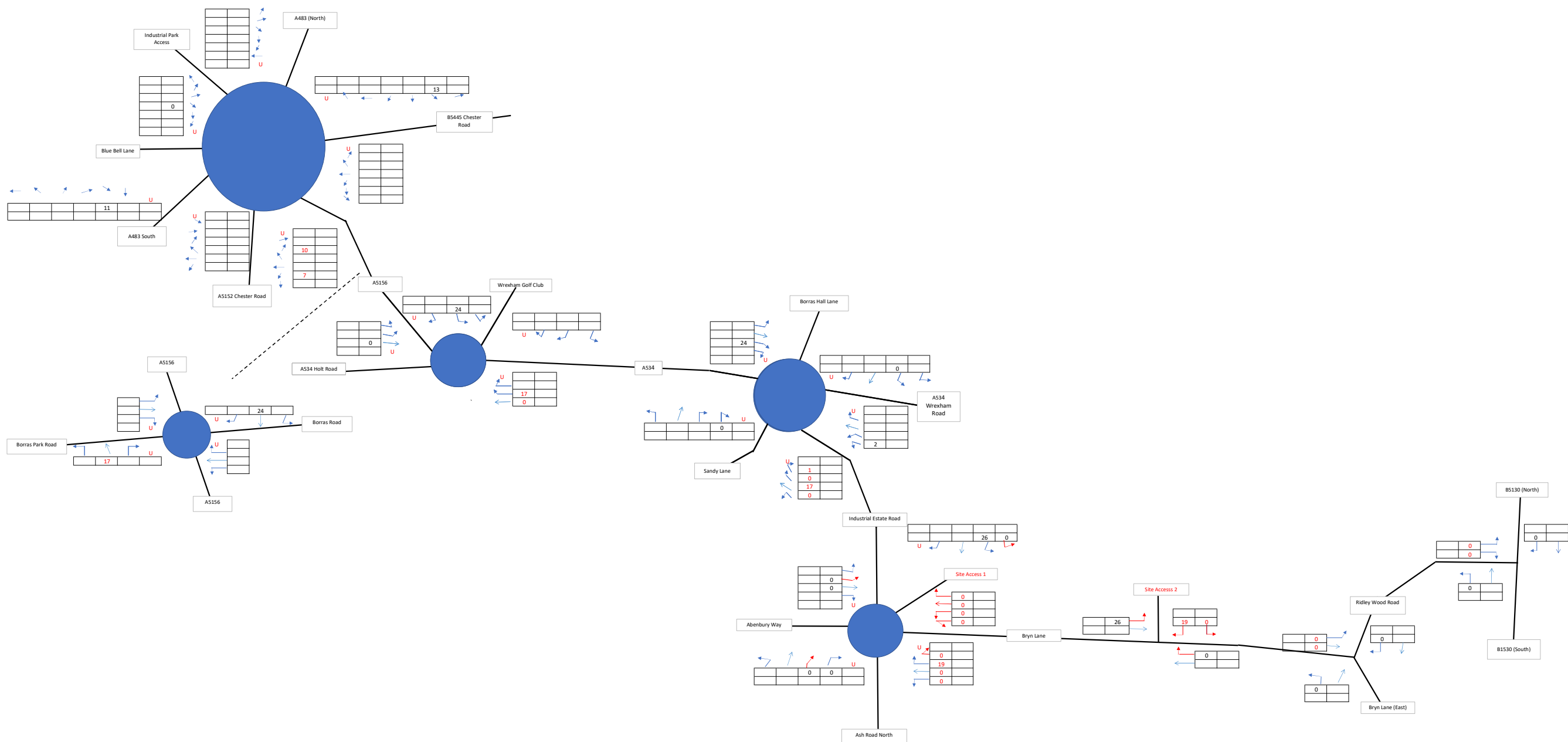


Figure 8e - Industrial Estate Development Trips (Lights) [Phase 2]
AM Peak: 0800-0900

Notes: 149 Arrivals
58 Departures

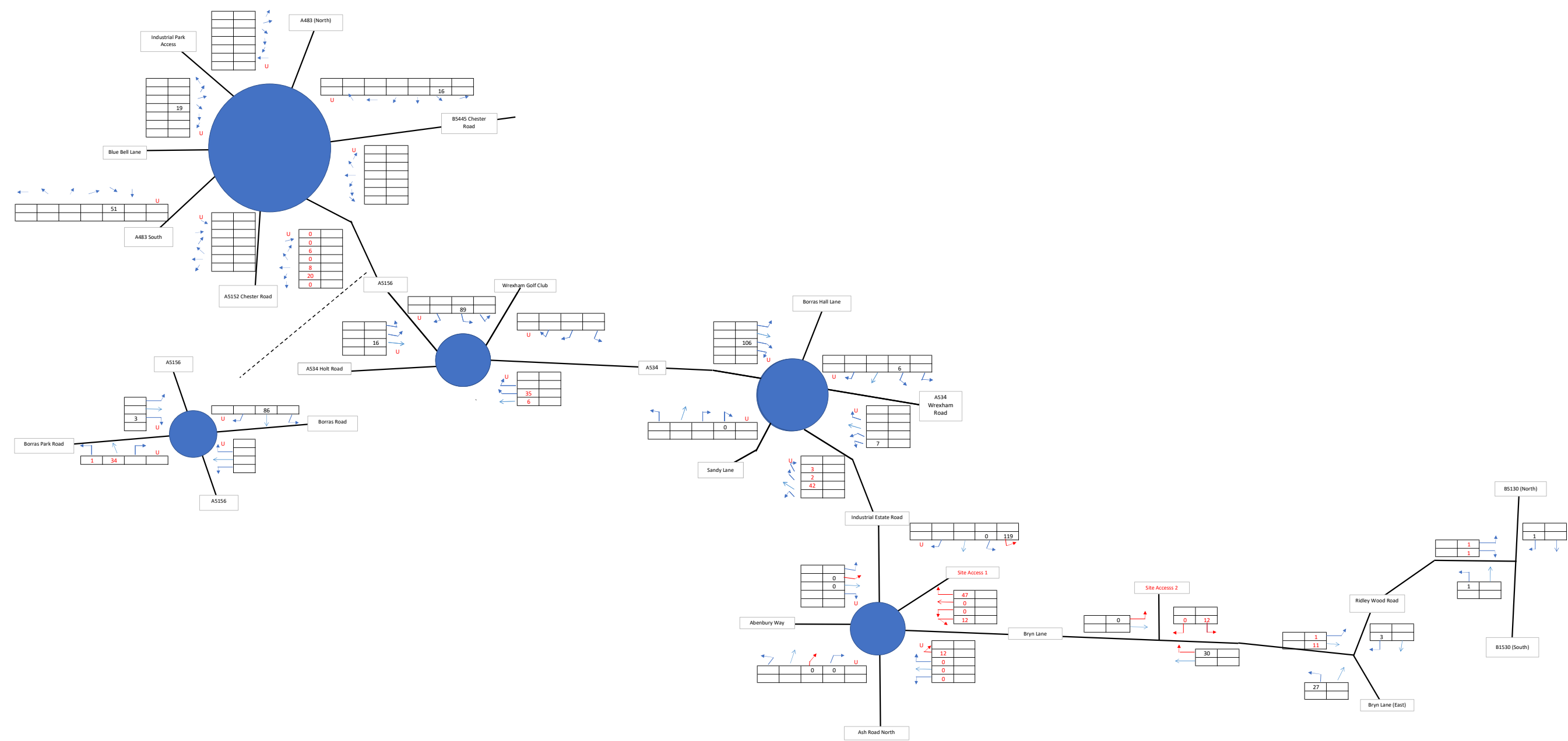


Figure 8e - Industrial Estate Development Trips (Lights) [Phase 2]
PM Peak: 1630-1730

Notes:

69

 Arrivals

132

 Departures

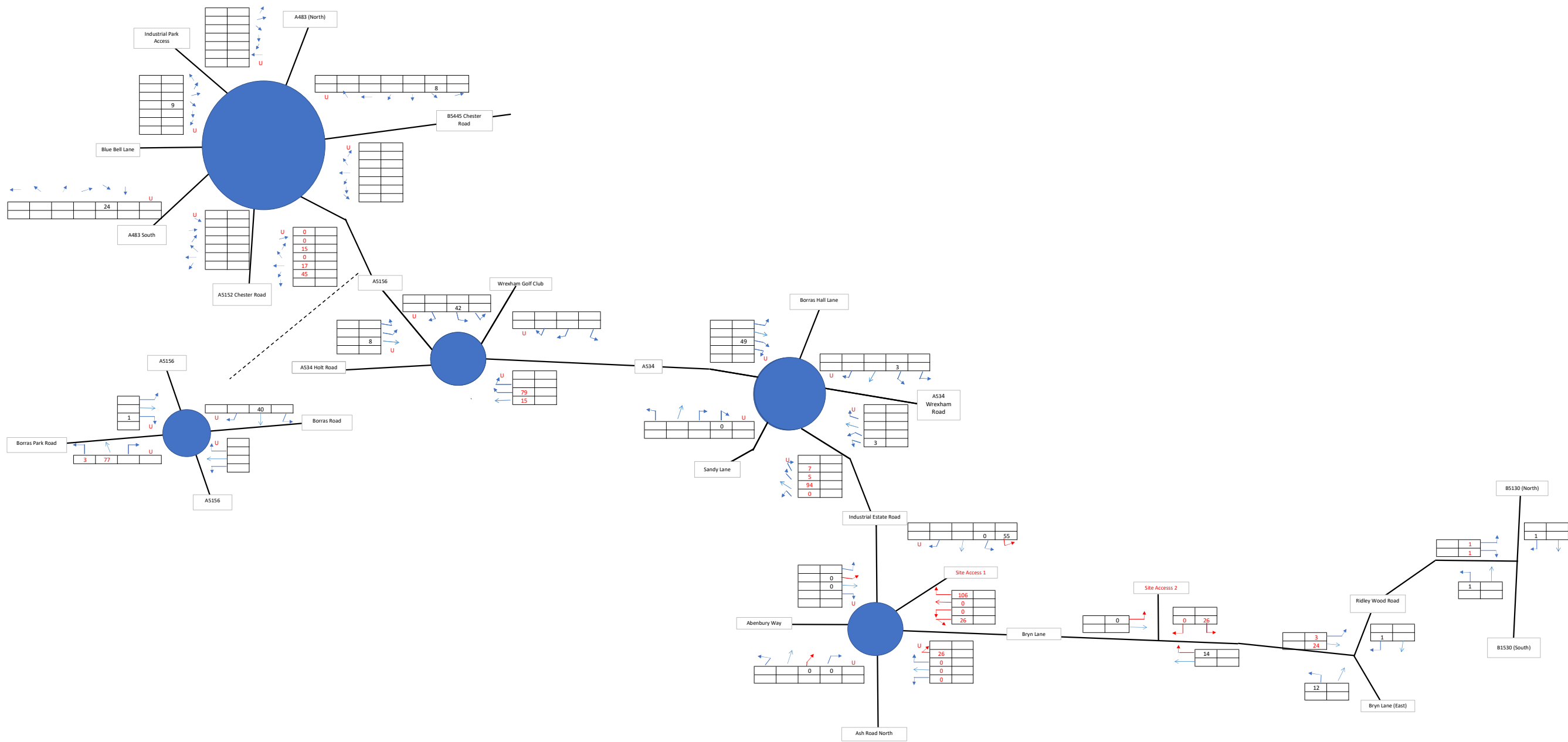


Figure 8g - Industrial Estate Development Trips (HGVs) [Phase 2]
AM Peak: 0800-0900

Notes:

17	Arrivals
25	Departures

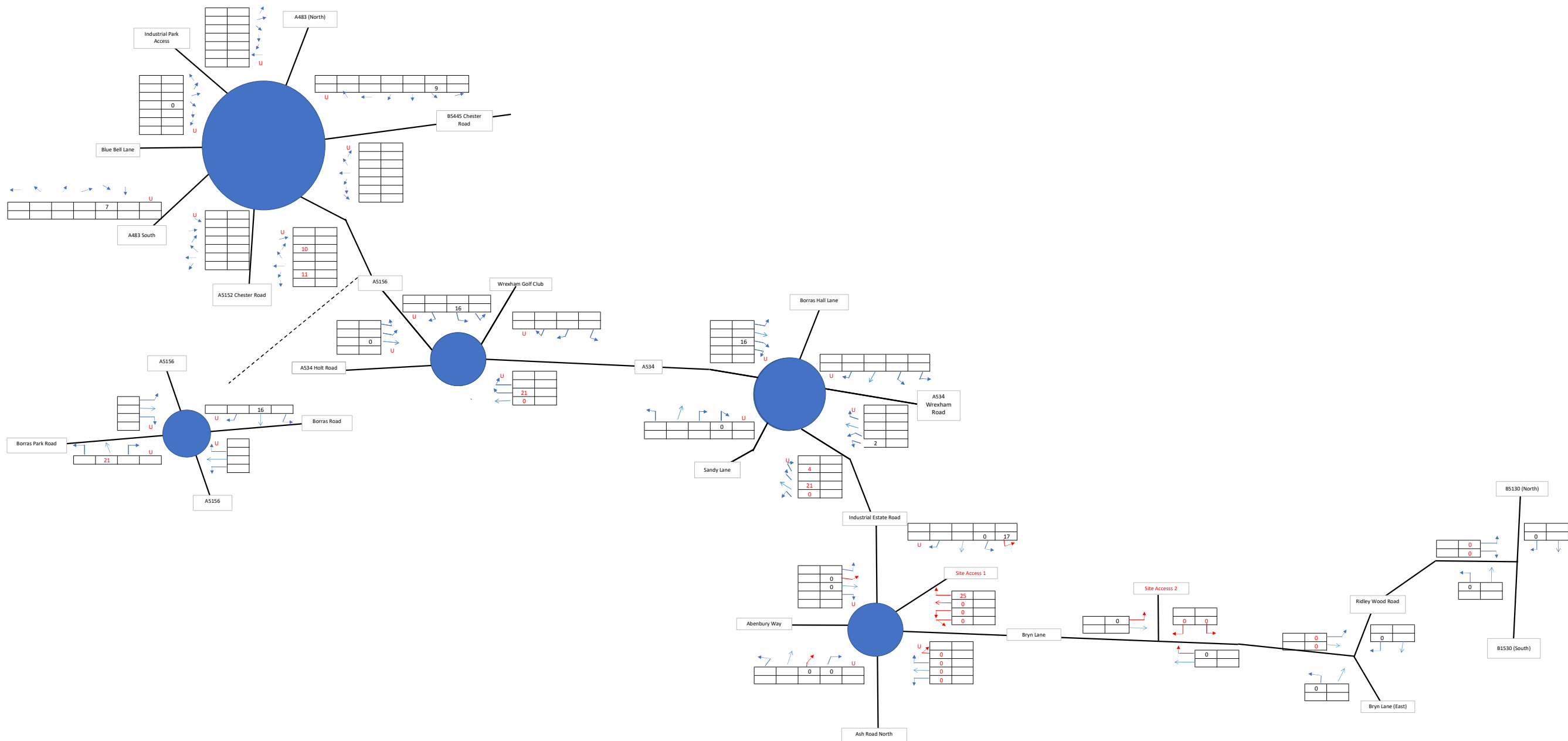


Figure 8h - Industrial Estate Development Trips (HGVs) [Phase 2]
PM Peak: 1630-1730

Notes:

25	Arrivals
18	Departures

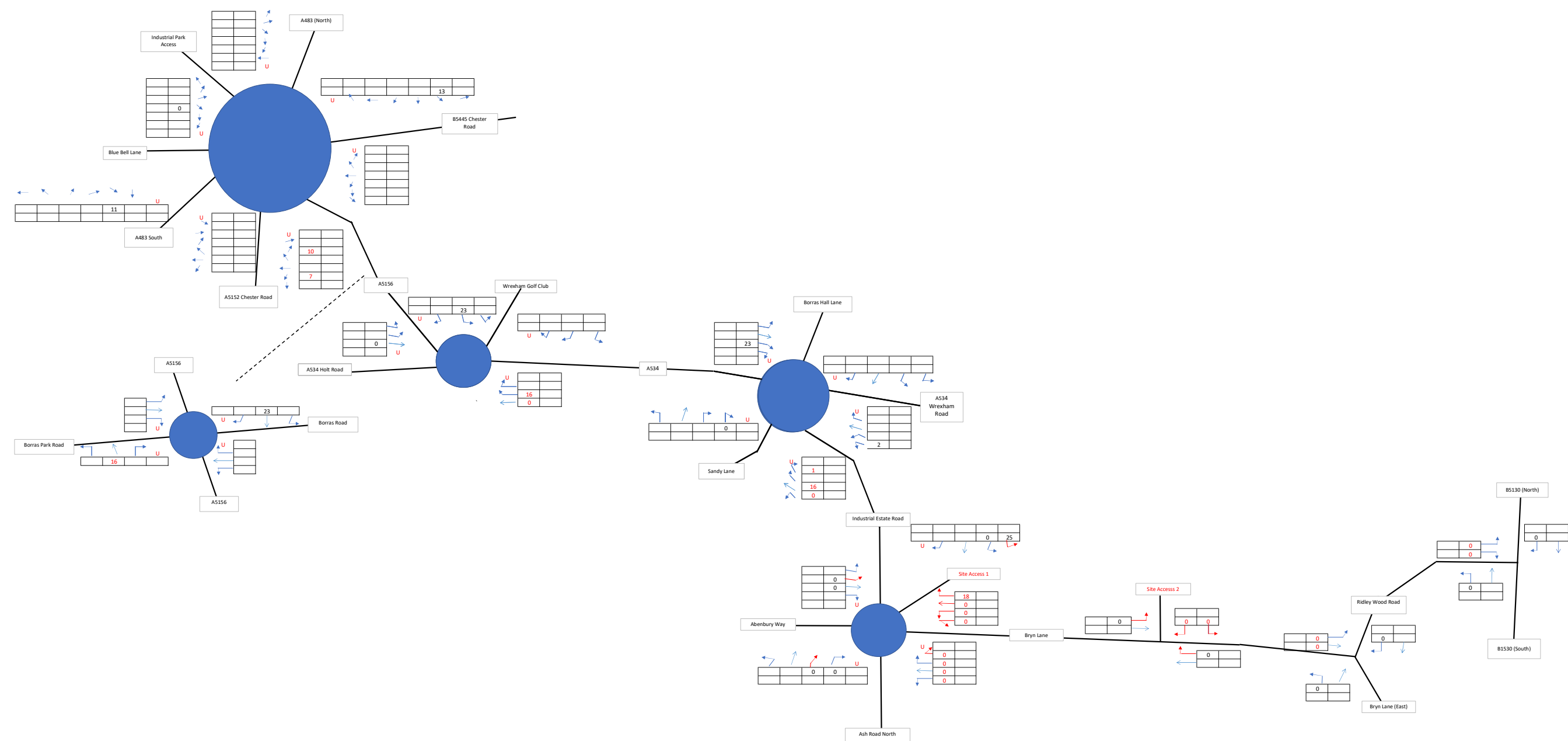


Figure 9 - Dummy Figure

Notes:

#REF!	Arrivals
#REF!	Departures

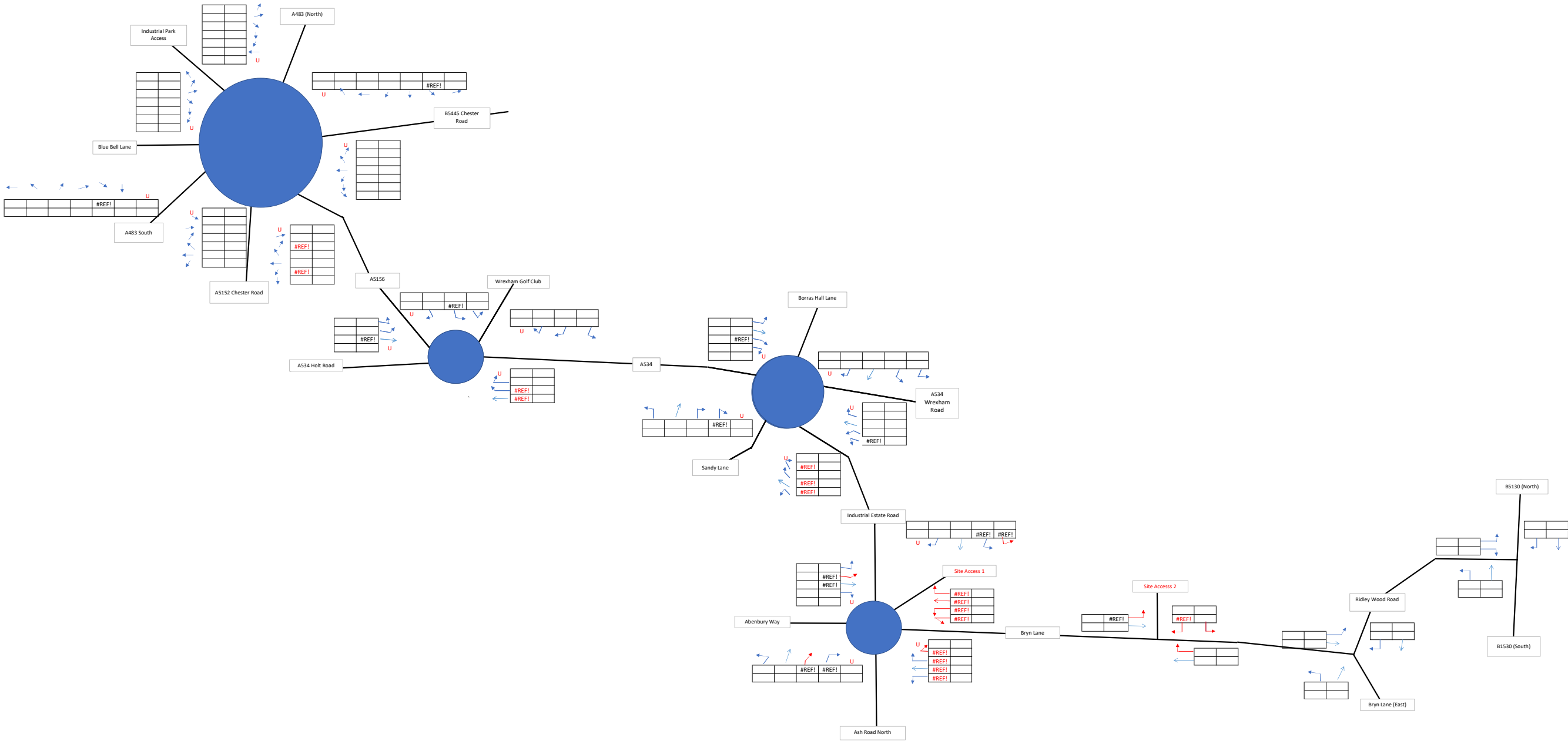


Figure 10 - Hotel Development Trips
AM Peak: 0800-0900

Notes: 9 Arrivals
18 Departures

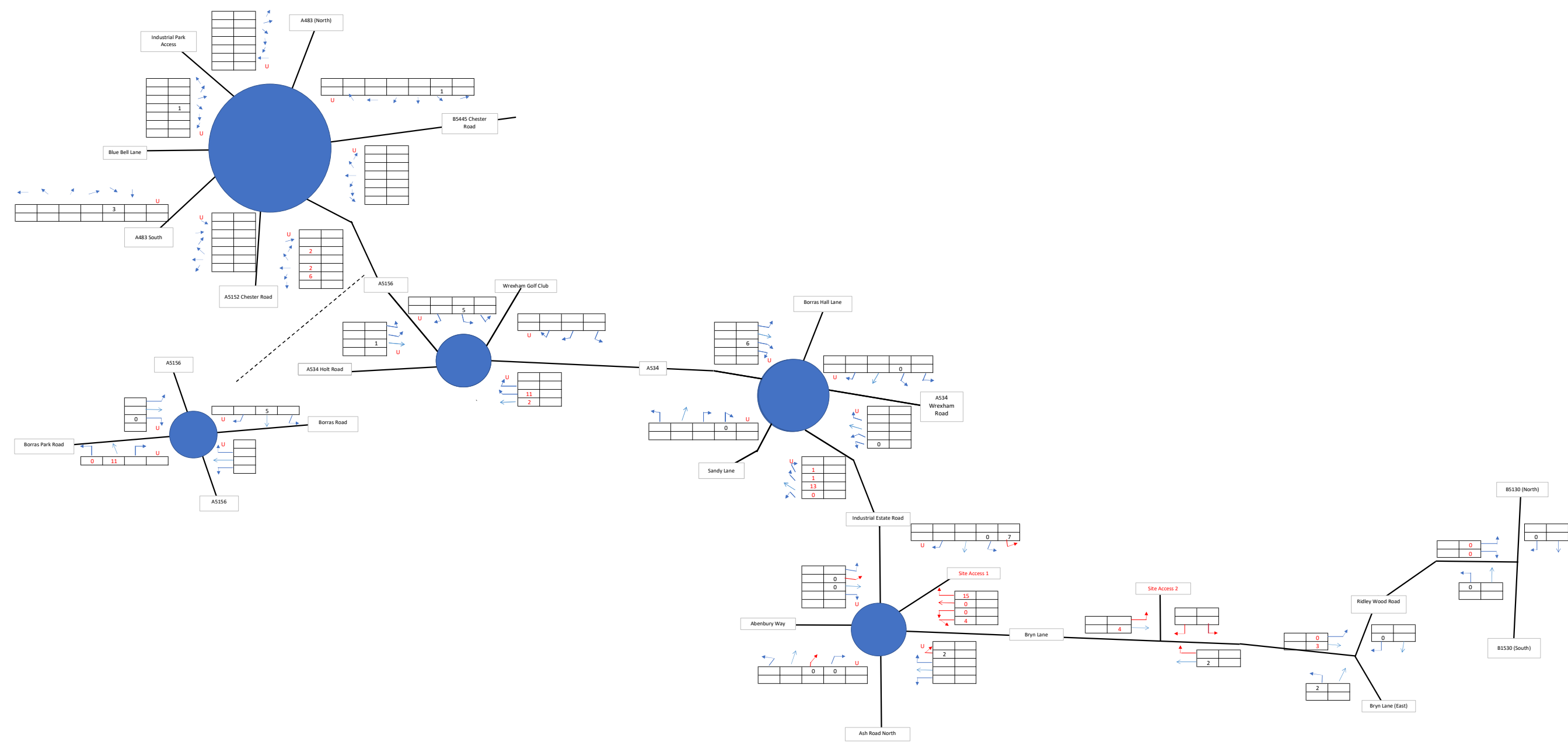


Figure 11 - Hotel Development Trips
PM Peak: 1630-1730

Notes:

13	Arrivals
8	Departures

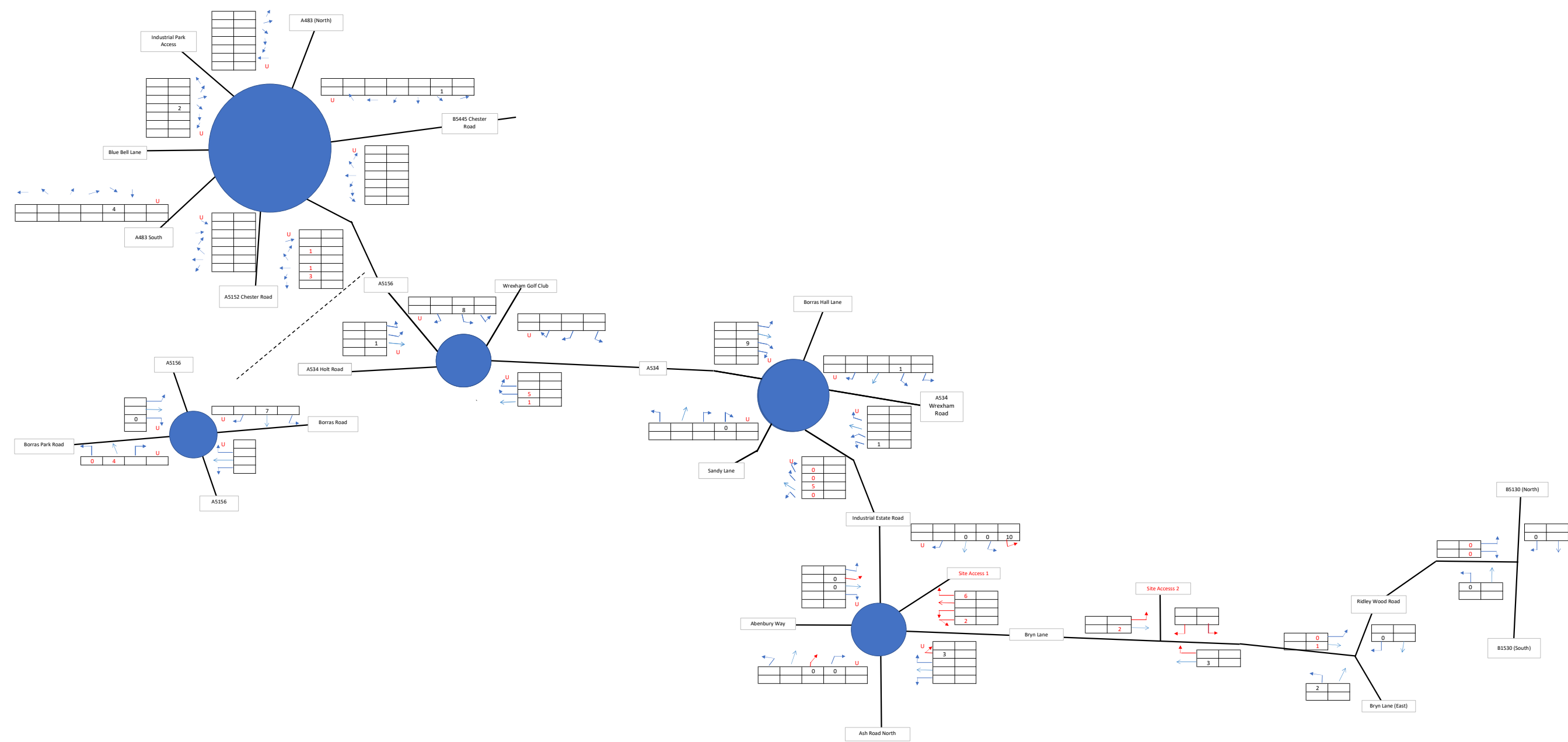


Figure 12 - Pass-By Trips (Local Centre, Drive-Thru & PFS)
AM Peak: 0800-0900

Notes:

283

 Arrivals

270

 Departures

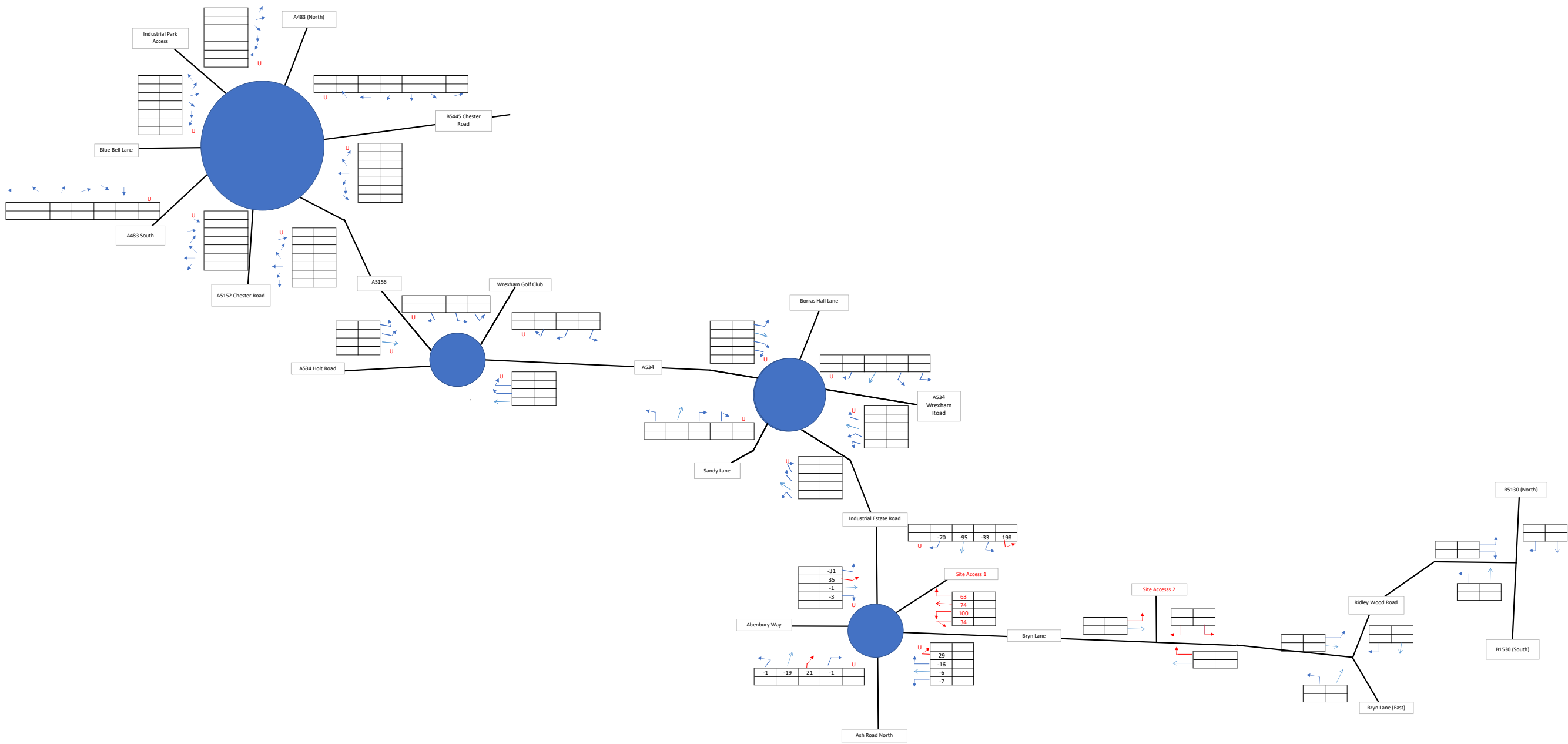


Figure 13 - Pass-By Trips (Local Centre, Drive-Thru & PFS)
PM Peak: 1630-1730

Notes:

332

 Arrivals

343

 Departures

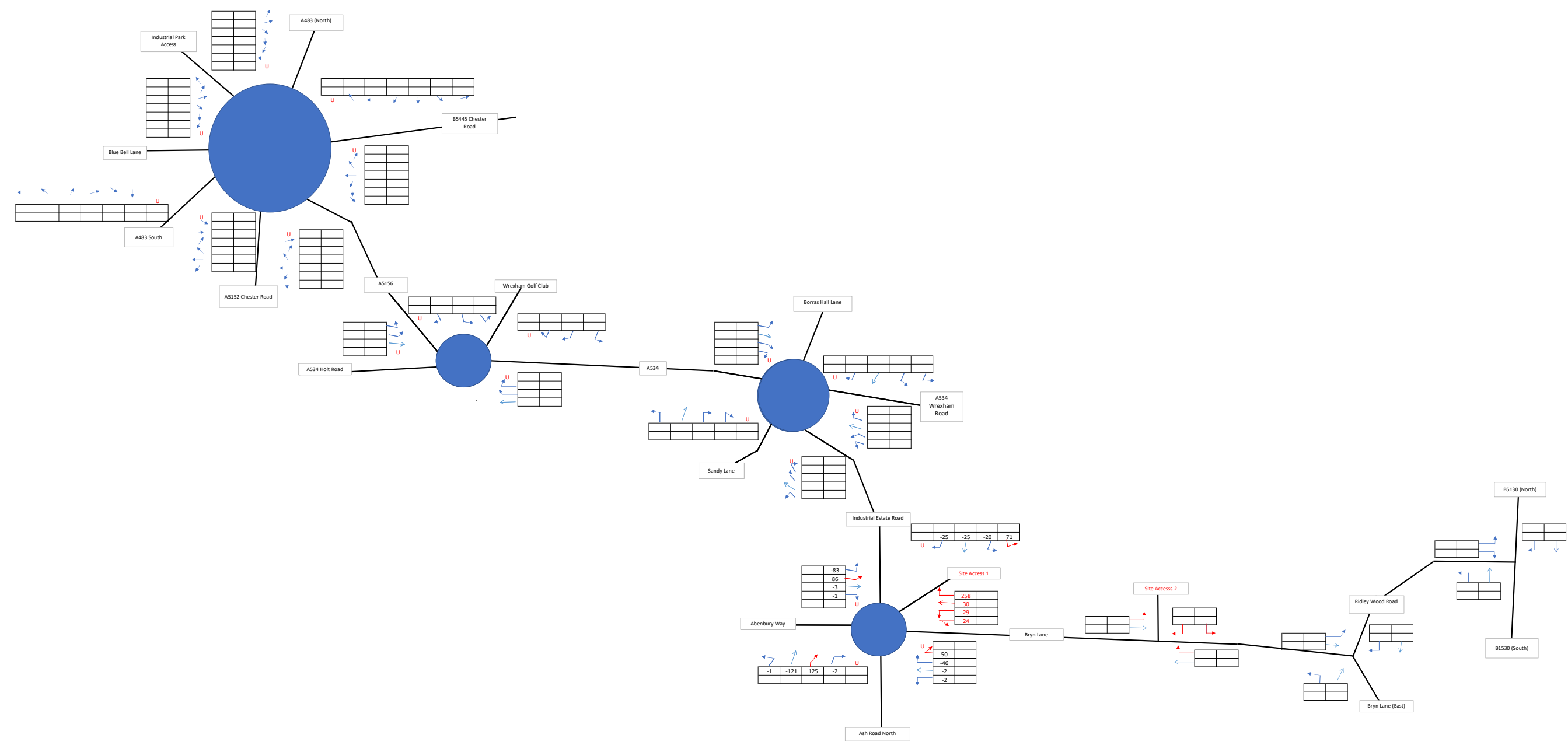


Figure 14 - New Trips (Local Centre, Drive-Thru & PFS)
AM Peak: 0800-0900

Notes:

31	Arrivals
30	Departures

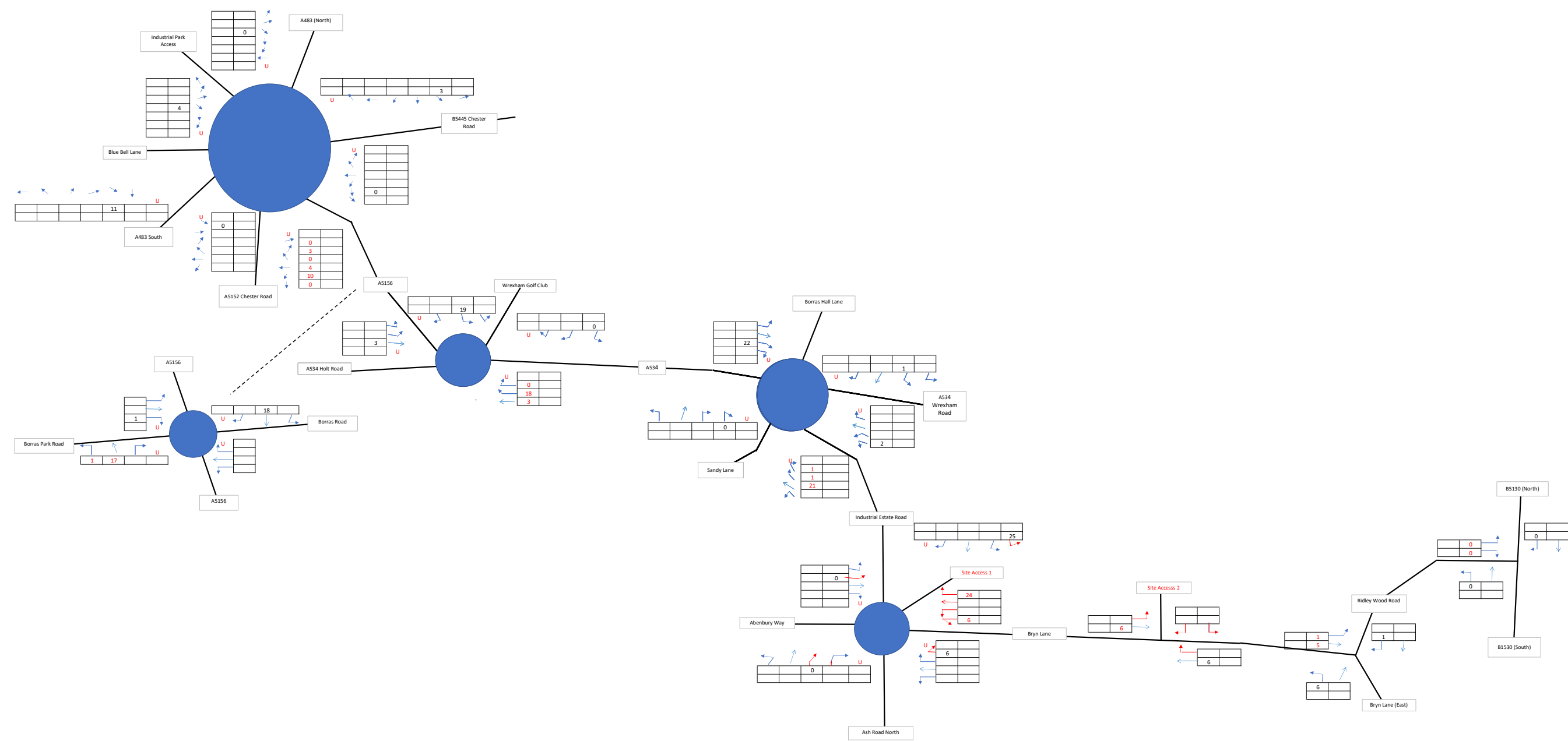
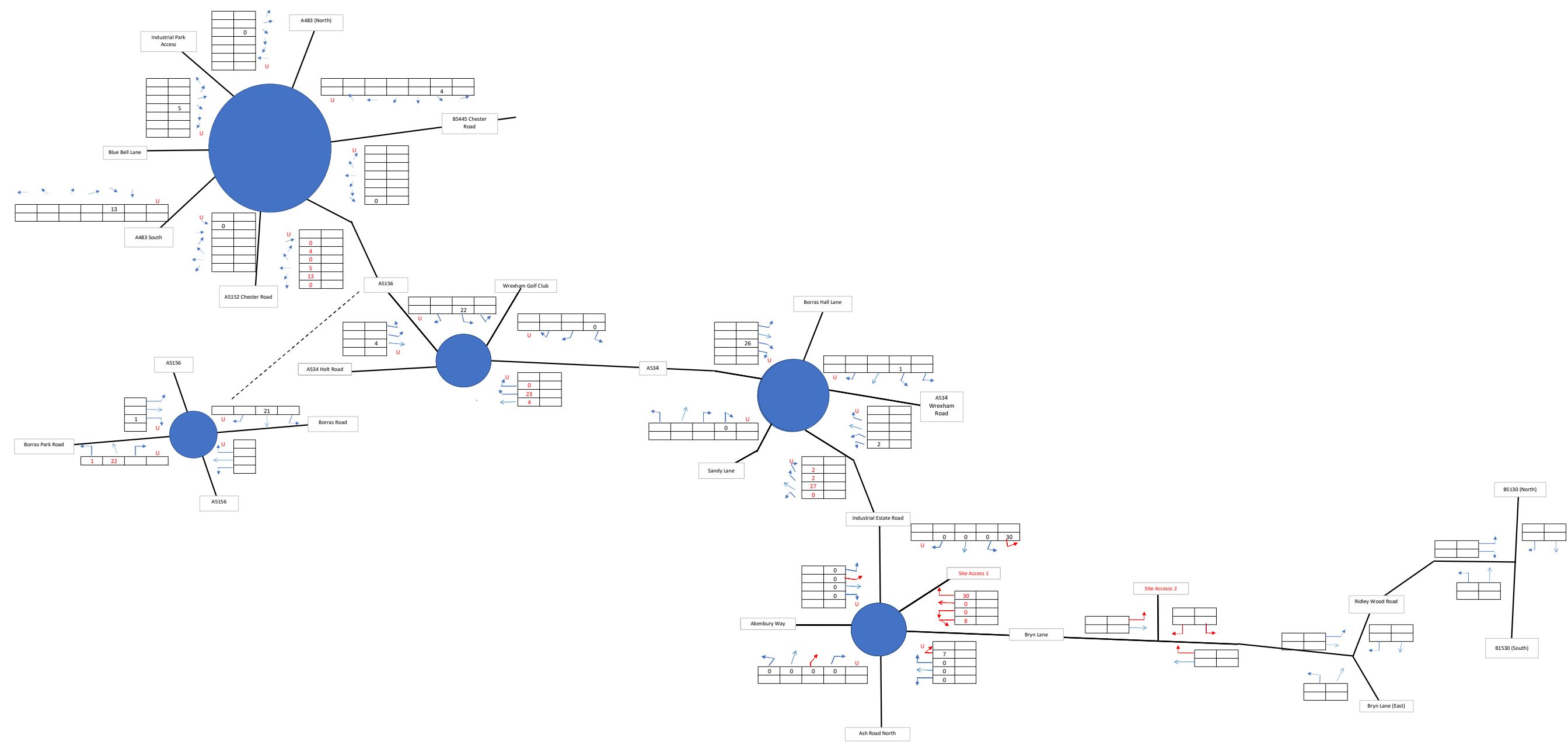


Figure 15 - New Trips (Local Centre, Drive-Thru & PFS)
PM Peak: 1630-1730

Notes:

37	Arrivals
38	Departures



Notes:

123

 PCUs

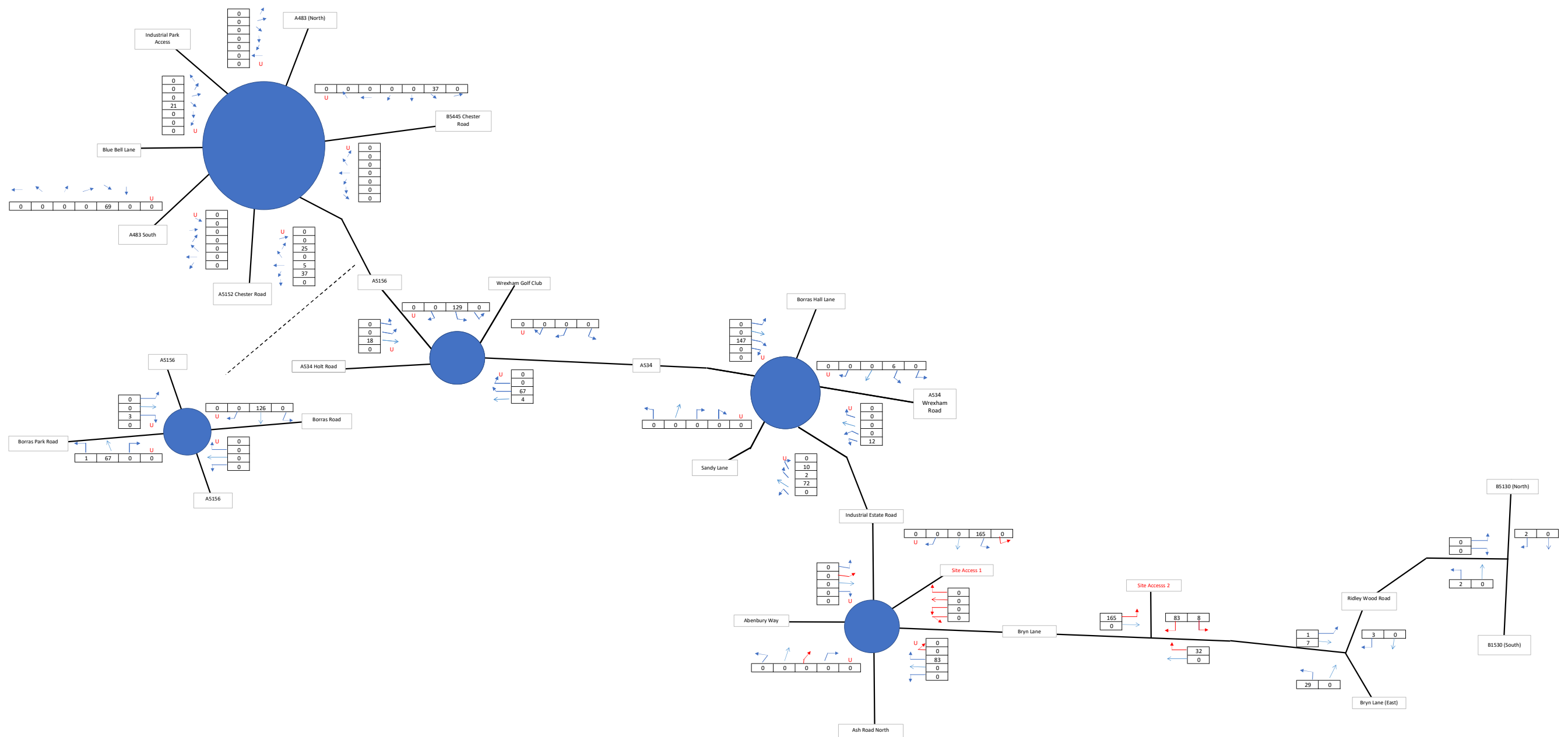
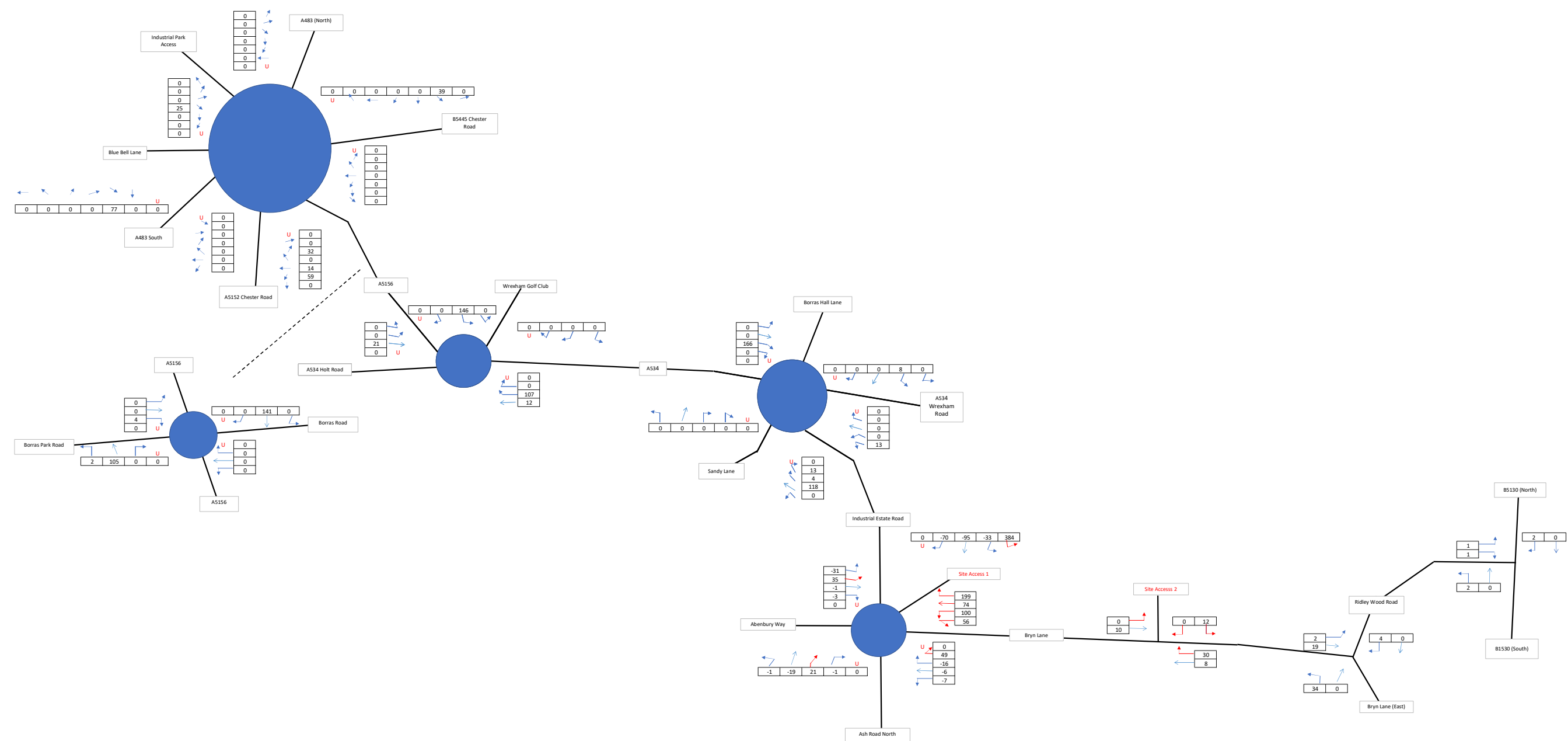


Figure 16a - Total Development Trips [Phase 1 + 2]
AM Peak: 0800-0900

Notes:

-123

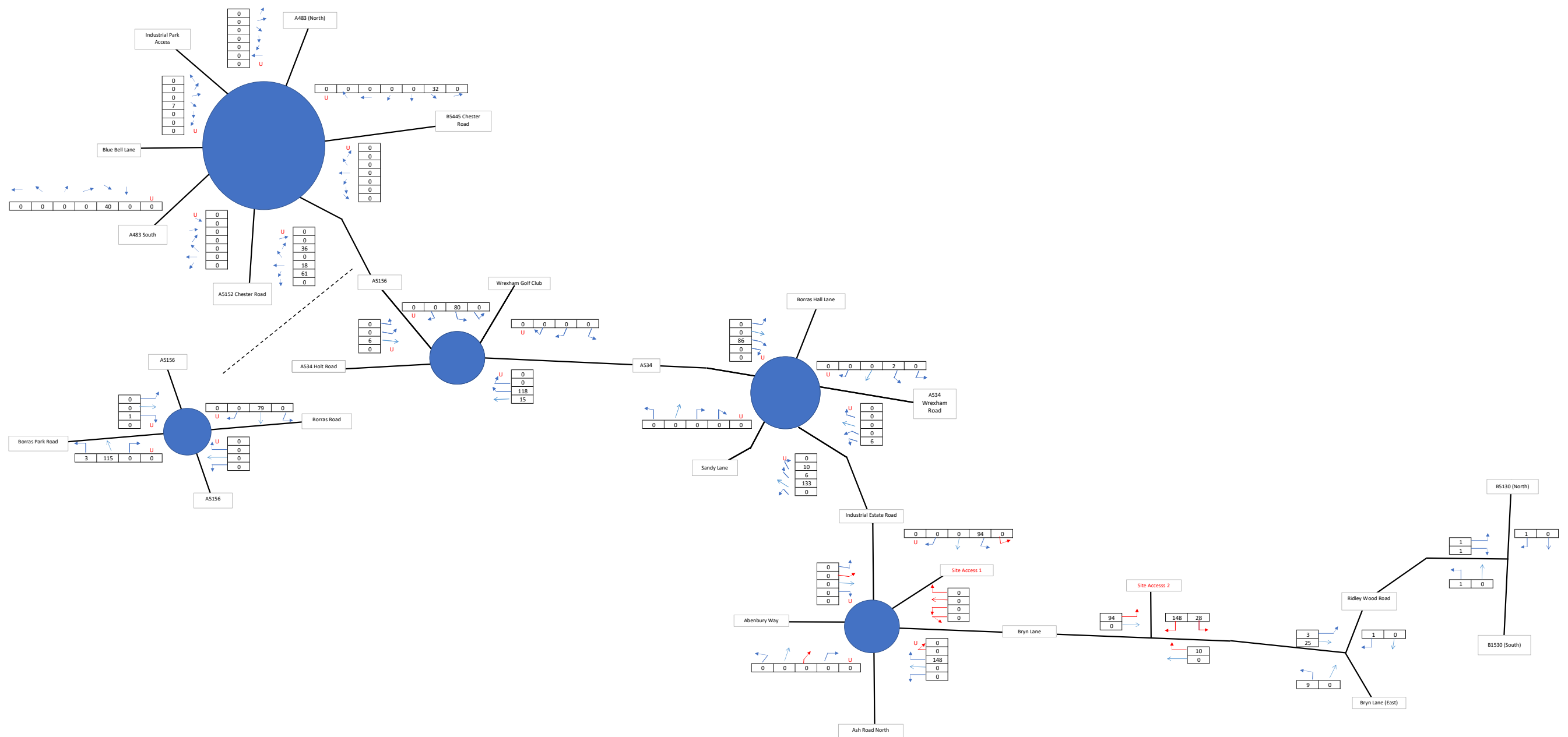
 PCUs



Notes:

123

 PCUs:



Notes:

123

 PCUs:

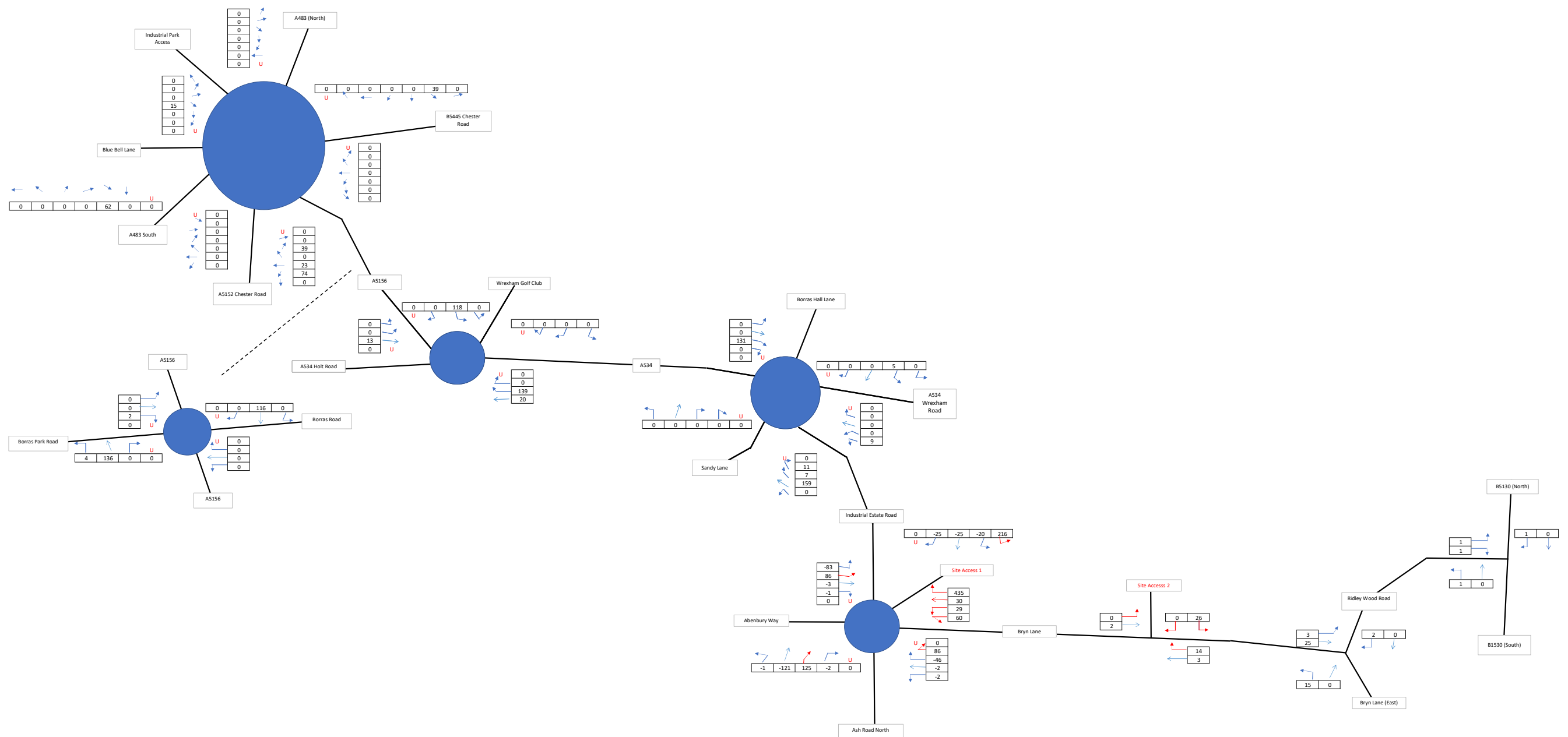
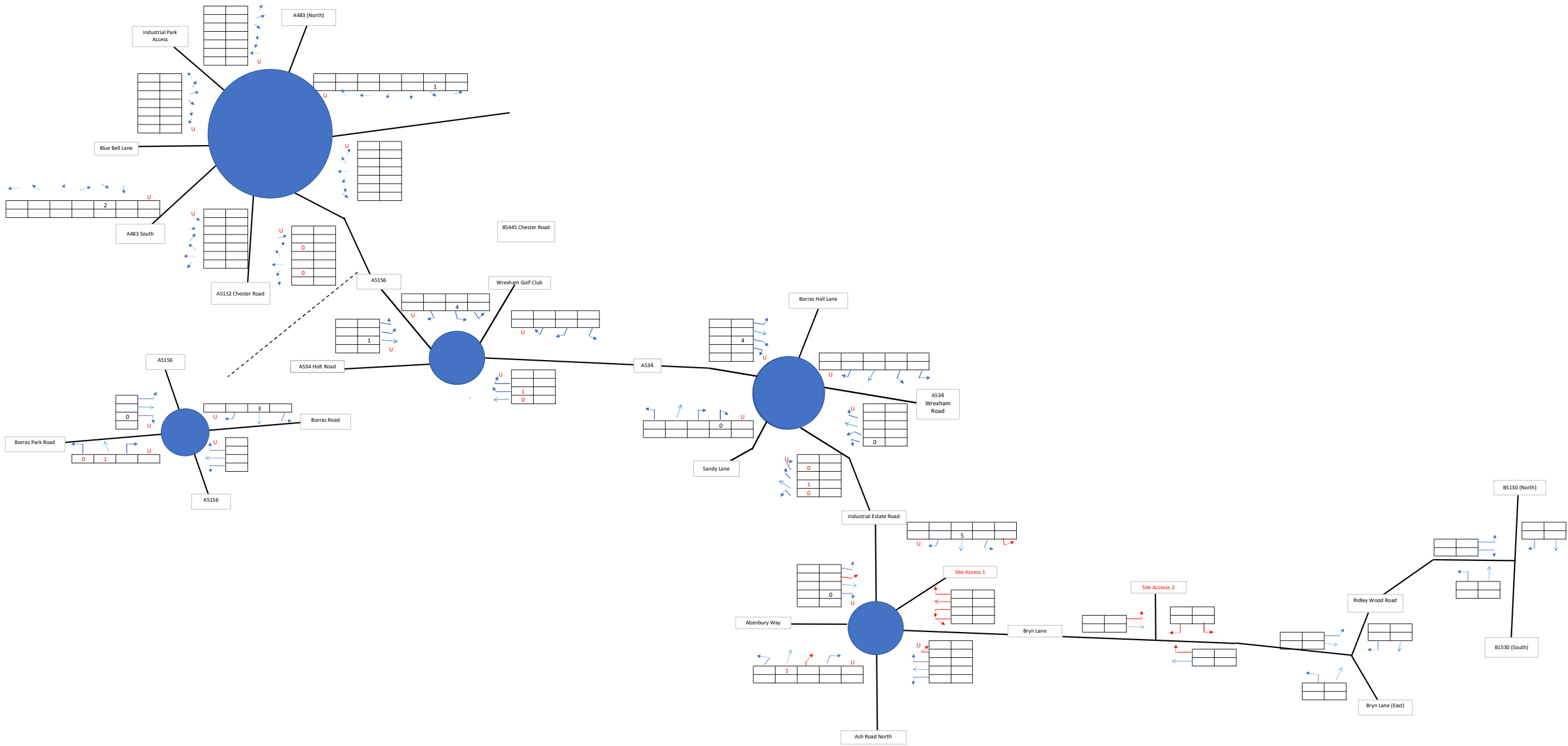


Figure 18 - Pacific Park Committed Traffic
AM Peak

Notes:

6	Arrivals
1	Departures

GFA 2567 sqm
Arr 0.228
Dep 0.028



Notes:	1	Arrivals
	9	Departures

GFA	2567	sqm
Arr	0.039	
Dep	0.361	

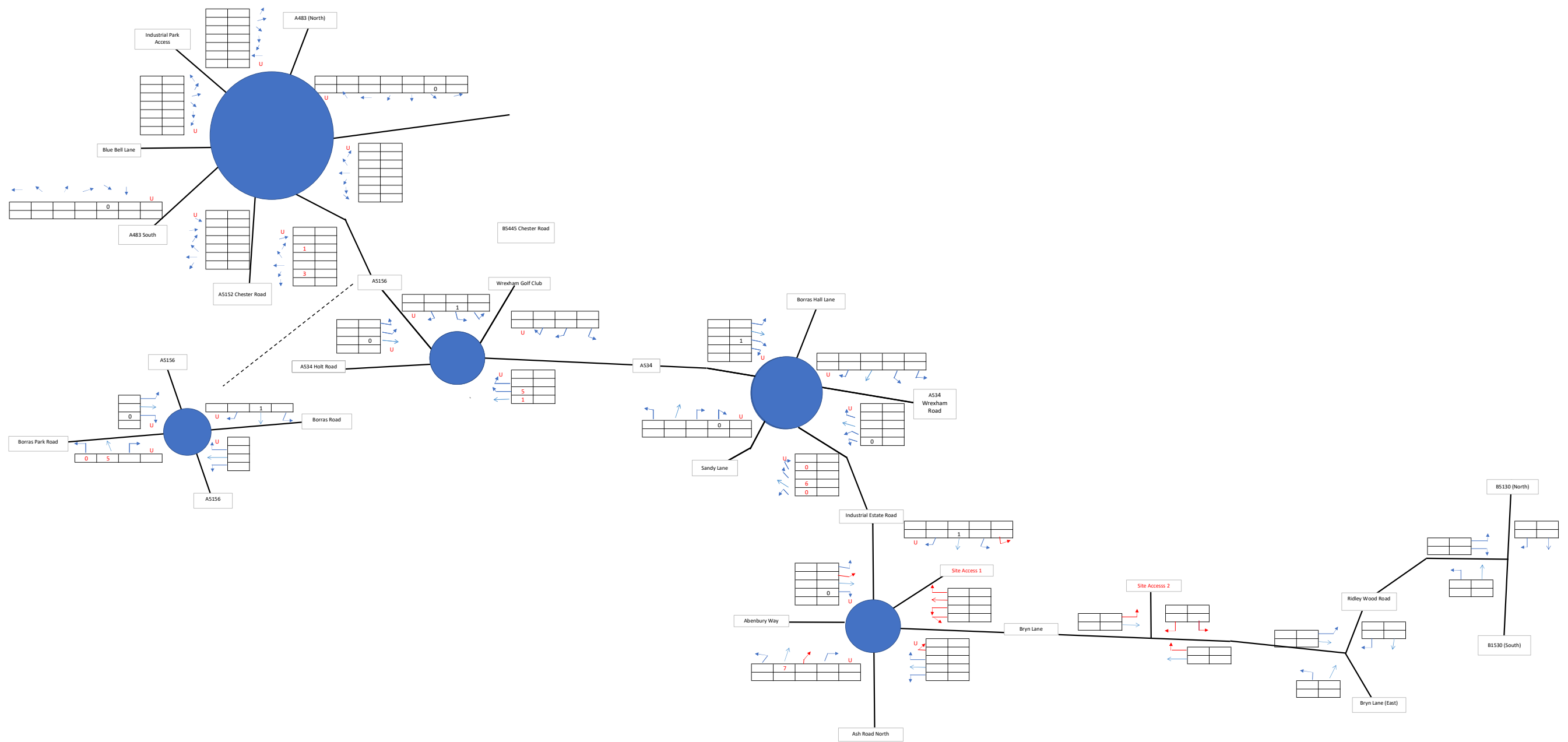


Figure 20 - Ash Road Committed Traffic
AM Peak

Notes:

6	Arrivals
1	Departures

GFA 2605 sqm
Arr 0.228
Dep 0.028

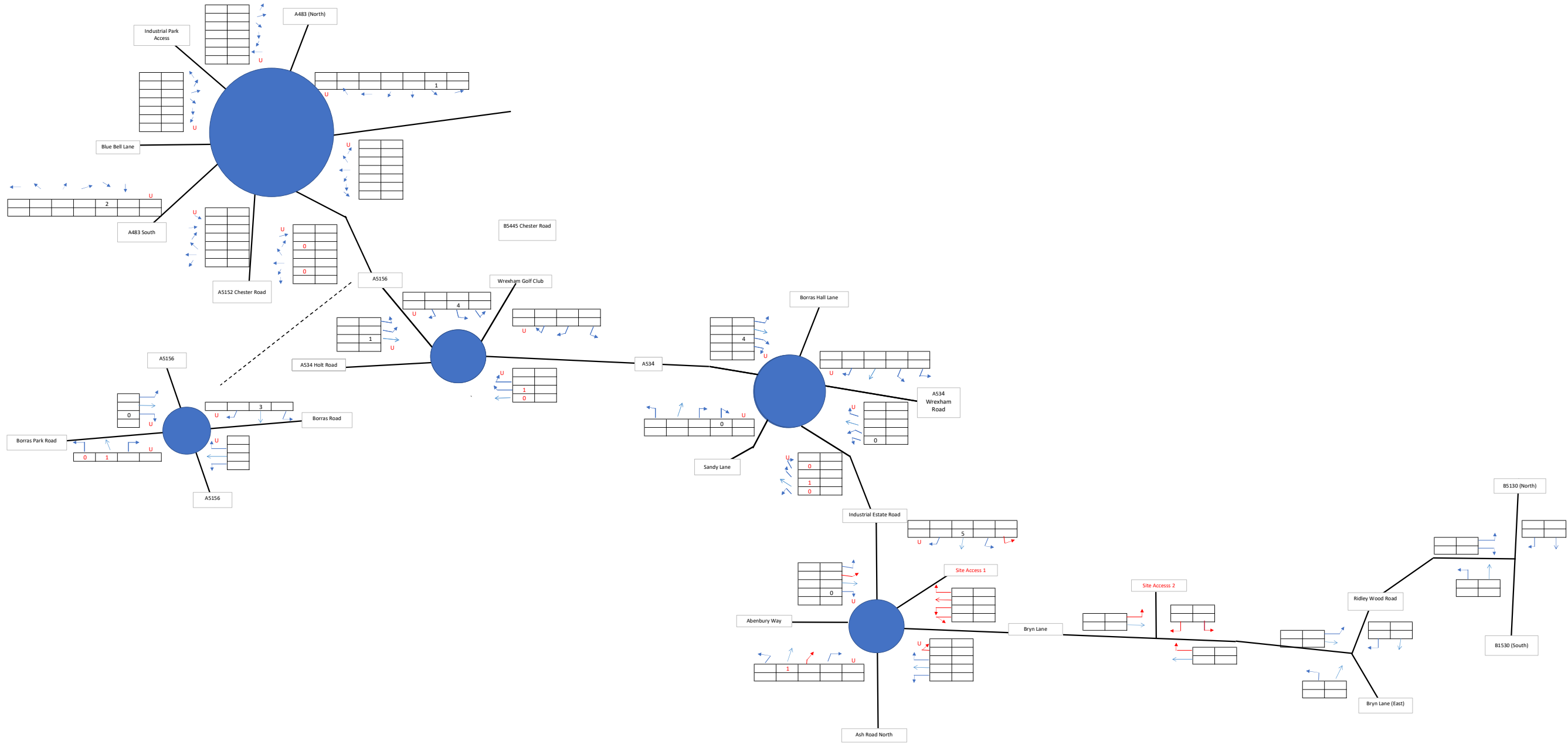


Figure 21 - Ash Road Committed Traffic
PM Peak

Notes:

1	Arrivals
9	Departures

GFA 2605 sqm
Arr 0.039
Dep 0.361

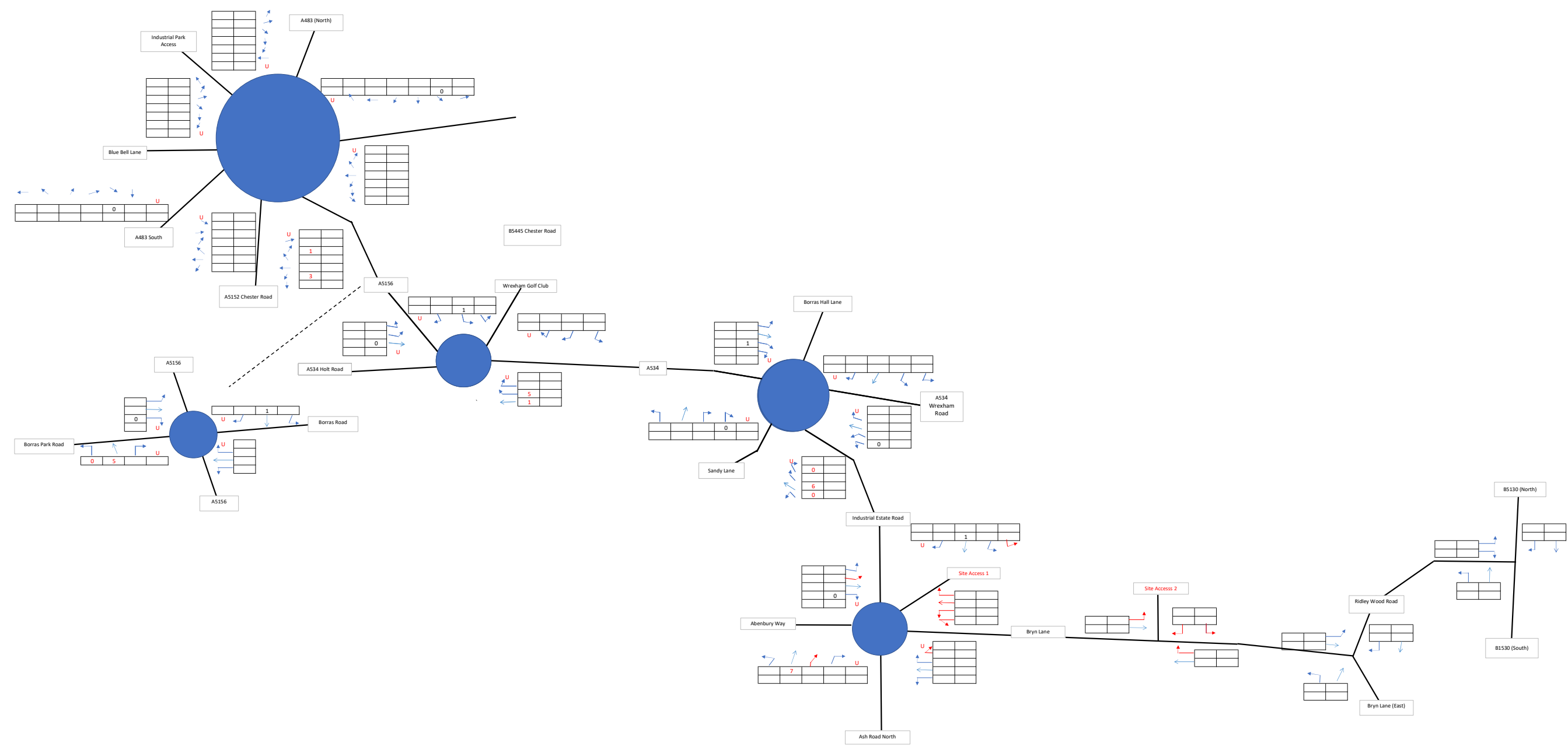


Figure 22 - KSS2 Development Traffic Distribution

Notes:

%	Arrivals
%	Departures

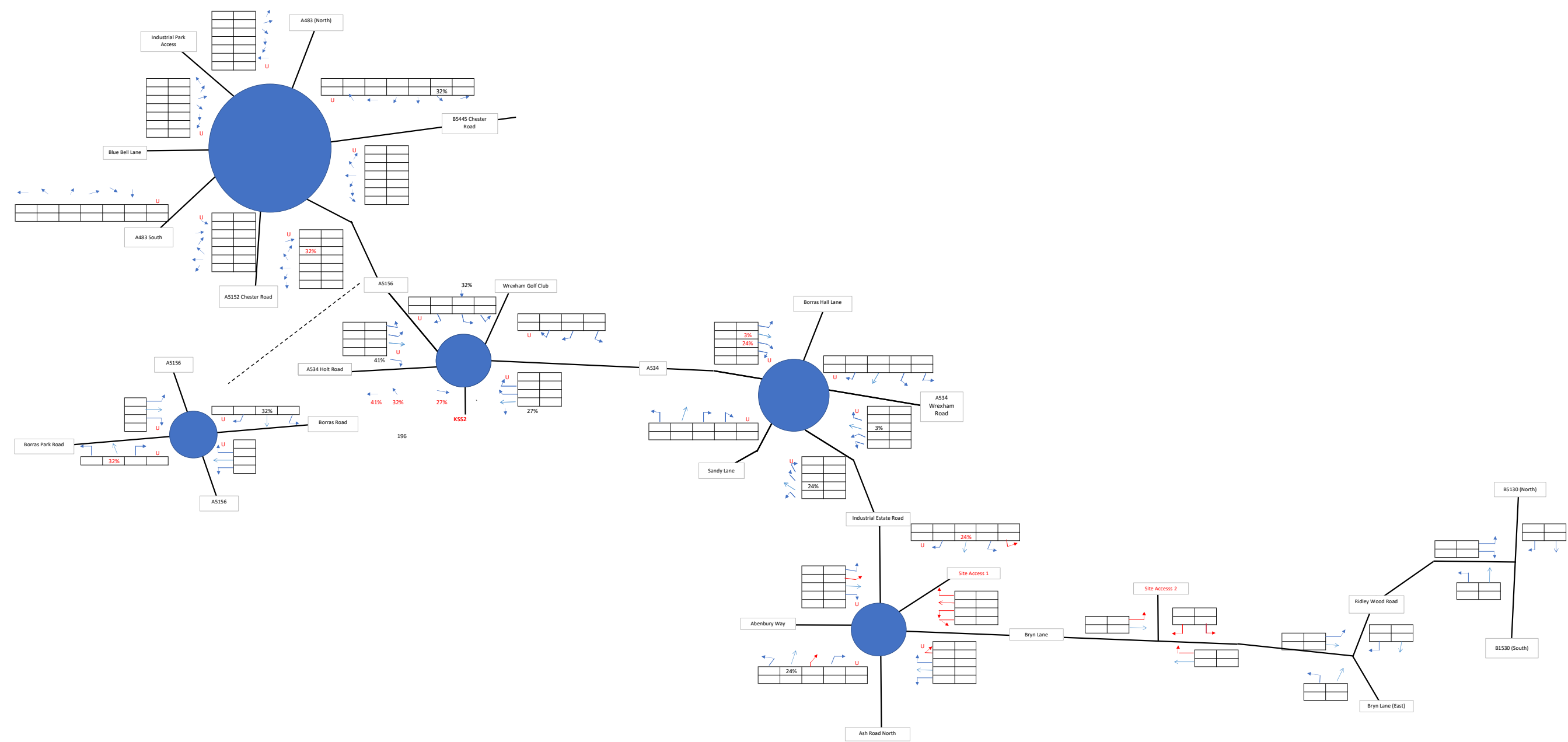


Figure 23 - KSS2 Development Trips
AM Peak

Notes:

237

 Arrivals

626

 Departures

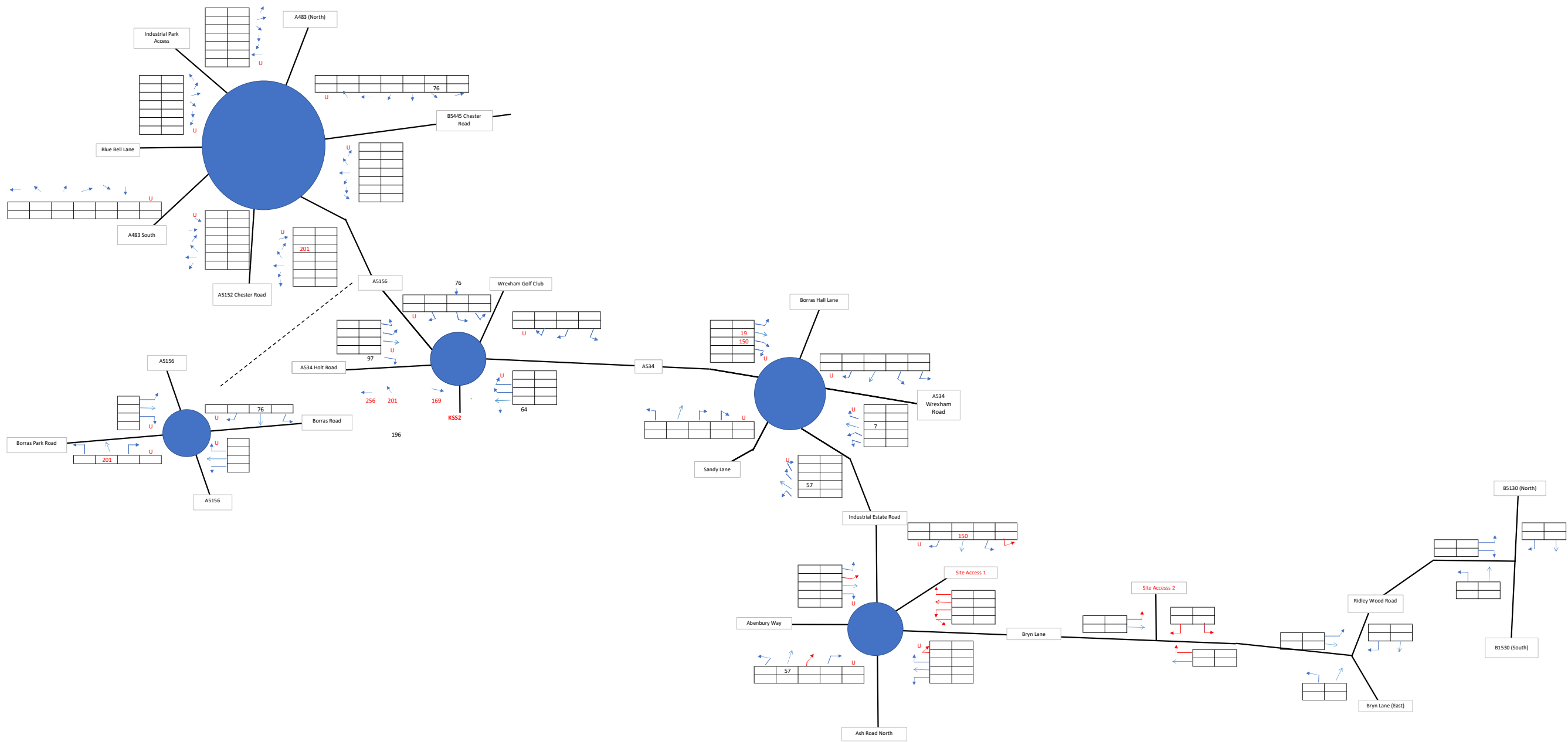


Figure 24 - KSS2 Development Trips
PM Peak

Notes: 547 Arrivals
301 Departures

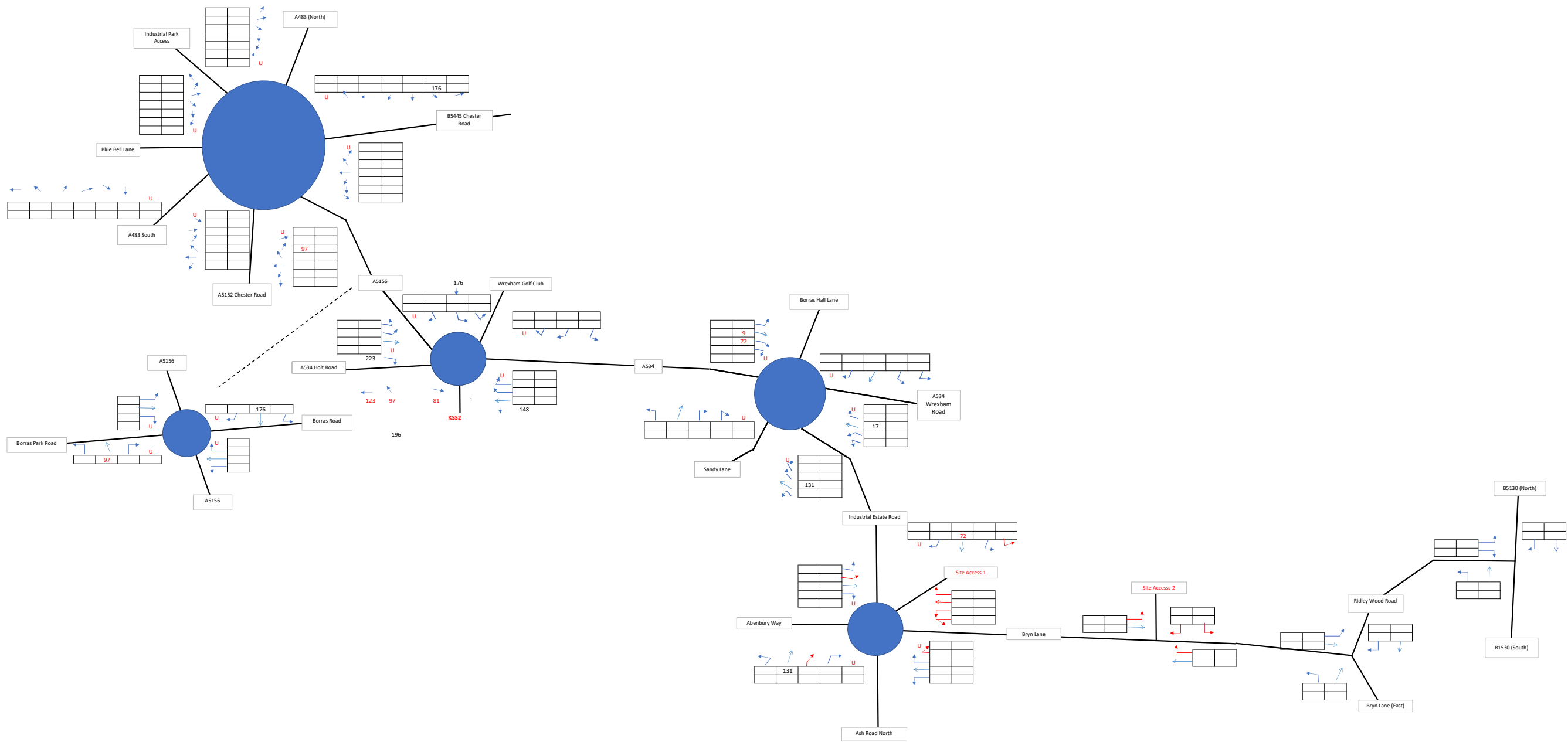


Figure 25 - Kingmoor Development Trips
AM Peak

Notes:

75	Arrivals (Lights)
50	Departures (Lights)

16	Arrivals (HGVs)
15	Departures (HGVs)

*Converted into PCUs

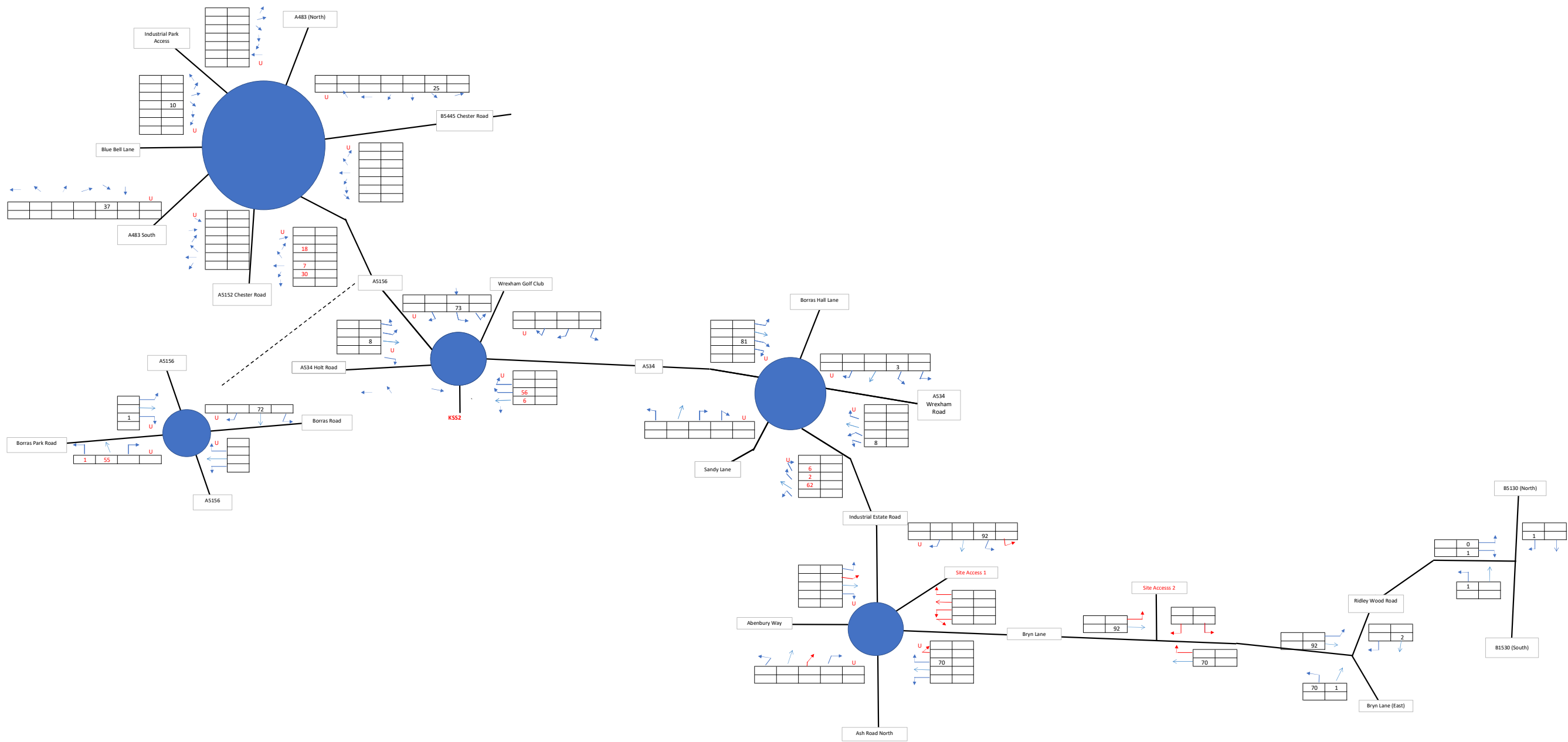


Figure 26 - Kingmoor Development Trips
PM Peak

Notes:

60	Arrivals (Lights)
98	Departures (Lights)

18	Arrivals (HGVs)
16	Departures (HGVs)

*Converted into PCUs

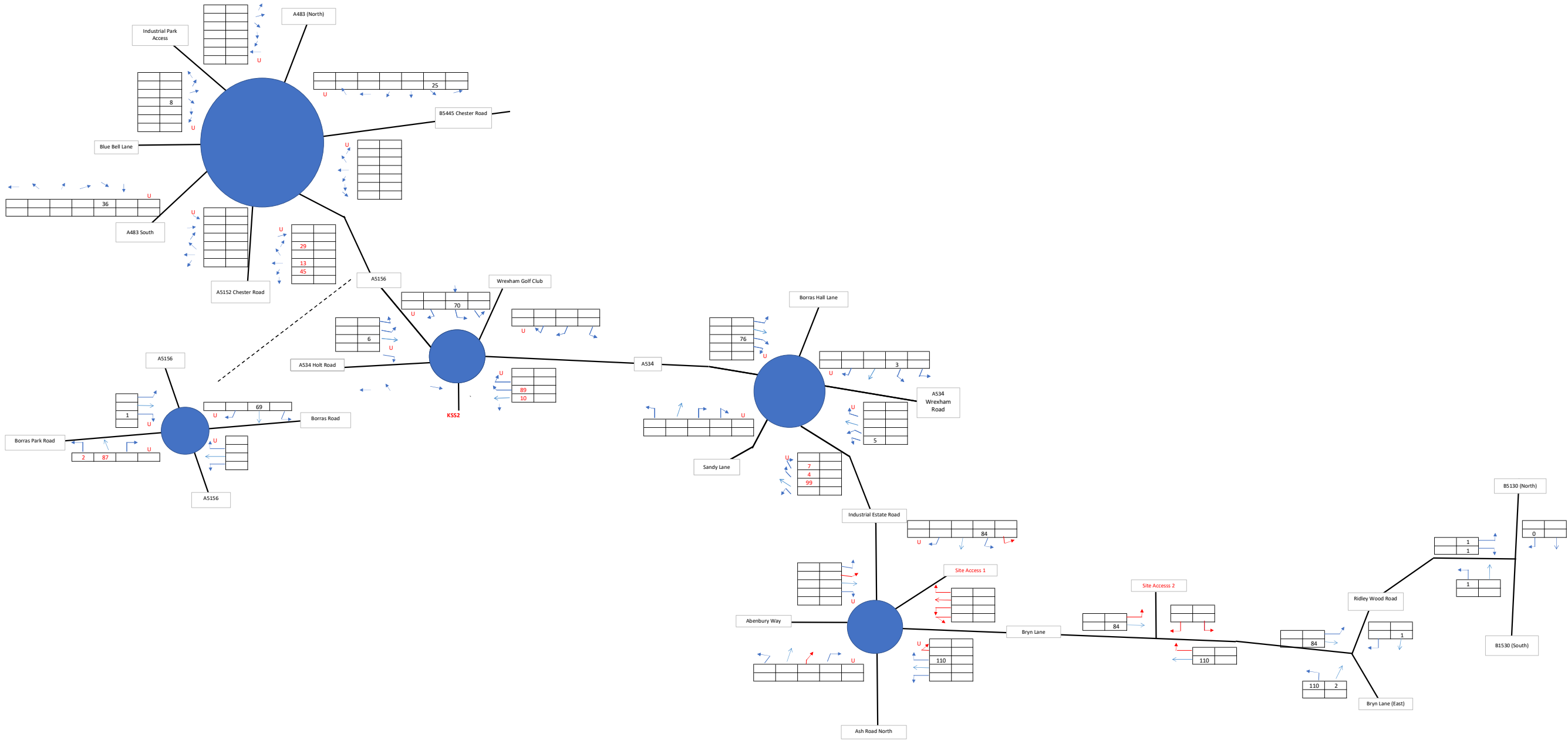


Figure 27 - 2037 Base + Committed
AM Peak: 0800-0900

Notes:

123

 PCUs

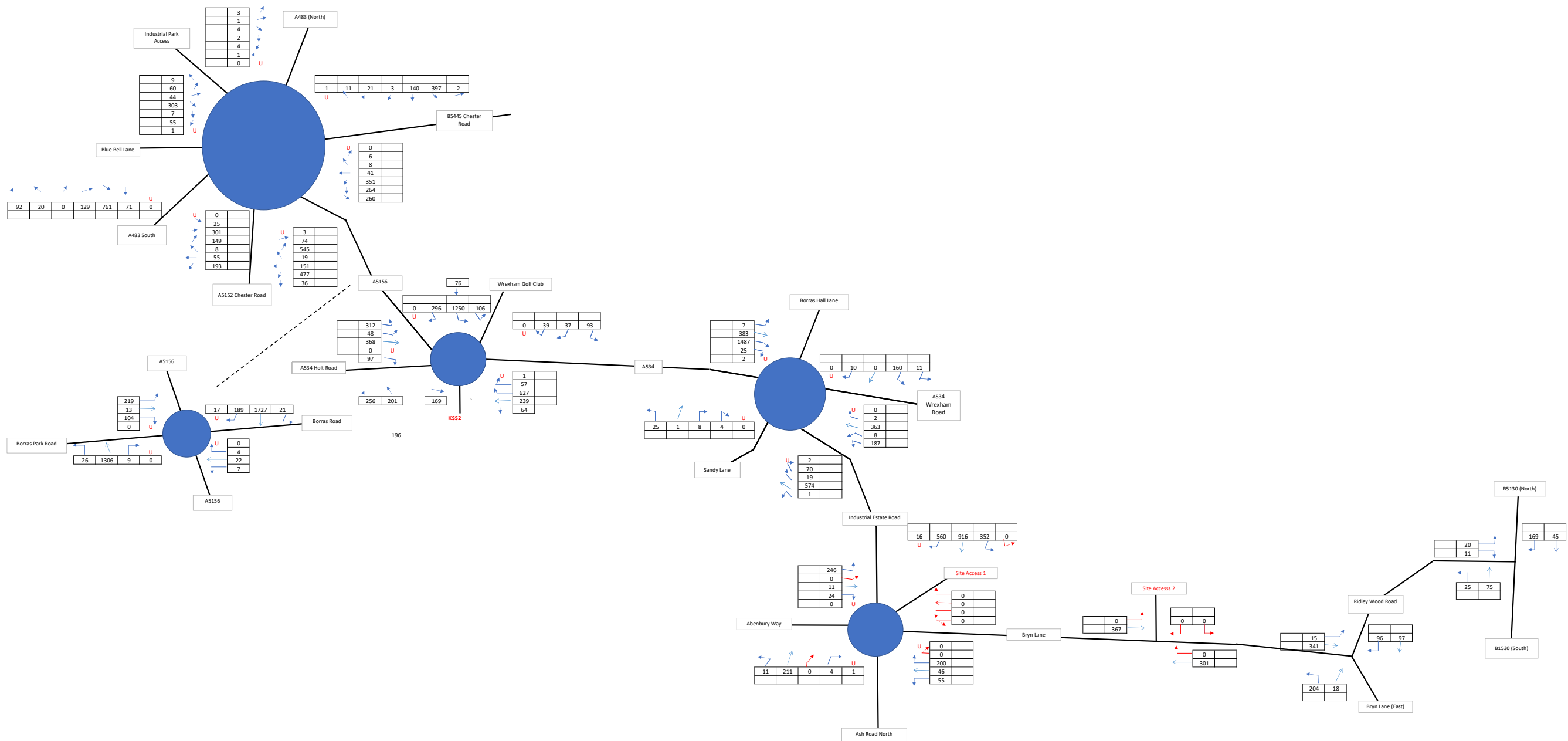


Figure 27a - 2037 Base + Development (Phase 1)
AM Peak: 0800-0900

Notes:

123

 PCUs

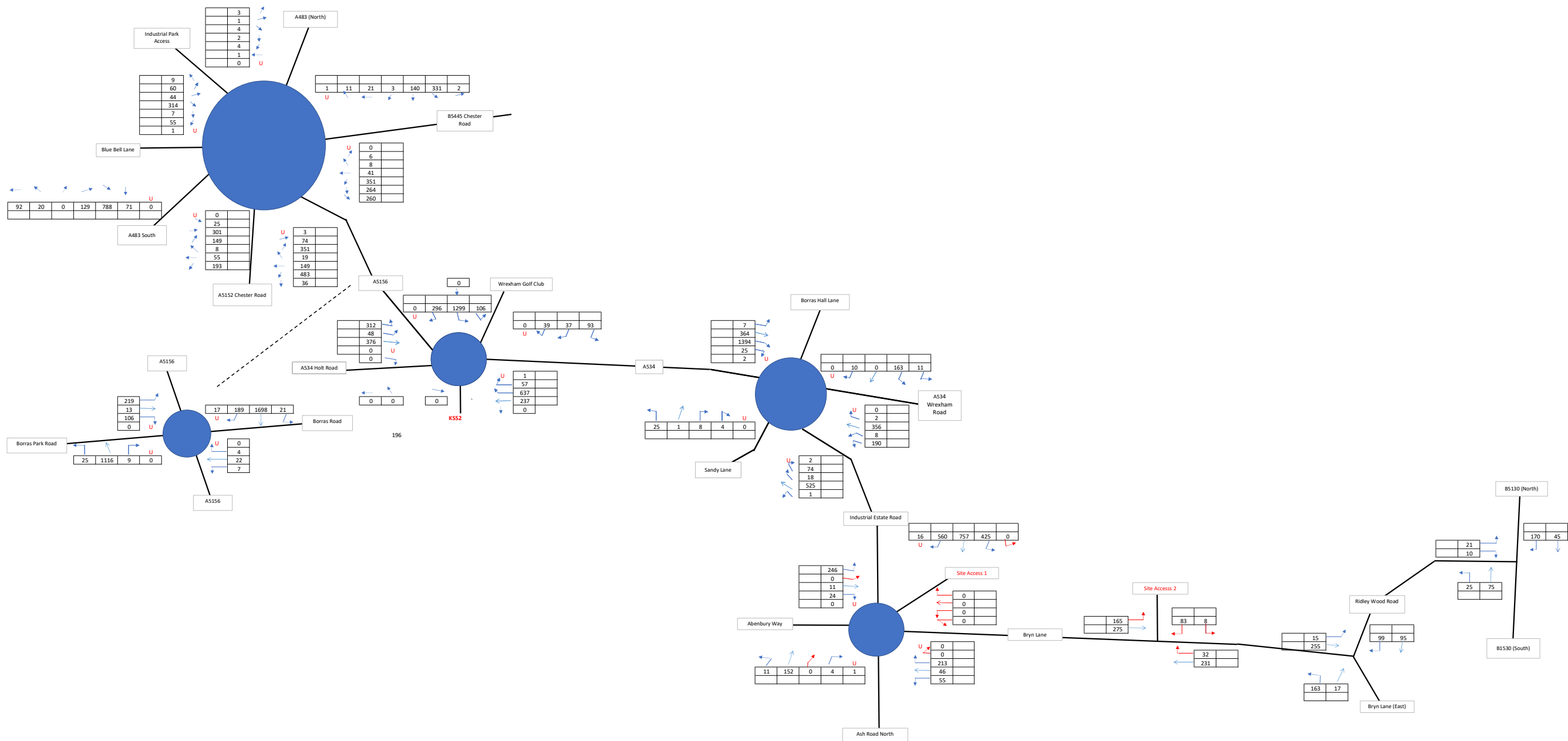


Figure 27b - 2037 Base + Development (Phase 1 + 2)
AM Peak: 0800-0900

Notes:

123

 PCUs

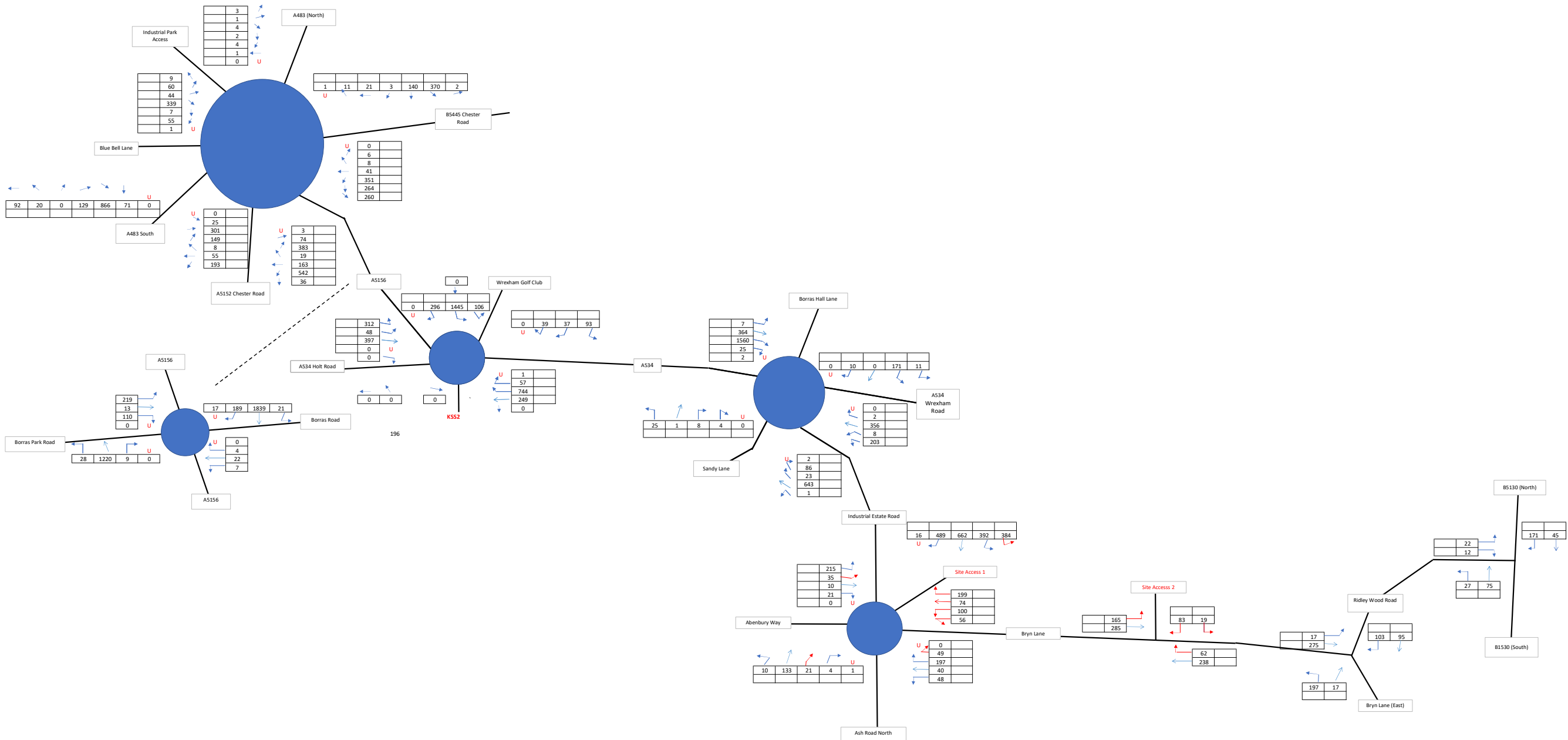


Figure 28 - 2037 Base + Committed
PM Peak: 1630-1730

Notes:

123

 PCUs

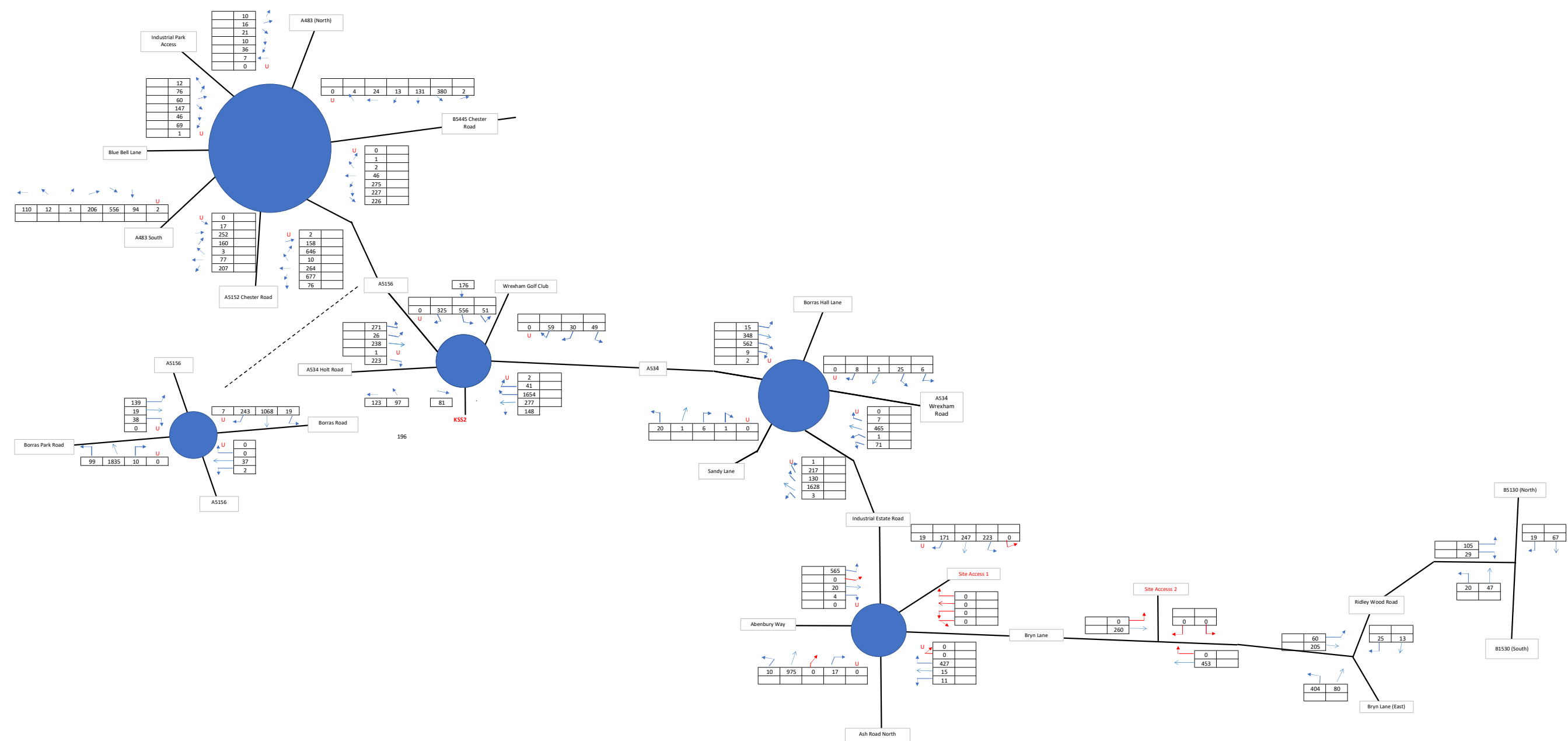


Figure 28a - 2037 Base + Development (Phase 1)
PM Peak: 1630-1730

Notes:

123

 PCUs

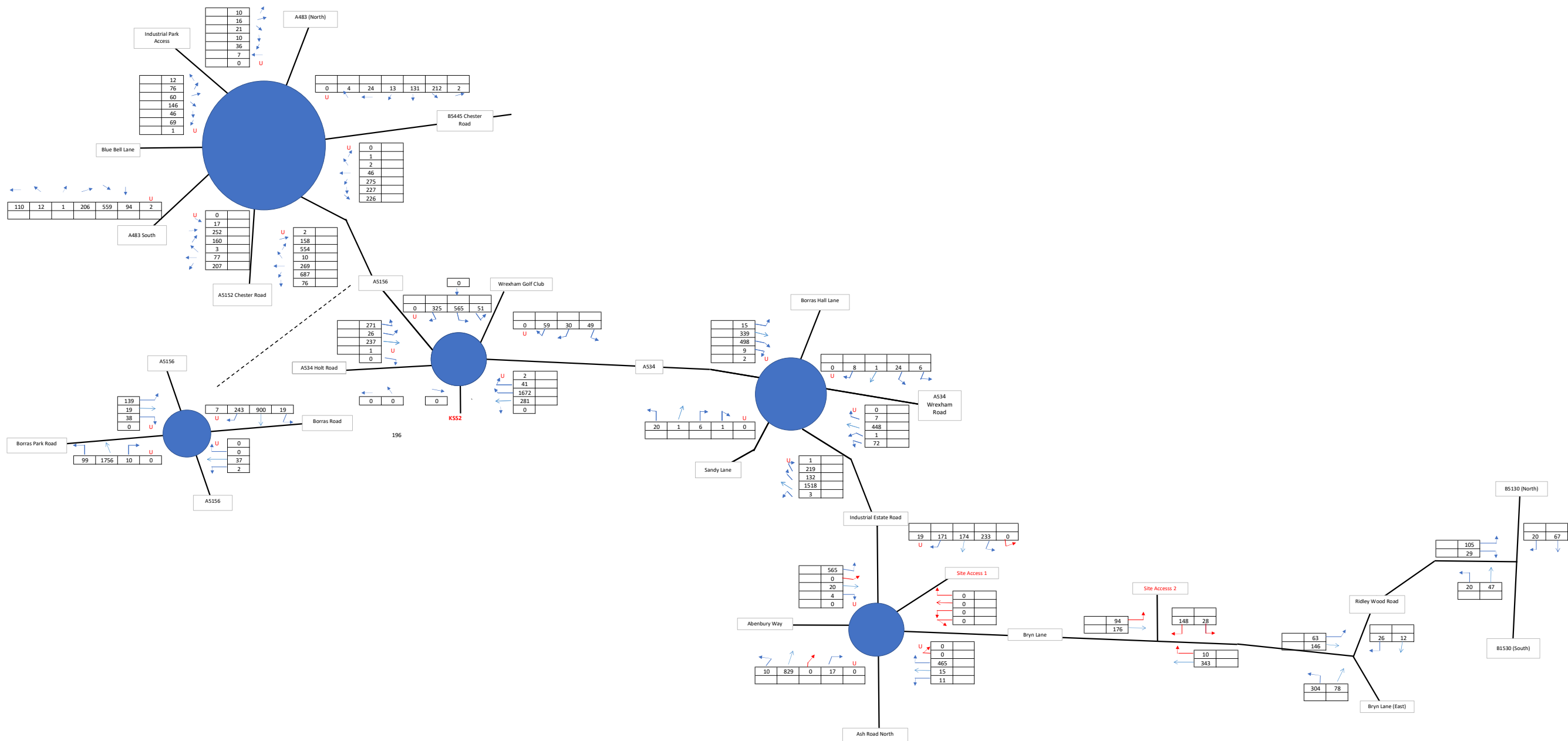


Figure 28b - 2037 Base + Development (Phase 1 + 2)
PM Peak: 1630-1730

Notes:

123

 PCUs

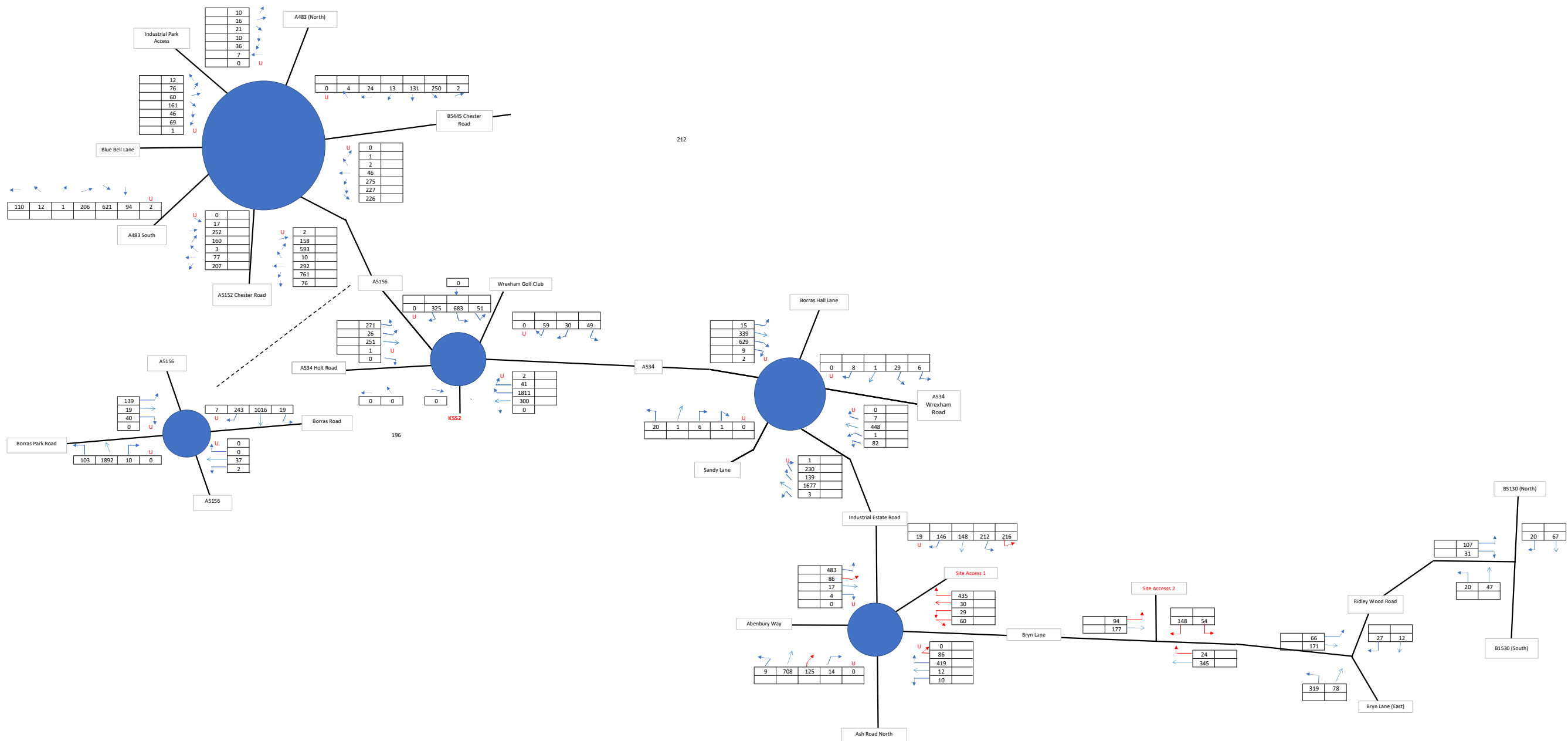


Figure 29 - 2037 Base + Development [Phase 1] + Committed
AM Peak: 0800-0900

Notes:

123

 PCUs

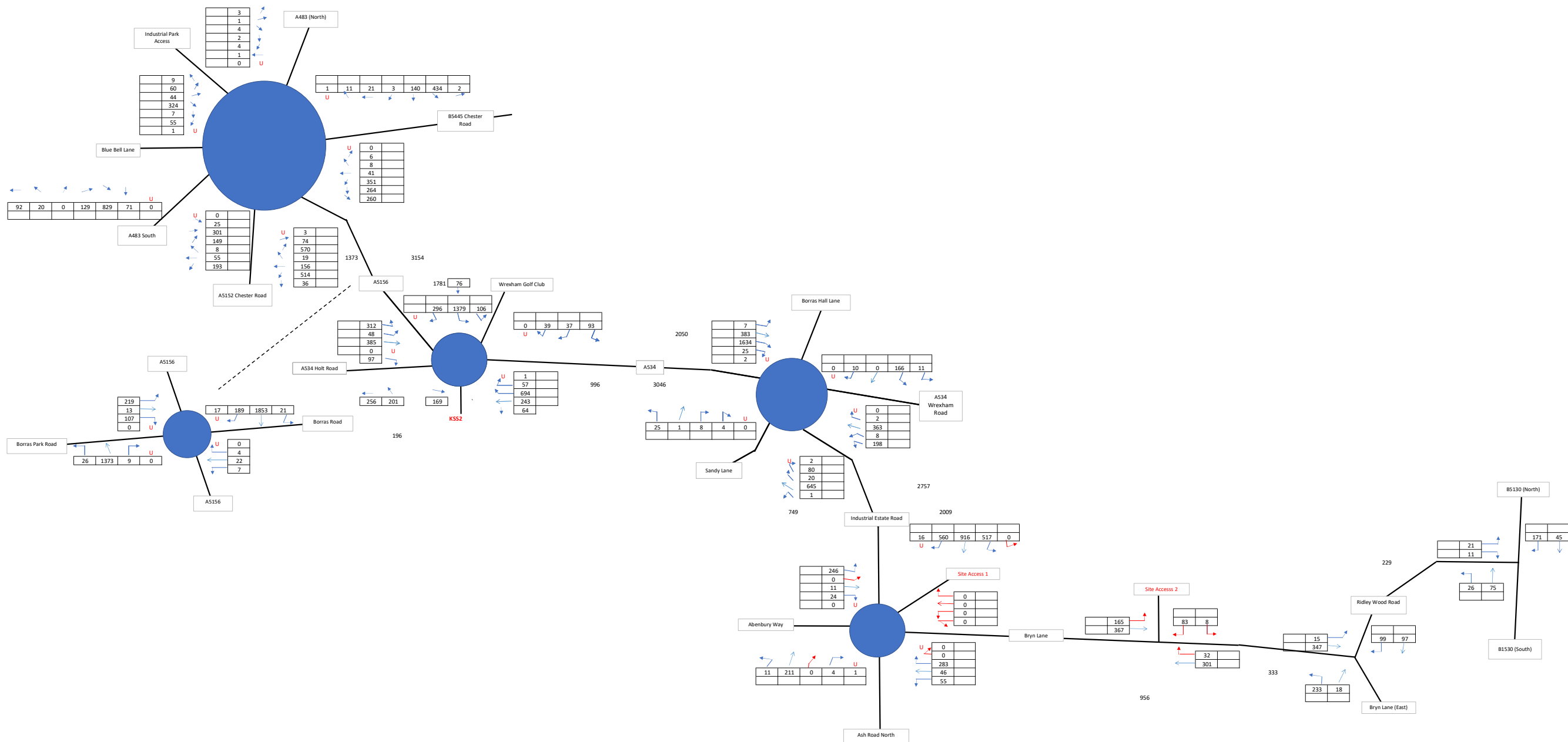


Figure 29a - 2037 Base + Development [Phase 1 + 2] + Committed
AM Peak: 0800-0900

Notes:

123

 PCUs

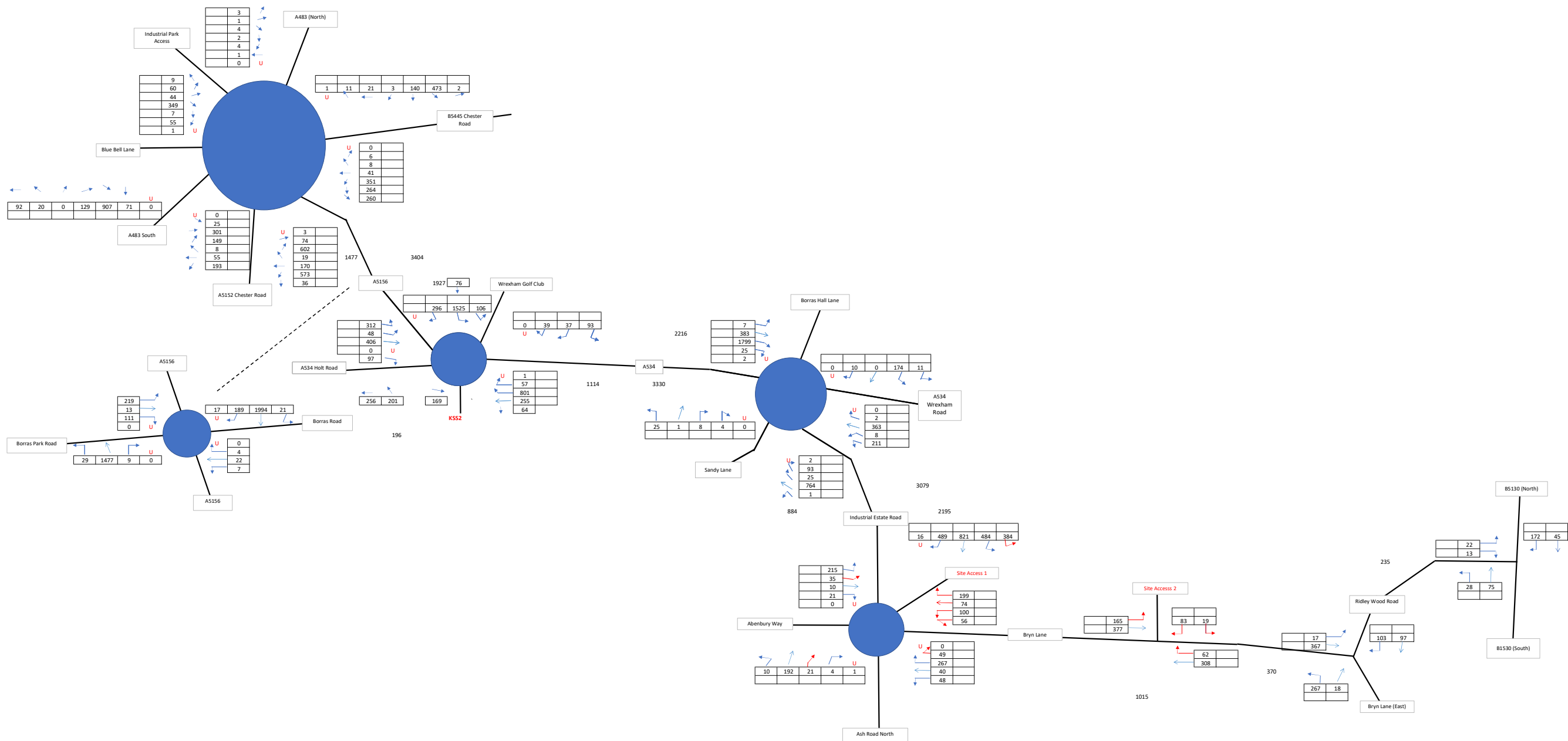


Figure 29b - 2037 Base + Development [Phase 1 + 2] + Committed [Without KSS2]
AM Peak: 0800-0900

Notes:

123

 PCUs

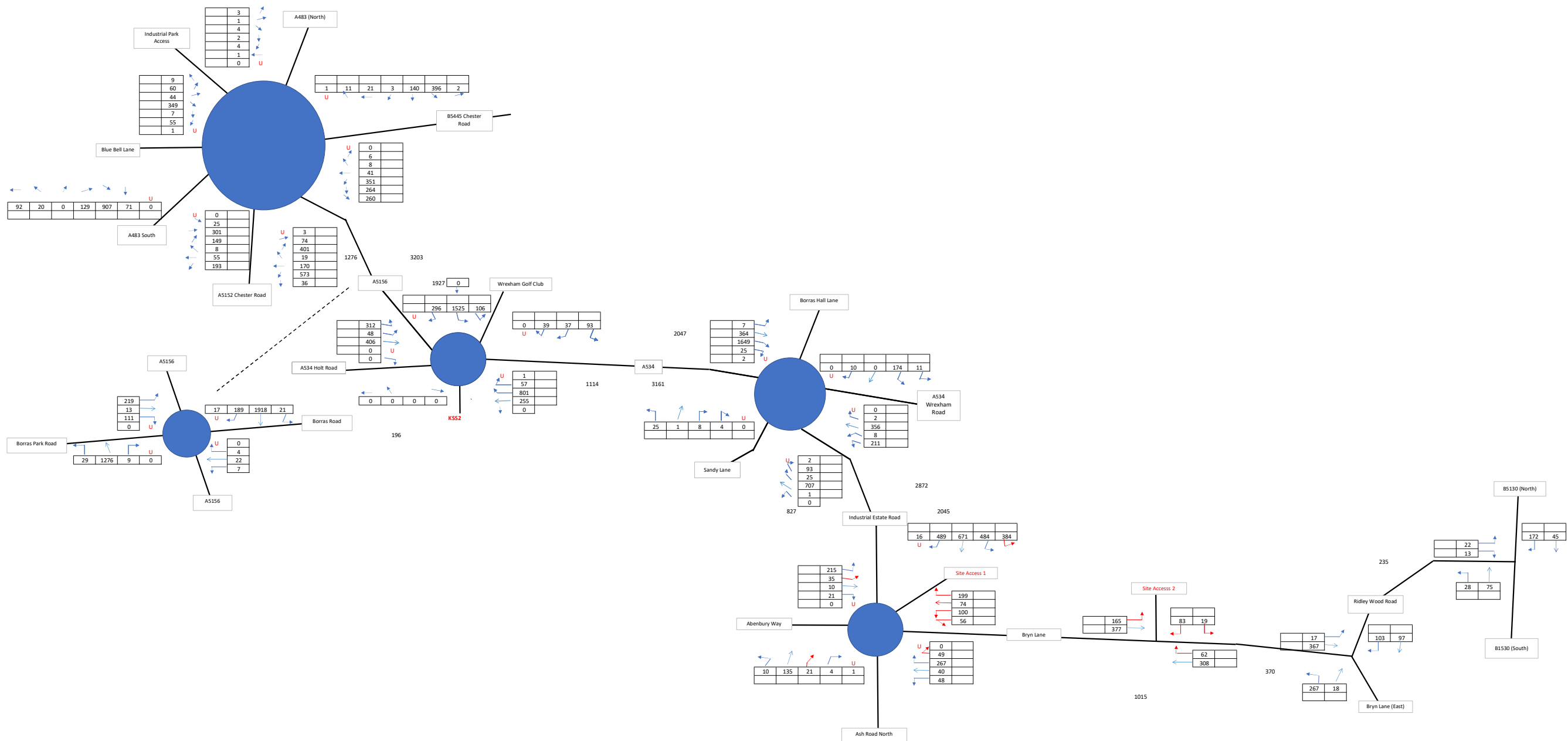


Figure 29c - 2037 Base + Development [Phase 1 + 2] + Committed [Without Kingmoor]
AM Peak: 0800-0900

Notes:

123

 PCUs

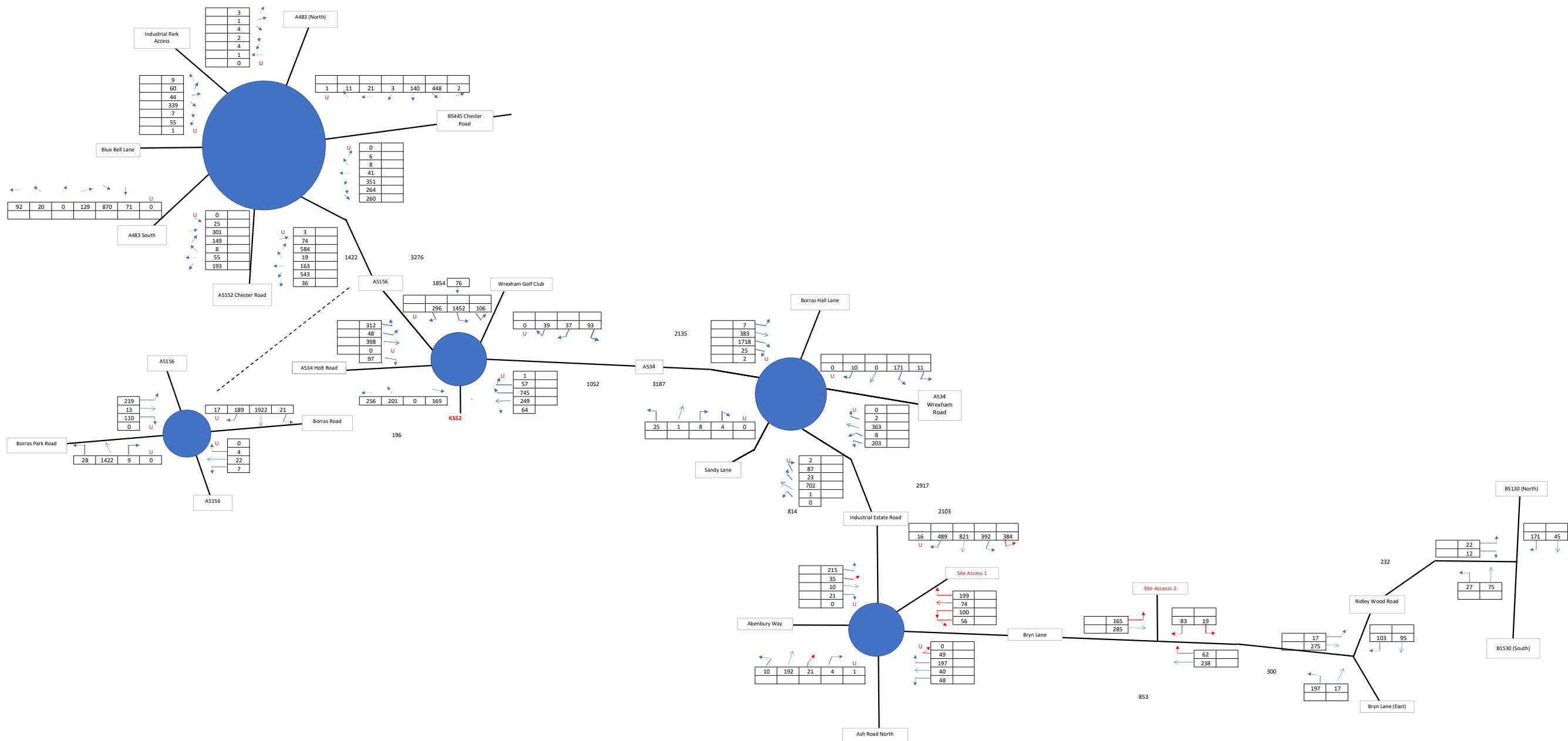


Figure 30 - 2037 Base + Development [Phase 1] + Committed
PM Peak: 1630-1730

Notes:

123

 PCUs

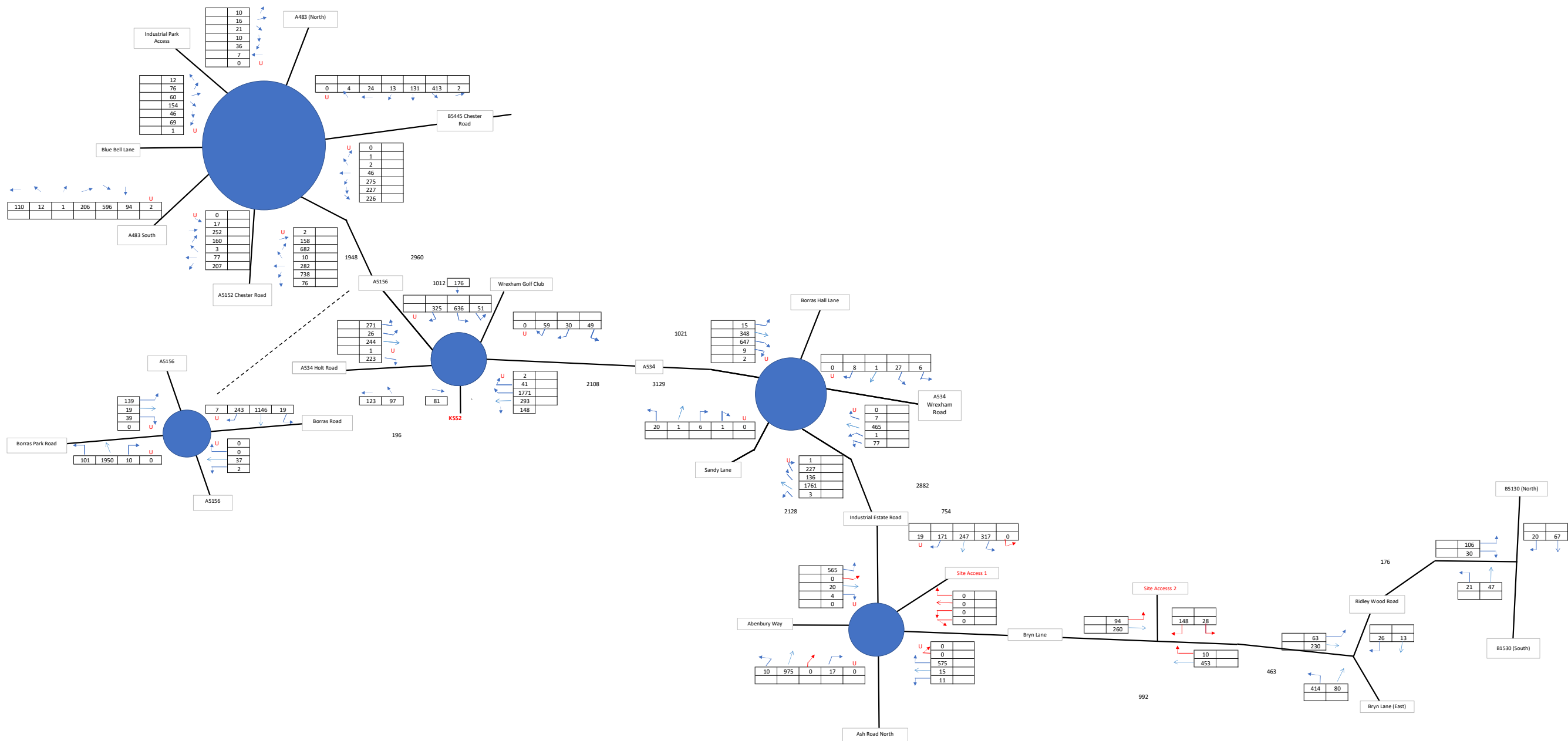


Figure 30a - 2037 Base + Development [Phase 1 + 2] + Committed
PM Peak: 1630-1730

Notes:

123

 PCUs

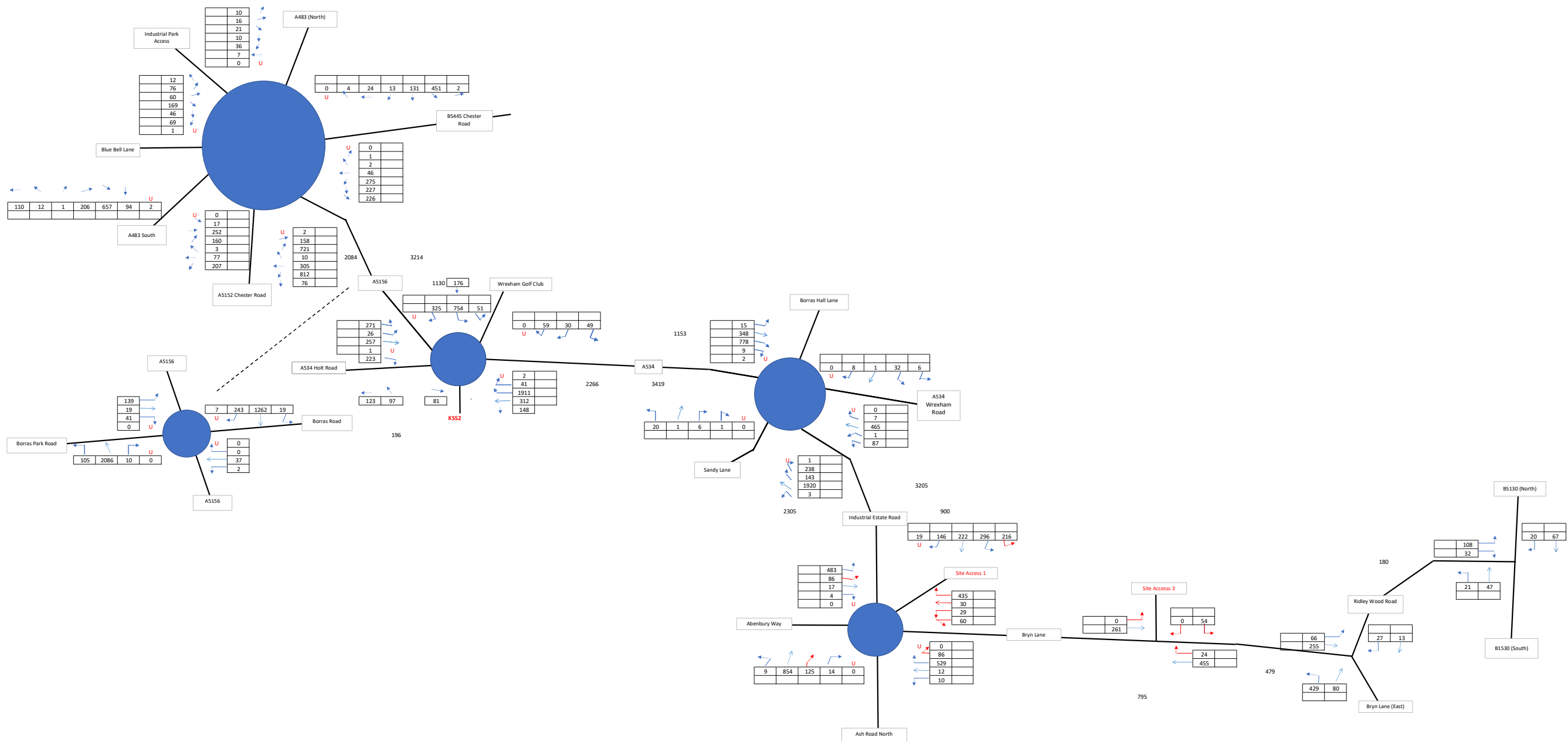


Figure 30b- 2037 Base + Development [Phase 1 + 2] + Committed [Without KSS2]
PM Peak: 1630-1730

Notes:

123

 PCUs

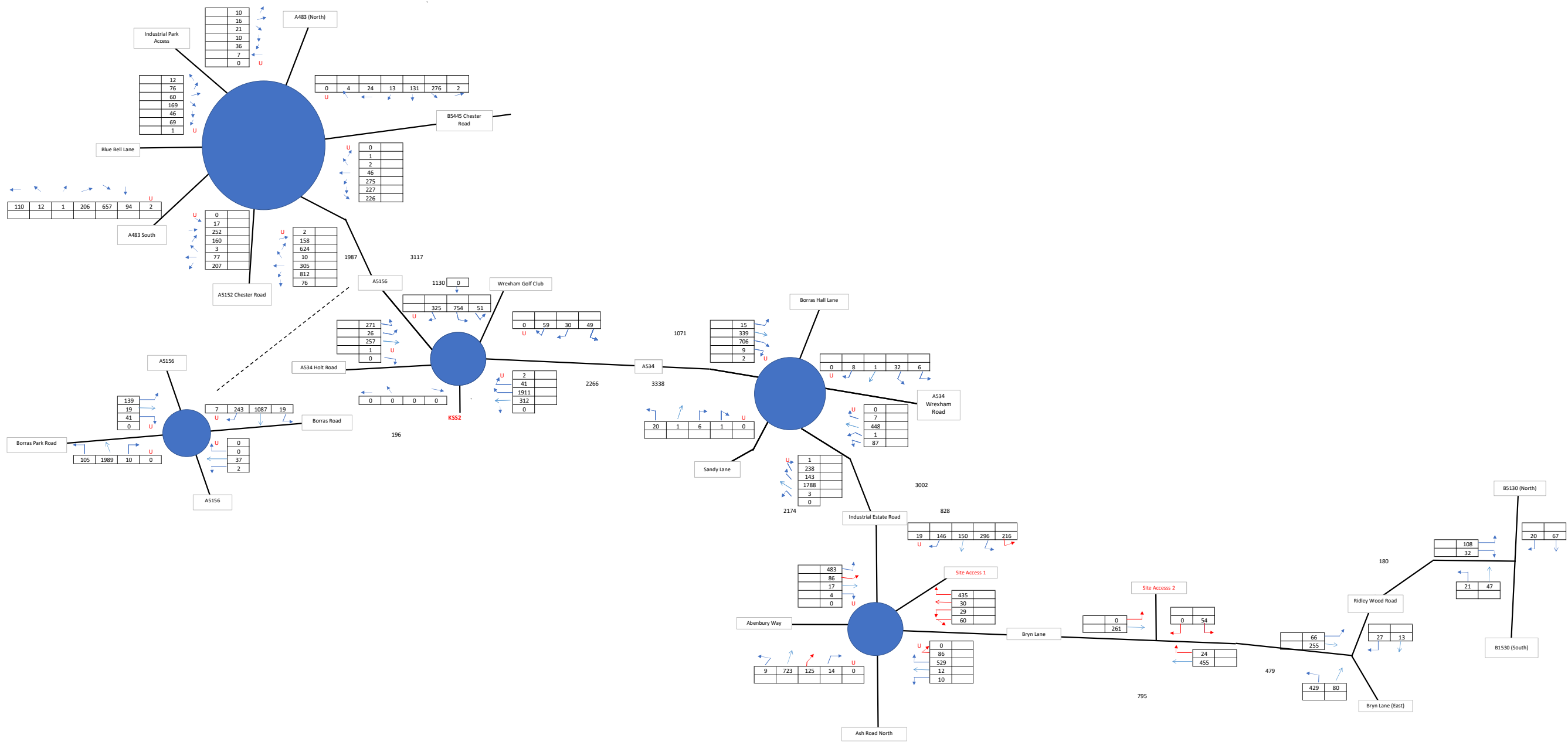
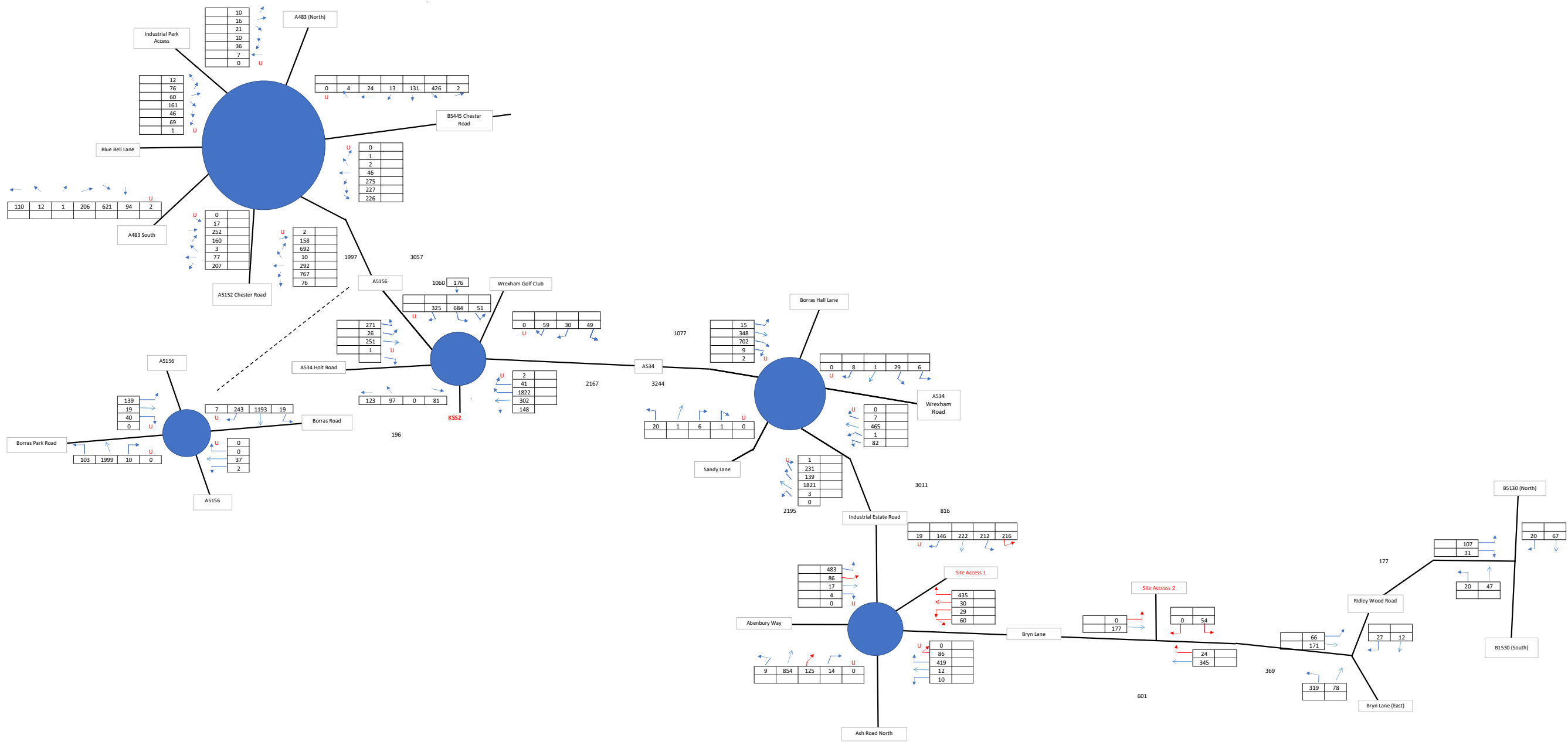


Figure 30c - 2037 Base + Development [Phase 1] + Committed [Without Kingmoor]
PM Peak: 1630-1730

Notes:

123

 PCUs



Appendix C Junction 1 - Industrial Estate Road/Bryn Lane/Ash Road North/Abenbury Way

Junctions 10		
ARCADY 10 - Roundabout Module		
Version: 10.0.1.1519		
© Copyright TRL Software Limited, 2021		
For sales and distribution information, program advice and maintenance, contact TRL Software:		
+44 (0)1344 379777 software@trl.co.uk trlsoftware.com		
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution		

Filename: Bryn Lane, Industrial Estate Road, Ash Road North ARCADY (Existing) - Apr 24.j10

Path: C:\Users\mchau\Downloads\Wrexham Mar 2024

Report generation date: 03/04/2024 11:06:43

-
- »2023 Base, AM
 - »2023 Base, PM
 - »2030 Base, AM
 - »2030 Base, PM
 - »2030 Base + Committed (KSS2 & Kingmoor), AM
 - »2030 Base + Committed (KSS2 & Kingmoor), PM
 - »2037 Base, AM
 - »2037 Base, PM
 - »2037 Base + Committed (KSS2 & Kingmoor), AM
 - »2037 Base + Committed (KSS2 & Kingmoor), PM
 - »2030 Base + Development (Phase 1), AM
 - »2030 Base + Development (Phase 1), PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2023 Base									
1 - Bryn Lane	D1	0.3	4.75	0.23	A	D2	0.3	3.00	0.22	A
2 - Ash Road North		0.1	3.15	0.13	A		1.4	6.11	0.59	A
3 - Abenbury Way		0.3	3.95	0.23	A		3.2	20.31	0.77	C
4 - Industrial Estate Road		1.7	3.82	0.62	A		0.2	1.79	0.20	A
	2030 Base									
1 - Bryn Lane	D3	0.3	5.14	0.26	A	D4	0.3	3.08	0.23	A
2 - Ash Road North		0.2	3.25	0.14	A		1.7	6.89	0.63	A
3 - Abenbury Way		0.3	4.06	0.25	A		5.1	31.97	0.85	D
4 - Industrial Estate Road		1.9	4.24	0.66	A		0.3	1.81	0.21	A
	2030 Base + Committed (KSS2 & Kingmoor)									
1 - Bryn Lane	D5	0.6	6.87	0.38	A	D6	0.5	3.59	0.32	A
2 - Ash Road North		0.2	3.59	0.19	A		3.5	12.11	0.78	B
3 - Abenbury Way		0.4	4.41	0.26	A		27.1	149.69	1.06	F
4 - Industrial Estate Road		3.3	6.29	0.77	A		0.4	1.99	0.28	A
	2037 Base									
1 - Bryn Lane	D7	0.4	5.63	0.28	A	D8	0.3	3.17	0.25	A
2 - Ash Road North		0.2	3.35	0.15	A		2.0	7.91	0.67	A
3 - Abenbury Way		0.4	4.18	0.26	A		10.6	62.50	0.95	F
4 - Industrial Estate Road		2.3	4.79	0.70	A		0.3	1.84	0.22	A
	2037 Base + Committed (KSS2 & Kingmoor)									
1 - Bryn Lane	D9	0.7	7.77	0.42	A	D10	0.5	3.71	0.34	A
2 - Ash Road North		0.3	3.72	0.21	A		4.6	15.50	0.83	C
3 - Abenbury Way		0.4	4.56	0.28	A		56.2	285.90	1.19	F
4 - Industrial Estate Road		4.2	7.57	0.81	A		0.4	2.02	0.29	A
	2030 Base + Development (Phase 1)									
1 - Bryn Lane	D11	0.5	5.91	0.35	A	D12	0.5	3.58	0.34	A
2 - Ash Road North		0.2	3.40	0.14	A		2.0	8.29	0.67	A
3 - Abenbury Way		0.3	4.28	0.26	A		11.9	73.20	0.96	F
4 - Industrial Estate Road		2.7	5.40	0.73	A		0.3	1.91	0.25	A

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

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

File summary

File Description

Title	Industrial Estate Road / Bryn Lane / Ash Road North / Abenbury Way
Location	Wrexham
Site number	
Date	09/02/2023
Version	
Status	(new file)
Identifier	
Client	LIDL
Jobnumber	
Enumerator	LAPTOP-DTQ9HGBB\mchau
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15
D2	2023 Base	PM	ONE HOUR	16:15	17:45	15
D3	2030 Base	AM	ONE HOUR	07:45	09:15	15
D4	2030 Base	PM	ONE HOUR	16:15	17:45	15
D5	2030 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15
D6	2030 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15
D7	2037 Base	AM	ONE HOUR	07:45	09:15	15
D8	2037 Base	PM	ONE HOUR	16:15	17:45	15
D9	2037 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15
D10	2037 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15
D11	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D12	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.88	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.88	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Bryn Lane		
2	Ash Road North		
3	Abenbury Way		
4	Industrial Estate Road		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Bryn Lane	3.60	7.00	17.7	40.7	59.7	34.6		
2 - Ash Road North	3.60	7.50	21.0	10.0	59.7	35.2		
3 - Abenbury Way	3.60	5.00	5.0	60.3	59.7	34.5		
4 - Industrial Estate Road	7.00	9.70	7.5	48.0	59.7	34.2		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Bryn Lane	0.569	1744
2 - Ash Road North	0.543	1709
3 - Abenbury Way	0.500	1337
4 - Industrial Estate Road	0.708	2536

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)
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	206	100.000
2 - Ash Road North		✓	151	100.000
3 - Abenbury Way		✓	251	100.000
4 - Industrial Estate Road		✓	1422	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
From	1 - Bryn Lane	0	49	41	116
	2 - Ash Road North	4	1	10	136
	3 - Abenbury Way	10	21	0	220
	4 - Industrial Estate Road	232	676	500	14

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
From	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.23	4.75	0.3	A
2 - Ash Road North	0.13	3.15	0.1	A
3 - Abenbury Way	0.23	3.95	0.3	A
4 - Industrial Estate Road	0.62	3.82	1.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	155	910	1227	0.126	155	0.1	3.356	A
2 - Ash Road North	114	504	1436	0.079	113	0.1	2.721	A
3 - Abenbury Way	189	203	1235	0.153	188	0.2	3.437	A
4 - Industrial Estate Road	1071	27	2517	0.425	1068	0.7	2.478	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	185	1089	1125	0.165	185	0.2	3.829	A
2 - Ash Road North	136	603	1382	0.098	136	0.1	2.887	A
3 - Abenbury Way	226	243	1215	0.186	225	0.2	3.636	A
4 - Industrial Estate Road	1278	32	2513	0.509	1277	1.0	2.910	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	1332	986	0.230	226	0.3	4.735	A
2 - Ash Road North	166	738	1309	0.127	166	0.1	3.149	A
3 - Abenbury Way	276	298	1188	0.233	276	0.3	3.947	A
4 - Industrial Estate Road	1566	40	2508	0.624	1563	1.6	3.801	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	1334	985	0.230	227	0.3	4.746	A
2 - Ash Road North	166	739	1308	0.127	166	0.1	3.151	A
3 - Abenbury Way	276	298	1188	0.233	276	0.3	3.949	A
4 - Industrial Estate Road	1566	40	2508	0.624	1566	1.7	3.819	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	185	1092	1123	0.165	186	0.2	3.841	A
2 - Ash Road North	136	604	1381	0.098	136	0.1	2.892	A
3 - Abenbury Way	226	244	1215	0.186	226	0.2	3.643	A
4 - Industrial Estate Road	1278	32	2513	0.509	1281	1.0	2.926	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	155	913	1225	0.127	155	0.1	3.368	A
2 - Ash Road North	114	506	1435	0.079	114	0.1	2.726	A
3 - Abenbury Way	189	204	1235	0.153	189	0.2	3.445	A
4 - Industrial Estate Road	1071	27	2517	0.425	1072	0.7	2.492	A

2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	8.36	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.36	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	306	100.000
2 - Ash Road North		✓	765	100.000
3 - Abenbury Way		✓	527	100.000
4 - Industrial Estate Road		✓	449	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	10	13	283
	2 - Ash Road North	15	0	9	741
	3 - Abenbury Way	18	4	0	505
	4 - Industrial Estate Road	124	155	153	17

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.22	3.00	0.3	A
2 - Ash Road North	0.59	6.11	1.4	A
3 - Abenbury Way	0.77	20.31	3.2	C
4 - Industrial Estate Road	0.20	1.79	0.2	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	230	247	1604	0.144	230	0.2	2.618	A
2 - Ash Road North	576	350	1519	0.379	574	0.6	3.796	A
3 - Abenbury Way	397	792	941	0.422	394	0.7	6.548	A
4 - Industrial Estate Road	338	28	2516	0.134	337	0.2	1.651	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	275	296	1576	0.175	275	0.2	2.766	A
2 - Ash Road North	688	419	1482	0.464	687	0.9	4.520	A
3 - Abenbury Way	474	948	863	0.549	472	1.2	9.165	A
4 - Industrial Estate Road	404	33	2513	0.161	403	0.2	1.706	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	337	362	1538	0.219	337	0.3	2.995	A
2 - Ash Road North	842	513	1431	0.589	840	1.4	6.067	A
3 - Abenbury Way	580	1160	757	0.767	573	3.0	18.880	C
4 - Industrial Estate Road	494	40	2507	0.197	494	0.2	1.787	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	337	362	1538	0.219	337	0.3	2.996	A
2 - Ash Road North	842	513	1431	0.589	842	1.4	6.115	A
3 - Abenbury Way	580	1163	756	0.768	580	3.2	20.315	C
4 - Industrial Estate Road	494	41	2507	0.197	494	0.2	1.787	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	275	296	1576	0.175	275	0.2	2.768	A
2 - Ash Road North	688	419	1482	0.464	690	0.9	4.557	A
3 - Abenbury Way	474	952	861	0.550	481	1.3	9.665	A
4 - Industrial Estate Road	404	34	2512	0.161	404	0.2	1.706	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	230	248	1603	0.144	231	0.2	2.622	A
2 - Ash Road North	576	351	1519	0.379	577	0.6	3.828	A
3 - Abenbury Way	397	796	939	0.423	399	0.7	6.693	A
4 - Industrial Estate Road	338	28	2516	0.134	338	0.2	1.652	A

2030 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.24	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.24	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	218	100.000
2 - Ash Road North		✓	160	100.000
3 - Abenbury Way		✓	266	100.000
4 - Industrial Estate Road		✓	1506	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	52	43	123
	2 - Ash Road North	4	1	11	144
	3 - Abenbury Way	11	22	0	233
	4 - Industrial Estate Road	246	716	529	15

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.26	5.14	0.3	A
2 - Ash Road North	0.14	3.25	0.2	A
3 - Abenbury Way	0.25	4.06	0.3	A
4 - Industrial Estate Road	0.66	4.24	1.9	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	164	963	1196	0.137	163	0.2	3.483	A
2 - Ash Road North	120	533	1420	0.085	120	0.1	2.769	A
3 - Abenbury Way	200	215	1229	0.163	199	0.2	3.494	A
4 - Industrial Estate Road	1134	29	2516	0.451	1131	0.8	2.595	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	196	1152	1089	0.180	196	0.2	4.029	A
2 - Ash Road North	144	638	1363	0.106	144	0.1	2.951	A
3 - Abenbury Way	239	258	1208	0.198	239	0.2	3.714	A
4 - Industrial Estate Road	1354	34	2512	0.539	1352	1.2	3.100	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	240	1410	942	0.255	240	0.3	5.119	A
2 - Ash Road North	176	780	1286	0.137	176	0.2	3.243	A
3 - Abenbury Way	293	316	1179	0.248	293	0.3	4.060	A
4 - Industrial Estate Road	1658	42	2506	0.662	1655	1.9	4.213	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	240	1413	941	0.255	240	0.3	5.136	A
2 - Ash Road North	176	782	1285	0.137	176	0.2	3.245	A
3 - Abenbury Way	293	316	1179	0.248	293	0.3	4.062	A
4 - Industrial Estate Road	1658	42	2506	0.662	1658	1.9	4.243	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	196	1156	1087	0.180	196	0.2	4.047	A
2 - Ash Road North	144	640	1362	0.106	144	0.1	2.955	A
3 - Abenbury Way	239	258	1208	0.198	239	0.2	3.718	A
4 - Industrial Estate Road	1354	34	2512	0.539	1357	1.2	3.124	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	164	967	1194	0.137	164	0.2	3.498	A
2 - Ash Road North	120	535	1419	0.085	121	0.1	2.774	A
3 - Abenbury Way	200	216	1229	0.163	200	0.2	3.500	A
4 - Industrial Estate Road	1134	29	2516	0.451	1135	0.8	2.609	A

2030 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.66	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.66	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	325	100.000
2 - Ash Road North		✓	810	100.000
3 - Abenbury Way		✓	558	100.000
4 - Industrial Estate Road		✓	475	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	11	14	300
	2 - Ash Road North	16	0	10	784
	3 - Abenbury Way	19	4	0	535
	4 - Industrial Estate Road	131	164	162	18

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.23	3.08	0.3	A
2 - Ash Road North	0.63	6.89	1.7	A
3 - Abenbury Way	0.85	31.97	5.1	D
4 - Industrial Estate Road	0.21	1.81	0.3	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	245	261	1595	0.153	244	0.2	2.662	A
2 - Ash Road North	610	371	1508	0.404	607	0.7	3.984	A
3 - Abenbury Way	420	838	918	0.458	417	0.8	7.140	A
4 - Industrial Estate Road	358	29	2515	0.142	357	0.2	1.667	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	292	313	1566	0.187	292	0.2	2.824	A
2 - Ash Road North	728	444	1468	0.496	727	1.0	4.847	A
3 - Abenbury Way	502	1004	835	0.601	499	1.5	10.638	B
4 - Industrial Estate Road	427	35	2511	0.170	427	0.2	1.726	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	358	383	1526	0.234	358	0.3	3.079	A
2 - Ash Road North	892	544	1414	0.631	889	1.7	6.815	A
3 - Abenbury Way	614	1228	723	0.850	601	4.7	27.179	D
4 - Industrial Estate Road	523	42	2506	0.209	523	0.3	1.814	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	358	383	1526	0.234	358	0.3	3.080	A
2 - Ash Road North	892	544	1414	0.631	892	1.7	6.888	A
3 - Abenbury Way	614	1231	721	0.852	613	5.1	31.968	D
4 - Industrial Estate Road	523	43	2506	0.209	523	0.3	1.814	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	292	313	1566	0.187	292	0.2	2.826	A
2 - Ash Road North	728	444	1468	0.496	731	1.0	4.901	A
3 - Abenbury Way	502	1008	833	0.602	516	1.6	11.845	B
4 - Industrial Estate Road	427	36	2511	0.170	427	0.2	1.727	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	245	262	1595	0.153	245	0.2	2.668	A
2 - Ash Road North	610	372	1507	0.405	611	0.7	4.021	A
3 - Abenbury Way	420	843	915	0.459	423	0.9	7.350	A
4 - Industrial Estate Road	358	30	2515	0.142	358	0.2	1.667	A

2030 Base + Committed (KSS2 & Kingmoor), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.92	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.92	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	288	100.000
2 - Ash Road North		✓	218	100.000
3 - Abenbury Way		✓	266	100.000
4 - Industrial Estate Road		✓	1757	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	52	43	193
	2 - Ash Road North	4	1	11	202
	3 - Abenbury Way	11	22	0	233
	4 - Industrial Estate Road	338	875	529	15

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.38	6.87	0.6	A
2 - Ash Road North	0.19	3.59	0.2	A
3 - Abenbury Way	0.26	4.41	0.4	A
4 - Industrial Estate Road	0.77	6.29	3.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	217	1082	1129	0.192	216	0.2	3.939	A
2 - Ash Road North	164	585	1392	0.118	164	0.1	2.929	A
3 - Abenbury Way	200	311	1181	0.170	199	0.2	3.662	A
4 - Industrial Estate Road	1323	28	2516	0.526	1318	1.1	2.995	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	259	1294	1008	0.257	258	0.3	4.801	A
2 - Ash Road North	196	700	1329	0.147	196	0.2	3.175	A
3 - Abenbury Way	239	373	1151	0.208	239	0.3	3.947	A
4 - Industrial Estate Road	1580	34	2512	0.629	1577	1.7	3.842	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	317	1582	844	0.376	316	0.6	6.805	A
2 - Ash Road North	240	856	1245	0.193	240	0.2	3.581	A
3 - Abenbury Way	293	456	1109	0.264	292	0.4	4.407	A
4 - Industrial Estate Road	1934	42	2506	0.772	1928	3.3	6.155	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	317	1588	841	0.377	317	0.6	6.866	A
2 - Ash Road North	240	859	1243	0.193	240	0.2	3.587	A
3 - Abenbury Way	293	457	1108	0.264	293	0.4	4.413	A
4 - Industrial Estate Road	1934	42	2506	0.772	1934	3.3	6.286	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	259	1302	1004	0.258	260	0.4	4.846	A
2 - Ash Road North	196	704	1327	0.148	196	0.2	3.185	A
3 - Abenbury Way	239	374	1150	0.208	240	0.3	3.957	A
4 - Industrial Estate Road	1580	34	2512	0.629	1586	1.7	3.916	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	217	1088	1126	0.193	217	0.2	3.964	A
2 - Ash Road North	164	588	1390	0.118	164	0.1	2.938	A
3 - Abenbury Way	200	313	1180	0.170	200	0.2	3.676	A
4 - Industrial Estate Road	1323	29	2516	0.526	1325	1.1	3.028	A

2030 Base + Committed (KSS2 & Kingmoor), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	37.93	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	37.93	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	435	100.000
2 - Ash Road North		✓	956	100.000
3 - Abenbury Way		✓	558	100.000
4 - Industrial Estate Road		✓	633	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	11	14	410
	2 - Ash Road North	16	0	10	930
	3 - Abenbury Way	19	4	0	535
	4 - Industrial Estate Road	215	238	162	18

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.32	3.59	0.5	A
2 - Ash Road North	0.78	12.11	3.5	B
3 - Abenbury Way	1.06	149.69	27.1	F
4 - Industrial Estate Road	0.28	1.99	0.4	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	327	317	1564	0.209	326	0.3	2.906	A
2 - Ash Road North	720	453	1463	0.492	716	1.0	4.793	A
3 - Abenbury Way	420	1030	822	0.511	416	1.0	8.781	A
4 - Industrial Estate Road	477	29	2515	0.189	476	0.2	1.764	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	391	379	1529	0.256	391	0.3	3.164	A
2 - Ash Road North	859	543	1415	0.607	857	1.5	6.429	A
3 - Abenbury Way	502	1233	720	0.696	497	2.2	15.794	C
4 - Industrial Estate Road	569	35	2511	0.227	569	0.3	1.852	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	479	464	1480	0.324	478	0.5	3.591	A
2 - Ash Road North	1053	664	1349	0.780	1045	3.4	11.585	B
3 - Abenbury Way	614	1505	584	1.052	557	16.5	78.221	F
4 - Industrial Estate Road	697	40	2507	0.278	697	0.4	1.988	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	479	464	1480	0.324	479	0.5	3.594	A
2 - Ash Road North	1053	665	1348	0.781	1052	3.5	12.109	B
3 - Abenbury Way	614	1512	581	1.058	572	27.1	149.685	F
4 - Industrial Estate Road	697	41	2507	0.278	697	0.4	1.988	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	391	380	1528	0.256	392	0.3	3.168	A
2 - Ash Road North	859	544	1414	0.608	867	1.6	6.663	A
3 - Abenbury Way	502	1243	715	0.701	600	2.6	51.137	F
4 - Industrial Estate Road	569	39	2508	0.227	569	0.3	1.859	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	327	318	1563	0.209	328	0.3	2.915	A
2 - Ash Road North	720	455	1462	0.492	722	1.0	4.880	A
3 - Abenbury Way	420	1037	818	0.513	426	1.1	9.314	A
4 - Industrial Estate Road	477	30	2515	0.189	477	0.2	1.768	A

2037 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.69	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.69	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2037 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	231	100.000
2 - Ash Road North		✓	168	100.000
3 - Abenbury Way		✓	281	100.000
4 - Industrial Estate Road		✓	1593	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	55	46	130
	2 - Ash Road North	4	1	11	152
	3 - Abenbury Way	11	24	0	246
	4 - Industrial Estate Road	260	757	560	16

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.28	5.63	0.4	A
2 - Ash Road North	0.15	3.35	0.2	A
3 - Abenbury Way	0.26	4.18	0.4	A
4 - Industrial Estate Road	0.70	4.79	2.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	174	1019	1165	0.149	173	0.2	3.630	A
2 - Ash Road North	126	564	1403	0.090	126	0.1	2.819	A
3 - Abenbury Way	212	227	1223	0.173	211	0.2	3.551	A
4 - Industrial Estate Road	1199	30	2515	0.477	1196	0.9	2.723	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	208	1219	1051	0.198	207	0.2	4.268	A
2 - Ash Road North	151	675	1343	0.112	151	0.1	3.019	A
3 - Abenbury Way	253	272	1201	0.210	252	0.3	3.795	A
4 - Industrial Estate Road	1432	36	2511	0.570	1430	1.3	3.329	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	254	1492	896	0.284	254	0.4	5.603	A
2 - Ash Road North	185	826	1261	0.147	185	0.2	3.344	A
3 - Abenbury Way	309	333	1170	0.264	309	0.4	4.177	A
4 - Industrial Estate Road	1754	44	2505	0.700	1750	2.3	4.744	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	254	1495	894	0.285	254	0.4	5.628	A
2 - Ash Road North	185	828	1260	0.147	185	0.2	3.347	A
3 - Abenbury Way	309	334	1170	0.264	309	0.4	4.182	A
4 - Industrial Estate Road	1754	44	2505	0.700	1754	2.3	4.791	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	208	1224	1048	0.198	208	0.2	4.289	A
2 - Ash Road North	151	678	1341	0.113	151	0.1	3.024	A
3 - Abenbury Way	253	273	1200	0.210	253	0.3	3.802	A
4 - Industrial Estate Road	1432	36	2511	0.570	1436	1.3	3.364	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	174	1024	1162	0.150	174	0.2	3.644	A
2 - Ash Road North	126	567	1402	0.090	127	0.1	2.825	A
3 - Abenbury Way	212	228	1223	0.173	212	0.2	3.563	A
4 - Industrial Estate Road	1199	30	2515	0.477	1201	0.9	2.745	A

2037 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	19.91	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.91	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2037 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	343	100.000
2 - Ash Road North		✓	856	100.000
3 - Abenbury Way		✓	589	100.000
4 - Industrial Estate Road		✓	502	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	11	15	317
	2 - Ash Road North	17	0	10	829
	3 - Abenbury Way	20	4	0	565
	4 - Industrial Estate Road	139	173	171	19

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.25	3.17	0.3	A
2 - Ash Road North	0.67	7.91	2.0	A
3 - Abenbury Way	0.95	62.50	10.6	F
4 - Industrial Estate Road	0.22	1.84	0.3	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	258	276	1587	0.163	257	0.2	2.705	A
2 - Ash Road North	644	392	1497	0.431	641	0.8	4.196	A
3 - Abenbury Way	443	886	894	0.496	440	1.0	7.860	A
4 - Industrial Estate Road	378	31	2514	0.150	377	0.2	1.684	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	308	330	1557	0.198	308	0.2	2.883	A
2 - Ash Road North	770	469	1455	0.529	768	1.1	5.232	A
3 - Abenbury Way	529	1061	806	0.657	526	1.8	12.681	B
4 - Industrial Estate Road	451	37	2510	0.180	451	0.2	1.747	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	378	404	1515	0.249	377	0.3	3.165	A
2 - Ash Road North	942	574	1398	0.674	939	2.0	7.784	A
3 - Abenbury Way	649	1297	688	0.943	622	8.5	43.328	E
4 - Industrial Estate Road	553	44	2505	0.221	552	0.3	1.843	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	378	404	1514	0.249	378	0.3	3.166	A
2 - Ash Road North	942	575	1397	0.674	942	2.0	7.906	A
3 - Abenbury Way	649	1301	686	0.945	640	10.6	62.502	F
4 - Industrial Estate Road	553	45	2504	0.221	553	0.3	1.843	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	308	330	1556	0.198	309	0.2	2.887	A
2 - Ash Road North	770	470	1454	0.529	773	1.1	5.313	A
3 - Abenbury Way	529	1066	804	0.659	564	2.0	17.021	C
4 - Industrial Estate Road	451	38	2509	0.180	452	0.2	1.751	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	258	276	1587	0.163	258	0.2	2.709	A
2 - Ash Road North	644	393	1496	0.431	646	0.8	4.242	A
3 - Abenbury Way	443	892	891	0.498	447	1.0	8.187	A
4 - Industrial Estate Road	378	31	2514	0.150	378	0.2	1.684	A

2037 Base + Committed (KSS2 & Kingmoor), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.94	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.94	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2037 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	301	100.000
2 - Ash Road North		✓	227	100.000
3 - Abenbury Way		✓	281	100.000
4 - Industrial Estate Road		✓	1844	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	55	46	200
	2 - Ash Road North	4	1	11	211
	3 - Abenbury Way	11	24	0	246
	4 - Industrial Estate Road	352	916	560	16

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.42	7.77	0.7	A
2 - Ash Road North	0.21	3.72	0.3	A
3 - Abenbury Way	0.28	4.56	0.4	A
4 - Industrial Estate Road	0.81	7.57	4.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	1138	1097	0.207	226	0.3	4.125	A
2 - Ash Road North	171	616	1375	0.124	170	0.1	2.987	A
3 - Abenbury Way	212	324	1175	0.180	211	0.2	3.730	A
4 - Industrial Estate Road	1388	30	2515	0.552	1383	1.2	3.169	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1361	970	0.279	270	0.4	5.141	A
2 - Ash Road North	204	738	1309	0.156	204	0.2	3.257	A
3 - Abenbury Way	253	388	1143	0.221	252	0.3	4.041	A
4 - Industrial Estate Road	1658	36	2511	0.660	1655	1.9	4.194	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1663	798	0.415	330	0.7	7.669	A
2 - Ash Road North	250	901	1220	0.205	250	0.3	3.709	A
3 - Abenbury Way	309	474	1100	0.281	309	0.4	4.551	A
4 - Industrial Estate Road	2030	44	2505	0.811	2022	4.1	7.316	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1670	794	0.417	331	0.7	7.773	A
2 - Ash Road North	250	905	1218	0.205	250	0.3	3.716	A
3 - Abenbury Way	309	476	1099	0.281	309	0.4	4.558	A
4 - Industrial Estate Road	2030	44	2505	0.811	2030	4.2	7.566	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1371	964	0.281	272	0.4	5.206	A
2 - Ash Road North	204	743	1306	0.156	204	0.2	3.269	A
3 - Abenbury Way	253	390	1142	0.221	253	0.3	4.052	A
4 - Industrial Estate Road	1658	36	2511	0.660	1667	2.0	4.309	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	1144	1093	0.207	227	0.3	4.160	A
2 - Ash Road North	171	620	1373	0.124	171	0.1	2.995	A
3 - Abenbury Way	212	326	1174	0.180	212	0.2	3.744	A
4 - Industrial Estate Road	1388	30	2515	0.552	1391	1.2	3.211	A

2037 Base + Committed (KSS2 & Kingmoor), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	69.15	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	69.15	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2037 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	453	100.000
2 - Ash Road North		✓	1001	100.000
3 - Abenbury Way		✓	589	100.000
4 - Industrial Estate Road		✓	660	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	11	15	427
	2 - Ash Road North	17	0	10	974
	3 - Abenbury Way	20	4	0	565
	4 - Industrial Estate Road	223	247	171	19

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.34	3.71	0.5	A
2 - Ash Road North	0.83	15.50	4.6	C
3 - Abenbury Way	1.19	285.90	56.2	F
4 - Industrial Estate Road	0.29	2.02	0.4	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	341	331	1556	0.219	340	0.3	2.958	A
2 - Ash Road North	754	474	1452	0.519	749	1.1	5.094	A
3 - Abenbury Way	443	1077	799	0.555	439	1.2	9.873	A
4 - Industrial Estate Road	497	31	2514	0.198	496	0.2	1.783	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	407	396	1519	0.268	407	0.4	3.237	A
2 - Ash Road North	900	568	1401	0.642	897	1.8	7.101	A
3 - Abenbury Way	529	1289	692	0.765	522	3.0	20.391	C
4 - Industrial Estate Road	593	37	2510	0.236	593	0.3	1.877	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	499	485	1469	0.340	498	0.5	3.708	A
2 - Ash Road North	1102	695	1332	0.827	1092	4.4	14.374	B
3 - Abenbury Way	649	1571	551	1.177	540	30.2	128.486	F
4 - Industrial Estate Road	727	41	2507	0.290	726	0.4	2.021	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	499	485	1468	0.340	499	0.5	3.711	A
2 - Ash Road North	1102	696	1332	0.828	1101	4.6	15.495	C
3 - Abenbury Way	649	1581	546	1.188	545	56.2	285.902	F
4 - Industrial Estate Road	727	41	2507	0.290	727	0.4	2.021	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	407	398	1518	0.268	408	0.4	3.246	A
2 - Ash Road North	900	569	1401	0.642	911	1.8	7.506	A
3 - Abenbury Way	529	1303	685	0.773	673	20.3	208.248	F
4 - Industrial Estate Road	593	43	2506	0.237	594	0.3	1.882	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	341	333	1555	0.219	341	0.3	2.966	A
2 - Ash Road North	754	476	1451	0.519	757	1.1	5.206	A
3 - Abenbury Way	443	1085	794	0.558	519	1.3	17.075	C
4 - Industrial Estate Road	497	34	2512	0.198	497	0.2	1.786	A

2030 Base + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.20	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.20	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	301	100.000
2 - Ash Road North		✓	160	100.000
3 - Abenbury Way		✓	266	100.000
4 - Industrial Estate Road		✓	1671	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	52	43	206
	2 - Ash Road North	4	1	11	144
	3 - Abenbury Way	11	22	0	233
	4 - Industrial Estate Road	411	716	529	15

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.35	5.91	0.5	A
2 - Ash Road North	0.14	3.40	0.2	A
3 - Abenbury Way	0.26	4.28	0.3	A
4 - Industrial Estate Road	0.73	5.40	2.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	963	1197	0.189	226	0.2	3.704	A
2 - Ash Road North	120	595	1386	0.087	120	0.1	2.842	A
3 - Abenbury Way	200	278	1198	0.167	199	0.2	3.601	A
4 - Industrial Estate Road	1258	28	2516	0.500	1254	1.0	2.853	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1152	1089	0.248	270	0.3	4.394	A
2 - Ash Road North	144	712	1323	0.109	144	0.1	3.052	A
3 - Abenbury Way	239	332	1171	0.204	239	0.3	3.862	A
4 - Industrial Estate Road	1502	34	2512	0.598	1500	1.5	3.553	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1409	943	0.351	331	0.5	5.872	A
2 - Ash Road North	176	871	1237	0.142	176	0.2	3.393	A
3 - Abenbury Way	293	407	1134	0.258	293	0.3	4.278	A
4 - Industrial Estate Road	1840	42	2506	0.734	1835	2.7	5.321	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1413	941	0.352	331	0.5	5.906	A
2 - Ash Road North	176	873	1236	0.143	176	0.2	3.397	A
3 - Abenbury Way	293	407	1133	0.258	293	0.3	4.283	A
4 - Industrial Estate Road	1840	42	2506	0.734	1840	2.7	5.397	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1157	1086	0.249	271	0.3	4.424	A
2 - Ash Road North	144	715	1321	0.109	144	0.1	3.060	A
3 - Abenbury Way	239	333	1170	0.204	239	0.3	3.870	A
4 - Industrial Estate Road	1502	34	2512	0.598	1507	1.5	3.599	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	967	1194	0.190	227	0.2	3.723	A
2 - Ash Road North	120	598	1385	0.087	121	0.1	2.847	A
3 - Abenbury Way	200	279	1197	0.167	200	0.2	3.610	A
4 - Industrial Estate Road	1258	29	2516	0.500	1260	1.0	2.872	A

2030 Base + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	20.89	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.89	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	473	100.000
2 - Ash Road North		✓	810	100.000
3 - Abenbury Way		✓	558	100.000
4 - Industrial Estate Road		✓	569	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	11	14	448
	2 - Ash Road North	16	0	10	784
	3 - Abenbury Way	19	4	0	535
	4 - Industrial Estate Road	225	164	162	18

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road
	1 - Bryn Lane	0	0	0	0
	2 - Ash Road North	0	0	0	0
	3 - Abenbury Way	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.34	3.58	0.5	A
2 - Ash Road North	0.67	8.29	2.0	A
3 - Abenbury Way	0.96	73.20	11.9	F
4 - Industrial Estate Road	0.25	1.91	0.3	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	356	261	1596	0.223	355	0.3	2.899	A
2 - Ash Road North	610	482	1448	0.421	607	0.7	4.267	A
3 - Abenbury Way	420	949	862	0.487	416	0.9	8.009	A
4 - Industrial Estate Road	428	29	2515	0.170	428	0.2	1.724	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	425	313	1566	0.271	425	0.4	3.153	A
2 - Ash Road North	728	577	1396	0.521	727	1.1	5.366	A
3 - Abenbury Way	502	1136	769	0.653	498	1.8	13.139	B
4 - Industrial Estate Road	512	35	2511	0.204	511	0.3	1.799	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	521	383	1527	0.341	520	0.5	3.575	A
2 - Ash Road North	892	706	1326	0.673	888	2.0	8.151	A
3 - Abenbury Way	614	1390	642	0.957	585	9.2	48.469	E
4 - Industrial Estate Road	626	42	2507	0.250	626	0.3	1.913	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	521	383	1526	0.341	521	0.5	3.579	A
2 - Ash Road North	892	707	1326	0.673	892	2.0	8.289	A
3 - Abenbury Way	614	1394	640	0.960	603	11.9	73.203	F
4 - Industrial Estate Road	626	42	2506	0.250	626	0.3	1.914	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	425	313	1566	0.272	426	0.4	3.158	A
2 - Ash Road North	728	578	1396	0.522	732	1.1	5.453	A
3 - Abenbury Way	502	1142	766	0.655	541	2.0	18.698	C
4 - Industrial Estate Road	512	37	2510	0.204	512	0.3	1.800	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	356	262	1595	0.223	356	0.3	2.906	A
2 - Ash Road North	610	484	1447	0.421	611	0.7	4.315	A
3 - Abenbury Way	420	955	859	0.489	424	1.0	8.346	A
4 - Industrial Estate Road	428	30	2515	0.170	429	0.2	1.727	A

Junctions 10									
ARCADY 10 - Roundabout Module									
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Filename: Proposed Site Access ARCADY (Impr) [Apr 24].j10

Path: C:\Users\mchau\Downloads\Wrexham Mar 2024

Report generation date: 02/04/2024 16:55:47

»2030 Base + Committed (KSS2 & Kingmoor), AM
 »2030 Base + Committed (KSS2 & Kingmoor), PM
 »2030 Base + Committed + Development (Phase 1), AM
 »2030 Base + Committed + Development (Phase 1), PM
 »2037 Base + Committed (KSS2 & Kingmoor), AM
 »2037 Base + Committed (KSS2 & Kingmoor), PM
 »2037 Base + Committed + Development (Phase 1 + 2), AM
 »2037 Base + Committed + Development (Phase 1 + 2), PM
 »2030 Base + Committed + Development (Phase 1) [Without KSS2], AM
 »2030 Base + Committed + Development (Phase 1) [Without KSS2], PM
 »2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2], AM
 »2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2], PM
 »2030 Base + Committed + Development (Phase 1) [Without Kingmoor], AM
 »2030 Base + Committed + Development (Phase 1) [Without Kingmoor], PM
 »2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor], AM
 »2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor], PM
 »2030 Base + Development (Phase 1), AM
 »2030 Base + Development (Phase 1), PM
 »2037 Base + Development (Phase 1 + 2), AM
 »2037 Base + Development (Phase 1 + 2), PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030 Base + Committed (KSS2 & Kingmoor)									
1 - Bryn Lane	D1	0.4	4.07	0.26	A	D2	0.3	2.62	0.26	A
2 - Ash Road North		0.2	2.95	0.16	A		2.1	7.11	0.68	A
3 - Abenbury Way		0.2	2.16	0.15	A		0.9	5.02	0.46	A
4 - Industrial Estate Road		2.7	5.09	0.73	A		0.4	1.85	0.26	A
5 - Proposed Site Access		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2030 Base + Committed + Development (Phase 1)									
1 - Bryn Lane	D3	0.5	4.55	0.34	A	D4	0.5	2.98	0.35	A
2 - Ash Road North		0.2	3.08	0.17	A		2.5	8.54	0.71	A
3 - Abenbury Way		0.2	2.23	0.15	A		1.0	5.81	0.50	A
4 - Industrial Estate Road		4.0	6.85	0.80	A		0.4	1.96	0.30	A
5 - Proposed Site Access		0.0	0.00	0.00	A		0.0	0.00	0.00	A
	2037 Base + Committed (KSS2 & Kingmoor)									
1 - Bryn Lane		0.4	4.38	0.29	A		0.4	2.69	0.27	A

2 - Ash Road North	D7	0.2	3.04	0.17	A	D8	2.5	8.16	0.71	A
3 - Abenbury Way		0.2	2.19	0.16	A		1.0	5.62	0.50	A
4 - Industrial Estate Road		3.3	5.91	0.77	A		0.4	1.88	0.28	A
5 - Proposed Site Access		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2037 Base + Committed + Development (Phase 1 + 2)										
1 - Bryn Lane	D11	0.8	6.21	0.43	A	D12	0.8	4.21	0.45	A
2 - Ash Road North		0.2	3.59	0.20	A		10.6	36.90	0.93	E
3 - Abenbury Way		0.2	2.51	0.18	A		2.7	15.20	0.73	C
4 - Industrial Estate Road		13.5	21.37	0.94	C		0.7	2.50	0.41	A
5 - Proposed Site Access		1.0	8.07	0.51	A		0.6	3.58	0.38	A
2030 Base + Committed + Development (Phase 1) [Without KSS2]										
1 - Bryn Lane	D13	0.5	4.06	0.32	A	D14	0.5	2.87	0.34	A
2 - Ash Road North		0.1	2.92	0.12	A		1.6	6.36	0.62	A
3 - Abenbury Way		0.2	2.18	0.15	A		0.9	5.10	0.47	A
4 - Industrial Estate Road		2.8	5.22	0.74	A		0.4	1.87	0.27	A
5 - Proposed Site Access		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]										
1 - Bryn Lane	D15	0.7	5.34	0.40	A	D16	0.8	4.00	0.44	A
2 - Ash Road North		0.2	3.38	0.15	A		4.1	15.92	0.81	C
3 - Abenbury Way		0.2	2.45	0.17	A		2.0	11.39	0.67	B
4 - Industrial Estate Road		6.8	11.26	0.88	B		0.6	2.37	0.37	A
5 - Proposed Site Access		0.9	6.71	0.47	A		0.6	3.43	0.37	A
2030 Base + Committed + Development (Phase 1) [Without Kingmoor]										
1 - Bryn Lane	D17	0.4	4.14	0.28	A	D18	0.4	2.71	0.28	A
2 - Ash Road North		0.2	2.97	0.17	A		2.1	7.42	0.68	A
3 - Abenbury Way		0.2	2.17	0.15	A		0.9	5.21	0.47	A
4 - Industrial Estate Road		3.2	5.75	0.76	A		0.4	1.86	0.27	A
5 - Proposed Site Access		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]										
1 - Bryn Lane	D19	0.6	5.49	0.36	A	D20	0.6	3.69	0.37	A
2 - Ash Road North		0.2	3.45	0.19	A		6.9	23.98	0.89	C
3 - Abenbury Way		0.2	2.43	0.17	A		2.1	11.82	0.68	B
4 - Industrial Estate Road		8.5	13.91	0.90	B		0.6	2.35	0.37	A
5 - Proposed Site Access		0.9	7.18	0.49	A		0.6	3.40	0.37	A
2030 Base + Development (Phase 1)										
1 - Bryn Lane	D21	0.3	3.71	0.25	A	D22	0.4	2.61	0.27	A
2 - Ash Road North		0.1	2.82	0.12	A		1.4	5.58	0.58	A
3 - Abenbury Way		0.2	2.12	0.15	A		0.8	4.57	0.44	A
4 - Industrial Estate Road		2.3	4.49	0.70	A		0.3	1.79	0.24	A
5 - Proposed Site Access		0.0	0.00	0.00	A		0.0	0.00	0.00	A
2037 Base + Development (Phase 1 + 2)										
1 - Bryn Lane	D23	0.5	4.71	0.33	A	D24	0.6	3.52	0.36	A
2 - Ash Road North		0.2	3.22	0.14	A		3.0	11.81	0.76	B
3 - Abenbury Way		0.2	2.23	0.16	A		1.6	9.05	0.62	A
4 - Industrial Estate Road		4.9	8.40	0.83	A		0.5	2.23	0.34	A
5 - Proposed Site Access		0.7	5.72	0.41	A		0.6	3.26	0.36	A

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

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

File summary

File Description

Title	Industrial Estate Road / Bryn Lane / Ash Road North / Abenbury Way
Location	Wrexham
Site number	
Date	09/02/2023
Version	
Status	(new file)
Identifier	
Client	LIDL
Jobnumber	
Enumerator	LAPTOP-DTQ9HG8B\mchau
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15
D2	2030 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15
D3	2030 Base + Committed + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D4	2030 Base + Committed + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D7	2037 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15
D8	2037 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15
D11	2037 Base + Committed + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15
D12	2037 Base + Committed + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15
D13	2030 Base + Committed + Development (Phase 1) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15
D14	2030 Base + Committed + Development (Phase 1) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15
D15	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15
D16	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15
D17	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15
D18	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15
D19	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15
D20	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15
D21	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D22	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D23	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15
D24	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030 Base + Committed (KSS2 & Kingmoor), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.48	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Bryn Lane		
2	Ash Road North		
3	Abenbury Way		
4	Industrial Estate Road		
5	Proposed Site Access		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Bryn Lane	3.77	8.01	33.4	38.9	70.0	28.0		
2 - Ash Road North	4.33	9.11	15.2	20.0	70.0	48.0		
3 - Abenbury Way	3.92	8.82	30.2	57.7	70.0	30.0		
4 - Industrial Estate Road	8.50	9.02	9.5	37.4	70.0	41.0		
5 - Proposed Site Access	3.65	10.00	19.5	25.2	70.0	31.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Bryn Lane	0.579	2119
2 - Ash Road North	0.523	1907
3 - Abenbury Way	0.597	2234
4 - Industrial Estate Road	0.654	2668
5 - Proposed Site Access	0.564	2062

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)
D1	2030 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	288	100.000
2 - Ash Road North		✓	217	100.000
3 - Abenbury Way		✓	266	100.000
4 - Industrial Estate Road		✓	1757	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	52	43	193	0
	2 - Ash Road North	4	0	11	202	0
	3 - Abenbury Way	11	22	0	233	0
	4 - Industrial Estate Road	338	875	529	15	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.26	4.07	0.4	A
2 - Ash Road North	0.16	2.95	0.2	A
3 - Abenbury Way	0.15	2.16	0.2	A
4 - Industrial Estate Road	0.73	5.09	2.7	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	217	1082	1493	0.145	216	0.2	2.818	A
2 - Ash Road North	163	585	1601	0.102	163	0.1	2.504	A
3 - Abenbury Way	200	311	2049	0.098	200	0.1	1.947	A
4 - Industrial Estate Road	1323	28	2650	0.499	1319	1.0	2.697	A
5 - Proposed Site Access	0	1347	1302	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	259	1294	1370	0.189	259	0.2	3.238	A
2 - Ash Road North	195	700	1540	0.127	195	0.1	2.675	A
3 - Abenbury Way	239	372	2012	0.119	239	0.1	2.030	A
4 - Industrial Estate Road	1580	33	2646	0.597	1578	1.5	3.364	A
5 - Proposed Site Access	0	1611	1153	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	317	1583	1203	0.264	317	0.4	4.060	A
2 - Ash Road North	239	857	1459	0.164	239	0.2	2.951	A
3 - Abenbury Way	293	455	1962	0.149	293	0.2	2.156	A
4 - Industrial Estate Road	1934	41	2641	0.732	1930	2.7	5.026	A
5 - Proposed Site Access	0	1970	950	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	317	1586	1201	0.264	317	0.4	4.073	A
2 - Ash Road North	239	859	1458	0.164	239	0.2	2.953	A
3 - Abenbury Way	293	456	1962	0.149	293	0.2	2.156	A
4 - Industrial Estate Road	1934	41	2641	0.732	1934	2.7	5.091	A
5 - Proposed Site Access	0	1975	948	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	259	1299	1367	0.189	259	0.2	3.250	A
2 - Ash Road North	195	703	1539	0.127	195	0.1	2.679	A
3 - Abenbury Way	239	373	2012	0.119	239	0.1	2.031	A
4 - Industrial Estate Road	1580	33	2646	0.597	1584	1.5	3.408	A
5 - Proposed Site Access	0	1618	1149	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	217	1086	1490	0.146	217	0.2	2.829	A
2 - Ash Road North	163	588	1599	0.102	163	0.1	2.507	A
3 - Abenbury Way	200	312	2048	0.098	200	0.1	1.949	A
4 - Industrial Estate Road	1323	28	2650	0.499	1325	1.0	2.722	A
5 - Proposed Site Access	0	1353	1299	0.000	0	0.0	0.000	A

2030 Base + Committed (KSS2 & Kingmoor), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.61	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.61	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	435	100.000
2 - Ash Road North		✓	956	100.000
3 - Abenbury Way		✓	558	100.000
4 - Industrial Estate Road		✓	633	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	11	14	410	0
	2 - Ash Road North	16	0	10	930	0
	3 - Abenbury Way	19	4	0	535	0
	4 - Industrial Estate Road	215	238	162	18	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.26	2.62	0.3	A
2 - Ash Road North	0.68	7.11	2.1	A
3 - Abenbury Way	0.46	5.02	0.9	A
4 - Industrial Estate Road	0.26	1.85	0.4	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	327	317	1935	0.169	327	0.2	2.236	A
2 - Ash Road North	720	454	1669	0.431	717	0.8	3.755	A
3 - Abenbury Way	420	1031	1619	0.260	419	0.3	2.998	A
4 - Industrial Estate Road	477	29	2649	0.180	476	0.2	1.656	A
5 - Proposed Site Access	0	505	1777	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	391	379	1900	0.206	391	0.3	2.386	A
2 - Ash Road North	859	543	1623	0.530	858	1.1	4.698	A
3 - Abenbury Way	502	1234	1498	0.335	501	0.5	3.610	A
4 - Industrial Estate Road	569	35	2645	0.215	569	0.3	1.733	A
5 - Proposed Site Access	0	604	1721	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	479	464	1850	0.259	479	0.3	2.624	A
2 - Ash Road North	1053	665	1559	0.675	1049	2.0	7.006	A
3 - Abenbury Way	614	1509	1333	0.461	613	0.8	4.990	A
4 - Industrial Estate Road	697	43	2640	0.264	697	0.4	1.852	A
5 - Proposed Site Access	0	739	1645	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	479	465	1850	0.259	479	0.3	2.624	A
2 - Ash Road North	1053	665	1559	0.675	1052	2.1	7.106	A
3 - Abenbury Way	614	1513	1331	0.462	614	0.9	5.024	A
4 - Industrial Estate Road	697	43	2640	0.264	697	0.4	1.852	A
5 - Proposed Site Access	0	740	1644	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	391	380	1899	0.206	391	0.3	2.387	A
2 - Ash Road North	859	543	1623	0.530	863	1.1	4.762	A
3 - Abenbury Way	502	1239	1494	0.336	503	0.5	3.638	A
4 - Industrial Estate Road	569	35	2645	0.215	569	0.3	1.736	A
5 - Proposed Site Access	0	605	1721	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	327	318	1935	0.169	328	0.2	2.239	A
2 - Ash Road North	720	455	1669	0.431	721	0.8	3.804	A
3 - Abenbury Way	420	1036	1615	0.260	421	0.4	3.014	A
4 - Industrial Estate Road	477	29	2649	0.180	477	0.2	1.657	A
5 - Proposed Site Access	0	506	1776	0.000	0	0.0	0.000	A

2030 Base + Committed + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.80	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Base + Committed + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	371	100.000
2 - Ash Road North		✓	218	100.000
3 - Abenbury Way		✓	266	100.000
4 - Industrial Estate Road		✓	1922	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	52	43	276	0
	2 - Ash Road North	4	1	11	202	0
	3 - Abenbury Way	11	22	0	233	0
	4 - Industrial Estate Road	503	875	529	15	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.34	4.55	0.5	A
2 - Ash Road North	0.17	3.08	0.2	A
3 - Abenbury Way	0.15	2.23	0.2	A
4 - Industrial Estate Road	0.80	6.85	4.0	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	279	1082	1493	0.187	278	0.2	2.963	A
2 - Ash Road North	164	648	1568	0.105	164	0.1	2.563	A
3 - Abenbury Way	200	374	2011	0.100	200	0.1	1.987	A
4 - Industrial Estate Road	1447	29	2649	0.546	1442	1.2	2.970	A
5 - Proposed Site Access	0	1471	1232	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	334	1294	1370	0.243	333	0.3	3.472	A
2 - Ash Road North	196	775	1501	0.131	196	0.1	2.756	A
3 - Abenbury Way	239	447	1967	0.122	239	0.1	2.083	A
4 - Industrial Estate Road	1728	34	2645	0.653	1725	1.9	3.901	A
5 - Proposed Site Access	0	1759	1069	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	408	1582	1204	0.339	408	0.5	4.520	A
2 - Ash Road North	240	947	1411	0.170	240	0.2	3.073	A
3 - Abenbury Way	293	547	1907	0.154	293	0.2	2.229	A
4 - Industrial Estate Road	2116	42	2640	0.801	2108	3.9	6.661	A
5 - Proposed Site Access	0	2150	849	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	408	1587	1200	0.340	408	0.5	4.546	A
2 - Ash Road North	240	950	1410	0.170	240	0.2	3.076	A
3 - Abenbury Way	293	548	1907	0.154	293	0.2	2.230	A
4 - Industrial Estate Road	2116	42	2640	0.801	2116	4.0	6.852	A
5 - Proposed Site Access	0	2158	845	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	334	1302	1365	0.244	334	0.3	3.496	A
2 - Ash Road North	196	779	1499	0.131	196	0.2	2.762	A
3 - Abenbury Way	239	449	1966	0.122	239	0.1	2.084	A
4 - Industrial Estate Road	1728	34	2645	0.653	1736	1.9	3.995	A
5 - Proposed Site Access	0	1770	1063	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	279	1088	1490	0.188	280	0.2	2.975	A
2 - Ash Road North	164	651	1566	0.105	164	0.1	2.569	A
3 - Abenbury Way	200	375	2010	0.100	200	0.1	1.989	A
4 - Industrial Estate Road	1447	29	2649	0.546	1450	1.2	3.010	A
5 - Proposed Site Access	0	1478	1228	0.000	0	0.0	0.000	A

2030 Base + Committed + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.16	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.16	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Base + Committed + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	583	100.000
2 - Ash Road North		✓	956	100.000
3 - Abenbury Way		✓	558	100.000
4 - Industrial Estate Road		✓	727	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	11	14	558	0
	2 - Ash Road North	16	0	10	930	0
	3 - Abenbury Way	19	4	0	535	0
	4 - Industrial Estate Road	309	238	162	18	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.35	2.98	0.5	A
2 - Ash Road North	0.71	8.54	2.5	A
3 - Abenbury Way	0.50	5.81	1.0	A
4 - Industrial Estate Road	0.30	1.96	0.4	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	439	317	1935	0.227	438	0.3	2.404	A
2 - Ash Road North	720	565	1611	0.447	717	0.8	4.008	A
3 - Abenbury Way	420	1142	1553	0.271	419	0.4	3.170	A
4 - Industrial Estate Road	547	29	2649	0.207	546	0.3	1.712	A
5 - Proposed Site Access	0	576	1737	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	524	379	1900	0.276	524	0.4	2.616	A
2 - Ash Road North	859	676	1553	0.553	858	1.2	5.163	A
3 - Abenbury Way	502	1366	1418	0.354	501	0.5	3.922	A
4 - Industrial Estate Road	654	35	2645	0.247	653	0.3	1.806	A
5 - Proposed Site Access	0	688	1674	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	642	464	1850	0.347	641	0.5	2.976	A
2 - Ash Road North	1053	827	1474	0.714	1048	2.4	8.353	A
3 - Abenbury Way	614	1670	1237	0.497	613	1.0	5.752	A
4 - Industrial Estate Road	800	43	2640	0.303	800	0.4	1.956	A
5 - Proposed Site Access	0	843	1586	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	642	465	1850	0.347	642	0.5	2.978	A
2 - Ash Road North	1053	828	1474	0.714	1052	2.5	8.537	A
3 - Abenbury Way	614	1676	1234	0.498	614	1.0	5.813	A
4 - Industrial Estate Road	800	43	2640	0.303	800	0.4	1.957	A
5 - Proposed Site Access	0	843	1586	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	524	380	1899	0.276	525	0.4	2.619	A
2 - Ash Road North	859	677	1553	0.553	864	1.3	5.263	A
3 - Abenbury Way	502	1374	1414	0.355	503	0.6	3.960	A
4 - Industrial Estate Road	654	35	2645	0.247	654	0.3	1.810	A
5 - Proposed Site Access	0	689	1673	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	439	318	1935	0.227	439	0.3	2.406	A
2 - Ash Road North	720	567	1610	0.447	721	0.8	4.059	A
3 - Abenbury Way	420	1148	1549	0.271	421	0.4	3.193	A
4 - Industrial Estate Road	547	29	2649	0.207	548	0.3	1.712	A
5 - Proposed Site Access	0	577	1736	0.000	0	0.0	0.000	A

2037 Base + Committed (KSS2 & Kingmoor), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.10	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.10	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2037 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	301	100.000
2 - Ash Road North		✓	227	100.000
3 - Abenbury Way		✓	281	100.000
4 - Industrial Estate Road		✓	1844	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	55	46	200	0
	2 - Ash Road North	4	1	11	211	0
	3 - Abenbury Way	11	24	0	246	0
	4 - Industrial Estate Road	352	916	560	16	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.29	4.38	0.4	A
2 - Ash Road North	0.17	3.04	0.2	A
3 - Abenbury Way	0.16	2.19	0.2	A
4 - Industrial Estate Road	0.77	5.91	3.3	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	1138	1460	0.155	226	0.2	2.915	A
2 - Ash Road North	171	617	1584	0.108	170	0.1	2.546	A
3 - Abenbury Way	212	324	2041	0.104	211	0.1	1.967	A
4 - Industrial Estate Road	1388	30	2648	0.524	1384	1.1	2.838	A
5 - Proposed Site Access	0	1414	1264	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1362	1331	0.203	270	0.3	3.394	A
2 - Ash Road North	204	738	1521	0.134	204	0.2	2.733	A
3 - Abenbury Way	253	388	2002	0.126	252	0.1	2.056	A
4 - Industrial Estate Road	1658	36	2644	0.627	1655	1.7	3.633	A
5 - Proposed Site Access	0	1691	1108	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1665	1155	0.287	331	0.4	4.364	A
2 - Ash Road North	250	903	1435	0.174	250	0.2	3.038	A
3 - Abenbury Way	309	475	1951	0.159	309	0.2	2.193	A
4 - Industrial Estate Road	2030	44	2639	0.769	2024	3.2	5.793	A
5 - Proposed Site Access	0	2068	895	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1670	1152	0.288	331	0.4	4.384	A
2 - Ash Road North	250	905	1433	0.174	250	0.2	3.041	A
3 - Abenbury Way	309	476	1950	0.159	309	0.2	2.193	A
4 - Industrial Estate Road	2030	44	2639	0.769	2030	3.3	5.908	A
5 - Proposed Site Access	0	2074	892	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1369	1327	0.204	271	0.3	3.414	A
2 - Ash Road North	204	741	1519	0.134	204	0.2	2.740	A
3 - Abenbury Way	253	389	2002	0.126	253	0.1	2.059	A
4 - Industrial Estate Road	1658	36	2644	0.627	1664	1.7	3.695	A
5 - Proposed Site Access	0	1700	1103	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	1144	1457	0.156	227	0.2	2.929	A
2 - Ash Road North	171	620	1583	0.108	171	0.1	2.552	A
3 - Abenbury Way	212	326	2040	0.104	212	0.1	1.970	A
4 - Industrial Estate Road	1388	30	2648	0.524	1391	1.1	2.869	A
5 - Proposed Site Access	0	1421	1260	0.000	0	0.0	0.000	A

2037 Base + Committed (KSS2 & Kingmoor), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.16	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.16	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2037 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	453	100.000
2 - Ash Road North		✓	1001	100.000
3 - Abenbury Way		✓	589	100.000
4 - Industrial Estate Road		✓	660	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	11	15	427	0
	2 - Ash Road North	17	0	10	974	0
	3 - Abenbury Way	20	4	0	565	0
	4 - Industrial Estate Road	223	247	171	19	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.27	2.69	0.4	A
2 - Ash Road North	0.71	8.16	2.5	A
3 - Abenbury Way	0.50	5.62	1.0	A
4 - Industrial Estate Road	0.28	1.88	0.4	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	341	331	1927	0.177	340	0.2	2.267	A
2 - Ash Road North	754	475	1658	0.454	750	0.8	3.950	A
3 - Abenbury Way	443	1078	1591	0.279	442	0.4	3.130	A
4 - Industrial Estate Road	497	31	2648	0.188	496	0.2	1.672	A
5 - Proposed Site Access	0	527	1765	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	407	396	1890	0.216	407	0.3	2.428	A
2 - Ash Road North	900	568	1610	0.559	898	1.3	5.047	A
3 - Abenbury Way	529	1290	1464	0.362	529	0.6	3.847	A
4 - Industrial Estate Road	593	37	2644	0.224	593	0.3	1.754	A
5 - Proposed Site Access	0	630	1706	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	499	485	1838	0.271	498	0.4	2.687	A
2 - Ash Road North	1102	695	1543	0.714	1097	2.4	7.995	A
3 - Abenbury Way	649	1577	1292	0.502	647	1.0	5.562	A
4 - Industrial Estate Road	727	45	2638	0.275	726	0.4	1.882	A
5 - Proposed Site Access	0	771	1627	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	499	486	1838	0.271	499	0.4	2.687	A
2 - Ash Road North	1102	696	1543	0.714	1102	2.5	8.159	A
3 - Abenbury Way	649	1582	1289	0.503	648	1.0	5.616	A
4 - Industrial Estate Road	727	45	2638	0.275	727	0.4	1.882	A
5 - Proposed Site Access	0	772	1626	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	407	397	1889	0.216	408	0.3	2.429	A
2 - Ash Road North	900	569	1609	0.559	905	1.3	5.141	A
3 - Abenbury Way	529	1297	1460	0.363	531	0.6	3.884	A
4 - Industrial Estate Road	593	37	2644	0.224	594	0.3	1.758	A
5 - Proposed Site Access	0	631	1706	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	341	332	1927	0.177	341	0.2	2.270	A
2 - Ash Road North	754	476	1658	0.455	755	0.8	3.997	A
3 - Abenbury Way	443	1084	1587	0.279	444	0.4	3.151	A
4 - Industrial Estate Road	497	31	2648	0.188	497	0.2	1.676	A
5 - Proposed Site Access	0	528	1764	0.000	0	0.0	0.000	A

2037 Base + Committed + Development (Phase 1 + 2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	15.38	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	15.38	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2037 Base + Committed + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	404	100.000
2 - Ash Road North		✓	228	100.000
3 - Abenbury Way		✓	281	100.000
4 - Industrial Estate Road		✓	2194	100.000
5 - Proposed Site Access		✓	429	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
	1 - Bryn Lane	0	48	40	267	49
	2 - Ash Road North	4	1	10	192	21
	3 - Abenbury Way	10	21	0	215	35
	4 - Industrial Estate Road	484	821	489	16	384
	5 - Proposed Site Access	56	100	74	199	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.43	6.21	0.8	A
2 - Ash Road North	0.20	3.59	0.2	A
3 - Abenbury Way	0.18	2.51	0.2	A
4 - Industrial Estate Road	0.94	21.37	13.5	C
5 - Proposed Site Access	0.51	8.07	1.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	304	1290	1372	0.222	303	0.3	3.364	A
2 - Ash Road North	172	850	1462	0.117	171	0.1	2.787	A
3 - Abenbury Way	212	562	1899	0.111	211	0.1	2.133	A
4 - Industrial Estate Road	1652	106	2599	0.636	1645	1.7	3.747	A
5 - Proposed Site Access	323	1384	1281	0.252	322	0.3	3.747	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	363	1543	1226	0.296	363	0.4	4.167	A
2 - Ash Road North	205	1017	1375	0.149	205	0.2	3.077	A
3 - Abenbury Way	253	672	1833	0.138	252	0.2	2.277	A
4 - Industrial Estate Road	1972	127	2585	0.763	1967	3.1	5.770	A
5 - Proposed Site Access	386	1655	1128	0.342	385	0.5	4.839	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	445	1872	1036	0.429	444	0.7	6.065	A
2 - Ash Road North	251	1238	1259	0.199	251	0.2	3.570	A
3 - Abenbury Way	309	822	1743	0.177	309	0.2	2.510	A
4 - Industrial Estate Road	2416	155	2566	0.941	2380	12.0	16.843	C
5 - Proposed Site Access	472	2003	932	0.507	470	1.0	7.768	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	445	1891	1024	0.434	445	0.8	6.209	A
2 - Ash Road North	251	1247	1254	0.200	251	0.2	3.587	A
3 - Abenbury Way	309	824	1742	0.178	309	0.2	2.512	A
4 - Industrial Estate Road	2416	155	2566	0.941	2410	13.5	21.365	C
5 - Proposed Site Access	472	2028	918	0.514	472	1.0	8.069	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	363	1573	1208	0.301	364	0.4	4.272	A
2 - Ash Road North	205	1031	1367	0.150	205	0.2	3.100	A
3 - Abenbury Way	253	676	1831	0.138	253	0.2	2.283	A
4 - Industrial Estate Road	1972	127	2585	0.763	2013	3.3	6.725	A
5 - Proposed Site Access	386	1693	1107	0.348	388	0.5	5.019	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	304	1300	1367	0.223	305	0.3	3.391	A
2 - Ash Road North	172	856	1459	0.118	172	0.1	2.799	A
3 - Abenbury Way	212	565	1897	0.112	212	0.1	2.136	A
4 - Industrial Estate Road	1652	106	2598	0.636	1658	1.8	3.854	A
5 - Proposed Site Access	323	1395	1275	0.253	324	0.3	3.786	A

2037 Base + Committed + Development (Phase 1 + 2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	14.35	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.35	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2037 Base + Committed + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	636	100.000
2 - Ash Road North		✓	1001	100.000
3 - Abenbury Way		✓	589	100.000
4 - Industrial Estate Road		✓	899	100.000
5 - Proposed Site Access		✓	554	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	10	12	528	86
	2 - Ash Road North	14	0	9	853	125
	3 - Abenbury Way	17	4	0	482	86
	4 - Industrial Estate Road	296	222	146	19	216
	5 - Proposed Site Access	60	29	30	435	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.45	4.21	0.8	A
2 - Ash Road North	0.93	36.90	10.6	E
3 - Abenbury Way	0.73	15.20	2.7	C
4 - Industrial Estate Road	0.41	2.50	0.7	A
5 - Proposed Site Access	0.38	3.58	0.6	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	479	665	1734	0.276	477	0.4	2.859	A
2 - Ash Road North	754	943	1414	0.533	749	1.1	5.381	A
3 - Abenbury Way	443	1544	1312	0.338	441	0.5	4.125	A
4 - Industrial Estate Road	677	249	2505	0.270	675	0.4	1.965	A
5 - Proposed Site Access	417	539	1758	0.237	416	0.3	2.680	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	572	795	1659	0.345	571	0.5	3.308	A
2 - Ash Road North	900	1128	1317	0.683	896	2.1	8.482	A
3 - Abenbury Way	529	1847	1131	0.468	528	0.9	5.955	A
4 - Industrial Estate Road	808	298	2473	0.327	808	0.5	2.161	A
5 - Proposed Site Access	498	645	1698	0.293	498	0.4	2.999	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	700	973	1556	0.450	699	0.8	4.198	A
2 - Ash Road North	1102	1381	1184	0.931	1074	9.1	27.656	D
3 - Abenbury Way	649	2239	897	0.723	642	2.5	13.776	B
4 - Industrial Estate Road	990	360	2432	0.407	989	0.7	2.493	A
5 - Proposed Site Access	610	789	1617	0.377	609	0.6	3.572	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	700	974	1555	0.450	700	0.8	4.211	A
2 - Ash Road North	1102	1383	1183	0.931	1096	10.6	36.897	E
3 - Abenbury Way	649	2262	883	0.734	648	2.7	15.201	C
4 - Industrial Estate Road	990	365	2429	0.407	990	0.7	2.500	A
5 - Proposed Site Access	610	790	1616	0.377	610	0.6	3.577	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	572	797	1658	0.345	573	0.5	3.323	A
2 - Ash Road North	900	1131	1315	0.684	933	2.2	10.214	B
3 - Abenbury Way	529	1887	1108	0.478	536	0.9	6.376	A
4 - Industrial Estate Road	808	304	2469	0.327	809	0.5	2.169	A
5 - Proposed Site Access	498	647	1697	0.293	499	0.4	3.005	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	479	667	1733	0.276	479	0.4	2.874	A
2 - Ash Road North	754	947	1412	0.534	758	1.2	5.542	A
3 - Abenbury Way	443	1556	1305	0.340	445	0.5	4.194	A
4 - Industrial Estate Road	677	251	2504	0.270	677	0.4	1.972	A
5 - Proposed Site Access	417	541	1757	0.237	417	0.3	2.688	A

2030 Base + Committed + Development (Phase 1) [Without KSS2], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.59	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.59	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D13	2030 Base + Committed + Development (Phase 1) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	371	100.000
2 - Ash Road North		✓	160	100.000
3 - Abenbury Way		✓	266	100.000
4 - Industrial Estate Road		✓	1772	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	52	43	276	0
	2 - Ash Road North	4	1	9	146	0
	3 - Abenbury Way	11	22	0	233	0
	4 - Industrial Estate Road	503	725	529	15	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.32	4.06	0.5	A
2 - Ash Road North	0.12	2.92	0.1	A
3 - Abenbury Way	0.15	2.18	0.2	A
4 - Industrial Estate Road	0.74	5.22	2.8	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	279	970	1558	0.179	278	0.2	2.813	A
2 - Ash Road North	120	648	1568	0.077	120	0.1	2.486	A
3 - Abenbury Way	200	332	2036	0.098	200	0.1	1.960	A
4 - Industrial Estate Road	1334	29	2649	0.504	1330	1.0	2.721	A
5 - Proposed Site Access	0	1359	1295	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	334	1160	1448	0.230	333	0.3	3.230	A
2 - Ash Road North	144	775	1501	0.096	144	0.1	2.651	A
3 - Abenbury Way	239	397	1997	0.120	239	0.1	2.047	A
4 - Industrial Estate Road	1593	34	2645	0.602	1591	1.5	3.409	A
5 - Proposed Site Access	0	1625	1145	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	408	1419	1298	0.315	408	0.5	4.042	A
2 - Ash Road North	176	948	1411	0.125	176	0.1	2.915	A
3 - Abenbury Way	293	486	1944	0.151	293	0.2	2.179	A
4 - Industrial Estate Road	1951	42	2640	0.739	1946	2.8	5.145	A
5 - Proposed Site Access	0	1988	941	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	408	1422	1296	0.315	408	0.5	4.057	A
2 - Ash Road North	176	950	1410	0.125	176	0.1	2.917	A
3 - Abenbury Way	293	487	1944	0.151	293	0.2	2.180	A
4 - Industrial Estate Road	1951	42	2640	0.739	1951	2.8	5.219	A
5 - Proposed Site Access	0	1993	938	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	334	1165	1445	0.231	334	0.3	3.242	A
2 - Ash Road North	144	778	1500	0.096	144	0.1	2.654	A
3 - Abenbury Way	239	398	1997	0.120	239	0.1	2.050	A
4 - Industrial Estate Road	1593	34	2645	0.602	1598	1.5	3.455	A
5 - Proposed Site Access	0	1632	1141	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	279	974	1555	0.180	280	0.2	2.824	A
2 - Ash Road North	120	651	1566	0.077	121	0.1	2.489	A
3 - Abenbury Way	200	333	2035	0.098	200	0.1	1.961	A
4 - Industrial Estate Road	1334	29	2649	0.504	1336	1.0	2.745	A
5 - Proposed Site Access	0	1365	1292	0.000	0	0.0	0.000	A

2030 Base + Committed + Development (Phase 1) [Without KSS2], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.20	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.20	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D14	2030 Base + Committed + Development (Phase 1) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	583	100.000
2 - Ash Road North		✓	825	100.000
3 - Abenbury Way		✓	558	100.000
4 - Industrial Estate Road		✓	655	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	11	14	558	0
	2 - Ash Road North	16	0	10	799	0
	3 - Abenbury Way	19	4	0	535	0
	4 - Industrial Estate Road	309	166	162	18	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.34	2.87	0.5	A
2 - Ash Road North	0.62	6.36	1.6	A
3 - Abenbury Way	0.47	5.10	0.9	A
4 - Industrial Estate Road	0.27	1.87	0.4	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	439	263	1967	0.223	438	0.3	2.353	A
2 - Ash Road North	621	565	1611	0.385	619	0.6	3.617	A
3 - Abenbury Way	420	1044	1611	0.261	419	0.4	3.017	A
4 - Industrial Estate Road	493	29	2649	0.186	492	0.2	1.669	A
5 - Proposed Site Access	0	521	1768	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	524	315	1937	0.271	524	0.4	2.547	A
2 - Ash Road North	742	676	1553	0.477	741	0.9	4.422	A
3 - Abenbury Way	502	1249	1488	0.337	501	0.5	3.644	A
4 - Industrial Estate Road	589	35	2645	0.223	589	0.3	1.750	A
5 - Proposed Site Access	0	624	1710	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	642	385	1896	0.339	641	0.5	2.867	A
2 - Ash Road North	908	827	1474	0.616	906	1.6	6.304	A
3 - Abenbury Way	614	1528	1322	0.465	613	0.9	5.070	A
4 - Industrial Estate Road	721	43	2640	0.273	721	0.4	1.875	A
5 - Proposed Site Access	0	764	1631	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	642	385	1896	0.339	642	0.5	2.869	A
2 - Ash Road North	908	828	1474	0.616	908	1.6	6.365	A
3 - Abenbury Way	614	1531	1320	0.466	614	0.9	5.103	A
4 - Industrial Estate Road	721	43	2640	0.273	721	0.4	1.875	A
5 - Proposed Site Access	0	764	1631	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	524	315	1937	0.271	525	0.4	2.551	A
2 - Ash Road North	742	677	1553	0.478	744	0.9	4.468	A
3 - Abenbury Way	502	1254	1486	0.338	503	0.5	3.668	A
4 - Industrial Estate Road	589	35	2645	0.223	589	0.3	1.750	A
5 - Proposed Site Access	0	624	1710	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	439	264	1966	0.223	439	0.3	2.359	A
2 - Ash Road North	621	567	1610	0.386	622	0.6	3.649	A
3 - Abenbury Way	420	1049	1608	0.261	421	0.4	3.033	A
4 - Industrial Estate Road	493	29	2649	0.186	493	0.2	1.672	A
5 - Proposed Site Access	0	523	1767	0.000	0	0.0	0.000	A

2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.80	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.80	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D15	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	404	100.000
2 - Ash Road North		✓	171	100.000
3 - Abenbury Way		✓	281	100.000
4 - Industrial Estate Road		✓	2044	100.000
5 - Proposed Site Access		✓	429	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
	1 - Bryn Lane	0	48	40	267	49
	2 - Ash Road North	4	1	10	135	21
	3 - Abenbury Way	10	21	0	215	35
	4 - Industrial Estate Road	484	671	489	16	384
	5 - Proposed Site Access	56	100	74	199	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.40	5.34	0.7	A
2 - Ash Road North	0.15	3.38	0.2	A
3 - Abenbury Way	0.17	2.45	0.2	A
4 - Industrial Estate Road	0.88	11.26	6.8	B
5 - Proposed Site Access	0.47	6.71	0.9	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	304	1178	1437	0.212	303	0.3	3.171	A
2 - Ash Road North	129	851	1462	0.088	128	0.1	2.699	A
3 - Abenbury Way	212	519	1924	0.110	211	0.1	2.101	A
4 - Industrial Estate Road	1539	106	2599	0.592	1533	1.4	3.361	A
5 - Proposed Site Access	323	1272	1344	0.240	322	0.3	3.515	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	363	1410	1303	0.279	363	0.4	3.825	A
2 - Ash Road North	154	1018	1374	0.112	154	0.1	2.948	A
3 - Abenbury Way	253	621	1863	0.136	252	0.2	2.234	A
4 - Industrial Estate Road	1838	127	2585	0.711	1834	2.4	4.767	A
5 - Proposed Site Access	386	1521	1204	0.320	385	0.5	4.395	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	445	1719	1124	0.396	444	0.6	5.291	A
2 - Ash Road North	188	1243	1257	0.150	188	0.2	3.368	A
3 - Abenbury Way	309	760	1780	0.174	309	0.2	2.446	A
4 - Industrial Estate Road	2250	155	2566	0.877	2234	6.5	10.355	B
5 - Proposed Site Access	472	1854	1016	0.465	471	0.9	6.584	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	445	1729	1118	0.398	445	0.7	5.344	A
2 - Ash Road North	188	1248	1254	0.150	188	0.2	3.377	A
3 - Abenbury Way	309	762	1779	0.174	309	0.2	2.448	A
4 - Industrial Estate Road	2250	155	2566	0.877	2249	6.8	11.257	B
5 - Proposed Site Access	472	1866	1009	0.468	472	0.9	6.707	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	363	1424	1295	0.280	364	0.4	3.873	A
2 - Ash Road North	154	1026	1370	0.112	154	0.1	2.961	A
3 - Abenbury Way	253	624	1862	0.136	253	0.2	2.237	A
4 - Industrial Estate Road	1838	127	2585	0.711	1855	2.5	5.044	A
5 - Proposed Site Access	386	1539	1194	0.323	387	0.5	4.472	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	304	1186	1433	0.212	305	0.3	3.191	A
2 - Ash Road North	129	856	1459	0.088	129	0.1	2.705	A
3 - Abenbury Way	212	522	1923	0.110	212	0.1	2.105	A
4 - Industrial Estate Road	1539	106	2598	0.592	1543	1.5	3.426	A
5 - Proposed Site Access	323	1280	1340	0.241	324	0.3	3.547	A

2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	7.76	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.76	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D16	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	637	100.000
2 - Ash Road North		✓	871	100.000
3 - Abenbury Way		✓	590	100.000
4 - Industrial Estate Road		✓	827	100.000
5 - Proposed Site Access		✓	554	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	10	12	529	86
	2 - Ash Road North	14	0	9	723	125
	3 - Abenbury Way	17	4	0	483	86
	4 - Industrial Estate Road	296	150	146	19	216
	5 - Proposed Site Access	60	29	30	435	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.44	4.00	0.8	A
2 - Ash Road North	0.81	15.92	4.1	C
3 - Abenbury Way	0.67	11.39	2.0	B
4 - Industrial Estate Road	0.37	2.37	0.6	A
5 - Proposed Site Access	0.37	3.43	0.6	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	480	610	1766	0.272	478	0.4	2.794	A
2 - Ash Road North	656	944	1413	0.464	652	0.9	4.711	A
3 - Abenbury Way	444	1448	1370	0.324	442	0.5	3.875	A
4 - Industrial Estate Road	623	249	2505	0.249	621	0.3	1.911	A
5 - Proposed Site Access	417	485	1788	0.233	416	0.3	2.621	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	573	730	1696	0.338	572	0.5	3.200	A
2 - Ash Road North	783	1129	1316	0.595	781	1.4	6.694	A
3 - Abenbury Way	530	1733	1199	0.442	529	0.8	5.361	A
4 - Industrial Estate Road	743	298	2473	0.301	743	0.4	2.081	A
5 - Proposed Site Access	498	580	1734	0.287	498	0.4	2.911	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	701	894	1601	0.438	700	0.8	3.989	A
2 - Ash Road North	959	1382	1184	0.810	949	3.9	14.758	B
3 - Abenbury Way	650	2115	971	0.669	645	1.9	10.876	B
4 - Industrial Estate Road	911	363	2430	0.375	910	0.6	2.366	A
5 - Proposed Site Access	610	710	1661	0.367	609	0.6	3.421	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	701	895	1601	0.438	701	0.8	4.001	A
2 - Ash Road North	959	1384	1183	0.811	958	4.1	15.920	C
3 - Abenbury Way	650	2125	965	0.673	649	2.0	11.386	B
4 - Industrial Estate Road	911	365	2429	0.375	911	0.6	2.370	A
5 - Proposed Site Access	610	711	1661	0.367	610	0.6	3.425	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	573	732	1695	0.338	574	0.5	3.213	A
2 - Ash Road North	783	1132	1315	0.596	793	1.5	7.037	A
3 - Abenbury Way	530	1748	1190	0.446	535	0.8	5.535	A
4 - Industrial Estate Road	743	301	2471	0.301	744	0.4	2.085	A
5 - Proposed Site Access	498	582	1734	0.287	499	0.4	2.918	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	480	613	1764	0.272	480	0.4	2.805	A
2 - Ash Road North	656	947	1411	0.465	658	0.9	4.798	A
3 - Abenbury Way	444	1457	1364	0.326	445	0.5	3.924	A
4 - Industrial Estate Road	623	251	2504	0.249	623	0.3	1.916	A
5 - Proposed Site Access	417	487	1787	0.233	417	0.3	2.628	A

2030 Base + Committed + Development (Phase 1) [Without Kingmoor], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.97	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.97	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	301	100.000
2 - Ash Road North		✓	218	100.000
3 - Abenbury Way		✓	266	100.000
4 - Industrial Estate Road		✓	1830	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
From		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
	1 - Bryn Lane	0	52	43	206	0
	2 - Ash Road North	4	1	11	202	0
	3 - Abenbury Way	11	22	0	233	0
	4 - Industrial Estate Road	411	875	529	15	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.28	4.14	0.4	A
2 - Ash Road North	0.17	2.97	0.2	A
3 - Abenbury Way	0.15	2.17	0.2	A
4 - Industrial Estate Road	0.76	5.75	3.2	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	1082	1493	0.152	226	0.2	2.840	A
2 - Ash Road North	164	595	1595	0.103	164	0.1	2.514	A
3 - Abenbury Way	200	321	2042	0.098	200	0.1	1.954	A
4 - Industrial Estate Road	1378	29	2649	0.520	1373	1.1	2.813	A
5 - Proposed Site Access	0	1402	1271	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1295	1370	0.198	270	0.2	3.274	A
2 - Ash Road North	196	712	1534	0.128	196	0.1	2.689	A
3 - Abenbury Way	239	384	2005	0.119	239	0.1	2.038	A
4 - Industrial Estate Road	1645	34	2645	0.622	1643	1.6	3.583	A
5 - Proposed Site Access	0	1677	1116	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1583	1203	0.276	331	0.4	4.125	A
2 - Ash Road North	240	871	1451	0.165	240	0.2	2.971	A
3 - Abenbury Way	293	471	1953	0.150	293	0.2	2.167	A
4 - Industrial Estate Road	2015	42	2640	0.763	2009	3.1	5.646	A
5 - Proposed Site Access	0	2051	905	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1588	1200	0.276	331	0.4	4.143	A
2 - Ash Road North	240	873	1450	0.166	240	0.2	2.974	A
3 - Abenbury Way	293	471	1953	0.150	293	0.2	2.168	A
4 - Industrial Estate Road	2015	42	2640	0.763	2015	3.2	5.749	A
5 - Proposed Site Access	0	2057	902	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1301	1366	0.198	271	0.2	3.291	A
2 - Ash Road North	196	715	1533	0.128	196	0.1	2.693	A
3 - Abenbury Way	239	385	2004	0.119	239	0.1	2.041	A
4 - Industrial Estate Road	1645	34	2645	0.622	1651	1.7	3.644	A
5 - Proposed Site Access	0	1685	1111	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	1087	1490	0.152	227	0.2	2.853	A
2 - Ash Road North	164	598	1594	0.103	164	0.1	2.517	A
3 - Abenbury Way	200	323	2042	0.098	200	0.1	1.956	A
4 - Industrial Estate Road	1378	29	2649	0.520	1380	1.1	2.841	A
5 - Proposed Site Access	0	1409	1267	0.000	0	0.0	0.000	A

2030 Base + Committed + Development (Phase 1) [Without Kingmoor], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.75	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.75	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	473	100.000
2 - Ash Road North		✓	956	100.000
3 - Abenbury Way		✓	558	100.000
4 - Industrial Estate Road		✓	643	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	11	14	448	0
	2 - Ash Road North	16	0	10	930	0
	3 - Abenbury Way	19	4	0	535	0
	4 - Industrial Estate Road	225	238	162	18	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.28	2.71	0.4	A
2 - Ash Road North	0.68	7.42	2.1	A
3 - Abenbury Way	0.47	5.21	0.9	A
4 - Industrial Estate Road	0.27	1.86	0.4	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	356	317	1935	0.184	355	0.2	2.277	A
2 - Ash Road North	720	482	1655	0.435	717	0.8	3.826	A
3 - Abenbury Way	420	1059	1602	0.262	419	0.4	3.038	A
4 - Industrial Estate Road	484	29	2649	0.183	483	0.2	1.662	A
5 - Proposed Site Access	0	512	1773	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	425	379	1900	0.224	425	0.3	2.441	A
2 - Ash Road North	859	577	1605	0.535	858	1.1	4.808	A
3 - Abenbury Way	502	1268	1477	0.340	501	0.5	3.686	A
4 - Industrial Estate Road	578	35	2645	0.219	578	0.3	1.740	A
5 - Proposed Site Access	0	613	1716	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	521	464	1850	0.281	520	0.4	2.707	A
2 - Ash Road North	1053	706	1537	0.685	1049	2.1	7.310	A
3 - Abenbury Way	614	1550	1308	0.470	613	0.9	5.166	A
4 - Industrial Estate Road	708	43	2640	0.268	708	0.4	1.862	A
5 - Proposed Site Access	0	750	1638	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	521	465	1850	0.281	521	0.4	2.707	A
2 - Ash Road North	1053	707	1537	0.685	1052	2.1	7.424	A
3 - Abenbury Way	614	1555	1306	0.470	614	0.9	5.205	A
4 - Industrial Estate Road	708	43	2640	0.268	708	0.4	1.862	A
5 - Proposed Site Access	0	751	1638	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	425	380	1899	0.224	426	0.3	2.443	A
2 - Ash Road North	859	578	1605	0.536	863	1.2	4.883	A
3 - Abenbury Way	502	1274	1474	0.340	503	0.5	3.713	A
4 - Industrial Estate Road	578	35	2645	0.219	578	0.3	1.744	A
5 - Proposed Site Access	0	614	1716	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	356	318	1935	0.184	356	0.2	2.280	A
2 - Ash Road North	720	484	1654	0.435	721	0.8	3.866	A
3 - Abenbury Way	420	1065	1598	0.263	421	0.4	3.060	A
4 - Industrial Estate Road	484	29	2649	0.183	484	0.2	1.662	A
5 - Proposed Site Access	0	514	1772	0.000	0	0.0	0.000	A

2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	10.56	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.56	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D19	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	334	100.000
2 - Ash Road North		✓	228	100.000
3 - Abenbury Way		✓	281	100.000
4 - Industrial Estate Road		✓	2102	100.000
5 - Proposed Site Access		✓	429	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	48	40	197	49
	2 - Ash Road North	4	1	10	192	21
	3 - Abenbury Way	10	21	0	215	35
	4 - Industrial Estate Road	392	821	489	16	384
	5 - Proposed Site Access	56	100	74	199	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.36	5.49	0.6	A
2 - Ash Road North	0.19	3.45	0.2	A
3 - Abenbury Way	0.17	2.43	0.2	A
4 - Industrial Estate Road	0.90	13.91	8.5	B
5 - Proposed Site Access	0.49	7.18	0.9	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	251	1291	1372	0.183	251	0.2	3.206	A
2 - Ash Road North	172	798	1489	0.115	171	0.1	2.729	A
3 - Abenbury Way	212	509	1930	0.110	211	0.1	2.094	A
4 - Industrial Estate Road	1582	106	2599	0.609	1576	1.5	3.500	A
5 - Proposed Site Access	323	1315	1320	0.245	322	0.3	3.602	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	300	1544	1226	0.245	300	0.3	3.887	A
2 - Ash Road North	205	955	1407	0.146	205	0.2	2.993	A
3 - Abenbury Way	253	610	1870	0.135	252	0.2	2.225	A
4 - Industrial Estate Road	1890	127	2585	0.731	1885	2.7	5.112	A
5 - Proposed Site Access	386	1573	1174	0.328	385	0.5	4.556	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	368	1880	1031	0.357	367	0.5	5.411	A
2 - Ash Road North	251	1164	1298	0.193	251	0.2	3.439	A
3 - Abenbury Way	309	746	1789	0.173	309	0.2	2.432	A
4 - Industrial Estate Road	2314	155	2566	0.902	2293	8.1	12.293	B
5 - Proposed Site Access	472	1914	982	0.481	471	0.9	7.009	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	368	1894	1023	0.359	368	0.6	5.492	A
2 - Ash Road North	251	1171	1294	0.194	251	0.2	3.450	A
3 - Abenbury Way	309	748	1788	0.173	309	0.2	2.434	A
4 - Industrial Estate Road	2314	155	2566	0.902	2312	8.5	13.910	B
5 - Proposed Site Access	472	1930	973	0.485	472	0.9	7.181	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	300	1563	1214	0.247	301	0.3	3.946	A
2 - Ash Road North	205	964	1402	0.146	205	0.2	3.009	A
3 - Abenbury Way	253	612	1869	0.135	253	0.2	2.229	A
4 - Industrial Estate Road	1890	127	2585	0.731	1913	2.8	5.533	A
5 - Proposed Site Access	386	1596	1162	0.332	387	0.5	4.660	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	251	1299	1367	0.184	252	0.2	3.228	A
2 - Ash Road North	172	803	1487	0.115	172	0.1	2.737	A
3 - Abenbury Way	212	512	1928	0.110	212	0.1	2.098	A
4 - Industrial Estate Road	1582	106	2598	0.609	1587	1.6	3.576	A
5 - Proposed Site Access	323	1324	1315	0.246	324	0.3	3.634	A

2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	10.54	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.54	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	527	100.000
2 - Ash Road North		✓	1002	100.000
3 - Abenbury Way		✓	589	100.000
4 - Industrial Estate Road		✓	815	100.000
5 - Proposed Site Access		✓	554	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	10	12	419	86
	2 - Ash Road North	14	0	9	854	125
	3 - Abenbury Way	17	4	0	482	86
	4 - Industrial Estate Road	212	222	146	19	216
	5 - Proposed Site Access	60	29	30	435	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.37	3.69	0.6	A
2 - Ash Road North	0.89	23.98	6.9	C
3 - Abenbury Way	0.68	11.82	2.1	B
4 - Industrial Estate Road	0.37	2.35	0.6	A
5 - Proposed Site Access	0.37	3.40	0.6	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	397	665	1734	0.229	396	0.3	2.686	A
2 - Ash Road North	754	861	1456	0.518	750	1.1	5.067	A
3 - Abenbury Way	443	1463	1360	0.326	442	0.5	3.910	A
4 - Industrial Estate Road	614	249	2505	0.245	612	0.3	1.902	A
5 - Proposed Site Access	417	476	1793	0.233	416	0.3	2.611	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	474	795	1659	0.286	473	0.4	3.037	A
2 - Ash Road North	901	1030	1368	0.659	897	1.9	7.601	A
3 - Abenbury Way	529	1751	1189	0.445	528	0.8	5.441	A
4 - Industrial Estate Road	733	298	2473	0.296	732	0.4	2.068	A
5 - Proposed Site Access	498	570	1740	0.286	498	0.4	2.896	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	580	973	1556	0.373	579	0.6	3.684	A
2 - Ash Road North	1103	1261	1247	0.885	1085	6.4	20.346	C
3 - Abenbury Way	649	2130	962	0.674	644	2.0	11.141	B
4 - Industrial Estate Road	897	362	2431	0.369	897	0.6	2.345	A
5 - Proposed Site Access	610	697	1669	0.366	609	0.6	3.397	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	580	974	1555	0.373	580	0.6	3.692	A
2 - Ash Road North	1103	1263	1246	0.885	1101	6.9	23.983	C
3 - Abenbury Way	649	2147	952	0.681	648	2.1	11.819	B
4 - Industrial Estate Road	897	365	2429	0.369	897	0.6	2.350	A
5 - Proposed Site Access	610	698	1668	0.366	610	0.6	3.401	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	474	797	1658	0.286	475	0.4	3.045	A
2 - Ash Road North	901	1033	1367	0.659	921	2.0	8.417	A
3 - Abenbury Way	529	1776	1174	0.451	535	0.8	5.676	A
4 - Industrial Estate Road	733	302	2470	0.297	733	0.4	2.074	A
5 - Proposed Site Access	498	571	1740	0.286	499	0.4	2.904	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	397	667	1733	0.229	397	0.3	2.697	A
2 - Ash Road North	754	864	1455	0.519	758	1.1	5.195	A
3 - Abenbury Way	443	1474	1354	0.327	445	0.5	3.966	A
4 - Industrial Estate Road	614	251	2504	0.245	614	0.3	1.907	A
5 - Proposed Site Access	417	478	1792	0.233	417	0.3	2.620	A

2030 Base + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	301	100.000
2 - Ash Road North		✓	159	100.000
3 - Abenbury Way		✓	266	100.000
4 - Industrial Estate Road		✓	1671	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	52	43	206	0
	2 - Ash Road North	4	0	11	144	0
	3 - Abenbury Way	11	22	0	233	0
	4 - Industrial Estate Road	411	716	529	15	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.25	3.71	0.3	A
2 - Ash Road North	0.12	2.82	0.1	A
3 - Abenbury Way	0.15	2.12	0.2	A
4 - Industrial Estate Road	0.70	4.49	2.3	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	962	1562	0.145	226	0.2	2.693	A
2 - Ash Road North	120	595	1595	0.075	119	0.1	2.439	A
3 - Abenbury Way	200	277	2069	0.097	200	0.1	1.926	A
4 - Industrial Estate Road	1258	28	2650	0.475	1254	0.9	2.574	A
5 - Proposed Site Access	0	1282	1339	0.000	0	0.0	0.000	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1151	1453	0.186	270	0.2	3.044	A
2 - Ash Road North	143	712	1534	0.093	143	0.1	2.587	A
3 - Abenbury Way	239	331	2036	0.117	239	0.1	2.002	A
4 - Industrial Estate Road	1502	33	2646	0.568	1501	1.3	3.139	A
5 - Proposed Site Access	0	1534	1197	0.000	0	0.0	0.000	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1409	1304	0.254	331	0.3	3.698	A
2 - Ash Road North	175	871	1451	0.121	175	0.1	2.821	A
3 - Abenbury Way	293	406	1992	0.147	293	0.2	2.118	A
4 - Industrial Estate Road	1840	41	2641	0.697	1836	2.3	4.449	A
5 - Proposed Site Access	0	1877	1003	0.000	0	0.0	0.000	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	331	1411	1302	0.255	331	0.3	3.707	A
2 - Ash Road North	175	873	1450	0.121	175	0.1	2.823	A
3 - Abenbury Way	293	406	1992	0.147	293	0.2	2.118	A
4 - Industrial Estate Road	1840	41	2641	0.697	1840	2.3	4.492	A
5 - Proposed Site Access	0	1880	1001	0.000	0	0.0	0.000	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	271	1155	1450	0.187	271	0.2	3.053	A
2 - Ash Road North	143	714	1533	0.093	143	0.1	2.589	A
3 - Abenbury Way	239	332	2036	0.117	239	0.1	2.003	A
4 - Industrial Estate Road	1502	33	2646	0.568	1506	1.3	3.170	A
5 - Proposed Site Access	0	1539	1194	0.000	0	0.0	0.000	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	227	966	1560	0.145	227	0.2	2.703	A
2 - Ash Road North	120	598	1594	0.075	120	0.1	2.441	A
3 - Abenbury Way	200	278	2068	0.097	200	0.1	1.927	A
4 - Industrial Estate Road	1258	28	2650	0.475	1260	0.9	2.592	A
5 - Proposed Site Access	0	1288	1336	0.000	0	0.0	0.000	A

2030 Base + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	3.87	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.87	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D22	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	473	100.000
2 - Ash Road North		✓	810	100.000
3 - Abenbury Way		✓	558	100.000
4 - Industrial Estate Road		✓	569	100.000
5 - Proposed Site Access		✓	0	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	11	14	448	0
	2 - Ash Road North	16	0	10	784	0
	3 - Abenbury Way	19	4	0	535	0
	4 - Industrial Estate Road	225	164	162	18	0
	5 - Proposed Site Access	0	0	0	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.27	2.61	0.4	A
2 - Ash Road North	0.58	5.58	1.4	A
3 - Abenbury Way	0.44	4.57	0.8	A
4 - Industrial Estate Road	0.24	1.79	0.3	A
5 - Proposed Site Access	0.00	0.00	0.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	356	262	1968	0.181	355	0.2	2.231	A
2 - Ash Road North	610	482	1655	0.369	607	0.6	3.431	A
3 - Abenbury Way	420	950	1667	0.252	419	0.3	2.882	A
4 - Industrial Estate Road	428	29	2649	0.162	428	0.2	1.620	A
5 - Proposed Site Access	0	457	1804	0.000	0	0.0	0.000	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	425	313	1938	0.219	425	0.3	2.379	A
2 - Ash Road North	728	577	1605	0.454	727	0.8	4.097	A
3 - Abenbury Way	502	1137	1555	0.323	501	0.5	3.413	A
4 - Industrial Estate Road	512	35	2645	0.193	511	0.2	1.686	A
5 - Proposed Site Access	0	546	1754	0.000	0	0.0	0.000	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	521	383	1897	0.274	520	0.4	2.614	A
2 - Ash Road North	892	706	1537	0.580	890	1.4	5.540	A
3 - Abenbury Way	614	1391	1403	0.438	613	0.8	4.550	A
4 - Industrial Estate Road	626	43	2640	0.237	626	0.3	1.787	A
5 - Proposed Site Access	0	669	1684	0.000	0	0.0	0.000	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	521	383	1897	0.274	521	0.4	2.614	A
2 - Ash Road North	892	707	1537	0.580	892	1.4	5.579	A
3 - Abenbury Way	614	1394	1402	0.438	614	0.8	4.571	A
4 - Industrial Estate Road	626	43	2640	0.237	626	0.3	1.787	A
5 - Proposed Site Access	0	669	1684	0.000	0	0.0	0.000	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	425	313	1938	0.219	426	0.3	2.380	A
2 - Ash Road North	728	578	1605	0.454	730	0.8	4.127	A
3 - Abenbury Way	502	1141	1553	0.323	503	0.5	3.433	A
4 - Industrial Estate Road	512	35	2645	0.193	512	0.2	1.689	A
5 - Proposed Site Access	0	547	1753	0.000	0	0.0	0.000	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	356	262	1967	0.181	356	0.2	2.236	A
2 - Ash Road North	610	484	1654	0.369	611	0.6	3.454	A
3 - Abenbury Way	420	954	1664	0.252	421	0.3	2.897	A
4 - Industrial Estate Road	428	29	2649	0.162	429	0.2	1.620	A
5 - Proposed Site Access	0	458	1803	0.000	0	0.0	0.000	A

2037 Base + Development (Phase 1 + 2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	6.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.82	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D23	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	342	100.000
2 - Ash Road North		✓	169	100.000
3 - Abenbury Way		✓	281	100.000
4 - Industrial Estate Road		✓	1943	100.000
5 - Proposed Site Access		✓	402	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	48	48	197	49
	2 - Ash Road North	4	1	10	133	21
	3 - Abenbury Way	10	21	0	215	35
	4 - Industrial Estate Road	392	662	489	16	384
	5 - Proposed Site Access	56	100	197	49	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.33	4.71	0.5	A
2 - Ash Road North	0.14	3.22	0.2	A
3 - Abenbury Way	0.16	2.23	0.2	A
4 - Industrial Estate Road	0.83	8.40	4.9	A
5 - Proposed Site Access	0.41	5.72	0.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	257	1152	1453	0.177	257	0.2	3.009	A
2 - Ash Road North	127	784	1497	0.085	127	0.1	2.628	A
3 - Abenbury Way	212	353	2024	0.105	211	0.1	1.986	A
4 - Industrial Estate Road	1463	106	2599	0.563	1458	1.3	3.141	A
5 - Proposed Site Access	303	1197	1387	0.218	302	0.3	3.314	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	307	1378	1322	0.233	307	0.3	3.548	A
2 - Ash Road North	152	938	1416	0.107	152	0.1	2.847	A
3 - Abenbury Way	253	422	1982	0.127	252	0.1	2.081	A
4 - Industrial Estate Road	1747	127	2585	0.676	1744	2.1	4.264	A
5 - Proposed Site Access	361	1431	1254	0.288	361	0.4	4.027	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	377	1683	1145	0.329	376	0.5	4.675	A
2 - Ash Road North	186	1146	1307	0.142	186	0.2	3.210	A
3 - Abenbury Way	309	517	1926	0.161	309	0.2	2.226	A
4 - Industrial Estate Road	2139	155	2566	0.834	2128	4.8	8.028	A
5 - Proposed Site Access	443	1747	1076	0.411	441	0.7	5.662	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	377	1690	1141	0.330	377	0.5	4.708	A
2 - Ash Road North	186	1150	1305	0.143	186	0.2	3.216	A
3 - Abenbury Way	309	517	1925	0.161	309	0.2	2.227	A
4 - Industrial Estate Road	2139	155	2566	0.834	2139	4.9	8.396	A
5 - Proposed Site Access	443	1756	1071	0.413	443	0.7	5.724	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	307	1388	1316	0.234	308	0.3	3.574	A
2 - Ash Road North	152	944	1413	0.108	152	0.1	2.854	A
3 - Abenbury Way	253	423	1981	0.128	253	0.1	2.084	A
4 - Industrial Estate Road	1747	127	2585	0.676	1758	2.1	4.411	A
5 - Proposed Site Access	361	1443	1248	0.290	363	0.4	4.072	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	257	1158	1449	0.178	258	0.2	3.023	A
2 - Ash Road North	127	788	1494	0.085	127	0.1	2.633	A
3 - Abenbury Way	212	354	2023	0.105	212	0.1	1.987	A
4 - Industrial Estate Road	1463	106	2598	0.563	1466	1.3	3.187	A
5 - Proposed Site Access	303	1203	1383	0.219	303	0.3	3.334	A

2037 Base + Development (Phase 1 + 2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Bryn Lane - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - Abenbury Way - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	6.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.35	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D24	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Bryn Lane		✓	527	100.000
2 - Ash Road North		✓	856	100.000
3 - Abenbury Way		✓	590	100.000
4 - Industrial Estate Road		✓	741	100.000
5 - Proposed Site Access		✓	554	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	10	12	419	86
	2 - Ash Road North	14	0	9	708	125
	3 - Abenbury Way	17	4	0	483	86
	4 - Industrial Estate Road	212	148	146	19	216
	5 - Proposed Site Access	60	29	30	435	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Bryn Lane	2 - Ash Road North	3 - Abenbury Way	4 - Industrial Estate Road	5 - Proposed Site Access
From	1 - Bryn Lane	0	0	0	0	0
	2 - Ash Road North	0	0	0	0	0
	3 - Abenbury Way	0	0	0	0	0
	4 - Industrial Estate Road	0	0	0	0	0
	5 - Proposed Site Access	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Bryn Lane	0.36	3.52	0.6	A
2 - Ash Road North	0.76	11.81	3.0	B
3 - Abenbury Way	0.62	9.05	1.6	A
4 - Industrial Estate Road	0.34	2.23	0.5	A
5 - Proposed Site Access	0.36	3.26	0.6	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	397	609	1767	0.225	396	0.3	2.623	A
2 - Ash Road North	644	861	1456	0.443	641	0.8	4.401	A
3 - Abenbury Way	444	1354	1425	0.312	442	0.5	3.656	A
4 - Industrial Estate Road	558	249	2505	0.223	557	0.3	1.847	A
5 - Proposed Site Access	417	421	1824	0.229	416	0.3	2.553	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	474	729	1697	0.279	473	0.4	2.941	A
2 - Ash Road North	770	1030	1368	0.563	768	1.3	5.979	A
3 - Abenbury Way	530	1621	1266	0.419	529	0.7	4.878	A
4 - Industrial Estate Road	666	298	2473	0.269	666	0.4	1.992	A
5 - Proposed Site Access	498	503	1778	0.280	498	0.4	2.812	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	580	892	1603	0.362	580	0.6	3.517	A
2 - Ash Road North	942	1262	1247	0.756	936	2.9	11.336	B
3 - Abenbury Way	650	1981	1051	0.618	646	1.6	8.807	A
4 - Industrial Estate Road	816	364	2430	0.336	815	0.5	2.230	A
5 - Proposed Site Access	610	616	1714	0.356	609	0.5	3.256	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	580	893	1602	0.362	580	0.6	3.521	A
2 - Ash Road North	942	1263	1246	0.756	942	3.0	11.812	B
3 - Abenbury Way	650	1988	1047	0.620	649	1.6	9.051	A
4 - Industrial Estate Road	816	365	2429	0.336	816	0.5	2.231	A
5 - Proposed Site Access	610	617	1714	0.356	610	0.6	3.260	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	474	730	1697	0.279	474	0.4	2.949	A
2 - Ash Road North	770	1032	1367	0.563	776	1.3	6.167	A
3 - Abenbury Way	530	1632	1260	0.421	534	0.7	4.983	A
4 - Industrial Estate Road	666	300	2471	0.270	667	0.4	1.995	A
5 - Proposed Site Access	498	504	1777	0.280	499	0.4	2.818	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Bryn Lane	397	611	1765	0.225	397	0.3	2.631	A
2 - Ash Road North	644	864	1455	0.443	646	0.8	4.467	A
3 - Abenbury Way	444	1362	1421	0.313	445	0.5	3.694	A
4 - Industrial Estate Road	558	251	2504	0.223	558	0.3	1.849	A
5 - Proposed Site Access	417	422	1824	0.229	417	0.3	2.560	A

Appendix D Junction 2 - A534/Industrial Estate Road/Sandy Lane/Borras Hall Lane

Junctions 10				
ARCADY 10 - Roundabout Module				
Version: 10.0.1.1519				
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Filename: A534, Borrás Hall Lane, Industrial Estate Road ARCADY [Apr 24].j10

Path: C:\Users\mchau\Downloads\Wrexham Mar 2024

Report generation date: 02/04/2024 16:52:21

»2023 Base, AM
 »2023 Base, PM
 »2030 Base, AM
 »2030 Base, PM
 »2037 Base, AM
 »2037 Base, PM
 »2030 Base + Committed, AM
 »2030 Base + Committed, PM
 »2037 Base + Committed, AM
 »2037 Base + Committed, PM
 »2030 Base + Committed + Developement (Phase 1), AM
 »2030 Base + Committed + Developement (Phase 1), PM
 »2037 Base + Committed + Developement (Phase 1 + 2), AM
 »2037 Base + Committed + Developement (Phase 1 + 2), PM
 »2030 Base + Developement (Phase 1), AM
 »2030 Base + Developement (Phase 1), PM
 »2037 Base + Developement (Phase 1 + 2), AM
 »2037 Base + Developement (Phase 1 + 2), PM
 »2030 Base + Committed + Developement (Phase 1) [Without KSS2], AM
 »2030 Base + Committed + Developement (Phase 1) [Without KSS2], PM
 »2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2], AM
 »2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2], PM
 »2030 Base + Committed + Developement (Phase 1) [Without Kingmoor], AM
 »2030 Base + Committed + Developement (Phase 1) [Without Kingmoor], PM
 »2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor], AM
 »2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor], PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2023 Base									
1 - Borrás Hall Lane	D1	0.3	7.02	0.25	A	D2	0.0	3.63	0.04	A
2 - A534 Wrexham Road (East)		1.5	10.11	0.60	B		0.6	4.21	0.37	A
3 - Industrial Estate Road		0.3	2.04	0.23	A		3.0	6.55	0.76	A
4 - Sandy Lane		0.0	3.52	0.04	A		0.1	8.12	0.06	A
5 - A534 (West)		1.6	3.62	0.62	A		0.5	2.14	0.31	A
	2030 Base									
1 - Borrás Hall Lane		0.4	7.89	0.29	A		0.0	3.73	0.04	A

2 - A534 Wrexham Road (East)	D3	1.9	12.63	0.67	B	D4	0.7	4.42	0.40	A
3 - Industrial Estate Road		0.3	2.09	0.25	A		4.1	8.30	0.81	A
4 - Sandy Lane		0.0	3.61	0.04	A		0.1	9.38	0.07	A
5 - A534 (West)		1.9	4.01	0.66	A		0.5	2.21	0.33	A
	2037 Base									
1 - Borrass Hall Lane	D5	0.5	9.06	0.33	A	D6	0.0	3.86	0.04	A
2 - A534 Wrexham Road (East)		2.8	17.13	0.74	C		0.7	4.68	0.43	A
3 - Industrial Estate Road		0.4	2.15	0.26	A		6.0	11.73	0.86	B
4 - Sandy Lane		0.0	3.72	0.04	A		0.1	11.36	0.09	B
5 - A534 (West)		2.3	4.54	0.70	A		0.5	2.30	0.35	A
	2030 Base + Committed									
1 - Borrass Hall Lane	D7	0.6	11.37	0.37	B	D8	0.0	4.11	0.04	A
2 - A534 Wrexham Road (East)		4.0	25.86	0.81	D		0.8	5.09	0.45	A
3 - Industrial Estate Road		0.4	2.29	0.31	A		12.5	23.00	0.94	C
4 - Sandy Lane		0.0	3.88	0.04	A		0.1	14.63	0.10	B
5 - A534 (West)		3.2	5.93	0.77	A		0.7	2.50	0.41	A
	2037 Base + Committed									
1 - Borrass Hall Lane	D9	0.8	13.97	0.44	B	D10	0.1	4.26	0.05	A
2 - A534 Wrexham Road (East)		7.8	49.17	0.91	E		0.9	5.43	0.47	A
3 - Industrial Estate Road		0.5	2.36	0.32	A		27.7	46.61	0.99	E
4 - Sandy Lane		0.0	4.00	0.04	A		0.2	18.45	0.14	C
5 - A534 (West)		4.1	7.15	0.81	A		0.7	2.60	0.43	A
	2030 Base + Committed + Developement (Phase 1)									
1 - Borrass Hall Lane	D11	0.8	15.78	0.46	C	D12	0.1	4.36	0.05	A
2 - A534 Wrexham Road (East)		9.6	62.07	0.94	F		0.9	5.51	0.47	A
3 - Industrial Estate Road		0.5	2.43	0.35	A		39.1	60.87	1.01	F
4 - Sandy Lane		0.0	4.06	0.04	A		0.1	18.78	0.13	C
5 - A534 (West)		4.8	8.21	0.83	A		0.8	2.68	0.45	A
	2037 Base + Committed + Developement (Phase 1 + 2)									
1 - Borrass Hall Lane	D17	2.6	46.81	0.75	E	D18	0.1	4.93	0.07	A
2 - A534 Wrexham Road (East)		70.9	365.69	1.28	F		1.2	6.88	0.54	A
3 - Industrial Estate Road		0.7	2.69	0.42	A		181.6	255.39	1.15	F
4 - Sandy Lane		0.1	4.37	0.05	A		0.2	20.99	0.15	C
5 - A534 (West)		14.5	22.76	0.95	C		1.1	3.12	0.52	A
	2030 Base + Development (Phase 1)									
1 - Borrass Hall Lane	D19	0.5	9.79	0.35	A	D20	0.0	3.94	0.04	A
2 - A534 Wrexham Road (East)		2.9	18.97	0.75	C		0.7	4.74	0.42	A
3 - Industrial Estate Road		0.4	2.21	0.29	A		6.9	13.12	0.88	B
4 - Sandy Lane		0.0	3.77	0.04	A		0.1	11.69	0.09	B
5 - A534 (West)		2.5	4.94	0.72	A		0.6	2.37	0.37	A
	2037 Base + Development (Phase 1 + 2)									
1 - Borrass Hall Lane	D21	1.0	17.16	0.50	C	D22	0.1	4.46	0.06	A
2 - A534 Wrexham Road (East)		15.8	91.60	0.99	F		0.9	5.56	0.47	A
3 - Industrial Estate Road		0.6	2.50	0.37	A		47.3	70.90	1.02	F
4 - Sandy Lane		0.0	4.18	0.05	A		0.2	19.57	0.14	C
5 - A534 (West)		4.9	8.37	0.83	A		0.8	2.75	0.46	A
	2030 Base + Committed + Developement (Phase 1) [Without KSS2]									
1 - Borrass Hall Lane	D23	0.6	11.43	0.38	B	D24	0.0	4.16	0.05	A
2 - A534 Wrexham Road (East)		4.2	27.27	0.82	D		0.8	5.07	0.44	A
3 - Industrial Estate Road		0.5	2.32	0.32	A		12.9	23.53	0.94	C
4 - Sandy Lane		0.0	3.93	0.04	A		0.1	14.56	0.10	B
5 - A534 (West)		3.1	5.77	0.76	A		0.7	2.52	0.41	A
	2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2]									
1 - Borrass Hall Lane	D25	1.4	24.30	0.59	C	D26	0.1	4.73	0.06	A
2 - A534 Wrexham Road (East)		33.9	175.51	1.09	F		1.0	6.20	0.51	A
3 - Industrial Estate Road		0.7	2.62	0.40	A		104.0	137.26	1.08	F

4 - Sandy Lane		0.0	4.31	0.05	A		0.2	20.46	0.15	C
5 - A534 (West)		7.1	11.71	0.88	B		1.0	2.95	0.49	A
	2030 Base + Committed + Developement (Phase 1) [Without Kingmoor]									
1 - Borrass Hall Lane	D27	0.7	13.04	0.41	B	D28	0.0	4.14	0.04	A
2 - A534 Wrexham Road (East)		5.5	35.81	0.86	E		0.8	5.14	0.45	A
3 - Industrial Estate Road		0.5	2.31	0.31	A		16.0	28.84	0.96	D
4 - Sandy Lane		0.0	3.91	0.04	A		0.1	15.72	0.11	C
5 - A534 (West)		3.8	6.76	0.80	A		0.7	2.52	0.41	A
	2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor]									
1 - Borrass Hall Lane	D29	1.7	29.96	0.64	D	D30	0.1	4.67	0.06	A
2 - A534 Wrexham Road (East)		47.7	243.92	1.16	F		1.1	6.30	0.52	A
3 - Industrial Estate Road		0.6	2.58	0.39	A		121.2	158.30	1.10	F
4 - Sandy Lane		0.0	4.25	0.05	A		0.2	20.89	0.15	C
5 - A534 (West)		9.3	14.94	0.91	B		1.0	2.92	0.49	A

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

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

File summary

File Description

Title	Borrass Hall Lane / Wrexham Road / Industrial Estate Road
Location	Wrexham
Site number	
Date	31/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	LAPTOP-DTQ9HG8B\mchau
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15
D2	2023 Base	PM	ONE HOUR	16:15	17:45	15
D3	2030 Base	AM	ONE HOUR	07:45	09:15	15
D4	2030 Base	PM	ONE HOUR	16:15	17:45	15
D5	2037 Base	AM	ONE HOUR	07:45	09:15	15
D6	2037 Base	PM	ONE HOUR	16:15	17:45	15
D7	2030 Base + Committed	AM	ONE HOUR	07:45	09:15	15
D8	2030 Base + Committed	PM	ONE HOUR	16:15	17:45	15
D9	2037 Base + Committed	AM	ONE HOUR	07:45	09:15	15
D10	2037 Base + Committed	PM	ONE HOUR	16:15	17:45	15
D11	2030 Base + Committed + Developement (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D12	2030 Base + Committed + Developement (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D17	2037 Base + Committed + Developement (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15
D18	2037 Base + Committed + Developement (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15
D19	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D20	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D21	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15
D22	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15
D23	2030 Base + Committed + Developement (Phase 1) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15
D24	2030 Base + Committed + Developement (Phase 1) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15
D25	2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15
D26	2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15
D27	2030 Base + Committed + Developement (Phase 1) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15
D28	2030 Base + Committed + Developement (Phase 1) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15
D29	2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15
D30	2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	4.74	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.74	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Borras Hall Lane		
2	A534 Wrexham Road (East)		
3	Industrial Estate Road		
4	Sandy Lane		
5	A534 (West)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Borras Hall Lane	3.60	5.80	11.0	17.3	69.8	31.3		
2 - A534 Wrexham Road (East)	3.50	7.30	10.0	26.2	69.8	31.8		
3 - Industrial Estate Road	7.00	8.70	15.7	38.8	69.8	31.8		
4 - Sandy Lane	3.70	5.30	18.1	16.0	69.8	30.9		
5 - A534 (West)	7.80	10.05	4.9	32.0	69.8	31.3		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Borras Hall Lane	0.469	1479
2 - A534 Wrexham Road (East)	0.490	1588
3 - Industrial Estate Road	0.644	2547
4 - Sandy Lane	0.468	1476
5 - A534 (West)	0.663	2676

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)
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	159	100.000
2 - A534 Wrexham Road (East)		✓	486	100.000
3 - Industrial Estate Road		✓	480	100.000
4 - Sandy Lane		✓	34	100.000
5 - A534 (West)		✓	1469	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	10	140	0	9
	2 - A534 Wrexham Road (East)	2	0	159	7	318
	3 - Industrial Estate Road	15	57	2	1	405
	4 - Sandy Lane	1	7	4	0	22
	5 - A534 (West)	6	325	1114	22	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Hall Lane	0.25	7.02	0.3	A
2 - A534 Wrexham Road (East)	0.60	10.11	1.5	B
3 - Industrial Estate Road	0.23	2.04	0.3	A
4 - Sandy Lane	0.04	3.52	0.0	A
5 - A534 (West)	0.62	3.62	1.6	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	120	1151	939	0.127	119	0.1	4.385	A
2 - A534 Wrexham Road (East)	366	971	1113	0.329	364	0.5	4.795	A
3 - Industrial Estate Road	361	270	2374	0.152	361	0.2	1.788	A
4 - Sandy Lane	26	608	1192	0.021	26	0.0	3.086	A
5 - A534 (West)	1106	66	2632	0.420	1103	0.7	2.351	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	143	1377	834	0.171	143	0.2	5.209	A
2 - A534 Wrexham Road (East)	437	1161	1019	0.429	436	0.7	6.158	A
3 - Industrial Estate Road	432	323	2339	0.184	431	0.2	1.886	A
4 - Sandy Lane	31	727	1136	0.027	31	0.0	3.255	A
5 - A534 (West)	1321	79	2624	0.503	1319	1.0	2.758	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	175	1685	689	0.254	175	0.3	6.989	A
2 - A534 Wrexham Road (East)	535	1421	892	0.600	532	1.5	9.930	A
3 - Industrial Estate Road	528	394	2293	0.230	528	0.3	2.039	A
4 - Sandy Lane	37	890	1060	0.035	37	0.0	3.519	A
5 - A534 (West)	1617	97	2612	0.619	1615	1.6	3.602	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	175	1688	688	0.254	175	0.3	7.018	A
2 - A534 Wrexham Road (East)	535	1424	891	0.601	535	1.5	10.114	B
3 - Industrial Estate Road	528	396	2292	0.231	528	0.3	2.041	A
4 - Sandy Lane	37	892	1059	0.035	37	0.0	3.522	A
5 - A534 (West)	1617	97	2612	0.619	1617	1.6	3.619	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	143	1381	832	0.172	143	0.2	5.232	A
2 - A534 Wrexham Road (East)	437	1165	1018	0.429	440	0.8	6.262	A
3 - Industrial Estate Road	432	326	2337	0.185	432	0.2	1.891	A
4 - Sandy Lane	31	730	1135	0.027	31	0.0	3.260	A
5 - A534 (West)	1321	79	2623	0.503	1323	1.0	2.772	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	120	1155	938	0.128	120	0.1	4.405	A
2 - A534 Wrexham Road (East)	366	975	1111	0.329	367	0.5	4.848	A
3 - Industrial Estate Road	361	272	2372	0.152	362	0.2	1.789	A
4 - Sandy Lane	26	611	1190	0.022	26	0.0	3.089	A
5 - A534 (West)	1106	66	2632	0.420	1107	0.7	2.362	A

2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	33	100.000
2 - A534 Wrexham Road (East)		✓	466	100.000
3 - Industrial Estate Road		✓	1541	100.000
4 - Sandy Lane		✓	25	100.000
5 - A534 (West)		✓	694	100.000

Origin-Destination Data

Demand (PCU/hr)

		To				
From		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrás Hall Lane	0	5	20	1	7
	2 - A534 Wrexham Road (East)	6	0	59	1	400
	3 - Industrial Estate Road	113	187	1	3	1237
	4 - Sandy Lane	1	5	1	0	18
	5 - A534 (West)	13	303	368	8	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.04	3.63	0.0	A
2 - A534 Wrexham Road (East)	0.37	4.21	0.6	A
3 - Industrial Estate Road	0.76	6.55	3.0	A
4 - Sandy Lane	0.06	8.12	0.1	A
5 - A534 (West)	0.31	2.14	0.5	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	25	657	1171	0.021	25	0.0	3.140	A
2 - A534 Wrexham Road (East)	351	307	1438	0.244	350	0.3	3.302	A
3 - Industrial Estate Road	1160	319	2342	0.495	1156	1.0	3.026	A
4 - Sandy Lane	19	1465	791	0.024	19	0.0	4.661	A
5 - A534 (West)	522	236	2520	0.207	521	0.3	1.801	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	30	786	1111	0.027	30	0.0	3.329	A
2 - A534 Wrexham Road (East)	419	367	1409	0.297	419	0.4	3.633	A
3 - Industrial Estate Road	1385	382	2301	0.602	1383	1.5	3.912	A
4 - Sandy Lane	22	1753	656	0.034	22	0.0	5.678	A
5 - A534 (West)	624	282	2489	0.251	624	0.3	1.929	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	36	962	1028	0.035	36	0.0	3.629	A
2 - A534 Wrexham Road (East)	513	449	1368	0.375	512	0.6	4.201	A
3 - Industrial Estate Road	1697	467	2246	0.755	1691	3.0	6.411	A
4 - Sandy Lane	28	2144	474	0.058	27	0.1	8.062	A
5 - A534 (West)	764	345	2447	0.312	764	0.5	2.138	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	36	963	1028	0.035	36	0.0	3.631	A
2 - A534 Wrexham Road (East)	513	449	1368	0.375	513	0.6	4.209	A
3 - Industrial Estate Road	1697	468	2246	0.755	1697	3.0	6.546	A
4 - Sandy Lane	28	2150	471	0.058	28	0.1	8.120	A
5 - A534 (West)	764	346	2447	0.312	764	0.5	2.139	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	30	788	1110	0.027	30	0.0	3.332	A
2 - A534 Wrexham Road (East)	419	367	1409	0.297	420	0.4	3.641	A
3 - Industrial Estate Road	1385	383	2301	0.602	1391	1.5	3.986	A
4 - Sandy Lane	22	1762	652	0.034	23	0.0	5.719	A
5 - A534 (West)	624	284	2488	0.251	624	0.3	1.933	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	25	659	1170	0.021	25	0.0	3.142	A
2 - A534 Wrexham Road (East)	351	307	1438	0.244	351	0.3	3.316	A
3 - Industrial Estate Road	1160	320	2341	0.496	1162	1.0	3.061	A
4 - Sandy Lane	19	1473	787	0.024	19	0.0	4.683	A
5 - A534 (West)	522	237	2519	0.207	523	0.3	1.802	A

2030 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.48	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.48	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	169	100.000
2 - A534 Wrexham Road (East)		✓	514	100.000
3 - Industrial Estate Road		✓	508	100.000
4 - Sandy Lane		✓	35	100.000
5 - A534 (West)		✓	1554	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	148	0	10
	2 - A534 Wrexham Road (East)	2	0	168	7	337
	3 - Industrial Estate Road	16	60	2	1	429
	4 - Sandy Lane	1	7	4	0	23
	5 - A534 (West)	6	344	1179	23	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.29	7.89	0.4	A
2 - A534 Wrexham Road (East)	0.67	12.63	1.9	B
3 - Industrial Estate Road	0.25	2.09	0.3	A
4 - Sandy Lane	0.04	3.61	0.0	A
5 - A534 (West)	0.66	4.01	1.9	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	127	1217	909	0.140	127	0.2	4.599	A
2 - A534 Wrexham Road (East)	387	1027	1085	0.357	385	0.5	5.125	A
3 - Industrial Estate Road	382	285	2363	0.162	382	0.2	1.816	A
4 - Sandy Lane	26	644	1175	0.022	26	0.0	3.133	A
5 - A534 (West)	1170	69	2630	0.445	1167	0.8	2.455	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	152	1456	797	0.191	152	0.2	5.578	A
2 - A534 Wrexham Road (East)	462	1228	986	0.468	461	0.9	6.833	A
3 - Industrial Estate Road	457	342	2327	0.196	456	0.2	1.924	A
4 - Sandy Lane	31	770	1116	0.028	31	0.0	3.318	A
5 - A534 (West)	1397	83	2621	0.533	1396	1.1	2.935	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	186	1782	644	0.289	185	0.4	7.839	A
2 - A534 Wrexham Road (East)	566	1503	852	0.664	562	1.9	12.246	B
3 - Industrial Estate Road	559	417	2279	0.245	559	0.3	2.093	A
4 - Sandy Lane	39	942	1036	0.037	38	0.0	3.608	A
5 - A534 (West)	1711	101	2609	0.656	1708	1.9	3.982	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	186	1785	643	0.290	186	0.4	7.887	A
2 - A534 Wrexham Road (East)	566	1506	850	0.666	566	1.9	12.633	B
3 - Industrial Estate Road	559	419	2277	0.246	559	0.3	2.095	A
4 - Sandy Lane	39	945	1034	0.037	39	0.0	3.613	A
5 - A534 (West)	1711	101	2609	0.656	1711	1.9	4.009	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	152	1460	795	0.191	153	0.2	5.612	A
2 - A534 Wrexham Road (East)	462	1233	984	0.469	466	0.9	7.006	A
3 - Industrial Estate Road	457	345	2325	0.196	457	0.2	1.927	A
4 - Sandy Lane	31	774	1114	0.028	32	0.0	3.327	A
5 - A534 (West)	1397	83	2621	0.533	1400	1.1	2.954	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	127	1222	906	0.140	128	0.2	4.625	A
2 - A534 Wrexham Road (East)	387	1031	1083	0.357	388	0.6	5.191	A
3 - Industrial Estate Road	382	288	2362	0.162	383	0.2	1.821	A
4 - Sandy Lane	26	647	1173	0.022	26	0.0	3.137	A
5 - A534 (West)	1170	69	2630	0.445	1171	0.8	2.471	A

2030 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	6.07	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.07	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	34	100.000
2 - A534 Wrexham Road (East)		✓	492	100.000
3 - Industrial Estate Road		✓	1632	100.000
4 - Sandy Lane		✓	26	100.000
5 - A534 (West)		✓	734	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	5	21	1	7
	2 - A534 Wrexham Road (East)	6	0	62	1	423
	3 - Industrial Estate Road	120	198	1	3	1310
	4 - Sandy Lane	1	5	1	0	19
	5 - A534 (West)	13	321	390	8	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.04	3.73	0.0	A
2 - A534 Wrexham Road (East)	0.40	4.42	0.7	A
3 - Industrial Estate Road	0.81	8.30	4.1	A
4 - Sandy Lane	0.07	9.38	0.1	A
5 - A534 (West)	0.33	2.21	0.5	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	26	695	1153	0.022	26	0.0	3.192	A
2 - A534 Wrexham Road (East)	370	324	1430	0.259	369	0.3	3.389	A
3 - Industrial Estate Road	1229	336	2331	0.527	1224	1.1	3.240	A
4 - Sandy Lane	20	1550	751	0.026	19	0.0	4.920	A
5 - A534 (West)	553	249	2511	0.220	551	0.3	1.837	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	31	832	1089	0.028	31	0.0	3.399	A
2 - A534 Wrexham Road (East)	442	387	1399	0.316	442	0.5	3.760	A
3 - Industrial Estate Road	1467	402	2288	0.641	1465	1.8	4.357	A
4 - Sandy Lane	23	1855	609	0.038	23	0.0	6.149	A
5 - A534 (West)	660	298	2478	0.266	660	0.4	1.979	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	37	1018	1002	0.037	37	0.0	3.731	A
2 - A534 Wrexham Road (East)	542	474	1356	0.399	541	0.7	4.411	A
3 - Industrial Estate Road	1797	493	2230	0.806	1788	4.0	7.989	A
4 - Sandy Lane	29	2266	417	0.069	28	0.1	9.275	A
5 - A534 (West)	808	364	2435	0.332	808	0.5	2.213	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	37	1019	1001	0.037	37	0.0	3.734	A
2 - A534 Wrexham Road (East)	542	475	1356	0.400	542	0.7	4.421	A
3 - Industrial Estate Road	1797	493	2230	0.806	1797	4.1	8.295	A
4 - Sandy Lane	29	2275	412	0.069	29	0.1	9.384	A
5 - A534 (West)	808	365	2433	0.332	808	0.5	2.214	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	31	834	1088	0.028	31	0.0	3.403	A
2 - A534 Wrexham Road (East)	442	388	1398	0.316	443	0.5	3.770	A
3 - Industrial Estate Road	1467	403	2287	0.641	1476	1.8	4.485	A
4 - Sandy Lane	23	1868	603	0.039	24	0.0	6.215	A
5 - A534 (West)	660	300	2477	0.266	660	0.4	1.982	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	26	698	1152	0.022	26	0.0	3.195	A
2 - A534 Wrexham Road (East)	370	325	1429	0.259	371	0.4	3.404	A
3 - Industrial Estate Road	1229	338	2330	0.527	1231	1.1	3.287	A
4 - Sandy Lane	20	1559	747	0.026	20	0.0	4.951	A
5 - A534 (West)	553	251	2510	0.220	553	0.3	1.841	A

2037 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	6.69	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.69	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2037 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	178	100.000
2 - A534 Wrexham Road (East)		✓	544	100.000
3 - Industrial Estate Road		✓	537	100.000
4 - Sandy Lane		✓	38	100.000
5 - A534 (West)		✓	1645	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	157	0	10
	2 - A534 Wrexham Road (East)	2	0	178	8	356
	3 - Industrial Estate Road	17	64	2	1	453
	4 - Sandy Lane	1	8	4	0	25
	5 - A534 (West)	7	364	1247	25	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.33	9.06	0.5	A
2 - A534 Wrexham Road (East)	0.74	17.13	2.8	C
3 - Industrial Estate Road	0.26	2.15	0.4	A
4 - Sandy Lane	0.04	3.72	0.0	A
5 - A534 (West)	0.70	4.54	2.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	134	1288	875	0.153	133	0.2	4.848	A
2 - A534 Wrexham Road (East)	410	1086	1056	0.388	407	0.6	5.525	A
3 - Industrial Estate Road	404	302	2353	0.172	403	0.2	1.846	A
4 - Sandy Lane	29	680	1158	0.025	29	0.0	3.185	A
5 - A534 (West)	1238	74	2627	0.471	1235	0.9	2.579	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	160	1541	757	0.211	160	0.3	6.027	A
2 - A534 Wrexham Road (East)	489	1299	952	0.514	487	1.0	7.726	A
3 - Industrial Estate Road	483	361	2315	0.209	483	0.3	1.964	A
4 - Sandy Lane	34	813	1096	0.031	34	0.0	3.390	A
5 - A534 (West)	1479	88	2618	0.565	1477	1.3	3.153	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	196	1885	595	0.329	195	0.5	8.977	A
2 - A534 Wrexham Road (East)	599	1589	809	0.740	592	2.7	16.130	C
3 - Industrial Estate Road	591	439	2264	0.261	591	0.4	2.151	A
4 - Sandy Lane	42	993	1012	0.041	42	0.0	3.710	A
5 - A534 (West)	1811	108	2604	0.695	1807	2.2	4.495	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	196	1889	593	0.330	196	0.5	9.056	A
2 - A534 Wrexham Road (East)	599	1593	808	0.742	599	2.8	17.133	C
3 - Industrial Estate Road	591	443	2262	0.261	591	0.4	2.154	A
4 - Sandy Lane	42	997	1010	0.041	42	0.0	3.718	A
5 - A534 (West)	1811	108	2604	0.695	1811	2.3	4.538	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	160	1547	754	0.212	161	0.3	6.076	A
2 - A534 Wrexham Road (East)	489	1305	949	0.515	496	1.1	8.056	A
3 - Industrial Estate Road	483	367	2311	0.209	483	0.3	1.971	A
4 - Sandy Lane	34	819	1093	0.031	34	0.0	3.399	A
5 - A534 (West)	1479	88	2617	0.565	1483	1.3	3.182	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	134	1294	873	0.154	134	0.2	4.879	A
2 - A534 Wrexham Road (East)	410	1091	1054	0.389	411	0.6	5.620	A
3 - Industrial Estate Road	404	305	2351	0.172	405	0.2	1.848	A
4 - Sandy Lane	29	683	1156	0.025	29	0.0	3.191	A
5 - A534 (West)	1238	74	2627	0.471	1240	0.9	2.598	A

2037 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.08	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2037 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	37	100.000
2 - A534 Wrexham Road (East)		✓	521	100.000
3 - Industrial Estate Road		✓	1732	100.000
4 - Sandy Lane		✓	28	100.000
5 - A534 (West)		✓	777	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	6	22	1	8
	2 - A534 Wrexham Road (East)	7	0	66	1	447
	3 - Industrial Estate Road	126	209	1	3	1393
	4 - Sandy Lane	1	6	1	0	20
	5 - A534 (West)	15	339	412	9	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.04	3.86	0.0	A
2 - A534 Wrexham Road (East)	0.43	4.68	0.7	A
3 - Industrial Estate Road	0.86	11.73	6.0	B
4 - Sandy Lane	0.09	11.36	0.1	B
5 - A534 (West)	0.35	2.30	0.5	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	28	735	1134	0.025	28	0.0	3.252	A
2 - A534 Wrexham Road (East)	392	343	1421	0.276	391	0.4	3.491	A
3 - Industrial Estate Road	1304	356	2318	0.563	1299	1.3	3.516	A
4 - Sandy Lane	21	1645	707	0.030	21	0.0	5.246	A
5 - A534 (West)	585	263	2501	0.234	584	0.3	1.877	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	33	879	1067	0.031	33	0.0	3.481	A
2 - A534 Wrexham Road (East)	468	410	1388	0.338	468	0.5	3.912	A
3 - Industrial Estate Road	1557	427	2272	0.685	1554	2.1	4.984	A
4 - Sandy Lane	25	1968	556	0.045	25	0.0	6.778	A
5 - A534 (West)	699	315	2467	0.283	698	0.4	2.035	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	41	1076	975	0.042	41	0.0	3.853	A
2 - A534 Wrexham Road (East)	574	502	1343	0.427	573	0.7	4.670	A
3 - Industrial Estate Road	1907	522	2211	0.863	1892	5.8	10.841	B
4 - Sandy Lane	31	2399	354	0.087	31	0.1	11.116	B
5 - A534 (West)	855	384	2421	0.353	855	0.5	2.298	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	41	1078	974	0.042	41	0.0	3.857	A
2 - A534 Wrexham Road (East)	574	502	1342	0.427	574	0.7	4.682	A
3 - Industrial Estate Road	1907	523	2210	0.863	1906	6.0	11.731	B
4 - Sandy Lane	31	2414	348	0.089	31	0.1	11.362	B
5 - A534 (West)	855	386	2420	0.354	855	0.5	2.301	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	33	883	1065	0.031	33	0.0	3.490	A
2 - A534 Wrexham Road (East)	468	410	1387	0.338	469	0.5	3.924	A
3 - Industrial Estate Road	1557	428	2272	0.685	1572	2.2	5.254	A
4 - Sandy Lane	25	1987	547	0.046	25	0.0	6.904	A
5 - A534 (West)	699	319	2465	0.283	699	0.4	2.041	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	28	738	1133	0.025	28	0.0	3.258	A
2 - A534 Wrexham Road (East)	392	344	1420	0.276	393	0.4	3.505	A
3 - Industrial Estate Road	1304	358	2317	0.563	1308	1.3	3.582	A
4 - Sandy Lane	21	1655	702	0.030	21	0.0	5.287	A
5 - A534 (West)	585	265	2500	0.234	585	0.3	1.879	A

2030 Base + Committed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.79	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.79	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2030 Base + Committed	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	172	100.000
2 - A534 Wrexham Road (East)		✓	530	100.000
3 - Industrial Estate Road		✓	636	100.000
4 - Sandy Lane		✓	35	100.000
5 - A534 (West)		✓	1813	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	151	0	10
	2 - A534 Wrexham Road (East)	2	0	177	7	344
	3 - Industrial Estate Road	18	66	2	1	549
	4 - Sandy Lane	1	7	4	0	23
	5 - A534 (West)	6	363	1419	23	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.37	11.37	0.6	B
2 - A534 Wrexham Road (East)	0.81	25.86	4.0	D
3 - Industrial Estate Road	0.31	2.29	0.4	A
4 - Sandy Lane	0.04	3.88	0.0	A
5 - A534 (West)	0.77	5.93	3.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	129	1415	816	0.159	129	0.2	5.236	A
2 - A534 Wrexham Road (East)	399	1209	996	0.401	396	0.7	5.977	A
3 - Industrial Estate Road	479	290	2360	0.203	478	0.3	1.912	A
4 - Sandy Lane	26	745	1128	0.023	26	0.0	3.267	A
5 - A534 (West)	1365	75	2626	0.520	1361	1.1	2.835	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	155	1693	685	0.226	154	0.3	6.773	A
2 - A534 Wrexham Road (East)	476	1446	880	0.542	474	1.2	8.840	A
3 - Industrial Estate Road	572	347	2323	0.246	571	0.3	2.054	A
4 - Sandy Lane	31	891	1059	0.030	31	0.0	3.501	A
5 - A534 (West)	1630	90	2616	0.623	1628	1.6	3.634	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	189	2070	509	0.372	188	0.6	11.192	B
2 - A534 Wrexham Road (East)	584	1768	722	0.808	573	3.7	22.804	C
3 - Industrial Estate Road	700	420	2277	0.308	700	0.4	2.283	A
4 - Sandy Lane	39	1086	968	0.040	38	0.0	3.871	A
5 - A534 (West)	1996	110	2603	0.767	1990	3.2	5.813	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	189	2076	506	0.374	189	0.6	11.372	B
2 - A534 Wrexham Road (East)	584	1774	719	0.811	582	4.0	25.861	D
3 - Industrial Estate Road	700	426	2273	0.308	700	0.4	2.289	A
4 - Sandy Lane	39	1093	965	0.040	39	0.0	3.884	A
5 - A534 (West)	1996	110	2603	0.767	1996	3.2	5.927	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	155	1702	681	0.227	156	0.3	6.864	A
2 - A534 Wrexham Road (East)	476	1454	876	0.544	488	1.2	9.530	A
3 - Industrial Estate Road	572	356	2318	0.247	572	0.3	2.064	A
4 - Sandy Lane	31	900	1055	0.030	32	0.0	3.519	A
5 - A534 (West)	1630	90	2616	0.623	1636	1.7	3.695	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	129	1422	812	0.159	130	0.2	5.277	A
2 - A534 Wrexham Road (East)	399	1215	993	0.402	401	0.7	6.105	A
3 - Industrial Estate Road	479	294	2358	0.203	479	0.3	1.915	A
4 - Sandy Lane	26	749	1126	0.023	26	0.0	3.274	A
5 - A534 (West)	1365	75	2626	0.520	1367	1.1	2.864	A

2030 Base + Committed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	14.53	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.53	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2030 Base + Committed	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	37	100.000
2 - A534 Wrexham Road (East)		✓	515	100.000
3 - Industrial Estate Road		✓	1887	100.000
4 - Sandy Lane		✓	26	100.000
5 - A534 (West)		✓	893	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	5	24	1	7
	2 - A534 Wrexham Road (East)	6	0	68	1	440
	3 - Industrial Estate Road	124	206	1	3	1553
	4 - Sandy Lane	1	5	1	0	19
	5 - A534 (West)	14	330	539	8	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.04	4.11	0.0	A
2 - A534 Wrexham Road (East)	0.45	5.09	0.8	A
3 - Industrial Estate Road	0.94	23.00	12.5	C
4 - Sandy Lane	0.10	14.63	0.1	B
5 - A534 (West)	0.41	2.50	0.7	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	28	820	1095	0.025	28	0.0	3.373	A
2 - A534 Wrexham Road (East)	388	438	1374	0.282	386	0.4	3.638	A
3 - Industrial Estate Road	1421	349	2323	0.612	1414	1.6	3.937	A
4 - Sandy Lane	20	1753	656	0.030	19	0.0	5.653	A
5 - A534 (West)	672	258	2505	0.268	671	0.4	1.961	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	33	981	1019	0.033	33	0.0	3.649	A
2 - A534 Wrexham Road (East)	463	524	1332	0.348	462	0.5	4.138	A
3 - Industrial Estate Road	1696	418	2278	0.745	1691	2.8	6.079	A
4 - Sandy Lane	23	2097	496	0.047	23	0.0	7.622	A
5 - A534 (West)	803	308	2471	0.325	802	0.5	2.157	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	41	1198	918	0.044	41	0.0	4.105	A
2 - A534 Wrexham Road (East)	567	641	1274	0.445	566	0.8	5.076	A
3 - Industrial Estate Road	2078	511	2218	0.937	2045	11.1	18.098	C
4 - Sandy Lane	29	2541	288	0.099	28	0.1	13.861	B
5 - A534 (West)	983	373	2429	0.405	982	0.7	2.488	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	41	1202	916	0.044	41	0.0	4.113	A
2 - A534 Wrexham Road (East)	567	642	1274	0.445	567	0.8	5.092	A
3 - Industrial Estate Road	2078	512	2217	0.937	2072	12.5	22.996	C
4 - Sandy Lane	29	2570	275	0.104	29	0.1	14.628	B
5 - A534 (West)	983	378	2425	0.405	983	0.7	2.495	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	33	987	1017	0.033	33	0.0	3.660	A
2 - A534 Wrexham Road (East)	463	525	1331	0.348	464	0.5	4.155	A
3 - Industrial Estate Road	1696	419	2277	0.745	1734	3.0	7.071	A
4 - Sandy Lane	23	2141	475	0.049	24	0.1	7.983	A
5 - A534 (West)	803	316	2466	0.326	804	0.5	2.167	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	28	823	1093	0.025	28	0.0	3.381	A
2 - A534 Wrexham Road (East)	388	439	1373	0.282	388	0.4	3.659	A
3 - Industrial Estate Road	1421	351	2321	0.612	1426	1.6	4.046	A
4 - Sandy Lane	20	1767	650	0.030	20	0.0	5.712	A
5 - A534 (West)	672	260	2503	0.269	673	0.4	1.968	A

2037 Base + Committed, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	13.56	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.56	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2037 Base + Committed	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	181	100.000
2 - A534 Wrexham Road (East)		✓	560	100.000
3 - Industrial Estate Road		✓	666	100.000
4 - Sandy Lane		✓	38	100.000
5 - A534 (West)		✓	1904	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	160	0	10
	2 - A534 Wrexham Road (East)	2	0	187	8	363
	3 - Industrial Estate Road	19	70	2	1	574
	4 - Sandy Lane	1	8	4	0	25
	5 - A534 (West)	7	383	1487	25	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.44	13.97	0.8	B
2 - A534 Wrexham Road (East)	0.91	49.17	7.8	E
3 - Industrial Estate Road	0.32	2.36	0.5	A
4 - Sandy Lane	0.04	4.00	0.0	A
5 - A534 (West)	0.81	7.15	4.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	136	1486	782	0.174	135	0.2	5.558	A
2 - A534 Wrexham Road (East)	422	1268	967	0.436	419	0.8	6.532	A
3 - Industrial Estate Road	501	307	2350	0.213	500	0.3	1.945	A
4 - Sandy Lane	29	781	1111	0.026	29	0.0	3.326	A
5 - A534 (West)	1433	80	2623	0.546	1429	1.2	3.001	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	163	1778	646	0.252	162	0.3	7.439	A
2 - A534 Wrexham Road (East)	503	1517	845	0.596	501	1.4	10.373	B
3 - Industrial Estate Road	599	367	2311	0.259	598	0.3	2.102	A
4 - Sandy Lane	34	935	1039	0.033	34	0.0	3.581	A
5 - A534 (West)	1712	95	2613	0.655	1709	1.9	3.971	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	199	2173	461	0.433	198	0.7	13.600	B
2 - A534 Wrexham Road (East)	617	1852	681	0.906	596	6.6	36.246	E
3 - Industrial Estate Road	733	437	2265	0.324	733	0.5	2.349	A
4 - Sandy Lane	42	1133	946	0.044	42	0.0	3.980	A
5 - A534 (West)	2096	117	2599	0.807	2088	4.0	6.933	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	199	2181	457	0.436	199	0.8	13.966	B
2 - A534 Wrexham Road (East)	617	1860	677	0.911	612	7.8	49.166	E
3 - Industrial Estate Road	733	448	2259	0.325	733	0.5	2.359	A
4 - Sandy Lane	42	1144	941	0.044	42	0.0	4.002	A
5 - A534 (West)	2096	117	2599	0.807	2096	4.1	7.153	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	163	1790	640	0.254	164	0.3	7.590	A
2 - A534 Wrexham Road (East)	503	1528	840	0.600	529	1.5	12.467	B
3 - Industrial Estate Road	599	386	2299	0.260	599	0.4	2.118	A
4 - Sandy Lane	34	954	1030	0.033	34	0.0	3.614	A
5 - A534 (West)	1712	95	2613	0.655	1720	1.9	4.074	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	136	1494	779	0.175	137	0.2	5.612	A
2 - A534 Wrexham Road (East)	422	1275	964	0.438	425	0.8	6.718	A
3 - Industrial Estate Road	501	311	2347	0.214	502	0.3	1.950	A
4 - Sandy Lane	29	787	1108	0.026	29	0.0	3.336	A
5 - A534 (West)	1433	80	2623	0.546	1436	1.2	3.042	A

2037 Base + Committed, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	27.88	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	27.88	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2037 Base + Committed	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	40	100.000
2 - A534 Wrexham Road (East)		✓	543	100.000
3 - Industrial Estate Road		✓	1977	100.000
4 - Sandy Lane		✓	28	100.000
5 - A534 (West)		✓	935	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	6	25	1	8
	2 - A534 Wrexham Road (East)	7	0	71	1	464
	3 - Industrial Estate Road	130	217	1	3	1626
	4 - Sandy Lane	1	6	1	0	20
	5 - A534 (West)	15	348	561	9	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.05	4.26	0.1	A
2 - A534 Wrexham Road (East)	0.47	5.43	0.9	A
3 - Industrial Estate Road	0.99	46.61	27.7	E
4 - Sandy Lane	0.14	18.45	0.2	C
5 - A534 (West)	0.43	2.60	0.7	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	30	860	1076	0.028	30	0.0	3.440	A
2 - A534 Wrexham Road (East)	409	457	1365	0.300	407	0.4	3.753	A
3 - Industrial Estate Road	1488	369	2310	0.644	1481	1.8	4.309	A
4 - Sandy Lane	21	1840	616	0.034	21	0.0	6.048	A
5 - A534 (West)	704	272	2496	0.282	702	0.4	2.005	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	36	1028	997	0.036	36	0.0	3.744	A
2 - A534 Wrexham Road (East)	488	546	1321	0.370	488	0.6	4.318	A
3 - Industrial Estate Road	1777	442	2263	0.785	1770	3.5	7.209	A
4 - Sandy Lane	25	2199	448	0.056	25	0.1	8.515	A
5 - A534 (West)	841	325	2460	0.342	840	0.5	2.222	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	44	1252	892	0.049	44	0.1	4.244	A
2 - A534 Wrexham Road (East)	598	669	1261	0.474	597	0.9	5.411	A
3 - Industrial Estate Road	2177	541	2199	0.990	2109	20.5	28.604	D
4 - Sandy Lane	31	2634	245	0.126	30	0.1	16.787	C
5 - A534 (West)	1029	388	2419	0.426	1029	0.7	2.588	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	44	1257	890	0.050	44	0.1	4.256	A
2 - A534 Wrexham Road (East)	598	669	1260	0.474	598	0.9	5.433	A
3 - Industrial Estate Road	2177	542	2198	0.990	2148	27.7	46.614	E
4 - Sandy Lane	31	2674	226	0.137	31	0.2	18.455	C
5 - A534 (West)	1029	395	2414	0.426	1029	0.7	2.599	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	36	1041	991	0.036	36	0.0	3.768	A
2 - A534 Wrexham Road (East)	488	547	1320	0.370	489	0.6	4.338	A
3 - Industrial Estate Road	1777	443	2262	0.786	1873	3.8	11.523	B
4 - Sandy Lane	25	2304	399	0.063	26	0.1	9.646	A
5 - A534 (West)	841	343	2448	0.343	841	0.5	2.243	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	30	863	1074	0.028	30	0.0	3.449	A
2 - A534 Wrexham Road (East)	409	458	1364	0.300	409	0.4	3.776	A
3 - Industrial Estate Road	1488	371	2308	0.645	1496	1.8	4.477	A
4 - Sandy Lane	21	1857	608	0.035	21	0.0	6.136	A
5 - A534 (West)	704	275	2494	0.282	704	0.4	2.013	A

2030 Base + Committed + Developement (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	15.85	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	15.85	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2030 Base + Committed + Developement (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	179	100.000
2 - A534 Wrexham Road (East)		✓	542	100.000
3 - Industrial Estate Road		✓	719	100.000
4 - Sandy Lane		✓	35	100.000
5 - A534 (West)		✓	1960	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	158	0	10
	2 - A534 Wrexham Road (East)	2	0	189	7	344
	3 - Industrial Estate Road	19	76	2	1	621
	4 - Sandy Lane	1	7	4	0	23
	5 - A534 (West)	6	363	1566	23	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.46	15.78	0.8	C
2 - A534 Wrexham Road (East)	0.94	62.07	9.6	F
3 - Industrial Estate Road	0.35	2.43	0.5	A
4 - Sandy Lane	0.04	4.06	0.0	A
5 - A534 (West)	0.83	8.21	4.8	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	135	1533	761	0.177	134	0.2	5.738	A
2 - A534 Wrexham Road (East)	408	1324	940	0.434	405	0.8	6.697	A
3 - Industrial Estate Road	541	290	2360	0.229	540	0.3	1.977	A
4 - Sandy Lane	26	807	1099	0.024	26	0.0	3.356	A
5 - A534 (West)	1476	83	2621	0.563	1470	1.3	3.116	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	161	1833	620	0.260	160	0.3	7.833	A
2 - A534 Wrexham Road (East)	487	1584	812	0.600	484	1.5	10.890	B
3 - Industrial Estate Road	646	347	2324	0.278	646	0.4	2.145	A
4 - Sandy Lane	31	965	1025	0.031	31	0.0	3.623	A
5 - A534 (West)	1762	100	2610	0.675	1759	2.0	4.216	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	197	2239	430	0.459	195	0.8	15.231	C
2 - A534 Wrexham Road (East)	597	1933	641	0.931	572	7.7	42.354	E
3 - Industrial Estate Road	792	411	2283	0.347	791	0.5	2.414	A
4 - Sandy Lane	39	1168	930	0.041	38	0.0	4.038	A
5 - A534 (West)	2158	122	2595	0.832	2147	4.7	7.860	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	197	2249	425	0.464	197	0.8	15.780	C
2 - A534 Wrexham Road (East)	597	1943	636	0.938	589	9.6	62.069	F
3 - Industrial Estate Road	792	422	2275	0.348	792	0.5	2.425	A
4 - Sandy Lane	39	1180	925	0.042	39	0.0	4.062	A
5 - A534 (West)	2158	122	2595	0.832	2158	4.8	8.207	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	161	1847	613	0.262	163	0.4	8.029	A
2 - A534 Wrexham Road (East)	487	1597	806	0.605	519	1.6	13.948	B
3 - Industrial Estate Road	646	370	2309	0.280	647	0.4	2.168	A
4 - Sandy Lane	31	989	1014	0.031	32	0.0	3.666	A
5 - A534 (West)	1762	100	2610	0.675	1773	2.1	4.355	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	135	1541	757	0.178	135	0.2	5.801	A
2 - A534 Wrexham Road (East)	408	1332	936	0.436	411	0.8	6.905	A
3 - Industrial Estate Road	541	294	2358	0.230	542	0.3	1.982	A
4 - Sandy Lane	26	813	1096	0.024	26	0.0	3.364	A
5 - A534 (West)	1476	84	2620	0.563	1479	1.3	3.163	A

2030 Base + Committed + Developement (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	36.11	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	36.11	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2030 Base + Committed + Developement (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	39	100.000
2 - A534 Wrexham Road (East)		✓	521	100.000
3 - Industrial Estate Road		✓	2034	100.000
4 - Sandy Lane		✓	26	100.000
5 - A534 (West)		✓	979	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	5	26	1	7
	2 - A534 Wrexham Road (East)	6	0	74	1	440
	3 - Industrial Estate Road	129	215	1	3	1686
	4 - Sandy Lane	1	5	1	0	19
	5 - A534 (West)	14	330	625	8	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.05	4.36	0.1	A
2 - A534 Wrexham Road (East)	0.47	5.51	0.9	A
3 - Industrial Estate Road	1.01	60.87	39.1	F
4 - Sandy Lane	0.13	18.78	0.1	C
5 - A534 (West)	0.45	2.68	0.8	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	29	891	1061	0.028	29	0.0	3.487	A
2 - A534 Wrexham Road (East)	392	504	1341	0.292	391	0.4	3.779	A
3 - Industrial Estate Road	1531	349	2323	0.659	1524	1.9	4.465	A
4 - Sandy Lane	20	1863	605	0.032	19	0.0	6.143	A
5 - A534 (West)	737	268	2498	0.295	735	0.4	2.040	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	35	1066	980	0.036	35	0.0	3.810	A
2 - A534 Wrexham Road (East)	468	603	1293	0.362	468	0.6	4.360	A
3 - Industrial Estate Road	1829	417	2278	0.803	1821	3.9	7.731	A
4 - Sandy Lane	23	2226	435	0.054	23	0.1	8.738	A
5 - A534 (West)	880	320	2463	0.357	880	0.6	2.273	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	43	1296	871	0.049	43	0.1	4.344	A
2 - A534 Wrexham Road (East)	574	738	1227	0.468	572	0.9	5.492	A
3 - Industrial Estate Road	2239	511	2218	1.010	2149	26.4	33.851	D
4 - Sandy Lane	29	2646	239	0.120	28	0.1	17.071	C
5 - A534 (West)	1078	379	2425	0.445	1077	0.8	2.670	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	43	1301	869	0.049	43	0.1	4.357	A
2 - A534 Wrexham Road (East)	574	739	1226	0.468	574	0.9	5.514	A
3 - Industrial Estate Road	2239	512	2217	1.010	2189	39.1	60.870	F
4 - Sandy Lane	29	2686	220	0.130	29	0.1	18.784	C
5 - A534 (West)	1078	386	2420	0.445	1078	0.8	2.681	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	35	1083	971	0.036	35	0.0	3.844	A
2 - A534 Wrexham Road (East)	468	604	1292	0.362	470	0.6	4.382	A
3 - Industrial Estate Road	1829	419	2277	0.803	1968	4.3	16.885	C
4 - Sandy Lane	23	2375	366	0.064	24	0.1	10.536	B
5 - A534 (West)	880	346	2447	0.360	881	0.6	2.300	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	29	895	1059	0.028	29	0.0	3.496	A
2 - A534 Wrexham Road (East)	392	506	1341	0.293	393	0.4	3.802	A
3 - Industrial Estate Road	1531	351	2321	0.660	1541	2.0	4.665	A
4 - Sandy Lane	20	1882	596	0.033	20	0.0	6.245	A
5 - A534 (West)	737	271	2496	0.295	738	0.4	2.047	A

2037 Base + Committed + Developement (Phase 1 + 2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	70.36	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	70.36	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2037 Base + Committed + Developement (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	195	100.000
2 - A534 Wrexham Road (East)		✓	584	100.000
3 - Industrial Estate Road		✓	885	100.000
4 - Sandy Lane		✓	38	100.000
5 - A534 (West)		✓	2216	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	174	0	10
	2 - A534 Wrexham Road (East)	2	0	211	8	363
	3 - Industrial Estate Road	25	93	2	1	764
	4 - Sandy Lane	1	8	4	0	25
	5 - A534 (West)	7	383	1799	25	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.75	46.81	2.6	E
2 - A534 Wrexham Road (East)	1.28	365.69	70.9	F
3 - Industrial Estate Road	0.42	2.69	0.7	A
4 - Sandy Lane	0.05	4.37	0.1	A
5 - A534 (West)	0.95	22.76	14.5	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	147	1736	665	0.221	146	0.3	6.917	A
2 - A534 Wrexham Road (East)	440	1511	848	0.519	435	1.1	8.643	A
3 - Industrial Estate Road	666	306	2350	0.283	665	0.4	2.134	A
4 - Sandy Lane	29	945	1034	0.028	28	0.0	3.579	A
5 - A534 (West)	1668	101	2609	0.640	1661	1.8	3.773	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	175	2076	506	0.347	174	0.5	10.827	B
2 - A534 Wrexham Road (East)	525	1807	703	0.747	518	2.7	18.851	C
3 - Industrial Estate Road	796	364	2313	0.344	795	0.5	2.372	A
4 - Sandy Lane	34	1129	948	0.036	34	0.0	3.938	A
5 - A534 (West)	1992	121	2596	0.768	1986	3.2	5.853	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	215	2512	302	0.712	208	2.2	36.316	E
2 - A534 Wrexham Road (East)	643	2182	519	1.239	510	36.0	154.615	F
3 - Industrial Estate Road	974	366	2312	0.422	974	0.7	2.689	A
4 - Sandy Lane	42	1304	866	0.048	42	0.1	4.366	A
5 - A534 (West)	2440	148	2578	0.947	2402	12.7	17.574	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	215	2543	287	0.748	213	2.6	46.806	E
2 - A534 Wrexham Road (East)	643	2212	504	1.275	503	70.9	365.688	F
3 - Industrial Estate Road	974	362	2314	0.421	974	0.7	2.686	A
4 - Sandy Lane	42	1301	868	0.048	42	0.1	4.358	A
5 - A534 (West)	2440	148	2578	0.947	2433	14.5	22.756	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	175	2126	482	0.363	183	0.6	12.353	B
2 - A534 Wrexham Road (East)	525	1857	678	0.774	669	34.8	282.752	F
3 - Industrial Estate Road	796	462	2250	0.354	796	0.5	2.477	A
4 - Sandy Lane	34	1225	903	0.038	34	0.0	4.141	A
5 - A534 (West)	1992	122	2595	0.768	2036	3.4	6.938	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	147	1750	659	0.223	148	0.3	7.066	A
2 - A534 Wrexham Road (East)	440	1524	841	0.523	575	1.1	22.828	C
3 - Industrial Estate Road	666	395	2293	0.291	667	0.4	2.216	A
4 - Sandy Lane	29	1034	992	0.029	29	0.0	3.737	A
5 - A534 (West)	1668	102	2608	0.640	1675	1.8	3.884	A

2037 Base + Committed + Developement (Phase 1 + 2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	145.88	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	145.88	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2037 Base + Committed + Developement (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	47	100.000
2 - A534 Wrexham Road (East)		✓	560	100.000
3 - Industrial Estate Road		✓	2305	100.000
4 - Sandy Lane		✓	28	100.000
5 - A534 (West)		✓	1152	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	6	32	1	8
	2 - A534 Wrexham Road (East)	7	0	87	1	465
	3 - Industrial Estate Road	143	238	1	3	1920
	4 - Sandy Lane	1	6	1	0	20
	5 - A534 (West)	15	348	778	9	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Hall Lane	0.07	4.93	0.1	A
2 - A534 Wrexham Road (East)	0.54	6.88	1.2	A
3 - Industrial Estate Road	1.15	255.39	181.6	F
4 - Sandy Lane	0.15	20.99	0.2	C
5 - A534 (West)	0.52	3.12	1.1	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	35	1038	993	0.036	35	0.0	3.759	A
2 - A534 Wrexham Road (East)	422	625	1282	0.329	420	0.5	4.164	A
3 - Industrial Estate Road	1735	369	2309	0.751	1724	2.9	6.031	A
4 - Sandy Lane	21	2083	502	0.042	21	0.0	7.475	A
5 - A534 (West)	867	297	2479	0.350	865	0.5	2.228	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	42	1240	898	0.047	42	0.0	4.207	A
2 - A534 Wrexham Road (East)	503	747	1222	0.412	503	0.7	4.999	A
3 - Industrial Estate Road	2072	442	2262	0.916	2048	9.0	15.292	C
4 - Sandy Lane	25	2478	318	0.079	25	0.1	12.294	B
5 - A534 (West)	1036	353	2442	0.424	1035	0.7	2.557	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	52	1485	783	0.066	52	0.1	4.922	A
2 - A534 Wrexham Road (East)	617	915	1140	0.541	615	1.2	6.827	A
3 - Industrial Estate Road	2538	541	2199	1.154	2189	96.3	93.739	F
4 - Sandy Lane	31	2715	207	0.149	30	0.2	20.396	C
5 - A534 (West)	1268	379	2424	0.523	1267	1.1	3.106	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	52	1487	782	0.066	52	0.1	4.930	A
2 - A534 Wrexham Road (East)	617	916	1140	0.541	617	1.2	6.882	A
3 - Industrial Estate Road	2538	543	2198	1.155	2197	181.6	231.021	F
4 - Sandy Lane	31	2725	202	0.152	31	0.2	20.989	C
5 - A534 (West)	1268	381	2423	0.523	1268	1.1	3.115	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	42	1263	887	0.048	42	0.1	4.263	A
2 - A534 Wrexham Road (East)	503	749	1221	0.412	505	0.7	5.039	A
3 - Industrial Estate Road	2072	445	2261	0.917	2248	137.5	255.394	F
4 - Sandy Lane	25	2680	223	0.113	25	0.1	18.237	C
5 - A534 (West)	1036	386	2420	0.428	1037	0.8	2.605	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	35	1097	965	0.037	35	0.0	3.874	A
2 - A534 Wrexham Road (East)	422	627	1281	0.329	422	0.5	4.198	A
3 - Industrial Estate Road	1735	372	2308	0.752	2270	3.9	110.810	F
4 - Sandy Lane	21	2630	246	0.086	21	0.1	16.006	C
5 - A534 (West)	867	388	2419	0.359	868	0.6	2.322	A

2030 Base + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	7.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.12	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D19	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrass Hall Lane		✓	176	100.000
2 - A534 Wrexham Road (East)		✓	526	100.000
3 - Industrial Estate Road		✓	590	100.000
4 - Sandy Lane		✓	35	100.000
5 - A534 (West)		✓	1701	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	11	155	0	10
	2 - A534 Wrexham Road (East)	2	0	180	7	337
	3 - Industrial Estate Road	17	70	2	1	500
	4 - Sandy Lane	1	7	4	0	23
	5 - A534 (West)	6	344	1326	23	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrás Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Hall Lane	0.35	9.79	0.5	A
2 - A534 Wrexham Road (East)	0.75	18.97	2.9	C
3 - Industrial Estate Road	0.29	2.21	0.4	A
4 - Sandy Lane	0.04	3.77	0.0	A
5 - A534 (West)	0.72	4.94	2.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	133	1335	853	0.155	132	0.2	4.983	A
2 - A534 Wrexham Road (East)	396	1142	1029	0.385	394	0.6	5.647	A
3 - Industrial Estate Road	444	285	2364	0.188	443	0.2	1.874	A
4 - Sandy Lane	26	705	1146	0.023	26	0.0	3.213	A
5 - A534 (West)	1281	77	2625	0.488	1277	0.9	2.663	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	158	1597	731	0.217	158	0.3	6.280	A
2 - A534 Wrexham Road (East)	473	1366	919	0.515	471	1.0	8.014	A
3 - Industrial Estate Road	530	341	2327	0.228	530	0.3	2.003	A
4 - Sandy Lane	31	844	1082	0.029	31	0.0	3.427	A
5 - A534 (West)	1529	93	2615	0.585	1527	1.4	3.305	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	194	1953	564	0.344	193	0.5	9.684	A
2 - A534 Wrexham Road (East)	579	1671	769	0.753	572	2.8	17.646	C
3 - Industrial Estate Road	650	415	2280	0.285	649	0.4	2.207	A
4 - Sandy Lane	39	1030	995	0.039	38	0.0	3.764	A
5 - A534 (West)	1873	113	2601	0.720	1868	2.5	4.884	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	194	1958	561	0.345	194	0.5	9.787	A
2 - A534 Wrexham Road (East)	579	1676	767	0.755	579	2.9	18.970	C
3 - Industrial Estate Road	650	419	2277	0.285	650	0.4	2.211	A
4 - Sandy Lane	39	1035	992	0.039	39	0.0	3.773	A
5 - A534 (West)	1873	113	2601	0.720	1873	2.5	4.943	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	158	1603	728	0.217	159	0.3	6.344	A
2 - A534 Wrexham Road (East)	473	1373	916	0.516	480	1.1	8.406	A
3 - Industrial Estate Road	530	348	2323	0.228	531	0.3	2.008	A
4 - Sandy Lane	31	850	1078	0.029	32	0.0	3.437	A
5 - A534 (West)	1529	93	2614	0.585	1534	1.4	3.346	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	133	1340	851	0.156	133	0.2	5.017	A
2 - A534 Wrexham Road (East)	396	1148	1026	0.386	398	0.6	5.746	A
3 - Industrial Estate Road	444	288	2362	0.188	444	0.2	1.879	A
4 - Sandy Lane	26	709	1144	0.023	26	0.0	3.221	A
5 - A534 (West)	1281	78	2624	0.488	1282	1.0	2.685	A

2030 Base + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.89	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.89	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	36	100.000
2 - A534 Wrexham Road (East)		✓	499	100.000
3 - Industrial Estate Road		✓	1780	100.000
4 - Sandy Lane		✓	26	100.000
5 - A534 (West)		✓	819	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	5	23	1	7
	2 - A534 Wrexham Road (East)	6	0	69	1	423
	3 - Industrial Estate Road	125	208	1	3	1443
	4 - Sandy Lane	1	5	1	0	19
	5 - A534 (West)	13	321	475	8	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.04	3.94	0.0	A
2 - A534 Wrexham Road (East)	0.42	4.74	0.7	A
3 - Industrial Estate Road	0.88	13.12	6.9	B
4 - Sandy Lane	0.09	11.69	0.1	B
5 - A534 (West)	0.37	2.37	0.6	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	27	767	1120	0.024	27	0.0	3.294	A
2 - A534 Wrexham Road (East)	376	389	1398	0.269	374	0.4	3.513	A
3 - Industrial Estate Road	1340	336	2331	0.575	1335	1.3	3.595	A
4 - Sandy Lane	20	1661	700	0.028	19	0.0	5.294	A
5 - A534 (West)	617	260	2503	0.246	615	0.3	1.907	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	32	917	1049	0.031	32	0.0	3.539	A
2 - A534 Wrexham Road (East)	449	465	1360	0.330	448	0.5	3.944	A
3 - Industrial Estate Road	1600	402	2288	0.699	1596	2.3	5.177	A
4 - Sandy Lane	23	1987	547	0.043	23	0.0	6.873	A
5 - A534 (West)	736	311	2469	0.298	736	0.4	2.076	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	40	1121	953	0.042	40	0.0	3.939	A
2 - A534 Wrexham Road (East)	549	570	1309	0.420	548	0.7	4.726	A
3 - Industrial Estate Road	1960	492	2230	0.879	1943	6.5	11.887	B
4 - Sandy Lane	29	2421	344	0.083	28	0.1	11.396	B
5 - A534 (West)	902	379	2425	0.372	901	0.6	2.361	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	40	1124	952	0.042	40	0.0	3.944	A
2 - A534 Wrexham Road (East)	549	570	1309	0.420	549	0.7	4.739	A
3 - Industrial Estate Road	1960	493	2230	0.879	1959	6.9	13.119	B
4 - Sandy Lane	29	2437	336	0.085	29	0.1	11.692	B
5 - A534 (West)	902	382	2423	0.372	902	0.6	2.366	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	32	921	1048	0.031	32	0.0	3.545	A
2 - A534 Wrexham Road (East)	449	466	1360	0.330	449	0.5	3.958	A
3 - Industrial Estate Road	1600	404	2287	0.700	1618	2.4	5.520	A
4 - Sandy Lane	23	2010	536	0.044	24	0.0	7.024	A
5 - A534 (West)	736	315	2467	0.298	737	0.4	2.083	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	27	770	1118	0.024	27	0.0	3.300	A
2 - A534 Wrexham Road (East)	376	390	1397	0.269	376	0.4	3.526	A
3 - Industrial Estate Road	1340	338	2330	0.575	1344	1.4	3.669	A
4 - Sandy Lane	20	1672	694	0.028	20	0.0	5.335	A
5 - A534 (West)	617	262	2502	0.246	617	0.3	1.912	A

2037 Base + Development (Phase 1 + 2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	21.03	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	21.03	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	192	100.000
2 - A534 Wrexham Road (East)		✓	569	100.000
3 - Industrial Estate Road		✓	755	100.000
4 - Sandy Lane		✓	38	100.000
5 - A534 (West)		✓	1958	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	171	0	10
	2 - A534 Wrexham Road (East)	2	0	203	8	356
	3 - Industrial Estate Road	23	86	2	1	643
	4 - Sandy Lane	1	8	4	0	25
	5 - A534 (West)	7	364	1560	25	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.50	17.16	1.0	C
2 - A534 Wrexham Road (East)	0.99	91.60	15.8	F
3 - Industrial Estate Road	0.37	2.50	0.6	A
4 - Sandy Lane	0.05	4.18	0.0	A
5 - A534 (West)	0.83	8.37	4.9	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	145	1539	758	0.191	144	0.2	5.853	A
2 - A534 Wrexham Road (East)	428	1331	936	0.458	425	0.8	6.997	A
3 - Industrial Estate Road	568	301	2353	0.242	567	0.3	2.015	A
4 - Sandy Lane	29	843	1082	0.026	29	0.0	3.416	A
5 - A534 (West)	1474	95	2613	0.564	1469	1.3	3.132	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	173	1841	616	0.280	172	0.4	8.093	A
2 - A534 Wrexham Road (East)	512	1592	808	0.633	508	1.7	11.863	B
3 - Industrial Estate Road	679	360	2315	0.293	678	0.4	2.199	A
4 - Sandy Lane	34	1008	1005	0.034	34	0.0	3.708	A
5 - A534 (West)	1760	113	2601	0.677	1757	2.1	4.250	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	211	2247	426	0.497	209	1.0	16.455	C
2 - A534 Wrexham Road (East)	626	1942	636	0.984	589	11.0	54.629	F
3 - Industrial Estate Road	831	419	2277	0.365	831	0.6	2.487	A
4 - Sandy Lane	42	1213	909	0.046	42	0.0	4.152	A
5 - A534 (West)	2156	138	2584	0.834	2145	4.8	8.004	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	211	2258	421	0.502	211	1.0	17.159	C
2 - A534 Wrexham Road (East)	626	1953	631	0.992	608	15.8	91.597	F
3 - Industrial Estate Road	831	431	2269	0.366	831	0.6	2.502	A
4 - Sandy Lane	42	1226	903	0.046	42	0.0	4.179	A
5 - A534 (West)	2156	139	2584	0.834	2155	4.9	8.372	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	173	1855	610	0.283	175	0.4	8.326	A
2 - A534 Wrexham Road (East)	512	1606	801	0.638	567	1.8	19.009	C
3 - Industrial Estate Road	679	398	2291	0.296	679	0.4	2.236	A
4 - Sandy Lane	34	1046	987	0.035	34	0.0	3.778	A
5 - A534 (West)	1760	114	2601	0.677	1771	2.1	4.397	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	145	1547	754	0.192	145	0.2	5.923	A
2 - A534 Wrexham Road (East)	428	1339	932	0.460	432	0.9	7.254	A
3 - Industrial Estate Road	568	306	2350	0.242	569	0.3	2.021	A
4 - Sandy Lane	29	849	1079	0.027	29	0.0	3.429	A
5 - A534 (West)	1474	95	2613	0.564	1477	1.3	3.178	A

2037 Base + Development (Phase 1 + 2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	41.71	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	41.71	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D22	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	44	100.000
2 - A534 Wrexham Road (East)		✓	522	100.000
3 - Industrial Estate Road		✓	2050	100.000
4 - Sandy Lane		✓	28	100.000
5 - A534 (West)		✓	994	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	6	29	1	8
	2 - A534 Wrexham Road (East)	7	0	66	1	448
	3 - Industrial Estate Road	139	230	1	3	1677
	4 - Sandy Lane	1	6	1	0	20
	5 - A534 (West)	15	339	629	9	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.06	4.46	0.1	A
2 - A534 Wrexham Road (East)	0.47	5.56	0.9	A
3 - Industrial Estate Road	1.02	70.90	47.3	F
4 - Sandy Lane	0.14	19.57	0.2	C
5 - A534 (West)	0.46	2.75	0.8	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	33	914	1051	0.032	33	0.0	3.536	A
2 - A534 Wrexham Road (East)	393	511	1338	0.294	391	0.4	3.795	A
3 - Industrial Estate Road	1543	357	2317	0.666	1535	2.0	4.559	A
4 - Sandy Lane	21	1882	596	0.035	21	0.0	6.256	A
5 - A534 (West)	748	288	2485	0.301	747	0.4	2.069	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	40	1093	967	0.041	40	0.0	3.881	A
2 - A534 Wrexham Road (East)	469	611	1289	0.364	469	0.6	4.385	A
3 - Industrial Estate Road	1843	427	2272	0.811	1834	4.1	8.070	A
4 - Sandy Lane	25	2249	425	0.059	25	0.1	9.010	A
5 - A534 (West)	894	345	2447	0.365	893	0.6	2.316	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	48	1327	857	0.057	48	0.1	4.451	A
2 - A534 Wrexham Road (East)	575	748	1222	0.470	573	0.9	5.542	A
3 - Industrial Estate Road	2257	523	2210	1.021	2152	30.3	37.412	E
4 - Sandy Lane	31	2660	232	0.133	30	0.1	17.792	C
5 - A534 (West)	1094	405	2407	0.455	1093	0.8	2.736	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	48	1332	855	0.057	48	0.1	4.465	A
2 - A534 Wrexham Road (East)	575	749	1222	0.471	575	0.9	5.565	A
3 - Industrial Estate Road	2257	524	2210	1.021	2189	47.3	70.904	F
4 - Sandy Lane	31	2698	215	0.144	31	0.2	19.572	C
5 - A534 (West)	1094	412	2403	0.455	1094	0.8	2.750	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	40	1114	957	0.041	40	0.0	3.925	A
2 - A534 Wrexham Road (East)	469	612	1288	0.364	470	0.6	4.407	A
3 - Industrial Estate Road	1843	429	2271	0.812	2013	4.6	22.872	C
4 - Sandy Lane	25	2430	340	0.074	26	0.1	11.454	B
5 - A534 (West)	894	377	2426	0.368	895	0.6	2.352	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	33	918	1049	0.032	33	0.0	3.544	A
2 - A534 Wrexham Road (East)	393	512	1337	0.294	394	0.4	3.819	A
3 - Industrial Estate Road	1543	359	2316	0.666	1554	2.0	4.784	A
4 - Sandy Lane	21	1902	587	0.036	21	0.0	6.367	A
5 - A534 (West)	748	292	2482	0.301	749	0.4	2.077	A

2030 Base + Committed + Developement (Phase 1) [Without KSS2], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.95	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.95	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D23	2030 Base + Committed + Developement (Phase 1) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	179	100.000
2 - A534 Wrexham Road (East)		✓	535	100.000
3 - Industrial Estate Road		✓	662	100.000
4 - Sandy Lane		✓	35	100.000
5 - A534 (West)		✓	1791	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	158	0	10
	2 - A534 Wrexham Road (East)	2	0	189	7	337
	3 - Industrial Estate Road	19	76	2	1	564
	4 - Sandy Lane	1	7	4	0	23
	5 - A534 (West)	6	344	1416	23	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.38	11.43	0.6	B
2 - A534 Wrexham Road (East)	0.82	27.27	4.2	D
3 - Industrial Estate Road	0.32	2.32	0.5	A
4 - Sandy Lane	0.04	3.93	0.0	A
5 - A534 (West)	0.76	5.77	3.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	135	1406	820	0.164	134	0.2	5.244	A
2 - A534 Wrexham Road (East)	403	1212	995	0.405	400	0.7	6.030	A
3 - Industrial Estate Road	498	285	2364	0.211	497	0.3	1.928	A
4 - Sandy Lane	26	759	1121	0.024	26	0.0	3.287	A
5 - A534 (West)	1348	83	2621	0.515	1344	1.1	2.811	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	161	1682	690	0.233	160	0.3	6.787	A
2 - A534 Wrexham Road (East)	481	1450	878	0.548	479	1.2	8.976	A
3 - Industrial Estate Road	595	341	2328	0.256	595	0.3	2.077	A
4 - Sandy Lane	31	908	1051	0.030	31	0.0	3.528	A
5 - A534 (West)	1610	100	2610	0.617	1608	1.6	3.585	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	197	2057	515	0.383	196	0.6	11.246	B
2 - A534 Wrexham Road (East)	589	1772	720	0.818	578	3.9	23.786	C
3 - Industrial Estate Road	729	412	2282	0.319	728	0.5	2.317	A
4 - Sandy Lane	39	1107	959	0.040	38	0.0	3.912	A
5 - A534 (West)	1972	122	2595	0.760	1966	3.1	5.669	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	197	2063	512	0.385	197	0.6	11.427	B
2 - A534 Wrexham Road (East)	589	1778	717	0.822	588	4.2	27.273	D
3 - Industrial Estate Road	729	419	2278	0.320	729	0.5	2.324	A
4 - Sandy Lane	39	1113	955	0.040	39	0.0	3.925	A
5 - A534 (West)	1972	122	2595	0.760	1972	3.1	5.773	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	161	1691	687	0.234	162	0.3	6.880	A
2 - A534 Wrexham Road (East)	481	1458	874	0.550	493	1.3	9.729	A
3 - Industrial Estate Road	595	350	2322	0.256	596	0.3	2.086	A
4 - Sandy Lane	31	918	1047	0.030	32	0.0	3.544	A
5 - A534 (West)	1610	100	2610	0.617	1616	1.6	3.646	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	135	1413	817	0.165	135	0.2	5.287	A
2 - A534 Wrexham Road (East)	403	1218	991	0.406	405	0.7	6.161	A
3 - Industrial Estate Road	498	288	2362	0.211	499	0.3	1.932	A
4 - Sandy Lane	26	764	1119	0.024	26	0.0	3.294	A
5 - A534 (West)	1348	84	2620	0.515	1351	1.1	2.841	A

2030 Base + Committed + Developement (Phase 1) [Without KSS2], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	14.87	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.87	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D24	2030 Base + Committed + Developement (Phase 1) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	39	100.000
2 - A534 Wrexham Road (East)		✓	504	100.000
3 - Industrial Estate Road		✓	1902	100.000
4 - Sandy Lane		✓	26	100.000
5 - A534 (West)		✓	898	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	5	26	1	7
	2 - A534 Wrexham Road (East)	6	0	74	1	423
	3 - Industrial Estate Road	129	215	1	3	1554
	4 - Sandy Lane	1	5	1	0	19
	5 - A534 (West)	14	321	553	8	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.05	4.16	0.0	A
2 - A534 Wrexham Road (East)	0.44	5.07	0.8	A
3 - Industrial Estate Road	0.94	23.53	12.9	C
4 - Sandy Lane	0.10	14.56	0.1	B
5 - A534 (West)	0.41	2.52	0.7	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	29	830	1090	0.027	29	0.0	3.393	A
2 - A534 Wrexham Road (East)	379	450	1368	0.277	378	0.4	3.632	A
3 - Industrial Estate Road	1432	336	2331	0.614	1426	1.6	3.951	A
4 - Sandy Lane	20	1752	657	0.030	19	0.0	5.646	A
5 - A534 (West)	676	268	2498	0.271	675	0.4	1.972	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	35	993	1014	0.035	35	0.0	3.678	A
2 - A534 Wrexham Road (East)	453	538	1325	0.342	453	0.5	4.125	A
3 - Industrial Estate Road	1710	402	2288	0.747	1705	2.9	6.115	A
4 - Sandy Lane	23	2095	496	0.047	23	0.0	7.608	A
5 - A534 (West)	807	321	2463	0.328	807	0.5	2.173	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	43	1213	910	0.047	43	0.0	4.149	A
2 - A534 Wrexham Road (East)	555	659	1266	0.438	554	0.8	5.051	A
3 - Industrial Estate Road	2094	492	2230	0.939	2060	11.4	18.372	C
4 - Sandy Lane	29	2538	289	0.099	28	0.1	13.783	B
5 - A534 (West)	989	388	2419	0.409	988	0.7	2.515	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	43	1217	909	0.047	43	0.0	4.158	A
2 - A534 Wrexham Road (East)	555	659	1265	0.439	555	0.8	5.067	A
3 - Industrial Estate Road	2094	493	2230	0.939	2088	12.9	23.528	C
4 - Sandy Lane	29	2567	276	0.104	29	0.1	14.557	B
5 - A534 (West)	989	393	2415	0.409	989	0.7	2.523	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	35	1000	1011	0.035	35	0.0	3.692	A
2 - A534 Wrexham Road (East)	453	539	1324	0.342	454	0.5	4.141	A
3 - Industrial Estate Road	1710	404	2287	0.748	1749	3.0	7.159	A
4 - Sandy Lane	23	2141	475	0.049	24	0.1	7.977	A
5 - A534 (West)	807	329	2458	0.328	808	0.5	2.184	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	29	834	1088	0.027	29	0.0	3.399	A
2 - A534 Wrexham Road (East)	379	451	1367	0.278	380	0.4	3.650	A
3 - Industrial Estate Road	1432	338	2330	0.615	1438	1.6	4.060	A
4 - Sandy Lane	20	1766	651	0.030	20	0.0	5.706	A
5 - A534 (West)	676	271	2496	0.271	677	0.4	1.979	A

2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	35.78	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	35.78	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D25	2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	195	100.000
2 - A534 Wrexham Road (East)		✓	577	100.000
3 - Industrial Estate Road		✓	828	100.000
4 - Sandy Lane		✓	38	100.000
5 - A534 (West)		✓	2066	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	174	0	10
	2 - A534 Wrexham Road (East)	2	0	211	8	356
	3 - Industrial Estate Road	25	93	2	1	707
	4 - Sandy Lane	1	8	4	0	25
	5 - A534 (West)	7	383	1649	25	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.59	24.30	1.4	C
2 - A534 Wrexham Road (East)	1.09	175.51	33.9	F
3 - Industrial Estate Road	0.40	2.62	0.7	A
4 - Sandy Lane	0.05	4.31	0.0	A
5 - A534 (West)	0.88	11.71	7.1	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	147	1625	718	0.205	146	0.3	6.284	A
2 - A534 Wrexham Road (East)	434	1399	903	0.481	431	0.9	7.571	A
3 - Industrial Estate Road	623	301	2353	0.265	622	0.4	2.077	A
4 - Sandy Lane	29	897	1056	0.027	28	0.0	3.501	A
5 - A534 (West)	1555	101	2609	0.596	1550	1.5	3.382	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	175	1943	568	0.308	175	0.4	9.127	A
2 - A534 Wrexham Road (East)	519	1674	768	0.675	514	2.0	13.952	B
3 - Industrial Estate Road	744	359	2316	0.321	744	0.5	2.290	A
4 - Sandy Lane	34	1073	974	0.035	34	0.0	3.827	A
5 - A534 (West)	1857	121	2596	0.716	1853	2.5	4.824	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	215	2367	369	0.581	211	1.3	22.295	C
2 - A534 Wrexham Road (East)	635	2037	590	1.077	566	19.2	85.157	F
3 - Industrial Estate Road	912	400	2290	0.398	911	0.7	2.609	A
4 - Sandy Lane	42	1274	880	0.048	42	0.0	4.293	A
5 - A534 (West)	2275	148	2578	0.882	2257	6.8	10.700	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	215	2384	362	0.593	214	1.4	24.302	C
2 - A534 Wrexham Road (East)	635	2053	582	1.091	577	33.9	175.511	F
3 - Industrial Estate Road	912	407	2285	0.399	912	0.7	2.620	A
4 - Sandy Lane	42	1282	877	0.048	42	0.0	4.310	A
5 - A534 (West)	2275	148	2577	0.883	2273	7.1	11.714	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	175	1965	558	0.314	179	0.5	9.595	A
2 - A534 Wrexham Road (East)	519	1696	757	0.685	645	2.4	59.750	F
3 - Industrial Estate Road	744	443	2262	0.329	745	0.5	2.373	A
4 - Sandy Lane	34	1155	936	0.037	34	0.0	3.991	A
5 - A534 (West)	1857	122	2595	0.716	1876	2.6	5.125	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	147	1635	713	0.206	148	0.3	6.379	A
2 - A534 Wrexham Road (East)	434	1409	898	0.484	440	1.0	7.962	A
3 - Industrial Estate Road	623	307	2349	0.265	624	0.4	2.086	A
4 - Sandy Lane	29	905	1053	0.027	29	0.0	3.514	A
5 - A534 (West)	1555	102	2608	0.596	1560	1.5	3.445	A

2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	78.95	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	78.95	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D26	2037 Base + Committed + Developement (Phase 1 + 2) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	47	100.000
2 - A534 Wrexham Road (East)		✓	543	100.000
3 - Industrial Estate Road		✓	2173	100.000
4 - Sandy Lane		✓	28	100.000
5 - A534 (West)		✓	1080	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	6	32	1	8
	2 - A534 Wrexham Road (East)	7	0	87	1	448
	3 - Industrial Estate Road	143	238	1	3	1788
	4 - Sandy Lane	1	6	1	0	20
	5 - A534 (West)	15	348	706	9	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.06	4.73	0.1	A
2 - A534 Wrexham Road (East)	0.51	6.20	1.0	A
3 - Industrial Estate Road	1.08	137.26	104.0	F
4 - Sandy Lane	0.15	20.46	0.2	C
5 - A534 (West)	0.49	2.95	1.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	35	984	1018	0.035	35	0.0	3.663	A
2 - A534 Wrexham Road (East)	409	571	1309	0.312	407	0.5	3.984	A
3 - Industrial Estate Road	1636	357	2317	0.706	1627	2.4	5.143	A
4 - Sandy Lane	21	1973	554	0.038	21	0.0	6.755	A
5 - A534 (West)	813	297	2479	0.328	811	0.5	2.157	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	42	1176	928	0.046	42	0.0	4.065	A
2 - A534 Wrexham Road (East)	488	683	1254	0.389	487	0.6	4.693	A
3 - Industrial Estate Road	1953	427	2272	0.860	1940	5.7	10.451	B
4 - Sandy Lane	25	2355	375	0.067	25	0.1	10.282	B
5 - A534 (West)	971	355	2441	0.398	970	0.7	2.446	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	52	1419	814	0.064	52	0.1	4.723	A
2 - A534 Wrexham Road (East)	598	836	1179	0.507	596	1.0	6.164	A
3 - Industrial Estate Road	2393	523	2211	1.082	2186	57.4	60.106	F
4 - Sandy Lane	31	2693	217	0.142	30	0.2	19.275	C
5 - A534 (West)	1189	401	2410	0.493	1188	1.0	2.942	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	52	1423	812	0.064	52	0.1	4.734	A
2 - A534 Wrexham Road (East)	598	837	1178	0.507	598	1.0	6.200	A
3 - Industrial Estate Road	2393	524	2210	1.083	2206	104.0	137.258	F
4 - Sandy Lane	31	2715	207	0.149	31	0.2	20.457	C
5 - A534 (West)	1189	404	2408	0.494	1189	1.0	2.953	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	42	1212	911	0.046	42	0.0	4.145	A
2 - A534 Wrexham Road (East)	488	684	1253	0.390	490	0.6	4.726	A
3 - Industrial Estate Road	1953	429	2271	0.860	2249	30.1	110.016	F
4 - Sandy Lane	25	2665	230	0.109	25	0.1	17.614	C
5 - A534 (West)	971	409	2405	0.404	972	0.7	2.514	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	35	1000	1010	0.035	35	0.0	3.694	A
2 - A534 Wrexham Road (East)	409	573	1308	0.313	410	0.5	4.011	A
3 - Industrial Estate Road	1636	359	2316	0.706	1746	2.5	7.648	A
4 - Sandy Lane	21	2095	497	0.042	21	0.0	7.577	A
5 - A534 (West)	813	318	2465	0.330	814	0.5	2.181	A

2030 Base + Committed + Developement (Phase 1) [Without Kingmoor], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	10.92	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	10.92	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D27	2030 Base + Committed + Developement (Phase 1) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	176	100.000
2 - A534 Wrexham Road (East)		✓	534	100.000
3 - Industrial Estate Road		✓	649	100.000
4 - Sandy Lane		✓	35	100.000
5 - A534 (West)		✓	1879	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	155	0	10
	2 - A534 Wrexham Road (East)	2	0	181	7	344
	3 - Industrial Estate Road	17	70	2	1	559
	4 - Sandy Lane	1	7	4	0	23
	5 - A534 (West)	6	363	1485	23	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.41	13.04	0.7	B
2 - A534 Wrexham Road (East)	0.86	35.81	5.5	E
3 - Industrial Estate Road	0.31	2.31	0.5	A
4 - Sandy Lane	0.04	3.91	0.0	A
5 - A534 (West)	0.80	6.76	3.8	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	133	1468	791	0.168	132	0.2	5.453	A
2 - A534 Wrexham Road (East)	402	1261	970	0.414	399	0.7	6.273	A
3 - Industrial Estate Road	489	290	2360	0.207	488	0.3	1.921	A
4 - Sandy Lane	26	754	1123	0.023	26	0.0	3.281	A
5 - A534 (West)	1415	77	2625	0.539	1410	1.2	2.953	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	158	1756	656	0.241	158	0.3	7.219	A
2 - A534 Wrexham Road (East)	480	1509	849	0.565	478	1.3	9.638	A
3 - Industrial Estate Road	583	347	2324	0.251	583	0.3	2.068	A
4 - Sandy Lane	31	903	1054	0.030	31	0.0	3.519	A
5 - A534 (West)	1689	93	2615	0.646	1687	1.8	3.868	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	194	2146	473	0.409	192	0.7	12.749	B
2 - A534 Wrexham Road (East)	588	1843	685	0.858	573	4.9	29.181	D
3 - Industrial Estate Road	715	417	2278	0.314	714	0.5	2.301	A
4 - Sandy Lane	39	1098	963	0.040	38	0.0	3.894	A
5 - A534 (West)	2069	113	2601	0.795	2061	3.8	6.575	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	194	2153	470	0.413	194	0.7	13.038	B
2 - A534 Wrexham Road (East)	588	1851	681	0.863	586	5.5	35.805	E
3 - Industrial Estate Road	715	426	2273	0.314	715	0.5	2.309	A
4 - Sandy Lane	39	1106	959	0.040	39	0.0	3.911	A
5 - A534 (West)	2069	113	2601	0.795	2069	3.8	6.756	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	158	1766	651	0.243	160	0.3	7.349	A
2 - A534 Wrexham Road (East)	480	1519	844	0.569	497	1.4	10.832	B
3 - Industrial Estate Road	583	360	2315	0.252	584	0.3	2.081	A
4 - Sandy Lane	31	916	1048	0.030	32	0.0	3.541	A
5 - A534 (West)	1689	93	2614	0.646	1697	1.8	3.958	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	133	1475	788	0.168	133	0.2	5.505	A
2 - A534 Wrexham Road (East)	402	1268	967	0.416	405	0.7	6.431	A
3 - Industrial Estate Road	489	294	2358	0.207	489	0.3	1.926	A
4 - Sandy Lane	26	759	1121	0.024	26	0.0	3.288	A
5 - A534 (West)	1415	78	2624	0.539	1417	1.2	2.988	A

2030 Base + Committed + Developement (Phase 1) [Without Kingmoor], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	17.90	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	17.90	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D28	2030 Base + Committed + Developement (Phase 1) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	36	100.000
2 - A534 Wrexham Road (East)		✓	516	100.000
3 - Industrial Estate Road		✓	1924	100.000
4 - Sandy Lane		✓	26	100.000
5 - A534 (West)		✓	903	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	5	23	1	7
	2 - A534 Wrexham Road (East)	6	0	69	1	440
	3 - Industrial Estate Road	125	208	1	3	1587
	4 - Sandy Lane	1	5	1	0	19
	5 - A534 (West)	14	330	549	8	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.04	4.14	0.0	A
2 - A534 Wrexham Road (East)	0.45	5.14	0.8	A
3 - Industrial Estate Road	0.96	28.84	16.0	D
4 - Sandy Lane	0.11	15.72	0.1	C
5 - A534 (West)	0.41	2.52	0.7	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	27	829	1091	0.025	27	0.0	3.384	A
2 - A534 Wrexham Road (East)	388	445	1371	0.283	387	0.4	3.653	A
3 - Industrial Estate Road	1448	349	2323	0.624	1442	1.6	4.058	A
4 - Sandy Lane	20	1781	643	0.030	19	0.0	5.767	A
5 - A534 (West)	680	260	2503	0.272	678	0.4	1.970	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	32	991	1014	0.032	32	0.0	3.665	A
2 - A534 Wrexham Road (East)	464	532	1328	0.349	463	0.5	4.161	A
3 - Industrial Estate Road	1730	418	2278	0.759	1724	3.1	6.427	A
4 - Sandy Lane	23	2130	480	0.049	23	0.1	7.876	A
5 - A534 (West)	812	311	2470	0.329	811	0.5	2.171	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	40	1210	912	0.043	40	0.0	4.127	A
2 - A534 Wrexham Road (East)	568	651	1269	0.448	567	0.8	5.119	A
3 - Industrial Estate Road	2118	511	2218	0.955	2076	13.5	21.054	C
4 - Sandy Lane	29	2573	273	0.105	28	0.1	14.700	B
5 - A534 (West)	994	375	2427	0.410	993	0.7	2.509	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	40	1214	910	0.044	40	0.0	4.136	A
2 - A534 Wrexham Road (East)	568	652	1269	0.448	568	0.8	5.135	A
3 - Industrial Estate Road	2118	512	2217	0.955	2109	16.0	28.836	D
4 - Sandy Lane	29	2606	258	0.111	29	0.1	15.723	C
5 - A534 (West)	994	380	2424	0.410	994	0.7	2.518	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	32	999	1011	0.032	32	0.0	3.678	A
2 - A534 Wrexham Road (East)	464	533	1327	0.349	465	0.5	4.179	A
3 - Industrial Estate Road	1730	419	2277	0.759	1780	3.3	7.959	A
4 - Sandy Lane	23	2188	453	0.052	24	0.1	8.385	A
5 - A534 (West)	812	321	2463	0.330	813	0.5	2.183	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	27	832	1089	0.025	27	0.0	3.392	A
2 - A534 Wrexham Road (East)	388	446	1370	0.284	389	0.4	3.674	A
3 - Industrial Estate Road	1448	351	2321	0.624	1455	1.7	4.183	A
4 - Sandy Lane	20	1796	637	0.031	20	0.0	5.835	A
5 - A534 (West)	680	262	2502	0.272	680	0.4	1.976	A

2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	48.03	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	48.03	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D29	2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	192	100.000
2 - A534 Wrexham Road (East)		✓	576	100.000
3 - Industrial Estate Road		✓	815	100.000
4 - Sandy Lane		✓	38	100.000
5 - A534 (West)		✓	2135	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	11	171	0	10
	2 - A534 Wrexham Road (East)	2	0	203	8	363
	3 - Industrial Estate Road	23	87	2	1	702
	4 - Sandy Lane	1	8	4	0	25
	5 - A534 (West)	7	383	1718	25	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.64	29.96	1.7	D
2 - A534 Wrexham Road (East)	1.16	243.92	47.7	F
3 - Industrial Estate Road	0.39	2.58	0.6	A
4 - Sandy Lane	0.05	4.25	0.0	A
5 - A534 (West)	0.91	14.94	9.3	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	145	1672	696	0.208	144	0.3	6.510	A
2 - A534 Wrexham Road (East)	434	1448	879	0.494	430	1.0	7.956	A
3 - Industrial Estate Road	614	306	2350	0.261	612	0.4	2.069	A
4 - Sandy Lane	29	893	1059	0.027	28	0.0	3.494	A
5 - A534 (West)	1607	95	2613	0.615	1601	1.6	3.537	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	173	1999	542	0.318	172	0.5	9.702	A
2 - A534 Wrexham Road (East)	518	1732	739	0.700	513	2.2	15.550	C
3 - Industrial Estate Road	733	365	2312	0.317	732	0.5	2.279	A
4 - Sandy Lane	34	1067	977	0.035	34	0.0	3.816	A
5 - A534 (West)	1919	114	2600	0.738	1915	2.8	5.213	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	211	2430	340	0.622	207	1.5	26.350	D
2 - A534 Wrexham Road (East)	634	2104	557	1.138	542	25.4	109.657	F
3 - Industrial Estate Road	897	391	2295	0.391	897	0.6	2.572	A
4 - Sandy Lane	42	1252	891	0.047	42	0.0	4.239	A
5 - A534 (West)	2351	139	2583	0.910	2327	8.7	12.983	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	211	2452	330	0.641	211	1.7	29.963	D
2 - A534 Wrexham Road (East)	634	2125	547	1.159	545	47.7	243.917	F
3 - Industrial Estate Road	897	393	2294	0.391	897	0.6	2.577	A
4 - Sandy Lane	42	1255	889	0.047	42	0.0	4.246	A
5 - A534 (West)	2351	140	2583	0.910	2348	9.3	14.938	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	173	2029	528	0.327	177	0.5	10.406	B
2 - A534 Wrexham Road (East)	518	1762	725	0.715	695	3.3	130.601	F
3 - Industrial Estate Road	733	484	2235	0.328	733	0.5	2.399	A
4 - Sandy Lane	34	1184	922	0.037	34	0.0	4.052	A
5 - A534 (West)	1919	115	2600	0.738	1945	2.9	5.703	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	145	1683	690	0.209	145	0.3	6.620	A
2 - A534 Wrexham Road (East)	434	1460	873	0.497	443	1.0	8.540	A
3 - Industrial Estate Road	614	315	2345	0.262	614	0.4	2.080	A
4 - Sandy Lane	29	903	1054	0.027	29	0.0	3.513	A
5 - A534 (West)	1607	96	2612	0.615	1612	1.6	3.619	A

2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	91.05	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	91.05	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D30	2037 Base + Committed + Developement (Phase 1 + 2) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Hall Lane		✓	44	100.000
2 - A534 Wrexham Road (East)		✓	555	100.000
3 - Industrial Estate Road		✓	2195	100.000
4 - Sandy Lane		✓	28	100.000
5 - A534 (West)		✓	1076	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - Borrás Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrás Hall Lane	0	6	29	1	8
	2 - A534 Wrexham Road (East)	7	0	82	1	465
	3 - Industrial Estate Road	139	231	1	3	1821
	4 - Sandy Lane	1	6	1	0	20
	5 - A534 (West)	15	348	702	9	2

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - Borrass Hall Lane	2 - A534 Wrexham Road (East)	3 - Industrial Estate Road	4 - Sandy Lane	5 - A534 (West)
From	1 - Borrass Hall Lane	0	0	0	0	0
	2 - A534 Wrexham Road (East)	0	0	0	0	0
	3 - Industrial Estate Road	0	0	0	0	0
	4 - Sandy Lane	0	0	0	0	0
	5 - A534 (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrass Hall Lane	0.06	4.67	0.1	A
2 - A534 Wrexham Road (East)	0.52	6.30	1.1	A
3 - Industrial Estate Road	1.10	158.30	121.2	F
4 - Sandy Lane	0.15	20.89	0.2	C
5 - A534 (West)	0.49	2.92	1.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	33	976	1022	0.032	33	0.0	3.640	A
2 - A534 Wrexham Road (East)	418	565	1311	0.319	416	0.5	4.013	A
3 - Industrial Estate Road	1653	370	2309	0.716	1643	2.5	5.324	A
4 - Sandy Lane	21	2002	540	0.039	21	0.0	6.931	A
5 - A534 (West)	810	289	2484	0.326	808	0.5	2.146	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	40	1166	932	0.042	40	0.0	4.032	A
2 - A534 Wrexham Road (East)	499	676	1257	0.397	498	0.7	4.739	A
3 - Industrial Estate Road	1973	443	2262	0.872	1958	6.2	11.317	B
4 - Sandy Lane	25	2388	360	0.070	25	0.1	10.758	B
5 - A534 (West)	967	344	2447	0.395	967	0.7	2.429	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrass Hall Lane	48	1405	821	0.059	48	0.1	4.662	A
2 - A534 Wrexham Road (East)	611	828	1183	0.517	609	1.1	6.263	A
3 - Industrial Estate Road	2417	541	2199	1.099	2179	65.8	67.425	F
4 - Sandy Lane	31	2705	211	0.146	30	0.2	19.848	C
5 - A534 (West)	1185	385	2421	0.489	1183	1.0	2.907	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	48	1408	819	0.059	48	0.1	4.670	A
2 - A534 Wrexham Road (East)	611	829	1182	0.517	611	1.1	6.302	A
3 - Industrial Estate Road	2417	543	2198	1.100	2195	121.2	158.301	F
4 - Sandy Lane	31	2723	203	0.152	31	0.2	20.893	C
5 - A534 (West)	1185	388	2419	0.490	1185	1.0	2.916	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	40	1198	917	0.043	40	0.0	4.102	A
2 - A534 Wrexham Road (East)	499	678	1256	0.397	501	0.7	4.775	A
3 - Industrial Estate Road	1973	445	2261	0.873	2242	53.9	142.195	F
4 - Sandy Lane	25	2674	226	0.111	25	0.1	17.968	C
5 - A534 (West)	967	393	2416	0.400	968	0.7	2.491	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Hall Lane	33	1001	1010	0.033	33	0.0	3.688	A
2 - A534 Wrexham Road (East)	418	568	1310	0.319	419	0.5	4.040	A
3 - Industrial Estate Road	1653	372	2308	0.716	1858	2.6	12.776	B
4 - Sandy Lane	21	2219	439	0.048	21	0.1	8.630	A
5 - A534 (West)	810	325	2460	0.329	811	0.5	2.183	A

Appendix E Junction 3 - A534/A5156/A534 Holt Road

Junctions 10		
ARCADY 10 - Roundabout Module		
Version: 10.0.1.1519		
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Filename: A534, A5156 ARCADY (Existing) [Apr 24].j10

Path: C:\Users\mchau\Downloads\Wrexham Mar 2024

Report generation date: 03/04/2024 09:15:48

-
- »2023 Base, AM
 - »2023 Base, PM
 - »2030 Base, AM
 - »2030 Base, PM
 - »2037 Base, AM
 - »2037 Base, PM
 - »2030 Base + Development (Phase 1), AM
 - »2030 Base + Development (Phase 1), PM
 - »2037 Base + Development (Phase 1 + 2), AM
 - »2037 Base + Development (Phase 1 + 2), PM
 - »2030 Base + Committed + Development (Phase 1) [Without KSS2], AM
 - »2030 Base + Committed + Development (Phase 1) [Without KSS2], PM
 - »2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2], AM
 - »2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2], PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2023 Base									
1 - Golf Site Access	D1	0.4	7.65	0.26	A	D2	0.2	4.39	0.14	A
2 - A534 (East)		0.5	2.16	0.34	A		2.8	5.52	0.74	A
3 - A534 Holt Road (West)		1.0	4.86	0.49	A		1.1	7.65	0.53	A
4 - A5156		1.5	3.49	0.60	A		0.5	1.97	0.32	A
	2030 Base									
1 - Golf Site Access	D3	0.4	8.62	0.30	A	D4	0.2	4.58	0.16	A
2 - A534 (East)		0.6	2.25	0.36	A		3.6	6.77	0.79	A
3 - A534 Holt Road (West)		1.1	5.29	0.52	A		1.4	9.07	0.58	A
4 - A5156		1.8	3.90	0.64	A		0.5	2.03	0.34	A
	2037 Base									
1 - Golf Site Access	D5	0.5	9.95	0.34	A	D6	0.2	4.78	0.17	A
2 - A534 (East)		0.6	2.34	0.38	A		4.9	8.80	0.83	A
3 - A534 Holt Road (West)		1.3	5.81	0.56	A		1.8	11.30	0.65	B
4 - A5156		2.1	4.44	0.68	A		0.6	2.11	0.36	A
	2030 Base + Development (Phase 1)									
1 - Golf Site Access	D7	0.5	10.28	0.33	B	D8	0.2	4.82	0.16	A
2 - A534 (East)		0.6	2.36	0.39	A		5.0	8.94	0.84	A
3 - A534 Holt Road (West)		1.2	5.74	0.55	A		1.7	10.92	0.63	B
4 - A5156		2.3	4.69	0.70	A		0.6	2.14	0.37	A
	2037 Base + Development (Phase 1 + 2)									
1 - Golf Site Access	D9	0.8	16.46	0.46	C	D10	0.2	5.51	0.19	A
2 - A534 (East)		0.9	2.71	0.47	A		19.3	30.93	0.97	D
3 - A534 Holt Road (West)		1.7	7.39	0.63	A		3.4	20.87	0.78	C
4 - A5156		4.1	7.45	0.81	A		0.8	2.44	0.44	A
	2030 Base + Committed + Development (Phase 1) [Without KSS2]									
1 - Golf Site Access	D11	0.6	11.64	0.36	B	D12	0.2	5.06	0.17	A
2 - A534 (East)		0.7	2.48	0.42	A		7.1	12.20	0.88	B
3 - A534 Holt Road (West)		1.3	6.14	0.57	A		2.0	13.22	0.68	B
4 - A5156		2.7	5.35	0.74	A		0.7	2.26	0.40	A
	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]									
1 - Golf Site Access	D13	1.0	20.19	0.51	C	D14	0.2	5.82	0.20	A
2 - A534 (East)		1.0	2.86	0.49	A		46.6	63.82	1.02	F
3 - A534 Holt Road (West)		1.9	8.03	0.65	A		4.2	26.22	0.82	D
4 - A5156		5.3	9.23	0.85	A		0.9	2.58	0.47	A

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

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

File summary

File Description

Title	A534 / A5156 / Golf Access
Location	Wrexham
Site number	
Date	01/02/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	LAPTOP-DTQ9HGGB\mchau
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15
D2	2023 Base	PM	ONE HOUR	16:15	17:45	15
D3	2030 Base	AM	ONE HOUR	07:45	09:15	15
D4	2030 Base	PM	ONE HOUR	16:15	17:45	15
D5	2037 Base	AM	ONE HOUR	07:45	09:15	15
D6	2037 Base	PM	ONE HOUR	16:15	17:45	15
D7	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D8	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D9	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15
D10	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15
D11	2030 Base + Committed + Development (Phase 1) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15
D12	2030 Base + Committed + Development (Phase 1) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15
D13	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15
D14	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
AL	100.000

2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	3.66	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	3.66	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Golf Site Access		
2	A534 (East)		
3	A534 Holt Road (West)		
4	A5156		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Golf Site Access	3.40	5.60	6.9	20.0	89.3	25.3		
2 - A534 (East)	7.10	9.30	17.2	41.6	89.3	25.2		
3 - A534 Holt Road (West)	3.60	7.10	16.7	24.2	89.3	27.7		
4 - A5156	8.00	10.00	9.1	32.0	89.3	26.6		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Golf Site Access	0.415	1382
2 - A534 (East)	0.613	2735
3 - A534 Holt Road (West)	0.468	1754
4 - A5156	0.629	2864

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)
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	151	100.000
2 - A534 (East)		✓	769	100.000
3 - A534 Holt Road (West)		✓	642	100.000
4 - A5156		✓	1404	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
From	1 - Golf Site Access	0	83	33	35
	2 - A534 (East)	51	1	208	509
	3 - A534 Holt Road (West)	43	320	0	279
	4 - A5156	95	1045	264	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
From	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.26	7.65	0.4	A
2 - A534 (East)	0.34	2.16	0.5	A
3 - A534 Holt Road (West)	0.49	4.86	1.0	A
4 - A5156	0.60	3.49	1.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	114	1224	874	0.130	113	0.1	4.731	A
2 - A534 (East)	579	249	2582	0.224	578	0.3	1.796	A
3 - A534 Holt Road (West)	483	448	1544	0.313	482	0.5	3.381	A
4 - A5156	1057	311	2668	0.396	1054	0.7	2.227	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	136	1464	774	0.175	135	0.2	5.631	A
2 - A534 (East)	691	298	2552	0.271	691	0.4	1.934	A
3 - A534 Holt Road (West)	577	535	1503	0.384	576	0.6	3.882	A
4 - A5156	1262	373	2629	0.480	1261	0.9	2.631	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	166	1792	638	0.261	166	0.3	7.614	A
2 - A534 (East)	847	365	2511	0.337	846	0.5	2.162	A
3 - A534 Holt Road (West)	707	656	1447	0.488	706	0.9	4.846	A
4 - A5156	1546	456	2577	0.600	1544	1.5	3.477	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	166	1795	637	0.261	166	0.4	7.646	A
2 - A534 (East)	847	366	2511	0.337	847	0.5	2.163	A
3 - A534 Holt Road (West)	707	656	1447	0.489	707	1.0	4.864	A
4 - A5156	1546	457	2576	0.600	1546	1.5	3.492	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	136	1468	773	0.176	136	0.2	5.661	A
2 - A534 (East)	691	299	2551	0.271	692	0.4	1.936	A
3 - A534 Holt Road (West)	577	536	1503	0.384	578	0.6	3.900	A
4 - A5156	1262	374	2628	0.480	1264	0.9	2.643	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	114	1228	872	0.130	114	0.2	4.751	A
2 - A534 (East)	579	250	2581	0.224	579	0.3	1.800	A
3 - A534 Holt Road (West)	483	449	1544	0.313	484	0.5	3.400	A
4 - A5156	1057	313	2667	0.396	1058	0.7	2.238	A

2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.90	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.90	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	124	100.000
2 - A534 (East)		✓	1664	100.000
3 - A534 Holt Road (West)		✓	473	100.000
4 - A5156		✓	769	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	44	27	53
	2 - A534 (East)	37	2	237	1388
	3 - A534 Holt Road (West)	23	207	1	242
	4 - A5156	46	433	290	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
From	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.14	4.39	0.2	A
2 - A534 (East)	0.74	5.52	2.8	A
3 - A534 Holt Road (West)	0.53	7.65	1.1	A
4 - A5156	0.32	1.97	0.5	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	93	701	1091	0.086	93	0.1	3.606	A
2 - A534 (East)	1253	279	2564	0.489	1249	0.9	2.730	A
3 - A534 Holt Road (West)	356	1111	1234	0.289	354	0.4	4.086	A
4 - A5156	579	202	2736	0.212	578	0.3	1.667	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	111	838	1034	0.108	111	0.1	3.900	A
2 - A534 (East)	1496	333	2530	0.591	1494	1.4	3.468	A
3 - A534 Holt Road (West)	425	1329	1132	0.376	424	0.6	5.083	A
4 - A5156	691	242	2711	0.255	691	0.3	1.781	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	137	1026	956	0.143	136	0.2	4.389	A
2 - A534 (East)	1832	408	2484	0.737	1827	2.7	5.431	A
3 - A534 Holt Road (West)	521	1625	993	0.524	519	1.1	7.555	A
4 - A5156	847	296	2677	0.316	846	0.5	1.966	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	137	1027	956	0.143	137	0.2	4.394	A
2 - A534 (East)	1832	408	2484	0.737	1832	2.8	5.517	A
3 - A534 Holt Road (West)	521	1629	991	0.525	521	1.1	7.652	A
4 - A5156	847	297	2677	0.316	847	0.5	1.966	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	111	840	1033	0.108	112	0.1	3.905	A
2 - A534 (East)	1496	334	2530	0.591	1501	1.5	3.518	A
3 - A534 Holt Road (West)	425	1335	1129	0.377	427	0.6	5.145	A
4 - A5156	691	244	2710	0.255	692	0.3	1.783	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	93	703	1090	0.086	93	0.1	3.610	A
2 - A534 (East)	1253	279	2563	0.489	1255	1.0	2.754	A
3 - A534 Holt Road (West)	356	1116	1232	0.289	357	0.4	4.119	A
4 - A5156	579	204	2735	0.212	579	0.3	1.669	A

2030 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.01	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.01	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	160	100.000
2 - A534 (East)		✓	814	100.000
3 - A534 Holt Road (West)		✓	680	100.000
4 - A5156		✓	1486	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	88	35	37
	2 - A534 (East)	54	1	220	539
	3 - A534 Holt Road (West)	46	339	0	295
	4 - A5156	101	1106	279	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.30	8.62	0.4	A
2 - A534 (East)	0.36	2.25	0.6	A
3 - A534 Holt Road (West)	0.52	5.29	1.1	A
4 - A5156	0.64	3.90	1.8	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	120	1295	845	0.143	120	0.2	4.963	A
2 - A534 (East)	613	263	2573	0.238	612	0.3	1.835	A
3 - A534 Holt Road (West)	512	474	1532	0.334	510	0.5	3.516	A
4 - A5156	1119	330	2656	0.421	1116	0.7	2.334	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	144	1549	739	0.195	144	0.2	6.043	A
2 - A534 (East)	732	315	2541	0.288	731	0.4	1.989	A
3 - A534 Holt Road (West)	611	567	1489	0.411	611	0.7	4.096	A
4 - A5156	1336	395	2615	0.511	1335	1.0	2.809	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	176	1896	595	0.296	175	0.4	8.566	A
2 - A534 (East)	896	386	2498	0.359	896	0.6	2.246	A
3 - A534 Holt Road (West)	749	694	1429	0.524	747	1.1	5.268	A
4 - A5156	1636	484	2560	0.639	1633	1.8	3.875	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	176	1899	594	0.297	176	0.4	8.623	A
2 - A534 (East)	896	386	2498	0.359	896	0.6	2.247	A
3 - A534 Holt Road (West)	749	695	1429	0.524	749	1.1	5.293	A
4 - A5156	1636	484	2559	0.639	1636	1.8	3.900	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	144	1554	737	0.195	145	0.2	6.083	A
2 - A534 (East)	732	316	2541	0.288	732	0.4	1.992	A
3 - A534 Holt Road (West)	611	568	1488	0.411	613	0.7	4.120	A
4 - A5156	1336	396	2614	0.511	1339	1.1	2.828	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	120	1300	842	0.143	121	0.2	4.990	A
2 - A534 (East)	613	265	2572	0.238	613	0.3	1.836	A
3 - A534 Holt Road (West)	512	475	1531	0.334	513	0.5	3.535	A
4 - A5156	1119	332	2655	0.421	1120	0.7	2.346	A

2030 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.84	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.84	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	132	100.000
2 - A534 (East)		✓	1761	100.000
3 - A534 Holt Road (West)		✓	500	100.000
4 - A5156		✓	814	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	47	29	56
	2 - A534 (East)	39	2	251	1469
	3 - A534 Holt Road (West)	24	219	1	256
	4 - A5156	49	458	307	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.16	4.58	0.2	A
2 - A534 (East)	0.79	6.77	3.6	A
3 - A534 Holt Road (West)	0.58	9.07	1.4	A
4 - A5156	0.34	2.03	0.5	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	99	741	1075	0.092	99	0.1	3.687	A
2 - A534 (East)	1326	295	2554	0.519	1321	1.1	2.912	A
3 - A534 Holt Road (West)	376	1175	1204	0.313	375	0.5	4.331	A
4 - A5156	613	214	2729	0.225	612	0.3	1.700	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	119	887	1014	0.117	119	0.1	4.019	A
2 - A534 (East)	1583	353	2518	0.629	1581	1.7	3.830	A
3 - A534 Holt Road (West)	449	1406	1096	0.410	449	0.7	5.553	A
4 - A5156	732	256	2703	0.271	731	0.4	1.825	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	145	1085	932	0.156	145	0.2	4.575	A
2 - A534 (East)	1939	432	2470	0.785	1931	3.5	6.599	A
3 - A534 Holt Road (West)	551	1718	950	0.580	548	1.3	8.898	A
4 - A5156	896	312	2667	0.336	896	0.5	2.032	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	145	1087	931	0.156	145	0.2	4.581	A
2 - A534 (East)	1939	433	2469	0.785	1939	3.6	6.774	A
3 - A534 Holt Road (West)	551	1724	947	0.581	550	1.4	9.074	A
4 - A5156	896	314	2666	0.336	896	0.5	2.033	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	119	889	1013	0.117	119	0.1	4.027	A
2 - A534 (East)	1583	354	2518	0.629	1591	1.7	3.914	A
3 - A534 Holt Road (West)	449	1414	1092	0.412	452	0.7	5.649	A
4 - A5156	732	258	2702	0.271	732	0.4	1.830	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	99	744	1073	0.093	99	0.1	3.698	A
2 - A534 (East)	1326	296	2553	0.519	1328	1.1	2.946	A
3 - A534 Holt Road (West)	376	1181	1201	0.313	377	0.5	4.377	A
4 - A5156	613	215	2728	0.225	613	0.3	1.704	A

2037 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.47	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.47	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2037 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	169	100.000
2 - A534 (East)		✓	861	100.000
3 - A534 Holt Road (West)		✓	718	100.000
4 - A5156		✓	1572	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	93	37	39
	2 - A534 (East)	57	1	233	570
	3 - A534 Holt Road (West)	48	358	0	312
	4 - A5156	106	1170	296	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
From	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.34	9.95	0.5	A
2 - A534 (East)	0.38	2.34	0.6	A
3 - A534 Holt Road (West)	0.56	5.81	1.3	A
4 - A5156	0.68	4.44	2.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	127	1370	813	0.156	126	0.2	5.235	A
2 - A534 (East)	648	279	2564	0.253	647	0.3	1.878	A
3 - A534 Holt Road (West)	541	501	1519	0.356	538	0.5	3.662	A
4 - A5156	1183	348	2645	0.447	1180	0.8	2.453	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1639	702	0.217	152	0.3	6.539	A
2 - A534 (East)	774	334	2530	0.306	774	0.4	2.049	A
3 - A534 Holt Road (West)	645	599	1473	0.438	645	0.8	4.339	A
4 - A5156	1413	417	2602	0.543	1412	1.2	3.021	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	186	2005	550	0.339	185	0.5	9.852	A
2 - A534 (East)	948	408	2484	0.382	947	0.6	2.341	A
3 - A534 Holt Road (West)	791	734	1411	0.560	789	1.3	5.752	A
4 - A5156	1731	510	2543	0.681	1727	2.1	4.392	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	186	2009	548	0.340	186	0.5	9.947	A
2 - A534 (East)	948	410	2484	0.382	948	0.6	2.343	A
3 - A534 Holt Road (West)	791	734	1410	0.561	790	1.3	5.809	A
4 - A5156	1731	511	2542	0.681	1731	2.1	4.435	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1645	699	0.217	153	0.3	6.602	A
2 - A534 (East)	774	336	2529	0.306	775	0.4	2.052	A
3 - A534 Holt Road (West)	645	600	1473	0.438	647	0.8	4.372	A
4 - A5156	1413	418	2601	0.543	1417	1.2	3.052	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	127	1376	811	0.157	128	0.2	5.270	A
2 - A534 (East)	648	281	2563	0.253	649	0.3	1.880	A
3 - A534 Holt Road (West)	541	503	1519	0.356	541	0.6	3.686	A
4 - A5156	1183	350	2644	0.448	1185	0.8	2.472	A

2037 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.33	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.33	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2037 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	138	100.000
2 - A534 (East)		✓	1860	100.000
3 - A534 Holt Road (West)		✓	530	100.000
4 - A5156		✓	859	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	49	30	59
	2 - A534 (East)	41	2	265	1552
	3 - A534 Holt Road (West)	26	232	1	271
	4 - A5156	51	484	324	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.17	4.78	0.2	A
2 - A534 (East)	0.83	8.80	4.9	A
3 - A534 Holt Road (West)	0.65	11.30	1.8	B
4 - A5156	0.36	2.11	0.6	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	104	783	1057	0.098	103	0.1	3.772	A
2 - A534 (East)	1400	311	2544	0.550	1395	1.2	3.122	A
3 - A534 Holt Road (West)	399	1241	1173	0.340	397	0.5	4.626	A
4 - A5156	647	226	2721	0.238	645	0.3	1.734	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	124	937	993	0.125	124	0.1	4.141	A
2 - A534 (East)	1672	372	2507	0.667	1669	2.0	4.283	A
3 - A534 Holt Road (West)	476	1484	1059	0.450	475	0.8	6.153	A
4 - A5156	772	271	2693	0.287	772	0.4	1.873	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1146	906	0.168	152	0.2	4.769	A
2 - A534 (East)	2048	455	2455	0.834	2037	4.8	8.382	A
3 - A534 Holt Road (West)	584	1811	906	0.644	580	1.8	10.912	B
4 - A5156	946	330	2656	0.356	945	0.6	2.104	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1148	905	0.168	152	0.2	4.777	A
2 - A534 (East)	2048	456	2455	0.834	2047	4.9	8.798	A
3 - A534 Holt Road (West)	584	1821	902	0.647	583	1.8	11.297	B
4 - A5156	946	332	2655	0.356	946	0.6	2.106	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	124	940	992	0.125	124	0.1	4.151	A
2 - A534 (East)	1672	373	2506	0.667	1684	2.0	4.436	A
3 - A534 Holt Road (West)	476	1497	1053	0.452	480	0.8	6.323	A
4 - A5156	772	274	2691	0.287	773	0.4	1.875	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	104	786	1056	0.098	104	0.1	3.781	A
2 - A534 (East)	1400	312	2543	0.551	1404	1.2	3.166	A
3 - A534 Holt Road (West)	399	1248	1170	0.341	400	0.5	4.687	A
4 - A5156	647	228	2720	0.238	647	0.3	1.735	A

2030 Base + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.56	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.56	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	160	100.000
2 - A534 (East)		✓	885	100.000
3 - A534 Holt Road (West)		✓	697	100.000
4 - A5156		✓	1616	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	88	35	37
	2 - A534 (East)	54	1	224	606
	3 - A534 Holt Road (West)	46	356	0	295
	4 - A5156	101	1236	279	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.33	10.28	0.5	B
2 - A534 (East)	0.39	2.36	0.6	A
3 - A534 Holt Road (West)	0.55	5.74	1.2	A
4 - A5156	0.70	4.69	2.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	120	1405	799	0.151	120	0.2	5.296	A
2 - A534 (East)	666	263	2573	0.259	665	0.3	1.886	A
3 - A534 Holt Road (West)	525	524	1509	0.348	523	0.5	3.644	A
4 - A5156	1217	343	2648	0.459	1213	0.8	2.505	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	144	1681	684	0.210	143	0.3	6.653	A
2 - A534 (East)	796	315	2541	0.313	795	0.5	2.061	A
3 - A534 Holt Road (West)	627	627	1460	0.429	626	0.7	4.308	A
4 - A5156	1453	410	2606	0.558	1451	1.3	3.114	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	176	2056	528	0.333	175	0.5	10.169	B
2 - A534 (East)	974	385	2498	0.390	974	0.6	2.359	A
3 - A534 Holt Road (West)	767	768	1395	0.550	766	1.2	5.705	A
4 - A5156	1779	502	2548	0.698	1775	2.3	4.633	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	176	2061	526	0.335	176	0.5	10.276	B
2 - A534 (East)	974	386	2498	0.390	974	0.6	2.362	A
3 - A534 Holt Road (West)	767	769	1394	0.550	767	1.2	5.742	A
4 - A5156	1779	503	2547	0.699	1779	2.3	4.685	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	144	1688	681	0.211	145	0.3	6.718	A
2 - A534 (East)	796	317	2541	0.313	796	0.5	2.064	A
3 - A534 Holt Road (West)	627	628	1460	0.429	628	0.8	4.340	A
4 - A5156	1453	412	2605	0.558	1457	1.3	3.147	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	120	1411	796	0.151	121	0.2	5.334	A
2 - A534 (East)	666	265	2572	0.259	667	0.4	1.891	A
3 - A534 Holt Road (West)	525	526	1508	0.348	526	0.5	3.670	A
4 - A5156	1217	345	2647	0.460	1218	0.9	2.522	A

2030 Base + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.30	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.30	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	132	100.000
2 - A534 (East)		✓	1879	100.000
3 - A534 Holt Road (West)		✓	506	100.000
4 - A5156		✓	894	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	47	29	56
	2 - A534 (East)	39	2	251	1587
	3 - A534 Holt Road (West)	24	225	1	256
	4 - A5156	49	538	307	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
From	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.16	4.82	0.2	A
2 - A534 (East)	0.84	8.94	5.0	A
3 - A534 Holt Road (West)	0.63	10.92	1.7	B
4 - A5156	0.37	2.14	0.6	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	99	806	1048	0.095	99	0.1	3.792	A
2 - A534 (East)	1415	295	2554	0.554	1410	1.2	3.134	A
3 - A534 Holt Road (West)	381	1263	1163	0.328	379	0.5	4.583	A
4 - A5156	673	218	2726	0.247	672	0.3	1.752	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	119	964	982	0.121	119	0.1	4.169	A
2 - A534 (East)	1689	353	2518	0.671	1686	2.0	4.309	A
3 - A534 Holt Road (West)	455	1511	1047	0.435	454	0.8	6.062	A
4 - A5156	804	261	2699	0.298	803	0.4	1.898	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	145	1179	893	0.163	145	0.2	4.815	A
2 - A534 (East)	2069	432	2470	0.838	2057	4.9	8.502	A
3 - A534 Holt Road (West)	557	1844	891	0.626	554	1.6	10.574	B
4 - A5156	984	318	2663	0.370	984	0.6	2.143	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	145	1181	892	0.163	145	0.2	4.822	A
2 - A534 (East)	2069	433	2469	0.838	2068	5.0	8.943	A
3 - A534 Holt Road (West)	557	1854	886	0.629	557	1.7	10.922	B
4 - A5156	984	320	2662	0.370	984	0.6	2.145	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	119	967	981	0.121	119	0.1	4.179	A
2 - A534 (East)	1689	354	2518	0.671	1701	2.1	4.470	A
3 - A534 Holt Road (West)	455	1524	1040	0.437	458	0.8	6.220	A
4 - A5156	804	264	2698	0.298	804	0.4	1.903	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	99	809	1046	0.095	100	0.1	3.801	A
2 - A534 (East)	1415	296	2553	0.554	1418	1.3	3.179	A
3 - A534 Holt Road (West)	381	1271	1159	0.329	382	0.5	4.641	A
4 - A5156	673	220	2725	0.247	673	0.3	1.753	A

2037 Base + Development (Phase 1 + 2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.54	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.54	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	169	100.000
2 - A534 (East)		✓	1051	100.000
3 - A534 Holt Road (West)		✓	757	100.000
4 - A5156		✓	1847	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	93	37	39
	2 - A534 (East)	57	1	249	744
	3 - A534 Holt Road (West)	48	397	0	312
	4 - A5156	106	1445	296	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.46	16.46	0.8	C
2 - A534 (East)	0.47	2.71	0.9	A
3 - A534 Holt Road (West)	0.63	7.39	1.7	A
4 - A5156	0.81	7.45	4.1	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	127	1605	716	0.178	126	0.2	6.098	A
2 - A534 (East)	791	279	2564	0.309	789	0.4	2.027	A
3 - A534 Holt Road (West)	570	632	1458	0.391	567	0.6	4.029	A
4 - A5156	1391	377	2626	0.529	1386	1.1	2.891	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1920	585	0.260	151	0.3	8.291	A
2 - A534 (East)	945	334	2530	0.373	944	0.6	2.270	A
3 - A534 Holt Road (West)	681	755	1400	0.486	679	0.9	4.985	A
4 - A5156	1660	451	2580	0.644	1658	1.8	3.894	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	186	2345	408	0.456	184	0.8	15.925	C
2 - A534 (East)	1157	407	2485	0.466	1156	0.9	2.706	A
3 - A534 Holt Road (West)	833	925	1321	0.631	831	1.7	7.295	A
4 - A5156	2034	552	2516	0.808	2025	4.0	7.189	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	186	2355	404	0.460	186	0.8	16.464	C
2 - A534 (East)	1157	409	2484	0.466	1157	0.9	2.713	A
3 - A534 Holt Road (West)	833	926	1321	0.631	833	1.7	7.387	A
4 - A5156	2034	554	2515	0.808	2033	4.1	7.454	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1933	580	0.262	154	0.4	8.495	A
2 - A534 (East)	945	337	2528	0.374	946	0.6	2.276	A
3 - A534 Holt Road (West)	681	757	1399	0.486	683	1.0	5.049	A
4 - A5156	1660	454	2578	0.644	1670	1.8	4.001	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	127	1614	712	0.179	128	0.2	6.165	A
2 - A534 (East)	791	281	2563	0.309	792	0.4	2.033	A
3 - A534 Holt Road (West)	570	634	1457	0.391	571	0.6	4.069	A
4 - A5156	1391	379	2625	0.530	1393	1.1	2.928	A

2037 Base + Development (Phase 1 + 2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	20.88	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.88	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	138	100.000
2 - A534 (East)		✓	2154	100.000
3 - A534 Holt Road (West)		✓	549	100.000
4 - A5156		✓	1059	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	49	30	59
	2 - A534 (East)	41	2	300	1811
	3 - A534 Holt Road (West)	26	251	1	271
	4 - A5156	51	683	325	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
From	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.19	5.51	0.2	A
2 - A534 (East)	0.97	30.93	19.3	D
3 - A534 Holt Road (West)	0.78	20.87	3.4	C
4 - A5156	0.44	2.44	0.8	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	104	947	989	0.105	103	0.1	4.064	A
2 - A534 (East)	1622	312	2544	0.638	1615	1.7	3.848	A
3 - A534 Holt Road (West)	413	1434	1083	0.382	411	0.6	5.340	A
4 - A5156	797	240	2712	0.294	796	0.4	1.875	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	124	1133	912	0.136	124	0.2	4.568	A
2 - A534 (East)	1936	373	2506	0.773	1930	3.3	6.182	A
3 - A534 Holt Road (West)	494	1714	951	0.519	492	1.1	7.801	A
4 - A5156	952	288	2683	0.355	951	0.5	2.079	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1385	807	0.188	152	0.2	5.489	A
2 - A534 (East)	2372	456	2455	0.966	2321	15.9	21.601	C
3 - A534 Holt Road (West)	604	2063	788	0.767	597	3.0	18.085	C
4 - A5156	1166	348	2644	0.441	1165	0.8	2.432	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1389	806	0.189	152	0.2	5.507	A
2 - A534 (East)	2372	457	2455	0.966	2358	19.3	30.931	D
3 - A534 Holt Road (West)	604	2095	773	0.782	603	3.4	20.866	C
4 - A5156	1166	353	2642	0.441	1166	0.8	2.438	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	124	1139	909	0.136	124	0.2	4.590	A
2 - A534 (East)	1936	374	2506	0.773	1999	3.5	7.975	A
3 - A534 Holt Road (West)	494	1774	923	0.534	502	1.2	8.717	A
4 - A5156	952	294	2679	0.355	953	0.6	2.088	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	104	952	987	0.105	104	0.1	4.077	A
2 - A534 (East)	1622	313	2543	0.638	1629	1.8	3.966	A
3 - A534 Holt Road (West)	413	1446	1077	0.384	415	0.6	5.461	A
4 - A5156	797	243	2711	0.294	798	0.4	1.884	A

2030 Base + Committed + Development (Phase 1) [Without KSS2], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	5.02	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.02	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2030 Base + Committed + Development (Phase 1) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	160	100.000
2 - A534 (East)		✓	950	100.000
3 - A534 Holt Road (West)		✓	707	100.000
4 - A5156		✓	1696	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	88	35	37
	2 - A534 (East)	54	1	231	664
	3 - A534 Holt Road (West)	46	366	0	295
	4 - A5156	101	1316	279	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.36	11.64	0.6	B
2 - A534 (East)	0.42	2.48	0.7	A
3 - A534 Holt Road (West)	0.57	6.14	1.3	A
4 - A5156	0.74	5.35	2.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	120	1472	771	0.156	120	0.2	5.523	A
2 - A534 (East)	715	263	2573	0.278	714	0.4	1.934	A
3 - A534 Holt Road (West)	532	568	1488	0.358	530	0.6	3.750	A
4 - A5156	1277	350	2643	0.483	1273	0.9	2.621	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	144	1762	651	0.221	143	0.3	7.092	A
2 - A534 (East)	854	315	2542	0.336	854	0.5	2.133	A
3 - A534 Holt Road (West)	636	679	1436	0.443	635	0.8	4.486	A
4 - A5156	1525	419	2600	0.586	1523	1.4	3.336	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	176	2154	488	0.361	175	0.6	11.476	B
2 - A534 (East)	1046	385	2499	0.419	1045	0.7	2.475	A
3 - A534 Holt Road (West)	778	831	1365	0.570	776	1.3	6.096	A
4 - A5156	1867	513	2541	0.735	1862	2.7	5.261	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	176	2160	485	0.363	176	0.6	11.645	B
2 - A534 (East)	1046	386	2498	0.419	1046	0.7	2.479	A
3 - A534 Holt Road (West)	778	832	1364	0.571	778	1.3	6.143	A
4 - A5156	1867	514	2540	0.735	1867	2.7	5.347	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	144	1770	647	0.222	145	0.3	7.180	A
2 - A534 (East)	854	317	2540	0.336	855	0.5	2.138	A
3 - A534 Holt Road (West)	636	681	1435	0.443	638	0.8	4.523	A
4 - A5156	1525	421	2599	0.587	1530	1.4	3.386	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	120	1479	768	0.157	121	0.2	5.566	A
2 - A534 (East)	715	265	2572	0.278	716	0.4	1.939	A
3 - A534 Holt Road (West)	532	570	1487	0.358	533	0.6	3.776	A
4 - A5156	1277	352	2642	0.483	1279	0.9	2.645	A

2030 Base + Committed + Development (Phase 1) [Without KSS2], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.41	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.41	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2030 Base + Committed + Development (Phase 1) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	132	100.000
2 - A534 (East)		✓	1979	100.000
3 - A534 Holt Road (West)		✓	512	100.000
4 - A5156		✓	965	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	47	29	56
	2 - A534 (East)	39	2	251	1687
	3 - A534 Holt Road (West)	24	231	1	256
	4 - A5156	49	609	307	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
From	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.17	5.06	0.2	A
2 - A534 (East)	0.88	12.20	7.1	B
3 - A534 Holt Road (West)	0.68	13.22	2.0	B
4 - A5156	0.40	2.26	0.7	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	99	863	1024	0.097	99	0.1	3.891	A
2 - A534 (East)	1490	295	2554	0.583	1484	1.4	3.348	A
3 - A534 Holt Road (West)	385	1338	1128	0.342	383	0.5	4.823	A
4 - A5156	727	222	2724	0.267	725	0.4	1.801	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	119	1033	953	0.124	119	0.1	4.312	A
2 - A534 (East)	1779	353	2518	0.706	1775	2.4	4.820	A
3 - A534 Holt Road (West)	460	1600	1005	0.458	459	0.8	6.579	A
4 - A5156	868	266	2696	0.322	867	0.5	1.968	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	145	1263	858	0.169	145	0.2	5.051	A
2 - A534 (East)	2179	432	2470	0.882	2161	6.8	11.088	B
3 - A534 Holt Road (West)	564	1949	842	0.670	559	1.9	12.552	B
4 - A5156	1062	324	2660	0.400	1062	0.7	2.251	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	145	1266	857	0.170	145	0.2	5.061	A
2 - A534 (East)	2179	433	2469	0.882	2178	7.1	12.199	B
3 - A534 Holt Road (West)	564	1963	835	0.675	563	2.0	13.225	B
4 - A5156	1062	327	2658	0.400	1062	0.7	2.255	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	119	1037	952	0.125	119	0.1	4.324	A
2 - A534 (East)	1779	354	2518	0.707	1798	2.5	5.125	A
3 - A534 Holt Road (West)	460	1620	996	0.462	465	0.9	6.840	A
4 - A5156	868	270	2694	0.322	868	0.5	1.972	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	99	867	1022	0.097	100	0.1	3.901	A
2 - A534 (East)	1490	296	2553	0.584	1494	1.4	3.414	A
3 - A534 Holt Road (West)	385	1347	1123	0.343	387	0.5	4.895	A
4 - A5156	727	224	2722	0.267	727	0.4	1.803	A

2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.68	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.68	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D13	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	169	100.000
2 - A534 (East)		✓	1114	100.000
3 - A534 Holt Road (West)		✓	766	100.000
4 - A5156		✓	1927	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	93	37	39
	2 - A534 (East)	57	1	255	801
	3 - A534 Holt Road (West)	48	406	0	312
	4 - A5156	106	1525	296	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.51	20.19	1.0	C
2 - A534 (East)	0.49	2.86	1.0	A
3 - A534 Holt Road (West)	0.65	8.03	1.9	A
4 - A5156	0.85	9.23	5.3	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	127	1671	688	0.185	126	0.2	6.396	A
2 - A534 (East)	839	279	2564	0.327	837	0.5	2.083	A
3 - A534 Holt Road (West)	577	674	1438	0.401	574	0.7	4.153	A
4 - A5156	1451	384	2622	0.553	1446	1.2	3.048	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1999	552	0.275	151	0.4	8.970	A
2 - A534 (East)	1001	334	2530	0.396	1001	0.7	2.352	A
3 - A534 Holt Road (West)	689	807	1376	0.500	687	1.0	5.215	A
4 - A5156	1732	459	2575	0.673	1729	2.0	4.241	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	186	2440	369	0.504	184	1.0	19.164	C
2 - A534 (East)	1227	407	2485	0.494	1225	1.0	2.854	A
3 - A534 Holt Road (West)	843	987	1292	0.653	840	1.8	7.908	A
4 - A5156	2122	562	2510	0.845	2109	5.1	8.714	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	186	2452	364	0.511	186	1.0	20.190	C
2 - A534 (East)	1227	409	2484	0.494	1227	1.0	2.863	A
3 - A534 Holt Road (West)	843	989	1291	0.653	843	1.9	8.033	A
4 - A5156	2122	564	2509	0.846	2121	5.3	9.234	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	2017	545	0.279	154	0.4	9.282	A
2 - A534 (East)	1001	338	2528	0.396	1003	0.7	2.364	A
3 - A534 Holt Road (West)	689	809	1375	0.501	692	1.0	5.295	A
4 - A5156	1732	462	2573	0.673	1745	2.1	4.416	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	127	1681	684	0.186	128	0.2	6.481	A
2 - A534 (East)	839	281	2562	0.327	839	0.5	2.091	A
3 - A534 Holt Road (West)	577	677	1437	0.401	578	0.7	4.196	A
4 - A5156	1451	386	2621	0.554	1454	1.2	3.094	A

2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	39.84	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	39.84	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D14	2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Golf Site Access		✓	138	100.000
2 - A534 (East)		✓	2266	100.000
3 - A534 Holt Road (West)		✓	555	100.000
4 - A5156		✓	1130	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	49	30	59
	2 - A534 (East)	41	2	312	1911
	3 - A534 Holt Road (West)	26	257	1	271
	4 - A5156	51	754	325	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Golf Site Access	2 - A534 (East)	3 - A534 Holt Road (West)	4 - A5156
	1 - Golf Site Access	0	0	0	0
	2 - A534 (East)	0	0	0	0
	3 - A534 Holt Road (West)	0	0	0	0
	4 - A5156	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Golf Site Access	0.20	5.82	0.2	A
2 - A534 (East)	1.02	63.82	46.6	F
3 - A534 Holt Road (West)	0.82	26.22	4.2	D
4 - A5156	0.47	2.58	0.9	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	104	1005	965	0.108	103	0.1	4.177	A
2 - A534 (East)	1706	312	2544	0.671	1698	2.0	4.218	A
3 - A534 Holt Road (West)	418	1508	1048	0.399	415	0.7	5.668	A
4 - A5156	851	245	2710	0.314	849	0.5	1.933	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	124	1202	883	0.140	124	0.2	4.740	A
2 - A534 (East)	2037	373	2506	0.813	2028	4.2	7.404	A
3 - A534 Holt Road (West)	499	1802	910	0.548	497	1.2	8.661	A
4 - A5156	1016	293	2679	0.379	1015	0.6	2.163	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1468	772	0.197	152	0.2	5.796	A
2 - A534 (East)	2495	456	2455	1.016	2390	30.5	34.207	D
3 - A534 Holt Road (West)	611	2125	759	0.805	601	3.7	21.588	C
4 - A5156	1244	353	2642	0.471	1243	0.9	2.571	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	152	1473	771	0.197	152	0.2	5.819	A
2 - A534 (East)	2495	457	2455	1.016	2430	46.6	63.824	F
3 - A534 Holt Road (West)	611	2161	742	0.823	609	4.2	26.225	D
4 - A5156	1244	358	2639	0.472	1244	0.9	2.581	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	124	1210	880	0.141	124	0.2	4.768	A
2 - A534 (East)	2037	374	2506	0.813	2205	4.6	18.760	C
3 - A534 Holt Road (West)	499	1955	839	0.595	510	1.5	11.277	B
4 - A5156	1016	303	2673	0.380	1017	0.6	2.174	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Golf Site Access	104	1010	963	0.108	104	0.1	4.194	A
2 - A534 (East)	1706	313	2543	0.671	1716	2.1	4.406	A
3 - A534 Holt Road (West)	418	1524	1040	0.402	421	0.7	5.846	A
4 - A5156	851	248	2708	0.314	851	0.5	1.939	A

Junctions 10		
ARCADY 10 - Roundabout Module		
Version: 10.0.1.1519		
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Filename: A5156, A534, KSS2 Access ARCADY [Apr 24] v2.j10

Path: C:\Users\mchau\Downloads\Wrexham Mar 2024

Report generation date: 03/04/2024 08:49:03

-
- »2030 Base + Committed (KSS2 & Kingmoor), AM
 - »2030 Base + Committed (KSS2 & Kingmoor), PM
 - »2037 Base + Committed (KSS2 & Kingmoor), AM
 - »2037 Base + Committed (KSS2 & Kingmoor), PM
 - »2030 Base + Committed + Development (Phase 1), AM
 - »2030 Base + Committed + Development (Phase 1), PM
 - »2037 Base + Committed + Development (Phase 1 + 2), AM
 - »2037 Base + Committed + Development (Phase 1 + 2), PM
 - »2030 Base + Committed + Development (Phase 1) [Without Kingmoor], AM
 - »2030 Base + Committed + Development (Phase 1) [Without Kingmoor], PM
 - »2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor], AM
 - »2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor], PM
 - »2030 Base + Development (Phase 1), AM
 - »2030 Base + Development (Phase 1), PM
 - »2037 Base + Development (Phase 1 + 2), AM
 - »2037 Base + Development (Phase 1 + 2), PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2030 Base + Committed (KSS2 & Kingmoor)									
1 - A5156	D1	4.5	9.13	0.82	A	D2	1.0	3.23	0.51	A
2 - Wrexham Golf Club Access		1.4	29.52	0.59	D		0.4	9.45	0.28	A
3 - A534 (East)		0.9	3.26	0.48	A		135.0	193.09	1.13	F
4 - KSS2 Site Access		1.5	7.88	0.60	A		0.8	9.26	0.46	A
5 - A534 Holt Road (West)		2.4	10.09	0.71	B		6.2	29.71	0.88	D
	2037 Base + Committed (KSS2 & Kingmoor)									
1 - A5156	D3	6.4	12.55	0.87	B	D4	1.1	3.41	0.54	A
2 - Wrexham Golf Club Access		2.4	48.13	0.72	E		0.4	10.16	0.30	B
3 - A534 (East)		1.0	3.46	0.51	A		196.9	316.72	1.19	F
4 - KSS2 Site Access		1.6	8.55	0.62	A		0.9	9.47	0.47	A
5 - A534 Holt Road (West)		3.0	12.15	0.75	B		8.4	38.74	0.91	E
	2030 Base + Committed + Development (Phase 1)									
1 - A5156	D5	7.6	14.69	0.89	B	D6	1.2	3.51	0.55	A
2 - Wrexham Golf Club Access		2.4	51.58	0.73	F		0.4	10.30	0.29	B
3 - A534 (East)		1.1	3.51	0.52	A		210.1	341.82	1.20	F
4 - KSS2 Site Access		1.6	8.58	0.62	A		0.9	9.37	0.46	A
5 - A534 Holt Road (West)		2.9	11.88	0.75	B		6.9	32.73	0.89	D
	2037 Base + Committed + Development (Phase 1 + 2)									
1 - A5156	D11	45.3	69.61	1.02	F	D12	1.7	4.35	0.63	A
2 - Wrexham Golf Club Access		15.0	271.00	1.15	F		0.5	13.17	0.36	B
3 - A534 (East)		1.5	4.27	0.61	A		420.2	705.02	1.35	F
4 - KSS2 Site Access		2.0	10.79	0.67	B		0.9	9.69	0.47	A
5 - A534 Holt Road (West)		5.2	20.85	0.85	C		11.5	51.54	0.94	F
	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]									
1 - A5156	D17	5.5	11.00	0.85	B	D18	1.1	3.26	0.52	A
2 - Wrexham Golf Club Access		1.7	36.72	0.65	E		0.4	9.53	0.28	A
3 - A534 (East)		1.0	3.29	0.49	A		153.7	226.11	1.15	F
4 - KSS2 Site Access		1.5	7.98	0.60	A		0.8	9.29	0.46	A
5 - A534 Holt Road (West)		2.5	10.59	0.72	B		6.3	29.97	0.88	D
	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]									
1 - A5156	D19	23.5	41.07	0.98	E	D20	1.5	3.97	0.60	A
2 - Wrexham Golf Club Access		10.2	189.00	1.05	F		0.5	11.94	0.34	B
3 - A534 (East)		1.3	3.98	0.58	A		327.7	565.32	1.30	F
4 - KSS2 Site Access		1.9	10.00	0.66	A		0.9	9.62	0.47	A
5 - A534 Holt Road (West)		4.4	17.38	0.82	C		10.3	46.65	0.93	E
	2030 Base + Development (Phase 1)									
1 - A5156	D21	3.0	6.10	0.75	A	D22	0.7	2.41	0.40	A
2 - Wrexham Golf Club Access		0.8	15.82	0.44	C		0.3	6.46	0.21	A
3 - A534 (East)		0.8	2.83	0.43	A		12.7	23.43	0.94	C
4 - KSS2 Site Access		0.0	0.00	0.00	A		0.0	0.00	0.00	A
5 - A534 Holt Road (West)		1.2	5.66	0.55	A		1.6	10.26	0.61	B
	2037 Base + Development (Phase 1 + 2)									
1 - A5156	D23	6.4	11.69	0.87	B	D24	0.9	2.78	0.47	A
2 - Wrexham Golf Club Access		1.5	30.87	0.62	D		0.3	7.50	0.24	A
3 - A534 (East)		1.1	3.34	0.52	A		95.2	127.25	1.07	F
4 - KSS2 Site Access		0.0	0.00	0.00	A		0.0	0.00	0.00	A
5 - A534 Holt Road (West)		1.7	7.23	0.63	A		2.3	14.26	0.71	B

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	A534 / A5156 / Golf Access / KSS2 Access
Location	Wrexham
Site number	
Date	31/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	LAPTOP-DTQ9HGGBB\mchau
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2030 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15
D2	2030 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15
D3	2037 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15
D4	2037 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15
D5	2030 Base + Committed + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D6	2030 Base + Committed + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D11	2037 Base + Committed + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15
D12	2037 Base + Committed + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15
D17	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15
D18	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15
D19	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15
D20	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15
D21	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D22	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D23	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15
D24	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2030 Base + Committed (KSS2 & Kingmoor), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	8.58	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.58	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A5156		
2	Wrexham Golf Club Access		
3	A534 (East)		
4	KSS2 Site Access		
5	A534 Holt Road (West)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - A5156	7.30	10.50	11.0	34.0	90.0	41.0		
2 - Wrexham Golf Club Access	3.65	4.70	5.0	6.0	90.0	40.0		
3 - A534 (East)	7.30	9.60	5.0	38.0	90.0	40.0		
4 - KSS2 Site Access	3.50	7.50	18.4	24.0	90.0	32.0		
5 - A534 Holt Road (West)	3.65	7.50	18.0	26.0	90.0	40.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A5156	0.589	2665
2 - Wrexham Golf Club Access	0.340	1103
3 - A534 (East)	0.562	2465
4 - KSS2 Site Access	0.467	1777
5 - A534 Holt Road (West)	0.459	1756

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)
D1	2030 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1643	100.000
2 - Wrexham Golf Club Access		✓	160	100.000
3 - A534 (East)		✓	941	100.000
4 - KSS2 Site Access		✓	626	100.000
5 - A534 Holt Road (West)		✓	786	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	101	1187	76	279
	2 - Wrexham Golf Club Access	37	0	88	0	35
	3 - A534 (East)	596	54	1	64	226
	4 - KSS2 Site Access	201	0	169	0	256
	5 - A534 Holt Road (West)	295	46	348	97	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.82	9.13	4.5	A
2 - Wrexham Golf Club Access	0.59	29.52	1.4	D
3 - A534 (East)	0.48	3.26	0.9	A
4 - KSS2 Site Access	0.60	7.88	1.5	A
5 - A534 Holt Road (West)	0.71	10.09	2.4	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1237	536	2349	0.526	1233	1.1	3.208	A
2 - Wrexham Golf Club Access	120	1618	554	0.217	119	0.3	8.260	A
3 - A534 (East)	708	393	2244	0.316	707	0.5	2.338	A
4 - KSS2 Site Access	471	922	1347	0.350	469	0.5	4.093	A
5 - A534 Holt Road (West)	592	794	1392	0.425	589	0.7	4.467	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1477	641	2287	0.646	1474	1.8	4.414	A
2 - Wrexham Golf Club Access	144	1935	446	0.322	143	0.5	11.844	B
3 - A534 (East)	846	470	2201	0.384	845	0.6	2.654	A
4 - KSS2 Site Access	563	1103	1262	0.446	562	0.8	5.133	A
5 - A534 Holt Road (West)	707	950	1320	0.535	705	1.1	5.836	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1809	783	2203	0.821	1799	4.4	8.683	A
2 - Wrexham Golf Club Access	176	2362	301	0.585	173	1.3	27.320	D
3 - A534 (East)	1036	573	2143	0.483	1035	0.9	3.246	A
4 - KSS2 Site Access	689	1348	1147	0.601	687	1.5	7.765	A
5 - A534 Holt Road (West)	865	1162	1223	0.708	861	2.3	9.805	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1809	787	2201	0.822	1808	4.5	9.126	A
2 - Wrexham Golf Club Access	176	2374	297	0.593	176	1.4	29.516	D
3 - A534 (East)	1036	577	2141	0.484	1036	0.9	3.257	A
4 - KSS2 Site Access	689	1352	1146	0.602	689	1.5	7.885	A
5 - A534 Holt Road (West)	865	1165	1222	0.708	865	2.4	10.087	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1477	647	2284	0.647	1488	1.9	4.579	A
2 - Wrexham Golf Club Access	144	1952	440	0.327	147	0.5	12.430	B
3 - A534 (East)	846	476	2198	0.385	847	0.6	2.669	A
4 - KSS2 Site Access	563	1108	1259	0.447	565	0.8	5.210	A
5 - A534 Holt Road (West)	707	954	1318	0.536	711	1.2	5.979	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1237	540	2347	0.527	1240	1.1	3.259	A
2 - Wrexham Golf Club Access	120	1628	551	0.219	121	0.3	8.402	A
3 - A534 (East)	708	396	2243	0.316	709	0.5	2.350	A
4 - KSS2 Site Access	471	926	1345	0.351	472	0.5	4.134	A
5 - A534 Holt Road (West)	592	798	1390	0.426	593	0.7	4.530	A

2030 Base + Committed (KSS2 & Kingmoor), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	98.79	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	98.79	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2030 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1062	100.000
2 - Wrexham Golf Club Access		✓	132	100.000
3 - A534 (East)		✓	2021	100.000
4 - KSS2 Site Access		✓	301	100.000
5 - A534 Holt Road (West)		✓	729	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	49	530	176	307
	2 - Wrexham Golf Club Access	56	0	47	0	29
	3 - A534 (East)	1569	39	2	148	263
	4 - KSS2 Site Access	97	0	81	0	123
	5 - A534 Holt Road (West)	256	24	225	223	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.51	3.23	1.0	A
2 - Wrexham Golf Club Access	0.28	9.45	0.4	A
3 - A534 (East)	1.13	193.09	135.0	F
4 - KSS2 Site Access	0.46	9.26	0.8	A
5 - A534 Holt Road (West)	0.88	29.71	6.2	D

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	800	445	2403	0.333	798	0.5	2.239	A
2 - Wrexham Golf Club Access	99	1159	710	0.140	99	0.2	5.884	A
3 - A534 (East)	1522	594	2131	0.714	1512	2.4	5.726	A
4 - KSS2 Site Access	227	1696	985	0.230	225	0.3	4.735	A
5 - A534 Holt Road (West)	549	1380	1123	0.489	545	0.9	6.191	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	955	532	2352	0.406	954	0.7	2.574	A
2 - Wrexham Golf Club Access	119	1386	633	0.188	118	0.2	6.995	A
3 - A534 (East)	1817	710	2066	0.880	1800	6.5	12.848	B
4 - KSS2 Site Access	271	2022	832	0.325	270	0.5	6.391	A
5 - A534 Holt Road (West)	655	1644	1001	0.654	652	1.8	10.192	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1169	640	2288	0.511	1168	1.0	3.209	A
2 - Wrexham Golf Club Access	145	1690	530	0.274	145	0.4	9.341	A
3 - A534 (East)	2225	866	1978	1.125	1963	72.1	80.195	F
4 - KSS2 Site Access	331	2251	725	0.457	330	0.8	9.078	A
5 - A534 Holt Road (West)	803	1820	921	0.872	788	5.6	24.701	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1169	648	2283	0.512	1169	1.0	3.231	A
2 - Wrexham Golf Club Access	145	1699	526	0.276	145	0.4	9.447	A
3 - A534 (East)	2225	871	1975	1.127	1974	135.0	193.085	F
4 - KSS2 Site Access	331	2262	720	0.460	331	0.8	9.257	A
5 - A534 Holt Road (West)	803	1830	916	0.876	800	6.2	29.706	D

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	955	549	2342	0.408	956	0.7	2.602	A
2 - Wrexham Golf Club Access	119	1399	628	0.189	119	0.2	7.080	A
3 - A534 (East)	1817	717	2062	0.881	2047	77.5	187.788	F
4 - KSS2 Site Access	271	2251	725	0.373	272	0.6	7.950	A
5 - A534 Holt Road (West)	655	1842	911	0.720	669	2.7	15.696	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	800	458	2395	0.334	800	0.5	2.259	A
2 - Wrexham Golf Club Access	99	1168	707	0.141	100	0.2	5.932	A
3 - A534 (East)	1522	599	2128	0.715	1821	2.6	29.947	D
4 - KSS2 Site Access	227	1984	850	0.267	228	0.4	5.792	A
5 - A534 Holt Road (West)	549	1628	1009	0.544	555	1.2	8.027	A

2037 Base + Committed (KSS2 & Kingmoor), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	11.23	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.23	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2037 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1728	100.000
2 - Wrexham Golf Club Access		✓	171	100.000
3 - A534 (East)		✓	988	100.000
4 - KSS2 Site Access		✓	626	100.000
5 - A534 Holt Road (West)		✓	825	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	106	1250	76	296
	2 - Wrexham Golf Club Access	39	0	93	0	39
	3 - A534 (East)	627	57	1	64	239
	4 - KSS2 Site Access	201	0	169	0	256
	5 - A534 Holt Road (West)	312	48	368	97	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.87	12.55	6.4	B
2 - Wrexham Golf Club Access	0.72	48.13	2.4	E
3 - A534 (East)	0.51	3.46	1.0	A
4 - KSS2 Site Access	0.62	8.55	1.6	A
5 - A534 Holt Road (West)	0.75	12.15	3.0	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1301	554	2338	0.556	1296	1.2	3.436	A
2 - Wrexham Golf Club Access	129	1692	529	0.243	127	0.3	8.944	A
3 - A534 (East)	744	410	2235	0.333	742	0.5	2.408	A
4 - KSS2 Site Access	471	974	1322	0.356	469	0.5	4.209	A
5 - A534 Holt Road (West)	621	821	1380	0.450	618	0.8	4.707	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1553	664	2274	0.683	1550	2.1	4.948	A
2 - Wrexham Golf Club Access	154	2024	416	0.370	153	0.6	13.621	B
3 - A534 (East)	888	490	2189	0.406	887	0.7	2.764	A
4 - KSS2 Site Access	563	1165	1233	0.457	562	0.8	5.355	A
5 - A534 Holt Road (West)	742	982	1305	0.568	740	1.3	6.342	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1903	810	2188	0.870	1887	6.1	11.398	B
2 - Wrexham Golf Club Access	188	2466	266	0.708	182	2.1	40.390	E
3 - A534 (East)	1088	595	2130	0.511	1086	1.0	3.444	A
4 - KSS2 Site Access	689	1422	1113	0.620	686	1.6	8.384	A
5 - A534 Holt Road (West)	908	1200	1205	0.754	902	2.9	11.626	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1903	815	2185	0.871	1901	6.4	12.548	B
2 - Wrexham Golf Club Access	188	2484	260	0.724	187	2.4	48.130	E
3 - A534 (East)	1088	601	2127	0.511	1088	1.0	3.463	A
4 - KSS2 Site Access	689	1428	1110	0.621	689	1.6	8.555	A
5 - A534 Holt Road (West)	908	1204	1203	0.755	908	3.0	12.150	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1553	670	2270	0.684	1570	2.2	5.261	A
2 - Wrexham Golf Club Access	154	2049	408	0.377	161	0.6	14.970	B
3 - A534 (East)	888	499	2184	0.407	890	0.7	2.785	A
4 - KSS2 Site Access	563	1174	1229	0.458	566	0.9	5.456	A
5 - A534 Holt Road (West)	742	988	1303	0.569	748	1.3	6.566	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1301	559	2336	0.557	1305	1.3	3.502	A
2 - Wrexham Golf Club Access	129	1704	525	0.245	130	0.3	9.145	A
3 - A534 (East)	744	413	2233	0.333	745	0.5	2.421	A
4 - KSS2 Site Access	471	979	1320	0.357	472	0.6	4.254	A
5 - A534 Holt Road (West)	621	825	1378	0.451	623	0.8	4.784	A

2037 Base + Committed (KSS2 & Kingmoor), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	160.23	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	160.23	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2037 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1106	100.000
2 - Wrexham Golf Club Access		✓	138	100.000
3 - A534 (East)		✓	2120	100.000
4 - KSS2 Site Access		✓	301	100.000
5 - A534 Holt Road (West)		✓	759	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	51	555	176	324
	2 - Wrexham Golf Club Access	59	0	49	0	30
	3 - A534 (East)	1652	41	2	148	277
	4 - KSS2 Site Access	97	0	81	0	123
	5 - A534 Holt Road (West)	271	26	238	223	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.54	3.41	1.1	A
2 - Wrexham Golf Club Access	0.30	10.16	0.4	B
3 - A534 (East)	1.19	316.72	196.9	F
4 - KSS2 Site Access	0.47	9.47	0.9	A
5 - A534 Holt Road (West)	0.91	38.74	8.4	E

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	833	457	2396	0.348	831	0.5	2.297	A
2 - Wrexham Golf Club Access	104	1200	696	0.149	103	0.2	6.068	A
3 - A534 (East)	1596	609	2122	0.752	1584	2.9	6.555	A
4 - KSS2 Site Access	227	1784	943	0.240	225	0.3	5.006	A
5 - A534 Holt Road (West)	571	1444	1093	0.523	567	1.1	6.789	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	994	546	2343	0.424	993	0.7	2.666	A
2 - Wrexham Golf Club Access	124	1434	616	0.201	124	0.2	7.304	A
3 - A534 (East)	1906	729	2055	0.927	1878	9.9	17.998	C
4 - KSS2 Site Access	271	2119	787	0.344	270	0.5	6.947	A
5 - A534 Holt Road (West)	682	1714	969	0.704	678	2.3	12.137	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1218	653	2280	0.534	1216	1.1	3.379	A
2 - Wrexham Golf Club Access	152	1747	510	0.298	151	0.4	10.013	B
3 - A534 (East)	2334	888	1966	1.187	1959	103.8	111.779	F
4 - KSS2 Site Access	331	2277	713	0.465	330	0.9	9.366	A
5 - A534 Holt Road (West)	836	1826	918	0.910	815	7.3	30.451	D

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1218	663	2274	0.535	1218	1.1	3.407	A
2 - Wrexham Golf Club Access	152	1759	506	0.300	152	0.4	10.159	B
3 - A534 (East)	2334	894	1962	1.189	1962	196.9	277.789	F
4 - KSS2 Site Access	331	2281	711	0.466	331	0.9	9.473	A
5 - A534 Holt Road (West)	836	1830	916	0.912	831	8.4	38.737	E

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	994	567	2331	0.426	996	0.7	2.698	A
2 - Wrexham Golf Club Access	124	1453	610	0.203	125	0.3	7.427	A
3 - A534 (East)	1906	738	2050	0.930	2040	163.4	316.720	F
4 - KSS2 Site Access	271	2270	716	0.378	272	0.6	8.117	A
5 - A534 Holt Road (West)	682	1845	909	0.750	703	3.2	18.939	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	833	475	2385	0.349	833	0.5	2.320	A
2 - Wrexham Golf Club Access	104	1209	693	0.150	104	0.2	6.120	A
3 - A534 (East)	1596	614	2120	0.753	2107	35.8	172.550	F
4 - KSS2 Site Access	227	2272	715	0.317	227	0.5	7.384	A
5 - A534 Holt Road (West)	571	1863	901	0.634	577	1.8	11.307	B

2030 Base + Committed + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	12.06	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.06	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2030 Base + Committed + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1772	100.000
2 - Wrexham Golf Club Access		✓	160	100.000
3 - A534 (East)		✓	1014	100.000
4 - KSS2 Site Access		✓	626	100.000
5 - A534 Holt Road (West)		✓	804	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	101	1316	76	279
	2 - Wrexham Golf Club Access	37	0	88	0	35
	3 - A534 (East)	664	54	1	64	231
	4 - KSS2 Site Access	201	0	169	0	256
	5 - A534 Holt Road (West)	295	46	366	97	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.89	14.69	7.6	B
2 - Wrexham Golf Club Access	0.73	51.58	2.4	F
3 - A534 (East)	0.52	3.51	1.1	A
4 - KSS2 Site Access	0.62	8.58	1.6	A
5 - A534 Holt Road (West)	0.75	11.88	2.9	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1334	549	2341	0.570	1329	1.3	3.536	A
2 - Wrexham Golf Club Access	120	1727	517	0.233	119	0.3	9.028	A
3 - A534 (East)	763	393	2244	0.340	761	0.5	2.424	A
4 - KSS2 Site Access	471	976	1321	0.357	469	0.6	4.214	A
5 - A534 Holt Road (West)	605	845	1369	0.442	602	0.8	4.679	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1593	657	2278	0.699	1589	2.3	5.199	A
2 - Wrexham Golf Club Access	144	2066	402	0.358	143	0.5	13.853	B
3 - A534 (East)	912	470	2201	0.414	911	0.7	2.789	A
4 - KSS2 Site Access	563	1168	1232	0.457	562	0.8	5.365	A
5 - A534 Holt Road (West)	723	1011	1292	0.559	721	1.2	6.281	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1951	802	2192	0.890	1932	7.1	12.944	B
2 - Wrexham Golf Club Access	176	2514	250	0.706	170	2.1	42.491	E
3 - A534 (East)	1116	570	2145	0.521	1115	1.1	3.491	A
4 - KSS2 Site Access	689	1425	1111	0.620	686	1.6	8.410	A
5 - A534 Holt Road (West)	885	1235	1189	0.744	879	2.8	11.393	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1951	807	2190	0.891	1949	7.6	14.692	B
2 - Wrexham Golf Club Access	176	2535	243	0.726	175	2.4	51.578	F
3 - A534 (East)	1116	576	2141	0.521	1116	1.1	3.512	A
4 - KSS2 Site Access	689	1432	1108	0.622	689	1.6	8.585	A
5 - A534 Holt Road (West)	885	1239	1187	0.746	885	2.9	11.875	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1593	664	2274	0.701	1614	2.4	5.622	A
2 - Wrexham Golf Club Access	144	2095	392	0.367	151	0.6	15.350	C
3 - A534 (East)	912	479	2196	0.415	913	0.7	2.809	A
4 - KSS2 Site Access	563	1177	1227	0.459	566	0.9	5.471	A
5 - A534 Holt Road (West)	723	1017	1290	0.561	729	1.3	6.494	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1334	553	2339	0.570	1338	1.3	3.614	A
2 - Wrexham Golf Club Access	120	1740	513	0.235	122	0.3	9.236	A
3 - A534 (East)	763	396	2242	0.340	764	0.5	2.438	A
4 - KSS2 Site Access	471	981	1319	0.357	472	0.6	4.259	A
5 - A534 Holt Road (West)	605	849	1366	0.443	607	0.8	4.755	A

2030 Base + Committed + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	172.20	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	172.20	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2030 Base + Committed + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1141	100.000
2 - Wrexham Golf Club Access		✓	132	100.000
3 - A534 (East)		✓	2154	100.000
4 - KSS2 Site Access		✓	301	100.000
5 - A534 Holt Road (West)		✓	735	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	49	609	176	307
	2 - Wrexham Golf Club Access	56	0	47	0	29
	3 - A534 (East)	1687	39	2	148	278
	4 - KSS2 Site Access	97	0	81	0	123
	5 - A534 Holt Road (West)	256	24	231	223	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.55	3.51	1.2	A
2 - Wrexham Golf Club Access	0.29	10.30	0.4	B
3 - A534 (East)	1.20	341.82	210.1	F
4 - KSS2 Site Access	0.46	9.37	0.9	A
5 - A534 Holt Road (West)	0.89	32.73	6.9	D

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	859	449	2400	0.358	857	0.6	2.329	A
2 - Wrexham Golf Club Access	99	1222	688	0.144	99	0.2	6.099	A
3 - A534 (East)	1622	594	2131	0.761	1609	3.1	6.748	A
4 - KSS2 Site Access	227	1794	939	0.241	225	0.3	5.037	A
5 - A534 Holt Road (West)	553	1466	1083	0.511	549	1.0	6.693	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1026	537	2349	0.437	1025	0.8	2.718	A
2 - Wrexham Golf Club Access	119	1462	607	0.195	118	0.2	7.361	A
3 - A534 (East)	1936	710	2066	0.937	1905	11.0	19.386	C
4 - KSS2 Site Access	271	2127	783	0.345	270	0.5	6.999	A
5 - A534 Holt Road (West)	661	1738	958	0.689	656	2.1	11.747	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1256	643	2286	0.550	1255	1.2	3.483	A
2 - Wrexham Golf Club Access	145	1782	498	0.292	145	0.4	10.164	B
3 - A534 (East)	2372	866	1978	1.199	1972	110.9	118.307	F
4 - KSS2 Site Access	331	2268	717	0.462	330	0.8	9.272	A
5 - A534 Holt Road (West)	809	1839	912	0.887	793	6.2	27.117	D

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1256	652	2281	0.551	1256	1.2	3.513	A
2 - Wrexham Golf Club Access	145	1793	495	0.294	145	0.4	10.302	B
3 - A534 (East)	2372	871	1975	1.201	1975	210.1	294.088	F
4 - KSS2 Site Access	331	2272	715	0.463	331	0.9	9.372	A
5 - A534 Holt Road (West)	809	1842	911	0.889	806	6.9	32.727	D

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1026	553	2339	0.439	1027	0.8	2.747	A
2 - Wrexham Golf Club Access	119	1477	602	0.197	119	0.2	7.474	A
3 - A534 (East)	1936	718	2061	0.939	2052	181.3	341.821	F
4 - KSS2 Site Access	271	2265	719	0.376	272	0.6	8.068	A
5 - A534 Holt Road (West)	661	1857	904	0.731	677	2.9	16.857	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	859	465	2391	0.359	860	0.6	2.354	A
2 - Wrexham Golf Club Access	99	1232	685	0.145	100	0.2	6.151	A
3 - A534 (East)	1622	598	2129	0.762	2117	57.5	204.876	F
4 - KSS2 Site Access	227	2268	717	0.316	227	0.5	7.356	A
5 - A534 Holt Road (West)	553	1875	895	0.618	558	1.7	10.822	B

2037 Base + Committed + Development (Phase 1 + 2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	44.52	E

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	44.52	E

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2037 Base + Committed + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	2003	100.000
2 - Wrexham Golf Club Access		✓	171	100.000
3 - A534 (East)		✓	1178	100.000
4 - KSS2 Site Access		✓	626	100.000
5 - A534 Holt Road (West)		✓	863	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	106	1525	76	296
	2 - Wrexham Golf Club Access	39	0	93	0	39
	3 - A534 (East)	801	57	1	64	255
	4 - KSS2 Site Access	201	0	169	0	256
	5 - A534 Holt Road (West)	312	48	406	97	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	1.02	69.61	45.3	F
2 - Wrexham Golf Club Access	1.15	271.00	15.0	F
3 - A534 (East)	0.61	4.27	1.5	A
4 - KSS2 Site Access	0.67	10.79	2.0	B
5 - A534 Holt Road (West)	0.85	20.85	5.2	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1508	582	2322	0.649	1501	1.8	4.346	A
2 - Wrexham Golf Club Access	129	1925	450	0.286	127	0.4	11.108	B
3 - A534 (East)	887	409	2235	0.397	884	0.7	2.661	A
4 - KSS2 Site Access	471	1116	1256	0.375	469	0.6	4.561	A
5 - A534 Holt Road (West)	650	951	1320	0.492	646	1.0	5.313	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1801	697	2254	0.799	1793	3.8	7.669	A
2 - Wrexham Golf Club Access	154	2301	322	0.477	152	0.9	20.912	C
3 - A534 (East)	1059	489	2190	0.484	1058	0.9	3.177	A
4 - KSS2 Site Access	563	1335	1154	0.488	561	0.9	6.070	A
5 - A534 Holt Road (West)	776	1138	1234	0.629	773	1.7	7.763	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	2205	847	2166	1.018	2105	28.9	36.611	E
2 - Wrexham Golf Club Access	188	2726	178	1.059	160	7.9	134.510	F
3 - A534 (East)	1297	569	2145	0.605	1295	1.5	4.222	A
4 - KSS2 Site Access	689	1609	1026	0.672	685	2.0	10.448	B
5 - A534 Holt Road (West)	950	1386	1120	0.848	937	4.9	18.484	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	2205	856	2161	1.021	2140	45.3	69.608	F
2 - Wrexham Golf Club Access	188	2767	164	1.148	160	15.0	271.003	F
3 - A534 (East)	1297	577	2141	0.606	1297	1.5	4.266	A
4 - KSS2 Site Access	689	1616	1022	0.674	689	2.0	10.789	B
5 - A534 Holt Road (West)	950	1389	1118	0.850	949	5.2	20.853	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1801	710	2247	0.801	1965	4.3	20.302	C
2 - Wrexham Golf Club Access	154	2475	263	0.585	207	1.6	96.309	F
3 - A534 (East)	1059	548	2157	0.491	1061	1.0	3.291	A
4 - KSS2 Site Access	563	1388	1128	0.499	567	1.0	6.455	A
5 - A534 Holt Road (West)	776	1156	1225	0.633	790	1.8	8.513	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1508	588	2318	0.650	1518	1.9	4.547	A
2 - Wrexham Golf Club Access	129	1946	443	0.291	134	0.4	11.824	B
3 - A534 (East)	887	416	2231	0.398	888	0.7	2.684	A
4 - KSS2 Site Access	471	1125	1252	0.377	473	0.6	4.634	A
5 - A534 Holt Road (West)	650	958	1317	0.493	653	1.0	5.449	A

2037 Base + Committed + Development (Phase 1 + 2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	354.96	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	354.96	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2037 Base + Committed + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1306	100.000
2 - Wrexham Golf Club Access		✓	138	100.000
3 - A534 (East)		✓	2414	100.000
4 - KSS2 Site Access		✓	301	100.000
5 - A534 Holt Road (West)		✓	778	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	51	754	176	325
	2 - Wrexham Golf Club Access	59	0	49	0	30
	3 - A534 (East)	1911	41	2	148	312
	4 - KSS2 Site Access	97	0	81	0	123
	5 - A534 Holt Road (West)	271	26	257	223	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.63	4.35	1.7	A
2 - Wrexham Golf Club Access	0.36	13.17	0.5	B
3 - A534 (East)	1.35	705.02	420.2	F
4 - KSS2 Site Access	0.47	9.69	0.9	A
5 - A534 Holt Road (West)	0.94	51.54	11.5	F

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	983	471	2388	0.412	980	0.7	2.552	A
2 - Wrexham Golf Club Access	104	1363	641	0.162	103	0.2	6.689	A
3 - A534 (East)	1817	610	2122	0.856	1795	5.5	10.406	B
4 - KSS2 Site Access	227	1997	844	0.268	225	0.4	5.804	A
5 - A534 Holt Road (West)	586	1631	1008	0.581	580	1.4	8.323	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1174	560	2335	0.503	1173	1.0	3.094	A
2 - Wrexham Golf Club Access	124	1629	550	0.226	124	0.3	8.434	A
3 - A534 (East)	2170	729	2055	1.056	2022	42.6	51.932	F
4 - KSS2 Site Access	271	2270	716	0.378	270	0.6	8.046	A
5 - A534 Holt Road (West)	699	1849	907	0.771	692	3.1	16.224	C

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1438	665	2273	0.633	1435	1.7	4.281	A
2 - Wrexham Golf Club Access	152	1983	430	0.353	151	0.5	12.858	B
3 - A534 (East)	2658	887	1966	1.352	1966	215.7	241.652	F
4 - KSS2 Site Access	331	2301	702	0.472	330	0.9	9.655	A
5 - A534 Holt Road (West)	857	1851	907	0.945	831	9.6	38.276	E

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1438	677	2266	0.635	1438	1.7	4.347	A
2 - Wrexham Golf Club Access	152	1997	425	0.357	152	0.5	13.169	B
3 - A534 (East)	2658	894	1962	1.354	1962	389.6	549.680	F
4 - KSS2 Site Access	331	2299	703	0.472	331	0.9	9.690	A
5 - A534 Holt Road (West)	857	1849	907	0.944	849	11.5	51.535	F

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1174	585	2320	0.506	1177	1.0	3.155	A
2 - Wrexham Golf Club Access	124	1657	541	0.229	125	0.3	8.682	A
3 - A534 (East)	2170	742	2048	1.060	2047	420.2	705.021	F
4 - KSS2 Site Access	271	2296	704	0.384	272	0.6	8.347	A
5 - A534 Holt Road (West)	699	1871	897	0.780	730	3.9	24.548	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	983	485	2379	0.413	985	0.7	2.585	A
2 - Wrexham Golf Club Access	104	1376	636	0.163	104	0.2	6.775	A
3 - A534 (East)	1817	616	2119	0.858	2114	346.1	652.870	F
4 - KSS2 Site Access	227	2297	704	0.322	227	0.5	7.566	A
5 - A534 Holt Road (West)	586	1890	889	0.659	593	2.0	12.473	B

2030 Base + Committed + Development (Phase 1) [Without Kingmoor], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	9.72	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.72	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1699	100.000
2 - Wrexham Golf Club Access		✓	160	100.000
3 - A534 (East)		✓	952	100.000
4 - KSS2 Site Access		✓	626	100.000
5 - A534 Holt Road (West)		✓	796	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	101	1243	76	279
	2 - Wrexham Golf Club Access	37	0	88	0	35
	3 - A534 (East)	608	54	1	64	225
	4 - KSS2 Site Access	201	0	169	0	256
	5 - A534 Holt Road (West)	295	46	358	97	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.85	11.00	5.5	B
2 - Wrexham Golf Club Access	0.65	36.72	1.7	E
3 - A534 (East)	0.49	3.29	1.0	A
4 - KSS2 Site Access	0.60	7.98	1.5	A
5 - A534 Holt Road (West)	0.72	10.59	2.5	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1279	543	2345	0.545	1274	1.2	3.347	A
2 - Wrexham Golf Club Access	120	1667	537	0.224	119	0.3	8.589	A
3 - A534 (East)	717	393	2244	0.319	715	0.5	2.350	A
4 - KSS2 Site Access	471	930	1343	0.351	469	0.5	4.111	A
5 - A534 Holt Road (West)	599	803	1388	0.432	596	0.8	4.531	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1527	650	2282	0.669	1524	2.0	4.731	A
2 - Wrexham Golf Club Access	144	1994	426	0.337	143	0.5	12.673	B
3 - A534 (East)	856	470	2201	0.389	855	0.6	2.673	A
4 - KSS2 Site Access	563	1112	1257	0.448	562	0.8	5.167	A
5 - A534 Holt Road (West)	716	961	1315	0.544	714	1.2	5.969	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1871	794	2197	0.851	1857	5.3	10.216	B
2 - Wrexham Golf Club Access	176	2431	278	0.634	172	1.6	33.216	D
3 - A534 (East)	1048	572	2144	0.489	1047	1.0	3.280	A
4 - KSS2 Site Access	689	1359	1142	0.603	686	1.5	7.852	A
5 - A534 Holt Road (West)	876	1175	1217	0.720	871	2.5	10.258	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1871	798	2195	0.852	1870	5.5	11.002	B
2 - Wrexham Golf Club Access	176	2447	273	0.646	176	1.7	36.719	E
3 - A534 (East)	1048	576	2141	0.490	1048	1.0	3.293	A
4 - KSS2 Site Access	689	1364	1140	0.605	689	1.5	7.983	A
5 - A534 Holt Road (West)	876	1178	1216	0.721	876	2.5	10.590	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1527	656	2279	0.670	1541	2.1	4.971	A
2 - Wrexham Golf Club Access	144	2015	419	0.343	149	0.5	13.529	B
3 - A534 (East)	856	477	2197	0.390	857	0.6	2.690	A
4 - KSS2 Site Access	563	1119	1254	0.449	566	0.8	5.249	A
5 - A534 Holt Road (West)	716	966	1313	0.545	721	1.2	6.131	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1279	547	2343	0.546	1283	1.2	3.408	A
2 - Wrexham Golf Club Access	120	1678	534	0.226	121	0.3	8.756	A
3 - A534 (East)	717	396	2242	0.320	717	0.5	2.361	A
4 - KSS2 Site Access	471	934	1341	0.352	472	0.5	4.151	A
5 - A534 Holt Road (West)	599	807	1386	0.432	601	0.8	4.597	A

2030 Base + Committed + Development (Phase 1) [Without Kingmoor], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	115.22	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	115.22	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1071	100.000
2 - Wrexham Golf Club Access		✓	132	100.000
3 - A534 (East)		✓	2055	100.000
4 - KSS2 Site Access		✓	301	100.000
5 - A534 Holt Road (West)		✓	729	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	49	539	176	307
	2 - Wrexham Golf Club Access	56	0	47	0	29
	3 - A534 (East)	1598	39	2	148	268
	4 - KSS2 Site Access	97	0	81	0	123
	5 - A534 Holt Road (West)	256	24	225	223	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.52	3.26	1.1	A
2 - Wrexham Golf Club Access	0.28	9.53	0.4	A
3 - A534 (East)	1.15	226.11	153.7	F
4 - KSS2 Site Access	0.46	9.29	0.8	A
5 - A534 Holt Road (West)	0.88	29.97	6.3	D

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	806	445	2403	0.336	804	0.5	2.249	A
2 - Wrexham Golf Club Access	99	1165	708	0.140	99	0.2	5.906	A
3 - A534 (East)	1547	594	2131	0.726	1537	2.6	5.958	A
4 - KSS2 Site Access	227	1721	973	0.233	225	0.3	4.808	A
5 - A534 Holt Road (West)	549	1401	1113	0.493	545	1.0	6.296	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	963	532	2352	0.409	962	0.7	2.589	A
2 - Wrexham Golf Club Access	119	1394	630	0.188	118	0.2	7.032	A
3 - A534 (East)	1847	710	2066	0.894	1828	7.4	14.147	B
4 - KSS2 Site Access	271	2050	819	0.330	270	0.5	6.544	A
5 - A534 Holt Road (West)	655	1668	990	0.662	652	1.9	10.508	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1179	639	2289	0.515	1178	1.1	3.236	A
2 - Wrexham Golf Club Access	145	1700	526	0.276	145	0.4	9.423	A
3 - A534 (East)	2263	866	1978	1.144	1966	81.5	89.198	F
4 - KSS2 Site Access	331	2256	723	0.459	330	0.8	9.139	A
5 - A534 Holt Road (West)	803	1825	919	0.874	788	5.7	25.022	D

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1179	648	2283	0.516	1179	1.1	3.259	A
2 - Wrexham Golf Club Access	145	1709	523	0.278	145	0.4	9.531	A
3 - A534 (East)	2263	871	1975	1.146	1974	153.7	217.975	F
4 - KSS2 Site Access	331	2265	719	0.461	331	0.8	9.288	A
5 - A534 Holt Road (West)	803	1832	915	0.877	800	6.3	29.972	D

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	963	548	2342	0.411	964	0.7	2.615	A
2 - Wrexham Golf Club Access	119	1408	625	0.190	119	0.2	7.122	A
3 - A534 (East)	1847	717	2062	0.896	2048	103.4	226.109	F
4 - KSS2 Site Access	271	2255	723	0.374	272	0.6	7.986	A
5 - A534 Holt Road (West)	655	1845	909	0.721	670	2.7	15.819	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	806	460	2394	0.337	807	0.5	2.268	A
2 - Wrexham Golf Club Access	99	1175	704	0.141	100	0.2	5.956	A
3 - A534 (East)	1547	598	2129	0.727	1949	2.9	65.336	F
4 - KSS2 Site Access	227	2105	793	0.286	227	0.4	6.370	A
5 - A534 Holt Road (West)	549	1732	961	0.571	554	1.4	8.957	A

2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	29.19	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	29.19	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D19	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1930	100.000
2 - Wrexham Golf Club Access		✓	171	100.000
3 - A534 (East)		✓	1116	100.000
4 - KSS2 Site Access		✓	626	100.000
5 - A534 Holt Road (West)		✓	855	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	106	1452	76	296
	2 - Wrexham Golf Club Access	39	0	93	0	39
	3 - A534 (East)	745	57	1	64	249
	4 - KSS2 Site Access	201	0	169	0	256
	5 - A534 Holt Road (West)	312	48	398	97	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.98	41.07	23.5	E
2 - Wrexham Golf Club Access	1.05	189.00	10.2	F
3 - A534 (East)	0.58	3.98	1.3	A
4 - KSS2 Site Access	0.66	10.00	1.9	A
5 - A534 Holt Road (West)	0.82	17.38	4.4	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1453	577	2325	0.625	1446	1.6	4.067	A
2 - Wrexham Golf Club Access	129	1865	470	0.274	127	0.4	10.456	B
3 - A534 (East)	840	409	2235	0.376	838	0.6	2.572	A
4 - KSS2 Site Access	471	1070	1277	0.369	469	0.6	4.441	A
5 - A534 Holt Road (West)	644	909	1339	0.481	640	0.9	5.124	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1735	690	2258	0.768	1729	3.2	6.719	A
2 - Wrexham Golf Club Access	154	2230	346	0.444	152	0.8	18.401	C
3 - A534 (East)	1003	490	2190	0.458	1002	0.8	3.028	A
4 - KSS2 Site Access	563	1279	1179	0.477	561	0.9	5.814	A
5 - A534 Holt Road (West)	769	1088	1257	0.612	766	1.5	7.296	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	2125	840	2170	0.979	2066	17.9	26.165	D
2 - Wrexham Golf Club Access	188	2678	194	0.970	168	5.8	102.189	F
3 - A534 (East)	1229	581	2139	0.575	1227	1.3	3.939	A
4 - KSS2 Site Access	689	1550	1053	0.655	685	1.8	9.700	A
5 - A534 Holt Road (West)	941	1326	1147	0.820	931	4.2	15.909	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	2125	847	2166	0.981	2103	23.5	41.074	E
2 - Wrexham Golf Club Access	188	2719	180	1.045	171	10.2	188.996	F
3 - A534 (East)	1229	590	2133	0.576	1229	1.3	3.979	A
4 - KSS2 Site Access	689	1559	1049	0.657	689	1.9	9.996	A
5 - A534 Holt Road (West)	941	1330	1146	0.822	941	4.4	17.382	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1735	700	2252	0.770	1815	3.5	9.723	A
2 - Wrexham Golf Club Access	154	2320	315	0.487	190	1.0	36.701	E
3 - A534 (East)	1003	525	2170	0.462	1005	0.9	3.095	A
4 - KSS2 Site Access	563	1313	1164	0.484	566	0.9	6.066	A
5 - A534 Holt Road (West)	769	1102	1251	0.615	780	1.6	7.814	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1453	582	2322	0.626	1460	1.7	4.211	A
2 - Wrexham Golf Club Access	129	1883	464	0.277	131	0.4	10.890	B
3 - A534 (East)	840	415	2232	0.376	841	0.6	2.590	A
4 - KSS2 Site Access	471	1077	1274	0.370	473	0.6	4.499	A
5 - A534 Holt Road (West)	644	915	1336	0.482	646	0.9	5.237	A

2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	284.37	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	284.37	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1236	100.000
2 - Wrexham Golf Club Access		✓	138	100.000
3 - A534 (East)		✓	2315	100.000
4 - KSS2 Site Access		✓	301	100.000
5 - A534 Holt Road (West)		✓	772	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	51	684	176	325
	2 - Wrexham Golf Club Access	59	0	49	0	30
	3 - A534 (East)	1822	41	2	148	302
	4 - KSS2 Site Access	97	0	81	0	123
	5 - A534 Holt Road (West)	271	26	251	223	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.60	3.97	1.5	A
2 - Wrexham Golf Club Access	0.34	11.94	0.5	B
3 - A534 (East)	1.30	565.32	327.7	F
4 - KSS2 Site Access	0.47	9.62	0.9	A
5 - A534 Holt Road (West)	0.93	46.65	10.3	E

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	931	467	2390	0.389	928	0.6	2.458	A
2 - Wrexham Golf Club Access	104	1306	660	0.157	103	0.2	6.460	A
3 - A534 (East)	1743	610	2122	0.821	1725	4.3	8.729	A
4 - KSS2 Site Access	227	1926	877	0.258	225	0.3	5.513	A
5 - A534 Holt Road (West)	581	1567	1037	0.561	576	1.3	7.736	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1111	556	2338	0.475	1110	0.9	2.930	A
2 - Wrexham Golf Club Access	124	1562	573	0.216	124	0.3	8.004	A
3 - A534 (East)	2081	729	2055	1.013	1993	26.4	36.683	E
4 - KSS2 Site Access	271	2238	731	0.370	270	0.6	7.785	A
5 - A534 Holt Road (West)	694	1818	922	0.753	688	2.9	14.983	B

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1361	662	2275	0.598	1359	1.5	3.918	A
2 - Wrexham Golf Club Access	152	1902	458	0.332	151	0.5	11.710	B
3 - A534 (East)	2549	888	1966	1.297	1964	172.5	188.073	F
4 - KSS2 Site Access	331	2294	705	0.470	330	0.9	9.578	A
5 - A534 Holt Road (West)	850	1842	910	0.934	826	8.8	35.503	E

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1361	673	2268	0.600	1361	1.5	3.966	A
2 - Wrexham Golf Club Access	152	1915	453	0.335	152	0.5	11.944	B
3 - A534 (East)	2549	894	1962	1.299	1962	319.3	448.525	F
4 - KSS2 Site Access	331	2293	705	0.470	331	0.9	9.625	A
5 - A534 Holt Road (West)	850	1842	911	0.933	844	10.3	46.646	E

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1111	579	2324	0.478	1113	0.9	2.980	A
2 - Wrexham Golf Club Access	124	1586	565	0.220	125	0.3	8.197	A
3 - A534 (East)	2081	741	2048	1.016	2048	327.7	565.325	F
4 - KSS2 Site Access	271	2291	707	0.383	272	0.6	8.297	A
5 - A534 Holt Road (West)	694	1864	901	0.771	721	3.6	22.353	C

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	931	482	2381	0.391	932	0.6	2.485	A
2 - Wrexham Golf Club Access	104	1318	656	0.158	104	0.2	6.530	A
3 - A534 (East)	1743	615	2119	0.823	2113	235.2	480.102	F
4 - KSS2 Site Access	227	2290	707	0.321	227	0.5	7.516	A
5 - A534 Holt Road (West)	581	1881	893	0.651	588	1.9	12.065	B

2030 Base + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	5.61	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.61	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1616	100.000
2 - Wrexham Golf Club Access		✓	160	100.000
3 - A534 (East)		✓	885	100.000
4 - KSS2 Site Access		✓	0	100.000
5 - A534 Holt Road (West)		✓	697	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	101	1236	0	279
	2 - Wrexham Golf Club Access	37	0	88	0	35
	3 - A534 (East)	606	54	1	0	224
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	295	46	356	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.75	6.10	3.0	A
2 - Wrexham Golf Club Access	0.44	15.82	0.8	C
3 - A534 (East)	0.43	2.83	0.8	A
4 - KSS2 Site Access	0.00	0.00	0.0	A
5 - A534 Holt Road (West)	0.55	5.66	1.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1217	343	2463	0.494	1213	1.0	2.871	A
2 - Wrexham Golf Club Access	120	1405	626	0.192	120	0.2	7.089	A
3 - A534 (East)	666	263	2317	0.288	665	0.4	2.177	A
4 - KSS2 Site Access	0	928	1344	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	525	524	1516	0.346	523	0.5	3.617	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1453	410	2423	0.599	1451	1.5	3.693	A
2 - Wrexham Golf Club Access	144	1681	533	0.270	143	0.4	9.233	A
3 - A534 (East)	796	315	2288	0.348	795	0.5	2.411	A
4 - KSS2 Site Access	0	1110	1259	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	627	627	1468	0.427	626	0.7	4.267	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1779	502	2369	0.751	1773	2.9	5.984	A
2 - Wrexham Golf Club Access	176	2055	406	0.434	175	0.7	15.483	C
3 - A534 (East)	974	385	2249	0.433	973	0.8	2.822	A
4 - KSS2 Site Access	0	1358	1142	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	767	767	1404	0.547	766	1.2	5.623	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1779	503	2369	0.751	1779	3.0	6.102	A
2 - Wrexham Golf Club Access	176	2061	404	0.437	176	0.8	15.819	C
3 - A534 (East)	974	386	2248	0.434	974	0.8	2.826	A
4 - KSS2 Site Access	0	1361	1141	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	767	768	1404	0.547	767	1.2	5.658	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1453	412	2422	0.600	1459	1.5	3.759	A
2 - Wrexham Golf Club Access	144	1689	530	0.272	145	0.4	9.403	A
3 - A534 (East)	796	317	2287	0.348	797	0.5	2.418	A
4 - KSS2 Site Access	0	1114	1257	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	627	629	1468	0.427	628	0.8	4.297	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1217	345	2462	0.494	1219	1.0	2.899	A
2 - Wrexham Golf Club Access	120	1412	624	0.193	121	0.2	7.167	A
3 - A534 (East)	666	265	2316	0.288	667	0.4	2.183	A
4 - KSS2 Site Access	0	932	1342	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	525	526	1515	0.346	526	0.5	3.644	A

2030 Base + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	15.34	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	15.34	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D22	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	894	100.000
2 - Wrexham Golf Club Access		✓	132	100.000
3 - A534 (East)		✓	1894	100.000
4 - KSS2 Site Access		✓	0	100.000
5 - A534 Holt Road (West)		✓	506	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	49	538	0	307
	2 - Wrexham Golf Club Access	56	0	47	0	29
	3 - A534 (East)	1587	39	2	0	266
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	256	24	225	0	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.40	2.41	0.7	A
2 - Wrexham Golf Club Access	0.21	6.46	0.3	A
3 - A534 (East)	0.94	23.43	12.7	C
4 - KSS2 Site Access	0.00	0.00	0.0	A
5 - A534 Holt Road (West)	0.61	10.26	1.6	B

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	673	218	2537	0.265	672	0.4	1.930	A
2 - Wrexham Golf Club Access	99	806	830	0.120	99	0.1	4.922	A
3 - A534 (East)	1426	295	2299	0.620	1419	1.6	4.064	A
4 - KSS2 Site Access	0	1714	976	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	381	1262	1177	0.324	379	0.5	4.501	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	804	261	2511	0.320	803	0.5	2.107	A
2 - Wrexham Golf Club Access	119	964	776	0.153	118	0.2	5.473	A
3 - A534 (East)	1703	353	2267	0.751	1697	2.9	6.266	A
4 - KSS2 Site Access	0	2050	819	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	455	1509	1063	0.428	454	0.7	5.897	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	984	318	2478	0.397	984	0.7	2.408	A
2 - Wrexham Golf Club Access	145	1179	703	0.207	145	0.3	6.450	A
3 - A534 (East)	2085	432	2222	0.938	2052	11.3	18.378	C
4 - KSS2 Site Access	0	2484	616	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	557	1825	918	0.607	554	1.5	9.804	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	984	320	2476	0.397	984	0.7	2.412	A
2 - Wrexham Golf Club Access	145	1181	702	0.207	145	0.3	6.463	A
3 - A534 (East)	2085	433	2222	0.939	2080	12.7	23.425	C
4 - KSS2 Site Access	0	2512	603	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	557	1849	907	0.614	557	1.6	10.262	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	804	264	2510	0.320	804	0.5	2.111	A
2 - Wrexham Golf Club Access	119	967	775	0.153	119	0.2	5.491	A
3 - A534 (East)	1703	354	2266	0.751	1741	3.1	7.341	A
4 - KSS2 Site Access	0	2095	798	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	455	1547	1046	0.435	458	0.8	6.156	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	673	220	2536	0.265	673	0.4	1.935	A
2 - Wrexham Golf Club Access	99	809	829	0.120	100	0.1	4.939	A
3 - A534 (East)	1426	296	2299	0.620	1432	1.7	4.181	A
4 - KSS2 Site Access	0	1728	970	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	381	1273	1172	0.325	382	0.5	4.564	A

2037 Base + Development (Phase 1 + 2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	9.37	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.37	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D23	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1848	100.000
2 - Wrexham Golf Club Access		✓	171	100.000
3 - A534 (East)		✓	1051	100.000
4 - KSS2 Site Access		✓	0	100.000
5 - A534 Holt Road (West)		✓	757	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	106	1446	0	296
	2 - Wrexham Golf Club Access	39	0	93	0	39
	3 - A534 (East)	744	57	1	0	249
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	312	48	397	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.87	11.69	6.4	B
2 - Wrexham Golf Club Access	0.62	30.87	1.5	D
3 - A534 (East)	0.52	3.34	1.1	A
4 - KSS2 Site Access	0.00	0.00	0.0	A
5 - A534 Holt Road (West)	0.63	7.23	1.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1391	377	2443	0.570	1386	1.3	3.390	A
2 - Wrexham Golf Club Access	129	1605	558	0.231	128	0.3	8.333	A
3 - A534 (East)	791	280	2308	0.343	789	0.5	2.368	A
4 - KSS2 Site Access	0	1069	1278	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	570	631	1467	0.389	567	0.6	3.992	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1661	451	2399	0.692	1658	2.2	4.833	A
2 - Wrexham Golf Club Access	154	1920	451	0.341	153	0.5	12.024	B
3 - A534 (East)	945	335	2277	0.415	944	0.7	2.700	A
4 - KSS2 Site Access	0	1279	1179	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	681	755	1410	0.483	679	0.9	4.922	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	2035	552	2340	0.870	2019	6.1	10.738	B
2 - Wrexham Golf Club Access	188	2340	309	0.610	185	1.4	28.171	D
3 - A534 (East)	1157	408	2236	0.518	1156	1.1	3.328	A
4 - KSS2 Site Access	0	1563	1047	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	833	924	1332	0.626	831	1.6	7.137	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	2035	554	2339	0.870	2034	6.4	11.689	B
2 - Wrexham Golf Club Access	188	2355	304	0.620	188	1.5	30.870	D
3 - A534 (East)	1157	411	2234	0.518	1157	1.1	3.343	A
4 - KSS2 Site Access	0	1569	1044	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	833	926	1331	0.626	833	1.7	7.228	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1661	454	2398	0.693	1678	2.3	5.109	A
2 - Wrexham Golf Club Access	154	1941	444	0.346	158	0.5	12.731	B
3 - A534 (East)	945	341	2273	0.416	946	0.7	2.716	A
4 - KSS2 Site Access	0	1287	1176	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	681	758	1408	0.483	683	0.9	4.984	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1391	379	2442	0.570	1395	1.3	3.452	A
2 - Wrexham Golf Club Access	129	1615	555	0.232	130	0.3	8.485	A
3 - A534 (East)	791	283	2306	0.343	792	0.5	2.380	A
4 - KSS2 Site Access	0	1075	1275	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	570	634	1465	0.389	571	0.6	4.031	A

2037 Base + Development (Phase 1 + 2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	73.31	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	73.31	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D24	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A5156		✓	1059	100.000
2 - Wrexham Golf Club Access		✓	138	100.000
3 - A534 (East)		✓	2154	100.000
4 - KSS2 Site Access		✓	0	100.000
5 - A534 Holt Road (West)		✓	549	100.000

Origin-Destination Data

Demand (PCU/hr)

	To					
		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
From	1 - A5156	0	51	683	0	325
	2 - Wrexham Golf Club Access	59	0	49	0	30
	3 - A534 (East)	1811	41	2	0	300
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	271	26	251	0	1

Vehicle Mix

Heavy Vehicle Percentages

	To					
From		1 - A5156	2 - Wrexham Golf Club Access	3 - A534 (East)	4 - KSS2 Site Access	5 - A534 Holt Road (West)
	1 - A5156	0	0	0	0	0
	2 - Wrexham Golf Club Access	0	0	0	0	0
	3 - A534 (East)	0	0	0	0	0
	4 - KSS2 Site Access	0	0	0	0	0
	5 - A534 Holt Road (West)	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - A5156	0.47	2.78	0.9	A
2 - Wrexham Golf Club Access	0.24	7.50	0.3	A
3 - A534 (East)	1.07	127.25	95.2	F
4 - KSS2 Site Access	0.00	0.00	0.0	A
5 - A534 Holt Road (West)	0.71	14.26	2.3	B

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	797	240	2524	0.316	795	0.5	2.081	A
2 - Wrexham Golf Club Access	104	947	782	0.133	103	0.2	5.302	A
3 - A534 (East)	1622	311	2290	0.708	1612	2.4	5.241	A
4 - KSS2 Site Access	0	1924	878	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	413	1432	1099	0.376	411	0.6	5.215	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	952	287	2496	0.381	951	0.6	2.329	A
2 - Wrexham Golf Club Access	124	1133	719	0.173	124	0.2	6.052	A
3 - A534 (East)	1936	373	2255	0.859	1923	5.6	10.451	B
4 - KSS2 Site Access	0	2296	704	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	494	1709	972	0.508	492	1.0	7.475	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1166	347	2461	0.474	1165	0.9	2.776	A
2 - Wrexham Golf Club Access	152	1386	633	0.240	152	0.3	7.475	A
3 - A534 (East)	2372	456	2208	1.074	2181	53.3	56.913	F
4 - KSS2 Site Access	0	2637	545	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	604	1942	865	0.699	600	2.2	13.349	B

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	1166	350	2459	0.474	1166	0.9	2.783	A
2 - Wrexham Golf Club Access	152	1389	632	0.241	152	0.3	7.503	A
3 - A534 (East)	2372	457	2208	1.074	2204	95.2	127.247	F
4 - KSS2 Site Access	0	2661	534	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	604	1962	856	0.706	604	2.3	14.258	B

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	952	296	2490	0.382	953	0.6	2.342	A
2 - Wrexham Golf Club Access	124	1138	717	0.173	124	0.2	6.078	A
3 - A534 (East)	1936	374	2255	0.859	2231	21.5	97.429	F
4 - KSS2 Site Access	0	2605	560	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	494	1974	850	0.581	497	1.4	10.306	B

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A5156	797	245	2521	0.316	798	0.5	2.091	A
2 - Wrexham Golf Club Access	104	952	780	0.133	104	0.2	5.327	A
3 - A534 (East)	1622	313	2289	0.708	1698	2.5	6.886	A
4 - KSS2 Site Access	0	2010	838	0.000	0	0.0	0.000	A
5 - A534 Holt Road (West)	413	1506	1065	0.388	416	0.6	5.578	A

Appendix F Junction 4: A5156/Borras Park Road

Junctions 10				
ARCADY 10 - Roundabout Module				
Version: 10.0.1.1519				
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution				

Filename: A5156, Borrás Road ARCADY [Apr 24].j10
Path: C:\Users\mchau\Downloads\Wrexham Mar 2024
Report generation date: 03/04/2024 09:06:52

»2023 Base, AM
 »2023 Base, PM
 »2030 Base, AM
 »2030 Base, PM
 »2037 Base, AM
 »2037 Base, PM
 »2030 Base + Committed (KSS2 & Kingmoor), AM
 »2030 Base + Committed (KSS2 & Kingmoor), PM
 »2037 Base + Committed (KSS2 & Kingmoor), AM
 »2037 Base + Committed (KSS2 & Kingmoor), PM
 »2030 Base + Committed + Development (Phase 1), AM
 »2030 Base + Committed + Development (Phase 1), PM
 »2037 Base + Committed + Development (Phase 1+ 2), AM
 »2037 Base + Committed + Development (Phase 1+ 2), PM
 »2030 Base + Development (Phase 1), AM
 »2030 Base + Development (Phase 1), PM
 »2037 Base + Development (Phase 1 + 2), AM
 »2037 Base + Development (Phase 1 + 2), PM
 »2030 Base + Committed + Development (Phase 1) [Without KSS2], AM
 »2030 Base + Committed + Development (Phase 1) [Without KSS2], PM
 »2037 Base + Committed + Development (Phase 1+ 2) [Without KSS2], AM
 »2037 Base + Committed + Development (Phase 1+ 2) [Without KSS2], PM
 »2030 Base + Committed + Development (Phase 1) [Without Kingmoor], AM
 »2030 Base + Committed + Development (Phase 1) [Without Kingmoor], PM
 »2037 Base + Committed + Development (Phase 1+ 2) [Without Kingmoor], AM
 »2037 Base + Committed + Development (Phase 1+ 2) [Without Kingmoor], PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	2023 Base									
1 - Borrás Road	D1	0.1	12.05	0.10	B	D2	0.1	5.19	0.05	A
2 - A5156 (East)		0.9	3.05	0.47	A		3.5	7.36	0.78	A
3 - Borrás Park Road		1.1	12.36	0.53	B		1.3	24.56	0.57	C
4 - A5156 (East)		3.2	6.62	0.77	A		0.8	2.81	0.46	A
	2030 Base									
1 - Borrás Road		0.1	14.94	0.12	B		0.1	5.48	0.06	A

2 - A5156 (East)	D3	1.0	3.24	0.50	A	D4	4.7	9.55	0.83	A
3 - Borrás Park Road		1.4	14.94	0.59	B		2.1	40.25	0.70	E
4 - A5156 (East)		4.2	8.26	0.81	A		0.9	2.96	0.48	A
2037 Base										
1 - Borrás Road	D5	0.2	20.06	0.17	C	D6	0.1	5.80	0.06	A
2 - A5156 (East)		1.1	3.48	0.54	A		7.0	13.62	0.88	B
3 - Borrás Park Road		1.9	18.93	0.66	C		5.2	95.47	0.89	F
4 - A5156 (East)		5.9	11.11	0.86	B		1.0	3.13	0.51	A
2030 Base + Committed (KSS2 & Kingmoor)										
1 - Borrás Road	D7	0.2	23.94	0.19	C	D8	0.1	6.97	0.07	A
2 - A5156 (East)		1.7	4.36	0.63	A		11.1	20.87	0.93	C
3 - Borrás Park Road		3.3	35.90	0.78	E		13.8	227.74	1.10	F
4 - A5156 (East)		7.3	13.50	0.89	B		1.5	3.79	0.60	A
2037 Base + Committed (KSS2 & Kingmoor)										
1 - Borrás Road	D9	0.4	38.95	0.28	E	D10	0.1	7.43	0.08	A
2 - A5156 (East)		1.9	4.79	0.66	A		23.5	41.02	0.98	E
3 - Borrás Park Road		6.0	63.28	0.89	F		34.4	527.79	1.50	F
4 - A5156 (East)		12.2	21.63	0.93	C		1.6	4.03	0.62	A
2030 Base + Committed + Development (Phase 1)										
1 - Borrás Road	D11	0.4	45.20	0.30	E	D12	0.1	7.57	0.08	A
2 - A5156 (East)		2.0	4.79	0.66	A		26.2	44.54	0.99	E
3 - Borrás Park Road		5.1	55.77	0.86	F		34.7	562.60	1.55	F
4 - A5156 (East)		14.4	25.28	0.95	D		1.7	4.12	0.63	A
2037 Base + Committed + Development (Phase 1 + 2)										
1 - Borrás Road	D17	1.7	193.90	0.73	F	D18	0.1	9.62	0.10	A
2 - A5156 (East)		2.9	6.28	0.74	A		132.4	173.31	1.11	F
3 - Borrás Park Road		31.9	279.45	1.17	F		76.0	1584.40	1.97	F
4 - A5156 (East)		82.9	108.46	1.06	F		2.4	5.25	0.71	A
2030 Base + Development (Phase 1)										
1 - Borrás Road	D19	0.2	21.74	0.17	C	D20	0.1	5.89	0.06	A
2 - A5156 (East)		1.2	3.48	0.54	A		7.5	14.36	0.89	B
3 - Borrás Park Road		1.7	18.01	0.64	C		5.3	102.46	0.90	F
4 - A5156 (East)		6.6	12.18	0.87	B		1.1	3.18	0.52	A
2037 Base + Development (Phase 1 + 2)										
1 - Borrás Road	D21	0.9	93.81	0.50	F	D22	0.1	6.99	0.08	A
2 - A5156 (East)		1.6	4.26	0.62	A		40.1	63.00	1.01	F
3 - Borrás Park Road		3.8	39.11	0.81	E		43.4	719.02	1.71	F
4 - A5156 (East)		28.4	45.66	0.99	E		1.5	3.78	0.60	A
2030 Base + Committed + Development (Phase 1) [Without KSS2]										
1 - Borrás Road	D23	0.3	29.94	0.22	D	D24	0.1	6.28	0.07	A
2 - A5156 (East)		1.3	3.71	0.57	A		12.7	23.66	0.94	C
3 - Borrás Park Road		2.0	21.37	0.68	C		17.3	277.47	1.17	F
4 - A5156 (East)		9.4	16.92	0.91	C		1.2	3.40	0.55	A
2037 Base + Committed + Development (Phase 1 + 2) [Without KSS2]										
1 - Borrás Road	D25	1.5	163.72	0.68	F	D26	0.1	8.70	0.09	A
2 - A5156 (East)		1.8	4.57	0.65	A		86.1	117.86	1.07	F
3 - Borrás Park Road		5.4	55.87	0.87	F		70.5	1249.32	1.91	F
4 - A5156 (East)		54.2	76.42	1.03	F		2.1	4.73	0.68	A
2030 Base + Committed + Development (Phase 1) [Without Kingmoor]										
1 - Borrás Road	D27	0.3	30.31	0.22	D	D28	0.1	7.03	0.07	A
2 - A5156 (East)		1.7	4.43	0.64	A		13.3	24.67	0.94	C
3 - Borrás Park Road		3.6	39.07	0.80	E		18.5	296.75	1.19	F
4 - A5156 (East)		9.5	17.15	0.91	C		1.5	3.82	0.60	A
2037 Base + Committed + Development (Phase 1 + 2) [Without Kingmoor]										
1 - Borrás Road		1.4	155.26	0.66	F		0.1	8.70	0.09	A

2 - A5156 (East)	D29	2.5	5.73	0.72	A	D30	87.1	119.03	1.07	F
3 - Borrass Park Road		19.8	180.87	1.06	F		69.6	1241.23	1.89	F
4 - A5156 (East)		52.9	74.72	1.03	F		2.1	4.73	0.68	A

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

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

File summary

File Description

Title	A5156 / Borrass Road
Location	Wrexham
Site number	
Date	31/01/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	LAPTOP-DTQ9HGGBB\mchau
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	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15
D2	2023 Base	PM	ONE HOUR	16:15	17:45	15
D3	2030 Base	AM	ONE HOUR	07:45	09:15	15
D4	2030 Base	PM	ONE HOUR	16:15	17:45	15
D5	2037 Base	AM	ONE HOUR	07:45	09:15	15
D6	2037 Base	PM	ONE HOUR	16:15	17:45	15
D7	2030 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15
D8	2030 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15
D9	2037 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15
D10	2037 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15
D11	2030 Base + Committed + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D12	2030 Base + Committed + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D17	2037 Base + Committed + Development (Phase 1+ 2)	AM	ONE HOUR	07:45	09:15	15
D18	2037 Base + Committed + Development (Phase 1+ 2)	PM	ONE HOUR	16:15	17:45	15
D19	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15
D20	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15
D21	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15
D22	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15
D23	2030 Base + Committed + Development (Phase 1) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15
D24	2030 Base + Committed + Development (Phase 1) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15
D25	2037 Base + Committed + Development (Phase 1+ 2) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15
D26	2037 Base + Committed + Development (Phase 1+ 2) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15
D27	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15
D28	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15
D29	2037 Base + Committed + Development (Phase 1+ 2) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15
D30	2037 Base + Committed + Development (Phase 1+ 2) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

2023 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.08	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.08	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Borras Road		
2	A5156 (East)		
3	Borras Park Road		
4	A5156 (East)		

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Entry only	Exit only
1 - Borras Road	3.50	5.30	6.4	23.5	49.6	41.2		
2 - A5156 (East)	7.80	8.40	1.5	47.6	49.6	41.3		
3 - Borras Park Road	2.70	5.90	6.1	27.3	49.6	40.9		
4 - A5156 (East)	7.80	8.30	3.8	25.3	49.6	40.8		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Borras Road	0.526	1305
2 - A5156 (East)	0.743	2417
3 - Borras Park Road	0.499	1151
4 - A5156 (East)	0.736	2403

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)
D1	2023 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	30	100.000
2 - A5156 (East)		✓	967	100.000
3 - Borrás Park Road		✓	300	100.000
4 - A5156 (East)		✓	1607	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	6	20	4
	2 - A5156 (East)	8	0	22	937
	3 - Borrás Park Road	12	92	0	196
	4 - A5156 (East)	19	1404	169	15

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Road	0.10	12.05	0.1	B
2 - A5156 (East)	0.47	3.05	0.9	A
3 - Borrás Park Road	0.53	12.36	1.1	B
4 - A5156 (East)	0.77	6.62	3.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	23	1260	642	0.035	22	0.0	5.809	A
2 - A5156 (East)	728	156	2301	0.316	726	0.5	2.285	A
3 - Borrás Park Road	226	724	790	0.286	224	0.4	6.349	A
4 - A5156 (East)	1210	84	2341	0.517	1206	1.1	3.159	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	27	1508	512	0.053	27	0.1	7.428	A
2 - A5156 (East)	869	187	2278	0.382	869	0.6	2.553	A
3 - Borrás Park Road	270	866	719	0.375	269	0.6	7.986	A
4 - A5156 (East)	1445	100	2329	0.620	1442	1.6	4.052	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	1843	335	0.099	33	0.1	11.896	B
2 - A5156 (East)	1065	228	2247	0.474	1064	0.9	3.039	A
3 - Borrás Park Road	330	1060	622	0.531	328	1.1	12.176	B
4 - A5156 (East)	1769	123	2313	0.765	1763	3.2	6.479	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	1850	332	0.100	33	0.1	12.050	B
2 - A5156 (East)	1065	229	2246	0.474	1065	0.9	3.045	A
3 - Borrás Park Road	330	1061	621	0.532	330	1.1	12.359	B
4 - A5156 (East)	1769	123	2312	0.765	1769	3.2	6.625	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	27	1517	507	0.053	27	0.1	7.509	A
2 - A5156 (East)	869	188	2277	0.382	870	0.6	2.560	A
3 - Borrás Park Road	270	868	718	0.376	272	0.6	8.104	A
4 - A5156 (East)	1445	101	2328	0.621	1451	1.7	4.133	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	23	1267	638	0.035	23	0.0	5.849	A
2 - A5156 (East)	728	157	2300	0.317	729	0.5	2.291	A
3 - Borrás Park Road	226	726	788	0.286	227	0.4	6.416	A
4 - A5156 (East)	1210	85	2340	0.517	1212	1.1	3.196	A

2023 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.81	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.81	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	35	100.000
2 - A5156 (East)		✓	1561	100.000
3 - Borrás Park Road		✓	174	100.000
4 - A5156 (East)		✓	974	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	33	0
	2 - A5156 (East)	9	0	86	1466
	3 - Borrás Park Road	17	33	0	124
	4 - A5156 (East)	17	734	217	6

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Road	0.05	5.19	0.1	A
2 - A5156 (East)	0.78	7.36	3.5	A
3 - Borrás Park Road	0.57	24.56	1.3	C
4 - A5156 (East)	0.46	2.81	0.8	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	26	743	914	0.029	26	0.0	4.056	A
2 - A5156 (East)	1175	192	2274	0.517	1171	1.1	3.253	A
3 - Borrás Park Road	131	1111	597	0.220	130	0.3	7.695	A
4 - A5156 (East)	733	44	2370	0.309	731	0.4	2.195	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	31	889	837	0.038	31	0.0	4.468	A
2 - A5156 (East)	1403	230	2246	0.625	1401	1.6	4.249	A
3 - Borrás Park Road	156	1329	488	0.321	156	0.5	10.817	B
4 - A5156 (East)	876	53	2364	0.370	875	0.6	2.418	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	39	1088	732	0.053	38	0.1	5.189	A
2 - A5156 (East)	1719	282	2207	0.779	1712	3.4	7.161	A
3 - Borrás Park Road	192	1624	341	0.562	189	1.2	23.237	C
4 - A5156 (East)	1072	64	2356	0.455	1071	0.8	2.802	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	39	1090	731	0.053	39	0.1	5.194	A
2 - A5156 (East)	1719	282	2207	0.779	1718	3.5	7.357	A
3 - Borrás Park Road	192	1630	337	0.568	191	1.3	24.563	C
4 - A5156 (East)	1072	65	2355	0.455	1072	0.8	2.806	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	31	892	836	0.038	32	0.0	4.477	A
2 - A5156 (East)	1403	230	2245	0.625	1410	1.7	4.348	A
3 - Borrás Park Road	156	1338	483	0.324	160	0.5	11.225	B
4 - A5156 (East)	876	54	2363	0.371	877	0.6	2.423	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	26	746	912	0.029	26	0.0	4.062	A
2 - A5156 (East)	1175	193	2273	0.517	1178	1.1	3.294	A
3 - Borrás Park Road	131	1117	593	0.221	132	0.3	7.813	A
4 - A5156 (East)	733	45	2370	0.309	734	0.4	2.202	A

2030 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	7.35	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.35	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2030 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	31	100.000
2 - A5156 (East)		✓	1023	100.000
3 - Borrás Park Road		✓	318	100.000
4 - A5156 (East)		✓	1701	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	6	21	4
	2 - A5156 (East)	8	0	23	992
	3 - Borrás Park Road	13	97	0	208
	4 - A5156 (East)	20	1486	179	16

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.12	14.94	0.1	B
2 - A5156 (East)	0.50	3.24	1.0	A
3 - Borras Park Road	0.59	14.94	1.4	B
4 - A5156 (East)	0.81	8.26	4.2	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	23	1333	603	0.039	23	0.0	6.202	A
2 - A5156 (East)	770	165	2294	0.336	768	0.5	2.356	A
3 - Borras Park Road	239	766	769	0.311	238	0.4	6.754	A
4 - A5156 (East)	1281	88	2338	0.548	1276	1.2	3.374	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	1595	466	0.060	28	0.1	8.222	A
2 - A5156 (East)	920	197	2270	0.405	919	0.7	2.663	A
3 - Borras Park Road	286	916	694	0.412	285	0.7	8.784	A
4 - A5156 (East)	1529	106	2325	0.658	1526	1.9	4.493	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	1948	280	0.122	34	0.1	14.609	B
2 - A5156 (East)	1126	241	2238	0.503	1125	1.0	3.231	A
3 - Borras Park Road	350	1122	591	0.592	347	1.4	14.587	B
4 - A5156 (East)	1873	129	2308	0.812	1864	4.1	7.953	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	1957	275	0.124	34	0.1	14.939	B
2 - A5156 (East)	1126	242	2237	0.504	1126	1.0	3.241	A
3 - Borras Park Road	350	1123	591	0.593	350	1.4	14.945	B
4 - A5156 (East)	1873	130	2307	0.812	1872	4.2	8.262	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	1608	459	0.061	28	0.1	8.366	A
2 - A5156 (East)	920	199	2269	0.405	921	0.7	2.675	A
3 - Borras Park Road	286	918	693	0.413	289	0.7	8.972	A
4 - A5156 (East)	1529	107	2324	0.658	1538	2.0	4.632	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	23	1342	599	0.039	23	0.0	6.255	A
2 - A5156 (East)	770	166	2293	0.336	771	0.5	2.365	A
3 - Borras Park Road	239	769	767	0.312	240	0.5	6.844	A
4 - A5156 (East)	1281	89	2337	0.548	1284	1.2	3.425	A

2030 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.10	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.10	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2030 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	37	100.000
2 - A5156 (East)		✓	1653	100.000
3 - Borrás Park Road		✓	184	100.000
4 - A5156 (East)		✓	1031	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	35	0
	2 - A5156 (East)	10	0	91	1552
	3 - Borrás Park Road	18	35	0	131
	4 - A5156 (East)	18	777	230	6

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.06	5.48	0.1	A
2 - A5156 (East)	0.83	9.55	4.7	A
3 - Borras Park Road	0.70	40.25	2.1	E
4 - A5156 (East)	0.48	2.96	0.9	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	787	891	0.031	28	0.0	4.170	A
2 - A5156 (East)	1244	203	2265	0.549	1240	1.2	3.494	A
3 - Borras Park Road	139	1176	564	0.246	137	0.3	8.407	A
4 - A5156 (East)	776	47	2368	0.328	774	0.5	2.255	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	33	941	810	0.041	33	0.0	4.636	A
2 - A5156 (East)	1486	243	2236	0.665	1483	2.0	4.764	A
3 - Borras Park Road	165	1407	449	0.368	164	0.6	12.611	B
4 - A5156 (East)	927	56	2361	0.393	926	0.6	2.507	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1152	699	0.058	41	0.1	5.468	A
2 - A5156 (East)	1820	298	2195	0.829	1809	4.6	9.094	A
3 - Borras Park Road	203	1716	294	0.688	197	2.0	35.171	E
4 - A5156 (East)	1135	68	2353	0.482	1134	0.9	2.950	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1154	698	0.058	41	0.1	5.477	A
2 - A5156 (East)	1820	298	2195	0.829	1819	4.7	9.553	A
3 - Borras Park Road	203	1726	290	0.699	202	2.1	40.251	E
4 - A5156 (East)	1135	69	2352	0.483	1135	0.9	2.958	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	944	808	0.041	33	0.0	4.648	A
2 - A5156 (East)	1486	244	2235	0.665	1497	2.0	4.943	A
3 - Borrás Park Road	165	1420	442	0.374	172	0.6	13.570	B
4 - A5156 (East)	927	58	2360	0.393	928	0.6	2.515	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	790	889	0.031	28	0.0	4.180	A
2 - A5156 (East)	1244	204	2265	0.549	1248	1.2	3.548	A
3 - Borrás Park Road	139	1183	560	0.247	140	0.3	8.579	A
4 - A5156 (East)	776	48	2368	0.328	777	0.5	2.263	A

2037 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.46	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.46	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2037 Base	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	33	100.000
2 - A5156 (East)		✓	1083	100.000
3 - Borrás Park Road		✓	335	100.000
4 - A5156 (East)		✓	1799	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	7	22	4
	2 - A5156 (East)	9	0	25	1049
	3 - Borrás Park Road	13	103	0	219
	4 - A5156 (East)	21	1572	189	17

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Road	0.17	20.06	0.2	C
2 - A5156 (East)	0.54	3.48	1.1	A
3 - Borrás Park Road	0.66	18.93	1.9	C
4 - A5156 (East)	0.86	11.11	5.9	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	25	1410	563	0.044	25	0.0	6.686	A
2 - A5156 (East)	815	174	2287	0.356	813	0.6	2.439	A
3 - Borrás Park Road	252	810	747	0.338	250	0.5	7.222	A
4 - A5156 (East)	1354	93	2334	0.580	1349	1.4	3.633	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	30	1687	417	0.071	30	0.1	9.282	A
2 - A5156 (East)	974	208	2262	0.430	973	0.8	2.791	A
3 - Borrás Park Road	301	969	667	0.451	300	0.8	9.764	A
4 - A5156 (East)	1617	112	2320	0.697	1614	2.3	5.069	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	36	2056	223	0.163	36	0.2	19.191	C
2 - A5156 (East)	1192	254	2228	0.535	1191	1.1	3.466	A
3 - Borrás Park Road	369	1186	559	0.660	365	1.8	18.158	C
4 - A5156 (East)	1981	136	2303	0.860	1967	5.7	10.327	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	36	2070	216	0.168	36	0.2	20.059	C
2 - A5156 (East)	1192	255	2227	0.535	1192	1.1	3.479	A
3 - Borrás Park Road	369	1188	558	0.661	369	1.9	18.930	C
4 - A5156 (East)	1981	138	2302	0.861	1980	5.9	11.109	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	30	1706	407	0.073	30	0.1	9.561	A
2 - A5156 (East)	974	211	2260	0.431	975	0.8	2.806	A
3 - Borrás Park Road	301	972	666	0.452	305	0.8	10.091	B
4 - A5156 (East)	1617	114	2319	0.697	1632	2.3	5.341	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	25	1420	558	0.045	25	0.0	6.761	A
2 - A5156 (East)	815	175	2286	0.357	816	0.6	2.449	A
3 - Borrás Park Road	252	813	745	0.338	254	0.5	7.340	A
4 - A5156 (East)	1354	95	2333	0.580	1358	1.4	3.708	A

2037 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	14.99	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.99	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2037 Base	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	39	100.000
2 - A5156 (East)		✓	1746	100.000
3 - Borrás Park Road		✓	195	100.000
4 - A5156 (East)		✓	1090	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	37	0
	2 - A5156 (East)	10	0	96	1640
	3 - Borrás Park Road	19	37	0	139
	4 - A5156 (East)	19	821	243	7

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.06	5.80	0.1	A
2 - A5156 (East)	0.88	13.62	7.0	B
3 - Borras Park Road	0.89	95.47	5.2	F
4 - A5156 (East)	0.51	3.13	1.0	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	29	832	867	0.034	29	0.0	4.295	A
2 - A5156 (East)	1314	215	2256	0.583	1309	1.4	3.778	A
3 - Borras Park Road	147	1242	531	0.276	145	0.4	9.296	A
4 - A5156 (East)	821	49	2367	0.347	818	0.5	2.322	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	35	995	781	0.045	35	0.0	4.823	A
2 - A5156 (East)	1570	258	2225	0.705	1566	2.3	5.427	A
3 - Borras Park Road	175	1486	409	0.428	174	0.7	15.190	C
4 - A5156 (East)	980	59	2359	0.415	979	0.7	2.607	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1216	665	0.065	43	0.1	5.786	A
2 - A5156 (East)	1922	316	2182	0.881	1905	6.6	12.305	B
3 - Borras Park Road	215	1808	249	0.863	202	4.0	64.459	F
4 - A5156 (East)	1200	69	2352	0.510	1199	1.0	3.119	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1219	664	0.065	43	0.1	5.800	A
2 - A5156 (East)	1922	316	2182	0.881	1921	7.0	13.620	B
3 - Borras Park Road	215	1823	241	0.890	210	5.2	95.468	F
4 - A5156 (East)	1200	71	2350	0.511	1200	1.0	3.129	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	35	1001	778	0.045	35	0.0	4.843	A
2 - A5156 (East)	1570	258	2225	0.706	1588	2.4	5.807	A
3 - Borras Park Road	175	1507	399	0.439	193	0.8	18.888	C
4 - A5156 (East)	980	65	2355	0.416	981	0.7	2.621	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	29	835	866	0.034	29	0.0	4.305	A
2 - A5156 (East)	1314	216	2256	0.583	1319	1.4	3.859	A
3 - Borras Park Road	147	1251	527	0.279	148	0.4	9.565	A
4 - A5156 (East)	821	50	2366	0.347	821	0.5	2.333	A

2030 Base + Committed (KSS2 & Kingmoor), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	12.29	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	12.29	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2030 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	31	100.000
2 - A5156 (East)		✓	1281	100.000
3 - Borrás Park Road		✓	320	100.000
4 - A5156 (East)		✓	1857	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	6	21	4
	2 - A5156 (East)	8	0	24	1249
	3 - Borrás Park Road	13	99	0	208
	4 - A5156 (East)	20	1642	179	16

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.19	23.94	0.2	C
2 - A5156 (East)	0.63	4.36	1.7	A
3 - Borras Park Road	0.78	35.90	3.3	E
4 - A5156 (East)	0.89	13.50	7.3	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	23	1451	541	0.043	23	0.0	6.944	A
2 - A5156 (East)	964	165	2294	0.420	962	0.7	2.696	A
3 - Borras Park Road	241	958	673	0.358	239	0.6	8.256	A
4 - A5156 (East)	1398	90	2337	0.598	1392	1.5	3.788	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	1736	392	0.071	28	0.1	9.891	A
2 - A5156 (East)	1152	197	2270	0.507	1150	1.0	3.213	A
3 - Borras Park Road	288	1147	579	0.497	286	1.0	12.230	B
4 - A5156 (East)	1669	107	2324	0.718	1665	2.5	5.434	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	2111	194	0.176	34	0.2	22.373	C
2 - A5156 (East)	1410	240	2238	0.630	1408	1.7	4.320	A
3 - Borras Park Road	352	1403	451	0.782	344	3.1	31.494	D
4 - A5156 (East)	2045	129	2308	0.886	2027	7.0	12.112	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	2130	184	0.185	34	0.2	23.944	C
2 - A5156 (East)	1410	242	2237	0.631	1410	1.7	4.356	A
3 - Borras Park Road	352	1406	449	0.784	351	3.3	35.897	E
4 - A5156 (East)	2045	132	2306	0.887	2043	7.3	13.497	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	1762	378	0.074	28	0.1	10.319	B
2 - A5156 (East)	1152	200	2268	0.508	1154	1.0	3.242	A
3 - Borrás Park Road	288	1151	577	0.499	297	1.0	13.264	B
4 - A5156 (East)	1669	111	2321	0.719	1688	2.6	5.855	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	23	1462	535	0.044	23	0.0	7.032	A
2 - A5156 (East)	964	166	2293	0.421	966	0.7	2.716	A
3 - Borrás Park Road	241	963	671	0.359	243	0.6	8.450	A
4 - A5156 (East)	1398	91	2336	0.599	1402	1.5	3.876	A

2030 Base + Committed (KSS2 & Kingmoor), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	25.63	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	25.63	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2030 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	37	100.000
2 - A5156 (East)		✓	1849	100.000
3 - Borrás Park Road		✓	185	100.000
4 - A5156 (East)		✓	1277	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	35	0
	2 - A5156 (East)	10	0	93	1746
	3 - Borrás Park Road	18	36	0	131
	4 - A5156 (East)	18	1023	230	6

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.07	6.97	0.1	A
2 - A5156 (East)	0.93	20.87	11.1	C
3 - Borras Park Road	1.10	227.74	13.8	F
4 - A5156 (East)	0.60	3.79	1.5	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	972	794	0.035	28	0.0	4.701	A
2 - A5156 (East)	1392	203	2265	0.614	1386	1.6	4.060	A
3 - Borras Park Road	139	1321	492	0.283	138	0.4	10.114	B
4 - A5156 (East)	961	48	2368	0.406	959	0.7	2.551	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	33	1163	693	0.048	33	0.1	5.455	A
2 - A5156 (East)	1662	243	2236	0.743	1657	2.8	6.168	A
3 - Borras Park Road	166	1579	363	0.458	165	0.8	17.996	C
4 - A5156 (East)	1148	57	2361	0.486	1147	0.9	2.963	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1418	559	0.073	41	0.1	6.948	A
2 - A5156 (East)	2036	298	2195	0.927	2007	10.1	16.999	C
3 - Borras Park Road	204	1913	197	1.036	176	7.6	119.477	F
4 - A5156 (East)	1406	62	2357	0.597	1404	1.5	3.770	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1421	557	0.073	41	0.1	6.969	A
2 - A5156 (East)	2036	298	2195	0.928	2032	11.1	20.874	C
3 - Borras Park Road	204	1936	185	1.101	179	13.8	227.743	F
4 - A5156 (East)	1406	63	2356	0.597	1406	1.5	3.787	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	1176	686	0.048	33	0.1	5.517	A
2 - A5156 (East)	1662	244	2235	0.744	1695	3.0	7.043	A
3 - Borrás Park Road	166	1615	345	0.482	217	1.0	39.550	E
4 - A5156 (East)	1148	73	2349	0.489	1150	1.0	3.006	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	976	791	0.035	28	0.0	4.716	A
2 - A5156 (East)	1392	204	2265	0.615	1397	1.6	4.177	A
3 - Borrás Park Road	139	1332	486	0.286	142	0.4	10.505	B
4 - A5156 (East)	961	49	2367	0.406	962	0.7	2.565	A

2037 Base + Committed (KSS2 & Kingmoor), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	19.44	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	19.44	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2037 Base + Committed (KSS2 & Kingmoor)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	33	100.000
2 - A5156 (East)		✓	1341	100.000
3 - Borrás Park Road		✓	336	100.000
4 - A5156 (East)		✓	1954	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	7	22	4
	2 - A5156 (East)	9	0	26	1306
	3 - Borrás Park Road	13	104	0	219
	4 - A5156 (East)	21	1727	189	17

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.28	38.95	0.4	E
2 - A5156 (East)	0.66	4.79	1.9	A
3 - Borras Park Road	0.89	63.28	6.0	F
4 - A5156 (East)	0.93	21.63	12.2	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	25	1526	502	0.050	25	0.1	7.538	A
2 - A5156 (East)	1010	174	2287	0.441	1006	0.8	2.803	A
3 - Borras Park Road	253	1003	651	0.389	250	0.6	8.942	A
4 - A5156 (East)	1471	94	2334	0.630	1464	1.7	4.111	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	30	1825	345	0.086	30	0.1	11.421	B
2 - A5156 (East)	1206	208	2262	0.533	1204	1.1	3.398	A
3 - Borras Park Road	302	1200	552	0.547	300	1.2	14.137	B
4 - A5156 (East)	1757	113	2320	0.757	1751	3.0	6.269	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	36	2207	144	0.253	35	0.3	33.021	D
2 - A5156 (East)	1476	251	2230	0.662	1473	1.9	4.739	A
3 - Borras Park Road	370	1467	419	0.884	354	5.1	47.559	E
4 - A5156 (East)	2151	133	2305	0.933	2120	10.8	17.210	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	36	2236	128	0.283	36	0.4	38.951	E
2 - A5156 (East)	1476	255	2227	0.663	1476	1.9	4.794	A
3 - Borras Park Road	370	1471	417	0.887	366	6.0	63.277	F
4 - A5156 (East)	2151	137	2302	0.935	2146	12.2	21.629	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	30	1872	320	0.093	31	0.1	12.502	B
2 - A5156 (East)	1206	213	2258	0.534	1209	1.2	3.439	A
3 - Borrás Park Road	302	1205	550	0.549	321	1.3	16.954	C
4 - A5156 (East)	1757	120	2315	0.759	1792	3.2	7.342	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	25	1540	494	0.050	25	0.1	7.671	A
2 - A5156 (East)	1010	175	2286	0.442	1011	0.8	2.825	A
3 - Borrás Park Road	253	1007	648	0.390	255	0.7	9.219	A
4 - A5156 (East)	1471	96	2332	0.631	1477	1.7	4.240	A

2037 Base + Committed (KSS2 & Kingmoor), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	53.74	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	53.74	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2037 Base + Committed (KSS2 & Kingmoor)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	39	100.000
2 - A5156 (East)		✓	1943	100.000
3 - Borrás Park Road		✓	196	100.000
4 - A5156 (East)		✓	1336	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	37	0
	2 - A5156 (East)	10	0	99	1834
	3 - Borrás Park Road	19	38	0	139
	4 - A5156 (East)	19	1067	243	7

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.08	7.43	0.1	A
2 - A5156 (East)	0.98	41.02	23.5	E
3 - Borras Park Road	1.50	527.79	34.4	F
4 - A5156 (East)	0.62	4.03	1.6	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	29	1017	770	0.038	29	0.0	4.858	A
2 - A5156 (East)	1463	215	2257	0.648	1456	1.8	4.455	A
3 - Borras Park Road	148	1387	459	0.321	146	0.5	11.423	B
4 - A5156 (East)	1006	50	2366	0.425	1003	0.7	2.635	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	35	1216	665	0.053	35	0.1	5.715	A
2 - A5156 (East)	1747	258	2225	0.785	1740	3.5	7.319	A
3 - Borras Park Road	176	1658	324	0.544	174	1.1	23.545	C
4 - A5156 (East)	1201	59	2359	0.509	1200	1.0	3.103	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1478	527	0.081	43	0.1	7.426	A
2 - A5156 (East)	2139	315	2182	0.980	2080	18.2	26.559	D
3 - Borras Park Road	216	1982	162	1.333	155	16.4	246.513	F
4 - A5156 (East)	1471	56	2362	0.623	1469	1.6	4.020	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1478	527	0.081	43	0.1	7.430	A
2 - A5156 (East)	2139	316	2182	0.981	2118	23.5	41.023	E
3 - Borras Park Road	216	2018	144	1.497	144	34.4	527.788	F
4 - A5156 (East)	1471	53	2364	0.622	1471	1.6	4.030	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	35	1240	653	0.054	35	0.1	5.832	A
2 - A5156 (East)	1747	259	2224	0.785	1826	3.8	10.758	B
3 - Borrás Park Road	176	1739	283	0.622	275	9.6	292.608	F
4 - A5156 (East)	1201	89	2337	0.514	1203	1.1	3.181	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	29	1028	764	0.038	29	0.0	4.904	A
2 - A5156 (East)	1463	216	2256	0.648	1471	1.9	4.630	A
3 - Borrás Park Road	148	1401	452	0.327	184	0.5	15.346	C
4 - A5156 (East)	1006	61	2358	0.427	1007	0.7	2.667	A

2030 Base + Committed + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	20.62	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	20.62	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D11	2030 Base + Committed + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	31	100.000
2 - A5156 (East)		✓	1349	100.000
3 - Borrás Park Road		✓	323	100.000
4 - A5156 (East)		✓	1983	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	6	21	4
	2 - A5156 (East)	8	0	25	1316
	3 - Borrás Park Road	13	102	0	208
	4 - A5156 (East)	20	1768	179	16

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.30	45.20	0.4	E
2 - A5156 (East)	0.66	4.79	2.0	A
3 - Borras Park Road	0.86	55.77	5.1	F
4 - A5156 (East)	0.95	25.28	14.4	D

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	23	1547	491	0.048	23	0.0	7.692	A
2 - A5156 (East)	1016	165	2294	0.443	1012	0.8	2.801	A
3 - Borras Park Road	243	1009	648	0.375	241	0.6	8.799	A
4 - A5156 (East)	1493	92	2335	0.639	1486	1.7	4.205	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	1850	332	0.084	28	0.1	11.843	B
2 - A5156 (East)	1213	197	2270	0.534	1211	1.1	3.395	A
3 - Borras Park Road	290	1207	549	0.529	288	1.1	13.722	B
4 - A5156 (East)	1783	110	2322	0.768	1777	3.2	6.534	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	2233	130	0.262	33	0.3	36.805	E
2 - A5156 (East)	1485	238	2240	0.663	1482	1.9	4.731	A
3 - Borras Park Road	356	1476	414	0.858	342	4.5	43.746	E
4 - A5156 (East)	2183	131	2307	0.947	2146	12.4	19.163	C

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	2265	113	0.302	34	0.4	45.196	E
2 - A5156 (East)	1485	241	2237	0.664	1485	2.0	4.786	A
3 - Borras Park Road	356	1480	413	0.862	353	5.1	55.765	F
4 - A5156 (East)	2183	134	2304	0.948	2175	14.4	25.283	D

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	1905	303	0.092	29	0.1	13.215	B
2 - A5156 (East)	1213	203	2266	0.535	1216	1.2	3.438	A
3 - Borrás Park Road	290	1212	546	0.532	306	1.2	15.909	C
4 - A5156 (East)	1783	116	2317	0.769	1826	3.4	7.958	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	23	1562	483	0.048	24	0.1	7.836	A
2 - A5156 (East)	1016	166	2293	0.443	1017	0.8	2.824	A
3 - Borrás Park Road	243	1013	645	0.377	245	0.6	9.053	A
4 - A5156 (East)	1493	93	2334	0.640	1499	1.8	4.348	A

2030 Base + Committed + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	55.88	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	55.88	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D12	2030 Base + Committed + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	37	100.000
2 - A5156 (East)		✓	1967	100.000
3 - Borrás Park Road		✓	186	100.000
4 - A5156 (East)		✓	1356	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	35	0
	2 - A5156 (East)	10	0	96	1861
	3 - Borrás Park Road	18	37	0	131
	4 - A5156 (East)	18	1102	230	6

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Road	0.08	7.57	0.1	A
2 - A5156 (East)	0.99	44.54	26.2	E
3 - Borrás Park Road	1.55	562.60	34.7	F
4 - A5156 (East)	0.63	4.12	1.7	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	1032	762	0.037	28	0.0	4.901	A
2 - A5156 (East)	1481	203	2265	0.654	1473	1.9	4.503	A
3 - Borrás Park Road	140	1406	449	0.312	138	0.4	11.507	B
4 - A5156 (East)	1021	48	2367	0.431	1018	0.8	2.663	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	1234	655	0.051	33	0.1	5.785	A
2 - A5156 (East)	1768	243	2236	0.791	1761	3.6	7.473	A
3 - Borrás Park Road	167	1681	312	0.535	165	1.1	23.958	C
4 - A5156 (East)	1219	58	2360	0.516	1218	1.1	3.148	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	41	1499	516	0.079	41	0.1	7.569	A
2 - A5156 (East)	2166	298	2195	0.987	2101	19.7	27.951	D
3 - Borrás Park Road	205	2005	150	1.362	144	16.3	264.913	F
4 - A5156 (East)	1493	53	2364	0.632	1490	1.7	4.112	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	41	1499	516	0.079	41	0.1	7.573	A
2 - A5156 (East)	2166	298	2195	0.987	2140	26.2	44.545	E
3 - Borrás Park Road	205	2042	132	1.551	132	34.7	562.602	F
4 - A5156 (East)	1493	50	2366	0.631	1493	1.7	4.122	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	1257	644	0.052	33	0.1	5.901	A
2 - A5156 (East)	1768	244	2235	0.791	1857	4.0	11.703	B
3 - Borrás Park Road	167	1772	267	0.627	259	11.6	320.891	F
4 - A5156 (East)	1219	86	2339	0.521	1221	1.1	3.226	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	1045	755	0.037	28	0.0	4.953	A
2 - A5156 (East)	1481	204	2265	0.654	1489	1.9	4.688	A
3 - Borrás Park Road	140	1421	442	0.317	185	0.5	16.569	C
4 - A5156 (East)	1021	62	2357	0.433	1022	0.8	2.699	A

2037 Base + Committed + Development (Phase 1+2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	85.80	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	85.80	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D17	2037 Base + Committed + Development (Phase 1+ 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	33	100.000
2 - A5156 (East)		✓	1513	100.000
3 - Borrás Park Road		✓	343	100.000
4 - A5156 (East)		✓	2221	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	7	22	4
	2 - A5156 (East)	9	0	27	1477
	3 - Borrás Park Road	13	111	0	219
	4 - A5156 (East)	21	1994	189	17

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.73	193.90	1.7	F
2 - A5156 (East)	0.74	6.28	2.9	A
3 - Borras Park Road	1.17	279.45	31.9	F
4 - A5156 (East)	1.06	108.46	82.9	F

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	25	1729	395	0.063	25	0.1	9.706	A
2 - A5156 (East)	1139	174	2288	0.498	1135	1.0	3.113	A
3 - Borras Park Road	258	1131	587	0.440	255	0.8	10.759	B
4 - A5156 (East)	1672	99	2330	0.718	1662	2.5	5.316	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	30	2063	219	0.135	29	0.2	18.918	C
2 - A5156 (East)	1360	207	2263	0.601	1358	1.5	3.971	A
3 - Borras Park Road	308	1353	476	0.648	305	1.7	20.544	C
4 - A5156 (East)	1997	118	2316	0.862	1983	5.8	10.437	B

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	36	2359	64	0.569	33	1.0	107.223	F
2 - A5156 (East)	1666	237	2240	0.744	1661	2.8	6.153	A
3 - Borras Park Road	378	1652	327	1.157	313	17.8	137.023	F
4 - A5156 (East)	2445	123	2312	1.058	2279	47.4	50.393	F

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	36	2386	50	0.731	34	1.7	193.900	F
2 - A5156 (East)	1666	240	2238	0.744	1666	2.9	6.284	A
3 - Borras Park Road	378	1658	324	1.166	321	31.9	279.451	F
4 - A5156 (East)	2445	126	2310	1.059	2303	82.9	108.463	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	30	2373	56	0.526	31	1.3	150.482	F
2 - A5156 (East)	1360	234	2243	0.606	1365	1.6	4.128	A
3 - Borrás Park Road	308	1362	471	0.654	427	2.3	123.475	F
4 - A5156 (East)	1997	162	2283	0.874	2256	18.1	84.278	F

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	25	1803	356	0.070	30	0.1	11.192	B
2 - A5156 (East)	1139	184	2280	0.500	1141	1.0	3.170	A
3 - Borrás Park Road	258	1138	583	0.443	264	0.8	11.477	B
4 - A5156 (East)	1672	102	2328	0.718	1734	2.6	6.702	A

2037 Base + Committed + Development (Phase 1+2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	177.62	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	177.62	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D18	2037 Base + Committed + Development (Phase 1+ 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	39	100.000
2 - A5156 (East)		✓	2201	100.000
3 - Borrás Park Road		✓	199	100.000
4 - A5156 (East)		✓	1531	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	2	37	0
	2 - A5156 (East)	10	0	105	2086
	3 - Borrás Park Road	19	41	0	139
	4 - A5156 (East)	19	1262	243	7

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.10	9.62	0.1	A
2 - A5156 (East)	1.11	173.31	132.4	F
3 - Borras Park Road	1.97	1584.40	76.0	F
4 - A5156 (East)	0.71	5.25	2.4	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	29	1165	692	0.042	29	0.0	5.430	A
2 - A5156 (East)	1657	215	2257	0.734	1646	2.7	5.801	A
3 - Borras Park Road	150	1573	366	0.409	147	0.7	16.254	C
4 - A5156 (East)	1153	52	2365	0.487	1149	0.9	2.953	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	35	1392	572	0.061	35	0.1	6.698	A
2 - A5156 (East)	1979	258	2225	0.889	1961	7.1	12.838	B
3 - Borras Park Road	179	1874	216	0.828	168	3.3	65.315	F
4 - A5156 (East)	1376	60	2359	0.583	1375	1.4	3.651	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1685	418	0.103	43	0.1	9.576	A
2 - A5156 (East)	2423	315	2182	1.110	2166	71.5	73.212	F
3 - Borras Park Road	219	2070	118	1.855	117	29.0	557.596	F
4 - A5156 (East)	1686	45	2370	0.711	1682	2.4	5.201	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1688	417	0.103	43	0.1	9.624	A
2 - A5156 (East)	2423	316	2182	1.111	2180	132.4	173.308	F
3 - Borras Park Road	219	2084	111	1.968	111	55.9	1414.722	F
4 - A5156 (East)	1686	43	2371	0.711	1686	2.4	5.251	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	35	1384	577	0.061	35	0.1	6.651	A
2 - A5156 (East)	1979	259	2224	0.890	2208	75.2	170.379	F
3 - Borrás Park Road	179	2109	99	1.809	99	76.0	1584.398	F
4 - A5156 (East)	1376	40	2373	0.580	1381	1.4	3.639	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	29	1185	681	0.043	29	0.0	5.525	A
2 - A5156 (East)	1657	216	2256	0.735	1946	2.9	27.887	D
3 - Borrás Park Road	150	1859	224	0.670	221	58.2	1097.280	F
4 - A5156 (East)	1153	75	2347	0.491	1154	1.0	3.023	A

2030 Base + Development (Phase 1), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.94	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.94	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D19	2030 Base + Development (Phase 1)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	31	100.000
2 - A5156 (East)		✓	1091	100.000
3 - Borrás Park Road		✓	322	100.000
4 - A5156 (East)		✓	1828	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	6	21	4
	2 - A5156 (East)	8	0	24	1059
	3 - Borrás Park Road	13	101	0	208
	4 - A5156 (East)	20	1613	179	16

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.17	21.74	0.2	C
2 - A5156 (East)	0.54	3.48	1.2	A
3 - Borras Park Road	0.64	18.01	1.7	C
4 - A5156 (East)	0.87	12.18	6.6	B

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	23	1431	552	0.042	23	0.0	6.806	A
2 - A5156 (East)	821	165	2294	0.358	819	0.6	2.438	A
3 - Borras Park Road	242	816	744	0.326	241	0.5	7.127	A
4 - A5156 (East)	1376	91	2336	0.589	1371	1.4	3.710	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	1712	404	0.069	28	0.1	9.562	A
2 - A5156 (East)	981	197	2270	0.432	980	0.8	2.789	A
3 - Borras Park Road	289	976	664	0.436	288	0.8	9.561	A
4 - A5156 (East)	1643	109	2322	0.708	1640	2.4	5.243	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	2085	208	0.164	34	0.2	20.629	C
2 - A5156 (East)	1201	240	2238	0.537	1200	1.1	3.462	A
3 - Borras Park Road	355	1195	555	0.639	351	1.7	17.357	C
4 - A5156 (East)	2013	133	2305	0.873	1997	6.3	11.166	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	2101	200	0.171	34	0.2	21.740	C
2 - A5156 (East)	1201	242	2237	0.537	1201	1.2	3.475	A
3 - Borras Park Road	355	1197	554	0.640	354	1.7	18.006	C
4 - A5156 (East)	2013	134	2304	0.874	2012	6.6	12.184	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	1734	393	0.071	28	0.1	9.891	A
2 - A5156 (East)	981	200	2268	0.432	982	0.8	2.802	A
3 - Borrás Park Road	289	979	662	0.437	293	0.8	9.847	A
4 - A5156 (East)	1643	111	2321	0.708	1660	2.5	5.574	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	23	1442	546	0.043	23	0.0	6.887	A
2 - A5156 (East)	821	166	2293	0.358	822	0.6	2.450	A
3 - Borrás Park Road	242	819	742	0.327	244	0.5	7.240	A
4 - A5156 (East)	1376	92	2335	0.589	1380	1.4	3.786	A

2030 Base + Development (Phase 1), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	15.52	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	15.52	C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D20	2030 Base + Development (Phase 1)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	37	100.000
2 - A5156 (East)		✓	1771	100.000
3 - Borrás Park Road		✓	185	100.000
4 - A5156 (East)		✓	1110	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	35	0
	2 - A5156 (East)	10	0	94	1667
	3 - Borrás Park Road	18	36	0	131
	4 - A5156 (East)	18	856	230	6

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.06	5.89	0.1	A
2 - A5156 (East)	0.89	14.36	7.5	B
3 - Borras Park Road	0.90	102.46	5.3	F
4 - A5156 (East)	0.52	3.18	1.1	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	847	859	0.032	28	0.0	4.328	A
2 - A5156 (East)	1333	203	2265	0.589	1328	1.4	3.816	A
3 - Borras Park Road	139	1262	521	0.267	138	0.4	9.352	A
4 - A5156 (East)	836	48	2368	0.353	833	0.5	2.344	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	33	1013	772	0.043	33	0.0	4.873	A
2 - A5156 (East)	1592	243	2236	0.712	1588	2.4	5.525	A
3 - Borras Park Road	166	1509	398	0.418	165	0.7	15.364	C
4 - A5156 (East)	998	57	2361	0.423	997	0.7	2.638	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1238	654	0.062	41	0.1	5.874	A
2 - A5156 (East)	1950	298	2195	0.888	1931	7.0	12.835	B
3 - Borras Park Road	204	1835	235	0.866	190	4.0	67.684	F
4 - A5156 (East)	1222	67	2354	0.519	1221	1.1	3.172	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1241	652	0.062	41	0.1	5.888	A
2 - A5156 (East)	1950	298	2195	0.888	1948	7.5	14.365	B
3 - Borras Park Road	204	1851	227	0.897	198	5.3	102.463	F
4 - A5156 (East)	1222	69	2352	0.520	1222	1.1	3.185	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	1019	769	0.043	33	0.0	4.894	A
2 - A5156 (East)	1592	244	2235	0.712	1612	2.5	5.950	A
3 - Borrás Park Road	166	1532	387	0.430	185	0.8	19.328	C
4 - A5156 (East)	998	63	2356	0.423	999	0.7	2.654	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	850	858	0.032	28	0.0	4.340	A
2 - A5156 (East)	1333	204	2265	0.589	1338	1.4	3.901	A
3 - Borrás Park Road	139	1271	517	0.270	141	0.4	9.620	A
4 - A5156 (East)	836	49	2367	0.353	836	0.5	2.352	A

2037 Base + Development (Phase 1 + 2), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	31.41	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	31.41	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D21	2037 Base + Development (Phase 1 + 2)	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	33	100.000
2 - A5156 (East)		✓	1257	100.000
3 - Borrás Park Road		✓	342	100.000
4 - A5156 (East)		✓	2066	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	7	22	4
	2 - A5156 (East)	9	0	28	1220
	3 - Borrás Park Road	13	110	0	219
	4 - A5156 (East)	21	1839	189	17

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Road	0.50	93.81	0.9	F
2 - A5156 (East)	0.62	4.26	1.6	A
3 - Borrás Park Road	0.81	39.11	3.8	E
4 - A5156 (East)	0.99	45.66	28.4	E

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	25	1614	456	0.055	25	0.1	8.345	A
2 - A5156 (East)	946	174	2288	0.414	944	0.7	2.673	A
3 - Borrás Park Road	257	938	683	0.377	255	0.6	8.379	A
4 - A5156 (East)	1555	98	2330	0.667	1547	2.0	4.554	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	30	1929	290	0.102	29	0.1	13.813	B
2 - A5156 (East)	1130	208	2262	0.500	1129	1.0	3.173	A
3 - Borrás Park Road	307	1123	591	0.520	306	1.1	12.542	B
4 - A5156 (East)	1857	118	2316	0.802	1850	3.9	7.596	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	36	2302	94	0.388	34	0.6	59.232	F
2 - A5156 (East)	1384	247	2233	0.620	1382	1.6	4.217	A
3 - Borrás Park Road	377	1373	466	0.808	367	3.5	33.491	D
4 - A5156 (East)	2275	142	2298	0.990	2206	21.0	28.097	D

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	36	2343	72	0.503	35	0.9	93.810	F
2 - A5156 (East)	1384	252	2230	0.621	1384	1.6	4.256	A
3 - Borrás Park Road	377	1376	464	0.811	375	3.8	39.109	E
4 - A5156 (East)	2275	145	2296	0.991	2245	28.4	45.656	E

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	30	2036	233	0.127	33	0.1	18.156	C
2 - A5156 (East)	1130	220	2253	0.502	1132	1.0	3.222	A
3 - Borras Park Road	307	1127	588	0.522	318	1.1	13.832	B
4 - A5156 (East)	1857	123	2313	0.803	1954	4.3	12.639	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	25	1632	446	0.056	25	0.1	8.558	A
2 - A5156 (East)	946	176	2286	0.414	948	0.7	2.691	A
3 - Borras Park Road	257	942	681	0.378	260	0.6	8.587	A
4 - A5156 (East)	1555	100	2329	0.668	1564	2.0	4.763	A

2037 Base + Development (Phase 1 + 2), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	77.63	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	77.63	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D22	2037 Base + Development (Phase 1 + 2)	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	39	100.000
2 - A5156 (East)		✓	2005	100.000
3 - Borrás Park Road		✓	198	100.000
4 - A5156 (East)		✓	1285	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	37	0
	2 - A5156 (East)	10	0	103	1892
	3 - Borrás Park Road	19	40	0	139
	4 - A5156 (East)	19	1016	243	7

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.08	6.99	0.1	A
2 - A5156 (East)	1.01	63.00	40.1	F
3 - Borras Park Road	1.71	719.02	43.4	F
4 - A5156 (East)	0.60	3.78	1.5	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	29	980	789	0.037	29	0.0	4.735	A
2 - A5156 (East)	1509	215	2257	0.669	1502	2.0	4.720	A
3 - Borras Park Road	149	1430	438	0.341	147	0.5	12.308	B
4 - A5156 (East)	967	51	2365	0.409	965	0.7	2.565	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	35	1172	688	0.051	35	0.1	5.512	A
2 - A5156 (East)	1802	258	2225	0.810	1794	4.1	8.197	A
3 - Borras Park Road	178	1708	299	0.596	175	1.4	28.276	D
4 - A5156 (East)	1155	61	2358	0.490	1154	1.0	2.987	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1420	558	0.077	43	0.1	6.991	A
2 - A5156 (East)	2208	315	2182	1.012	2116	26.9	34.888	D
3 - Borras Park Road	218	2015	145	1.500	141	20.7	333.687	F
4 - A5156 (East)	1415	53	2364	0.598	1413	1.5	3.776	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1420	558	0.077	43	0.1	6.988	A
2 - A5156 (East)	2208	316	2182	1.012	2155	40.1	63.001	F
3 - Borras Park Road	218	2052	127	1.713	127	43.4	719.020	F
4 - A5156 (East)	1415	49	2367	0.598	1415	1.5	3.779	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	35	1185	681	0.051	35	0.1	5.570	A
2 - A5156 (East)	1802	259	2224	0.810	1945	4.6	19.144	C
3 - Borrás Park Road	178	1851	227	0.783	222	32.3	527.103	F
4 - A5156 (East)	1155	76	2347	0.492	1157	1.0	3.032	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	29	1010	774	0.038	29	0.0	4.839	A
2 - A5156 (East)	1509	216	2256	0.669	1519	2.1	4.953	A
3 - Borrás Park Road	149	1447	429	0.347	276	0.6	54.902	F
4 - A5156 (East)	967	90	2337	0.414	968	0.7	2.634	A

2030 Base + Committed + Development (Phase 1) [Without KSS2], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	13.00	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.00	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D23	2030 Base + Committed + Development (Phase 1) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	31	100.000
2 - A5156 (East)		✓	1150	100.000
3 - Borrás Park Road		✓	323	100.000
4 - A5156 (East)		✓	1907	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	6	21	4
	2 - A5156 (East)	8	0	27	1115
	3 - Borrás Park Road	13	102	0	208
	4 - A5156 (East)	20	1692	179	16

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.22	29.94	0.3	D
2 - A5156 (East)	0.57	3.71	1.3	A
3 - Borras Park Road	0.68	21.37	2.0	C
4 - A5156 (East)	0.91	16.92	9.4	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	23	1491	521	0.045	23	0.0	7.235	A
2 - A5156 (East)	866	165	2294	0.377	863	0.6	2.512	A
3 - Borras Park Road	243	858	723	0.336	241	0.5	7.446	A
4 - A5156 (East)	1436	92	2335	0.615	1429	1.6	3.947	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	1783	367	0.076	28	0.1	10.614	B
2 - A5156 (East)	1034	197	2270	0.455	1033	0.8	2.909	A
3 - Borras Park Road	290	1027	639	0.455	289	0.8	10.260	B
4 - A5156 (East)	1714	110	2322	0.738	1710	2.8	5.836	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	2165	166	0.206	33	0.3	27.085	D
2 - A5156 (East)	1266	239	2239	0.566	1264	1.3	3.688	A
3 - Borras Park Road	356	1256	524	0.679	351	2.0	20.283	C
4 - A5156 (East)	2100	134	2304	0.911	2076	8.7	14.472	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	34	2187	154	0.221	34	0.3	29.937	D
2 - A5156 (East)	1266	242	2237	0.566	1266	1.3	3.707	A
3 - Borras Park Road	356	1258	523	0.680	355	2.0	21.375	C
4 - A5156 (East)	2100	135	2303	0.912	2097	9.4	16.917	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	1815	350	0.080	29	0.1	11.231	B
2 - A5156 (East)	1034	201	2267	0.456	1036	0.8	2.929	A
3 - Borrás Park Road	290	1030	637	0.456	295	0.9	10.665	B
4 - A5156 (East)	1714	112	2320	0.739	1740	2.9	6.473	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	23	1503	514	0.045	23	0.0	7.338	A
2 - A5156 (East)	866	166	2293	0.378	867	0.6	2.525	A
3 - Borrás Park Road	243	861	721	0.337	245	0.5	7.575	A
4 - A5156 (East)	1436	93	2334	0.615	1441	1.6	4.053	A

2030 Base + Committed + Development (Phase 1) [Without KSS2], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	30.58	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	30.58	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D24	2030 Base + Committed + Development (Phase 1) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	37	100.000
2 - A5156 (East)		✓	1871	100.000
3 - Borrás Park Road		✓	186	100.000
4 - A5156 (East)		✓	1180	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	35	0
	2 - A5156 (East)	10	0	96	1765
	3 - Borrás Park Road	18	37	0	131
	4 - A5156 (East)	18	926	230	6

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.07	6.28	0.1	A
2 - A5156 (East)	0.94	23.66	12.7	C
3 - Borras Park Road	1.17	277.47	17.3	F
4 - A5156 (East)	0.55	3.40	1.2	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	900	831	0.034	28	0.0	4.479	A
2 - A5156 (East)	1409	203	2265	0.622	1402	1.6	4.140	A
3 - Borras Park Road	140	1335	485	0.289	138	0.4	10.342	B
4 - A5156 (East)	888	48	2367	0.375	886	0.6	2.426	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	33	1077	738	0.045	33	0.0	5.104	A
2 - A5156 (East)	1682	243	2236	0.752	1677	3.0	6.378	A
3 - Borras Park Road	167	1596	355	0.472	165	0.9	18.847	C
4 - A5156 (East)	1061	58	2360	0.449	1060	0.8	2.767	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1312	615	0.066	41	0.1	6.272	A
2 - A5156 (East)	2060	298	2195	0.938	2027	11.3	18.555	C
3 - Borras Park Road	205	1929	188	1.088	172	9.1	138.917	F
4 - A5156 (East)	1299	62	2357	0.551	1298	1.2	3.393	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1314	614	0.066	41	0.1	6.281	A
2 - A5156 (East)	2060	298	2195	0.939	2054	12.7	23.662	C
3 - Borras Park Road	205	1955	175	1.168	172	17.3	277.473	F
4 - A5156 (East)	1299	62	2357	0.551	1299	1.2	3.401	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	1092	730	0.046	33	0.0	5.168	A
2 - A5156 (East)	1682	244	2235	0.752	1720	3.1	7.490	A
3 - Borrás Park Road	167	1637	334	0.501	232	1.1	57.400	F
4 - A5156 (East)	1061	78	2345	0.452	1062	0.8	2.810	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	904	829	0.034	28	0.0	4.492	A
2 - A5156 (East)	1409	204	2265	0.622	1414	1.7	4.263	A
3 - Borrás Park Road	140	1346	479	0.292	143	0.4	10.781	B
4 - A5156 (East)	888	50	2366	0.375	889	0.6	2.440	A

2037 Base + Committed + Development (Phase 1+2) [Without KSS2], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	50.72	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	50.72	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D25	2037 Base + Committed + Development (Phase 1+2) [Without KSS2]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	33	100.000
2 - A5156 (East)		✓	1314	100.000
3 - Borrás Park Road		✓	343	100.000
4 - A5156 (East)		✓	2145	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	7	22	4
	2 - A5156 (East)	9	0	29	1276
	3 - Borrás Park Road	13	111	0	219
	4 - A5156 (East)	21	1918	189	17

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.68	163.72	1.5	F
2 - A5156 (East)	0.65	4.57	1.8	A
3 - Borras Park Road	0.87	55.87	5.4	F
4 - A5156 (East)	1.03	76.42	54.2	F

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	25	1673	425	0.059	25	0.1	8.993	A
2 - A5156 (East)	989	174	2288	0.432	986	0.8	2.761	A
3 - Borras Park Road	258	980	662	0.390	256	0.6	8.811	A
4 - A5156 (East)	1615	99	2330	0.693	1606	2.2	4.917	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	30	1999	253	0.117	29	0.1	16.059	C
2 - A5156 (East)	1181	207	2262	0.522	1180	1.1	3.320	A
3 - Borras Park Road	308	1173	566	0.545	306	1.2	13.756	B
4 - A5156 (East)	1928	119	2315	0.833	1918	4.7	8.850	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	36	2342	73	0.499	34	0.8	86.806	F
2 - A5156 (East)	1447	242	2237	0.647	1444	1.8	4.524	A
3 - Borras Park Road	378	1434	435	0.867	363	4.7	43.536	E
4 - A5156 (East)	2362	141	2299	1.027	2246	33.6	39.226	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	36	2378	54	0.679	34	1.5	163.720	F
2 - A5156 (East)	1447	246	2234	0.648	1447	1.8	4.571	A
3 - Borras Park Road	378	1437	434	0.870	375	5.4	55.874	F
4 - A5156 (East)	2362	145	2296	1.029	2279	54.2	76.424	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	30	2207	144	0.207	34	0.3	34.255	D
2 - A5156 (East)	1181	231	2245	0.526	1184	1.1	3.404	A
3 - Borrás Park Road	308	1179	563	0.548	325	1.3	16.145	C
4 - A5156 (East)	1928	126	2310	0.835	2123	5.6	32.931	D

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	25	1696	412	0.060	26	0.1	9.331	A
2 - A5156 (East)	989	177	2285	0.433	991	0.8	2.785	A
3 - Borrás Park Road	258	985	660	0.392	261	0.7	9.077	A
4 - A5156 (East)	1615	101	2328	0.694	1628	2.3	5.234	A

2037 Base + Committed + Development (Phase 1+ 2) [Without KSS2], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	132.13	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	132.13	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D26	2037 Base + Committed + Development (Phase 1+ 2) [Without KSS2]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	39	100.000
2 - A5156 (East)		✓	2112	100.000
3 - Borrás Park Road		✓	198	100.000
4 - A5156 (East)		✓	1462	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	2	37	0
	2 - A5156 (East)	10	0	103	1999
	3 - Borrás Park Road	19	40	0	139
	4 - A5156 (East)	19	1193	243	7

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.09	8.70	0.1	A
2 - A5156 (East)	1.07	117.86	86.1	F
3 - Borras Park Road	1.91	1249.32	70.5	F
4 - A5156 (East)	0.68	4.73	2.1	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	29	1113	720	0.041	29	0.0	5.213	A
2 - A5156 (East)	1590	215	2257	0.705	1581	2.3	5.256	A
3 - Borras Park Road	149	1509	398	0.374	147	0.6	14.192	B
4 - A5156 (East)	1101	51	2365	0.465	1097	0.9	2.833	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	35	1330	605	0.058	35	0.1	6.317	A
2 - A5156 (East)	1899	258	2225	0.853	1886	5.4	10.270	B
3 - Borras Park Road	178	1801	252	0.705	172	2.1	42.132	E
4 - A5156 (East)	1314	60	2358	0.557	1313	1.2	3.438	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1610	458	0.094	43	0.1	8.674	A
2 - A5156 (East)	2325	315	2182	1.066	2152	48.8	53.846	F
3 - Borras Park Road	218	2055	126	1.733	123	25.7	465.190	F
4 - A5156 (East)	1610	47	2368	0.680	1606	2.1	4.704	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1612	457	0.094	43	0.1	8.696	A
2 - A5156 (East)	2325	316	2182	1.066	2176	86.1	117.855	F
3 - Borras Park Road	218	2078	114	1.909	114	51.7	1175.882	F
4 - A5156 (East)	1610	44	2370	0.679	1610	2.1	4.733	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	35	1321	610	0.058	35	0.1	6.267	A
2 - A5156 (East)	1899	259	2224	0.854	2202	10.4	83.735	F
3 - Borrás Park Road	178	2100	103	1.730	103	70.5	1249.322	F
4 - A5156 (East)	1314	41	2373	0.554	1318	1.3	3.422	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	29	1163	693	0.042	29	0.0	5.427	A
2 - A5156 (East)	1590	216	2256	0.705	1622	2.4	5.951	A
3 - Borrás Park Road	149	1548	379	0.394	373	14.4	417.329	F
4 - A5156 (East)	1101	119	2315	0.475	1102	0.9	2.970	A

2030 Base + Committed + Development (Phase 1) [Without Kingmoor], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	14.62	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	14.62	B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D27	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	31	100.000
2 - A5156 (East)		✓	1293	100.000
3 - Borrás Park Road		✓	322	100.000
4 - A5156 (East)		✓	1911	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	6	21	4
	2 - A5156 (East)	8	0	24	1261
	3 - Borrás Park Road	13	101	0	208
	4 - A5156 (East)	20	1696	179	16

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borrás Road	0.22	30.31	0.3	D
2 - A5156 (East)	0.64	4.43	1.7	A
3 - Borrás Park Road	0.80	39.07	3.6	E
4 - A5156 (East)	0.91	17.15	9.5	C

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	23	1493	520	0.045	23	0.0	7.251	A
2 - A5156 (East)	973	165	2294	0.424	971	0.7	2.714	A
3 - Borrás Park Road	242	967	668	0.363	240	0.6	8.369	A
4 - A5156 (East)	1439	91	2336	0.616	1432	1.6	3.957	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	1786	365	0.076	28	0.1	10.655	B
2 - A5156 (East)	1162	197	2270	0.512	1161	1.0	3.244	A
3 - Borrás Park Road	289	1158	573	0.505	288	1.0	12.529	B
4 - A5156 (East)	1718	109	2322	0.740	1713	2.8	5.863	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	34	2167	165	0.207	33	0.3	27.252	D
2 - A5156 (East)	1424	239	2239	0.636	1421	1.7	4.386	A
3 - Borrás Park Road	355	1416	444	0.798	345	3.3	33.641	D
4 - A5156 (East)	2104	131	2306	0.912	2080	8.8	14.583	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	34	2190	153	0.224	34	0.3	30.307	D
2 - A5156 (East)	1424	242	2237	0.636	1424	1.7	4.426	A
3 - Borrás Park Road	355	1419	443	0.801	353	3.6	39.071	E
4 - A5156 (East)	2104	134	2304	0.913	2101	9.5	17.148	C

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	1820	347	0.080	29	0.1	11.322	B
2 - A5156 (East)	1162	201	2267	0.513	1165	1.1	3.273	A
3 - Borrás Park Road	289	1162	571	0.507	300	1.1	13.729	B
4 - A5156 (East)	1718	113	2319	0.741	1744	2.9	6.534	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	23	1505	513	0.046	23	0.0	7.358	A
2 - A5156 (East)	973	166	2293	0.425	975	0.7	2.734	A
3 - Borrás Park Road	242	972	666	0.364	244	0.6	8.575	A
4 - A5156 (East)	1439	93	2335	0.616	1444	1.6	4.066	A

2030 Base + Committed + Development (Phase 1) [Without Kingmoor], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	31.41	D

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	31.41	D

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D28	2030 Base + Committed + Development (Phase 1) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	37	100.000
2 - A5156 (East)		✓	1878	100.000
3 - Borrás Park Road		✓	185	100.000
4 - A5156 (East)		✓	1287	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
From	1 - Borrás Road	0	2	35	0
	2 - A5156 (East)	10	0	94	1774
	3 - Borrás Park Road	18	36	0	131
	4 - A5156 (East)	18	1033	230	6

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.07	7.03	0.1	A
2 - A5156 (East)	0.94	24.67	13.3	C
3 - Borras Park Road	1.19	296.75	18.5	F
4 - A5156 (East)	0.60	3.82	1.5	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	28	979	790	0.035	28	0.0	4.725	A
2 - A5156 (East)	1414	203	2265	0.624	1407	1.6	4.164	A
3 - Borras Park Road	139	1341	482	0.289	138	0.4	10.420	B
4 - A5156 (East)	969	48	2368	0.409	966	0.7	2.563	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	33	1172	688	0.048	33	0.1	5.494	A
2 - A5156 (East)	1688	243	2236	0.755	1683	3.0	6.446	A
3 - Borras Park Road	166	1604	351	0.474	164	0.9	19.149	C
4 - A5156 (East)	1157	57	2361	0.490	1156	1.0	2.985	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1428	554	0.074	41	0.1	7.016	A
2 - A5156 (East)	2068	298	2195	0.942	2033	11.7	19.085	C
3 - Borras Park Road	204	1938	184	1.107	169	9.5	146.743	F
4 - A5156 (East)	1417	60	2358	0.601	1415	1.5	3.807	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	41	1430	553	0.074	41	0.1	7.031	A
2 - A5156 (East)	2068	298	2195	0.942	2061	13.3	24.667	C
3 - Borras Park Road	204	1965	171	1.194	168	18.5	296.746	F
4 - A5156 (East)	1417	60	2359	0.601	1417	1.5	3.822	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	33	1189	679	0.049	33	0.1	5.574	A
2 - A5156 (East)	1688	244	2235	0.755	1729	3.2	7.653	A
3 - Borrás Park Road	166	1648	329	0.506	236	1.1	66.105	F
4 - A5156 (East)	1157	78	2345	0.493	1159	1.0	3.039	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	28	984	787	0.035	28	0.0	4.741	A
2 - A5156 (East)	1414	204	2265	0.624	1420	1.7	4.290	A
3 - Borrás Park Road	139	1353	476	0.293	142	0.4	10.874	B
4 - A5156 (East)	969	49	2367	0.409	970	0.7	2.581	A

2037 Base + Committed + Development (Phase 1+ 2) [Without Kingmoor], AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	59.23	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	59.23	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D29	2037 Base + Committed + Development (Phase 1+ 2) [Without Kingmoor]	AM	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	33	100.000
2 - A5156 (East)		✓	1459	100.000
3 - Borrás Park Road		✓	342	100.000
4 - A5156 (East)		✓	2149	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	7	22	4
	2 - A5156 (East)	9	0	28	1422
	3 - Borrás Park Road	13	110	0	219
	4 - A5156 (East)	21	1922	189	17

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.66	155.26	1.4	F
2 - A5156 (East)	0.72	5.73	2.5	A
3 - Borras Park Road	1.06	180.87	19.8	F
4 - A5156 (East)	1.03	74.72	52.9	F

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	25	1675	424	0.059	25	0.1	9.018	A
2 - A5156 (East)	1098	174	2288	0.480	1095	0.9	3.010	A
3 - Borras Park Road	257	1089	607	0.424	255	0.7	10.126	B
4 - A5156 (East)	1618	98	2330	0.694	1609	2.2	4.931	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	30	2001	252	0.118	29	0.1	16.145	C
2 - A5156 (East)	1312	207	2262	0.580	1310	1.4	3.773	A
3 - Borras Park Road	307	1303	501	0.614	304	1.5	18.054	C
4 - A5156 (East)	1932	118	2316	0.834	1922	4.7	8.902	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	36	2338	75	0.488	34	0.8	83.707	F
2 - A5156 (East)	1606	242	2236	0.718	1602	2.5	5.633	A
3 - Borras Park Road	377	1593	356	1.058	334	12.3	97.884	F
4 - A5156 (East)	2366	130	2307	1.026	2253	33.0	38.634	E

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	36	2376	55	0.661	34	1.4	155.258	F
2 - A5156 (East)	1606	246	2234	0.719	1606	2.5	5.732	A
3 - Borras Park Road	377	1598	354	1.064	346	19.8	180.873	F
4 - A5156 (East)	2366	134	2304	1.027	2286	52.9	74.719	F

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	30	2221	136	0.218	34	0.3	36.574	E
2 - A5156 (East)	1312	230	2246	0.584	1316	1.4	3.892	A
3 - Borrás Park Road	307	1312	496	0.619	380	1.8	47.843	E
4 - A5156 (East)	1932	145	2296	0.841	2120	5.9	33.908	D

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	25	1700	410	0.061	26	0.1	9.386	A
2 - A5156 (East)	1098	177	2285	0.481	1100	0.9	3.044	A
3 - Borrás Park Road	257	1095	604	0.426	261	0.8	10.615	B
4 - A5156 (East)	1618	101	2329	0.695	1632	2.3	5.273	A

2037 Base + Committed + Development (Phase 1+ 2) [Without Kingmoor], PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	132.35	F

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	132.35	F

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D30	2037 Base + Committed + Development (Phase 1+ 2) [Without Kingmoor]	PM	ONE HOUR	16:15	17:45	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Borrás Road		✓	39	100.000
2 - A5156 (East)		✓	2114	100.000
3 - Borrás Park Road		✓	198	100.000
4 - A5156 (East)		✓	1462	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	2	37	0
	2 - A5156 (East)	10	0	105	1999
	3 - Borrás Park Road	19	40	0	139
	4 - A5156 (East)	19	1193	243	7

Vehicle Mix

Heavy Vehicle Percentages

	To				
From		1 - Borrás Road	2 - A5156 (East)	3 - Borrás Park Road	4 - A5156 (East)
	1 - Borrás Road	0	0	0	0
	2 - A5156 (East)	0	0	0	0
	3 - Borrás Park Road	0	0	0	0
	4 - A5156 (East)	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Borras Road	0.09	8.70	0.1	A
2 - A5156 (East)	1.07	119.03	87.1	F
3 - Borras Park Road	1.89	1241.23	69.6	F
4 - A5156 (East)	0.68	4.73	2.1	A

Main Results for each time segment

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	29	1113	720	0.041	29	0.0	5.213	A
2 - A5156 (East)	1592	215	2257	0.705	1582	2.3	5.268	A
3 - Borras Park Road	149	1509	398	0.374	147	0.6	14.191	B
4 - A5156 (East)	1101	51	2365	0.465	1097	0.9	2.833	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	35	1330	605	0.058	35	0.1	6.317	A
2 - A5156 (East)	1900	258	2225	0.854	1888	5.4	10.318	B
3 - Borras Park Road	178	1801	253	0.705	172	2.1	42.117	E
4 - A5156 (East)	1314	60	2358	0.557	1313	1.2	3.438	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1611	458	0.094	43	0.1	8.676	A
2 - A5156 (East)	2328	315	2182	1.067	2152	49.3	54.249	F
3 - Borras Park Road	218	2053	127	1.722	124	25.5	459.329	F
4 - A5156 (East)	1610	47	2368	0.680	1606	2.1	4.705	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borras Road	43	1612	457	0.094	43	0.1	8.698	A
2 - A5156 (East)	2328	316	2182	1.067	2176	87.1	119.028	F
3 - Borras Park Road	218	2076	115	1.894	115	51.3	1160.612	F
4 - A5156 (East)	1610	45	2370	0.679	1610	2.1	4.734	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	35	1322	609	0.058	35	0.1	6.272	A
2 - A5156 (East)	1900	259	2224	0.854	2199	12.4	85.519	F
3 - Borrás Park Road	178	2096	105	1.694	105	69.6	1241.235	F
4 - A5156 (East)	1314	42	2372	0.554	1318	1.3	3.427	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Borrás Road	29	1162	693	0.042	29	0.0	5.422	A
2 - A5156 (East)	1592	216	2256	0.706	1631	2.4	6.127	A
3 - Borrás Park Road	149	1556	375	0.398	369	14.5	417.198	F
4 - A5156 (East)	1101	118	2316	0.475	1102	0.9	2.968	A