

Technical note

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1. Introduction

Hydrock Fore are commissioned by Equites Newlands (Goldthorpe) Ltd in relation to a hybrid planning application for a proposed employment development on land to the south of Dearne Valley Parkway, near Goldthorpe, Barnsley. The commission includes the preparation of a Transport Assessment (TA) and Framework Travel Plan (FTP) for submission with the planning application to Barnsley Metropolitan Borough Council (BMBC).

This Technical Note sets out assessment of the impacts of the proposed development at the key junctions on the Strategic Road Network, in accordance with the following:

- » National Highways' original consultation to the planning application, dated 24 January 2024, and related Technical Memorandum prepared by Jacobs Systra Joint Venture (JSJV) dated 22 January 2024.
- » Discussion at meeting between Fore Consulting and National Highways on 9 February 2024.
- » 'Technical Note 1' (dated 11 March 2024) prepared by Fore Consulting, which set out the assessment parameters and anticipated traffic impacts of the development at the key junctions on the SRN.
- » Consultation to the planning application dated 26 March 2024 and related JSJV Technical Memorandum dated 27 March 2024, which confirmed the assessment parameters set out Technical Note 1.

For the purposes of this assessment, and in accordance with the assessment parameters set out in Technical Note 1, the key junctions considered for the purposes of this assessment are as follows:

- » The M1 Junction 36 roundabout and "Birdwell Roundabout", a traffic signal-controlled gyratory located 75m north of M1 Junction 36. The operation of both junctions is effectively linked, and for the purposes of this assessment these junctions are treated accordingly.
- » "Rockingham Roundabout", a priority-controlled roundabout located 250m north of Birdwell Roundabout.
- » A1(M) Junction 37.

2. M1 Junction 36 / Birdwell Roundabout

2.1 2024 Base Year Assessment

Traffic flow data for the 2024 Base Year scenario has been derived from classified turning count and queue length surveys undertaken during the AM and PM peak periods on 12 March 2024.

On the basis of the surveys, AM and PM peak hours of 07:30 to 08:30 and 16:00 to 17:00 are identified respectively. The traffic survey data is presented at Appendix A, and the resulting peak hour flows are demonstrated on Figure 101.

A LinSig model of the existing junction layout and controller operation has been developed. LinSig calculates the Degree of Saturation (DoS) and Practical Reserve Capacity (PRC) to indicate the likely performance of links and the overall junction under a given set of traffic flows. The software also calculates the mean maximum queue (MMQ), representing the average position of the furthest vehicle from the stop line in each cycle.

Specifically, the model has been prepared in accordance with a LinSig model approved for the purposes of transport assessment work submitted and approved by BMBC and National Highways as part of a planning application for proposed development located west of the Dearne Valley Parkway¹.

The LinSig model has been run for the 2024 Base Year scenario, based on the surveyed traffic flows. The results are summarised in Table 1, with the detailed LinSig output is provided at Appendix D.

Table 1: M1 Junction 36 / Birdwell Roundabout - 2024 Base Year Assessment

Link	AM Peak Hour		PM Peak Hour	
	DoS (%)	MMQ (pcu)	DoS (%)	MMQ (%)
M1 Junction 36				
Northbound Exit Slip Road	93.8	8.3	99.9	15.0
Circulatory at Northbound Exit Slip Road	56.7	9.7	49.3	8.2
Southbound Exit Slip Road	75.4	9.0	94.3	20.9
Circulatory at Southbound Exit Slip Road	73.2	8.2	91.2	13.7
A61 East	82.0	17.1	70.9	11.9
Circulatory at A61 East	80.4	6.2	68.4	6.5
A61 West	96.6	19.5	95.2	16.4
Circulatory at A61 West	82.2	13.9	75.6	13.7
Practical Reserve Capacity (%)	-7.3		-11.0	
Birdwell Roundabout				
A6195 Dearne Valley Parkway North	64.4	9.5	71.8	9.9
Circulatory at A6195 DVP North	89.6	11.8	86.9	15.9
Sheffield Road East	93.6	12.4	57.6	5.8
Circulatory at Sheffield Road East	81.2	10.0	73.2	5.2
Sheffield Road West	64.6	7.3	73.5	9.5
Circulatory at Sheffield Road West	65.4	1.2	76.4	1.8
A61 South	80.0	11.4	92.9	16.9
Circulatory at A61 South	44.4	3.1	57.8	8.8
Practical Reserve Capacity (%)	-4.0		-3.2	

The assessment indicates that most approaches to Junction 36 of the M1 and Birdwell Roundabout currently operate with a degree of spare capacity in both modelled peak hour scenarios, though a small number of approaches (specifically the exit slip road approaches and the A61 eastbound approach during both weekday peak hours, as well as the westbound Sheffield Road and northbound A61 approaches to Birdwell Roundabout during the AM and PM peak hours respectively) operate with a modelled DoS above the normal practical

¹ BMBC planning application reference 2023/O815.

capacity threshold of 90%. However, the opposing circulatory carriageway links operate satisfactorily, and modelled queue lengths do not affect the operation of the wider gyratory or the highway network beyond.

2.2 Model Validation

The LinSig model has been validated using queue length surveys undertaken at the same time as the traffic surveys.

To enable comparison with the 'mean maximum queue' (MMQ) modelled by LinSig, the maximum queue lengths during every five-minute period of the peak hours were recorded. As well as the 'mean average-maximum', 'minimum-maximum' and 'maximum-maximum' queue lengths have been derived from the queue length survey results for comparison.

The results of the comparison of modelled and observed queue lengths are presented in Table 2. For the purposes of the assessment, the model is considered to be representative of queuing observed at the junction if the modelled MMQ falls within the observed range.

Table 2: M1 Junction 36 / Birdwell Roundabout – Comparison of Observed and Modelled Queues

Link	Lane	AM Peak Hour				PM Peak Hour			
		Observed Queue			Modelled Queue	Observed Queue			Modelled Queue
		Min	Max	Ave		Min	Max	Ave	
M1 Junction 36									
Northbound Exit Slip Road	1	0	11	3.6	8.3	1	18	7.8	15.0
	2	0	10	4.6		1	25	8.8	
	Tot	0	21	8.3	8.3	2	43	16.5	15.0
Circulatory at Northbound Exit Slip Road	1	1	16	7.4	6.0	4	23	11.2	8.1
	2	0	15	5.5	9.8	0	17	7.3	8.2
	3	0	7	2.5	5.7	0	5	1.5	1.5
	Tot	1	38	15.3	21.5	4	45	20.0	17.8
Southbound Exit Slip Road	1	0	9	1.6	7.6	0	6	1.9	20.9
	2	2	16	7.9		7	38	19.1	
	3	1	16	6.6	9.0	3	20	9.8	8.9
	Tot	3	41	16.1	16.6	10	64	30.8	29.8
Circulatory at Southbound Exit Slip Road	1	0	12	4.4	4.5	0	15	7.1	5.6
	2	0	12	5.3	8.2	2	18	11.4	13.7
	3	0	3	0.6	0.2	0	4	0.9	1.2
	Tot	0	27	10.3	12.9	2	37	19.4	20.5
A61 East	1	1	21	10.3	17.1	0	21	8.1	11.9
	2	0	19	7.5	14.6	0	15	4.6	11.9
	Tot	1	40	17.9	31.7	0	36	12.6	23.8
Circulatory at A61 East	1	0	10	4.3	6.2	0	17	6.1	7.1
	2	0	7	1.6		0	5	1.8	
	Tot	0	17	6.0	6.2	0	22	7.8	7.1

Link	Lane	AM Peak Hour				PM Peak Hour			
		Observed Queue			Modelled Queue	Observed Queue			Modelled Queue
		Min	Max	Ave		Min	Max	Ave	
A61 West	1	6	71	28.4	19.5	3	56	17.0	16.4
	2	1	19	5.5	12.9	2	28	7.3	7.5
	Tot	7	90	33.9	32.4	5	84	24.3	23.9
Circulatory at A61 West	1	2	11	6.5	1.9	0	12	6.5	3.1
	2	1	10	5.1	10.9	0	9	3.1	13.7
	3	0	2	0.1	0.3	0	8	0.3	0.3
	Tot	3	23	11.7	13.1	0	29	9.9	17.1
Birdwell Roundabout									
A6195 Dearne Valley Parkway North	1	0	16	6.3	9.5	2	13	6.6	9.9
	2	2	18	8.6	8.9	1	17	6.3	9.8
	Tot	2	34	14.9	18.4	3	30	12.9	19.7
Circulatory at A6195 DVP North	1	2	10	5.6	11.8	0	14	6.9	16.0
	2	2	14	6.9	2.2	0	9	4.6	0.3
	3	0	10	2.9	2.5	0	6	2.0	0.3
	Tot	4	34	15.4	16.5	0	29	13.4	16.6
Sheffield Road East	1	1	11	7.1	12.4	0	11	4.1	5.2
	2	0	11	4.6	5.7	0	11	5.2	5.6
	Tot	1	22	11.7	18.1	0	22	9.2	10.8
Circulatory at Sheffield Road East	1	0	14	6.5	8.8	0	12	3.1	5.2
	2	0	9	1.7	10.2	0	4	0.7	5.7
	Tot	0	23	8.2	19.0	0	16	3.8	10.9
Sheffield Road West	1	2	11	6.0	6.6	0	14	7.5	10.4
	2	2	11	5.8	7.3	0	11	4.6	9.5
	3	0	7	2.2		0	7	1.7	
	Tot	4	29	14.0	13.9	0	32	13.8	19.9
Circulatory at Sheffield Road West	1	0	3	0.2	1.0	0	0	0.0	1.5
	2	0	1	0.1	1.2	0	2	0.2	1.8
	Tot	0	4	0.2	2.2	0	2	0.2	3.3
A61 South	1	0	16	5.5	8.6	0	16	8.1	14.7
	2	3	15	11.5	11.4	6	15	13.4	16.9
	3	0	10	4.0		2	15	7.8	
	Tot	3	41	21.0	20.0	8	46	29.3	31.6
Circulatory at A61 South	1	0	7	2.9	3.1	0	10	4.5	8.8
	2	1	1	1.0	0.1	1	1	1.0	0.2
	Tot	1	8	3.9	3.2	1	11	5.5	9.0

The assessment demonstrates that the modelled queues are generally in accordance with queues observed at the junction. Specifically, there are a number of links where modelled queues do not fully match queuing in specific lanes observed in practice; it is likely that traffic weaving between lanes occurs more in practice than assumed by the model.

Regardless of this, the overall level of queuing modelled on each link is generally comparable to, or higher than, that observed, indicating that the base model represents existing traffic conditions in an appropriately robust manner, and is therefore fit for purpose in assessing the future operation of the junction with the development in place.

2.3 Future Traffic Flows

Consistent with the submitted Transport Assessment and in accordance with the provisions of DfT Circular 01/2022, an Opening Year scenario of 2028 is assumed. This is based on the anticipated programme for construction and opening of the full development.

Traffic flows for the 2028 Opening Year scenario are modelled as set out in the following sections. Briefly:

- » A 2028 'do minimum' scenario is assessed, to represent the scenario that occurs regardless of whether the development is implanted. The surveyed 2024 traffic flows have been factored to the 2028 future year through the addition of traffic associated with known committed developments and planned allocations, and NTM/TEMPro traffic growth factors, as set out below. The related traffic flows are demonstrated on Figure 103.
- » A 2028 'with development' scenario is assessed. This adds the anticipated changes in traffic flows resulting from the proposed development to the do minimum scenario, and the two scenarios are compared to identify the development impacts. The related traffic flows are demonstrated on Figure 106.

2.3.1 Committed Developments

For the study area in the vicinity of M1 Junction 36, the following committed developments are assumed for the purposes of this assessment:

Table 3: Committed Developments / Allocated Sites

Local Plan Reference	Planning Application Reference	Description
ES14	2023/0815	Proposed Industrial Estate, West of Dearne Valley Parkway; total of 7,192 sqm for E(g)(ii), E(g)(iii), B2 and B8 use classes.
	2021/0479	Erection of 3no industrial/warehouse units (use classes B2 and B8 and E(g)(ii) and E(g)(iii)) 11,585sqm floorspace
ES15, ES17	2019/1573, 2021/1007, 2021/1691, 2023/001	Hybrid planning application for a development up to 102,193sqm of employment uses (use classes B1/B2 and B8)
ES13, HS57	2020/0647, 2021/1159	Hybrid planning application for a development up to 103,086sqm of employment uses (use classes B1/B2 and B8)
HS59	2020/0577	Residential development of up to 118 dwellings accessed via Hay Green Lane
/	2021/1150	Residential development of 83 dwellings accessed via Wood Walk.

The relevant committed development traffic flows are presented on Figure 102. These are as assessed in the transport assessment work submitted and approved by BMBC for planning application 2023/0815 in the course of 2023 and early 2024, and represents a suitable recent basis for the purposes of this assessment.

2.3.2 NTM/ TEMPro Traffic Growth

Background traffic growth factors have been obtained from TEMPro (v8.1) for principal roads in the Barnsley district and have been applied to the 2024 Base Traffic Flows.

To avoid double counting of proposed development and committed/allocated site trips, alternative assumptions have been applied to the TEMPro growth projections. The methodology for this is presented at Appendix B, and summarised in Table 4. .

Table 4: NTM / TEMPro Growth Factors

Time Period	2024 to 2028 Factor
Weekday AM Peak Period	1.0274
Weekday PM Peak Period	1.0284

2.3.3 Person Trip Generation by Mode

Development traffic flows are assessed on the basis of the methodology as set out in the submitted Transport Assessment and as set out in Fore Technical Note 1, with a 10% reduction in car driver trips to represent an initial 'target' scenario, assuming implementation of the proposed active travel and public transport measures to support travel planning at the development.

This approach is in line with DfT Circular 01/2022, which requires the residual traffic impacts (including travel planning measures) of a proposed development to be assessed. The initial mode share targets are set to reduce the proportion of employees travelling alone by car, based on a 10% reduction to the number of trips undertaken by car drivers, with the proportion of trips undertaken by bus, bicycle, on foot and as a car passenger increased accordingly.

The resulting person trip generation by mode is summarised in Table 5. .

Table 5: Person Trip Generation by Mode

Peak Hour	Mode	Baseline Mode Share				Target Mode Share			
		%	Arr	Dep	Tot	%	Arr	Dep	Tot
Weekday AM Peak Hour	Train / light rail	1.3%	6	1	7	1.3%	5	1	5
	Bus	5.9%	25	4	29	7.6%	32	5	37
	Taxi	0.2%	1	0	1	0.2%	1	0	1
	Motorcycle	0.5%	2	0	3	0.5%	2	0	3
	Car Driver	67.3%	279	49	328	60.5%	251	44	295
	Car Passenger	9.1%	38	7	45	10.8%	45	8	53
	Bicycle	1.2%	5	1	6	2.9%	12	2	14
	On foot	14.5%	60	10	70	16.1%	67	12	79
	HGV Driver	n/a	55	57	112	n/a	55	57	112
	Total	100%	471	129	600	100%	471	129	600
Weekday PM Peak Hour	Train / light rail	1.3%	1	6	7	1.3%	1	6	7
	Bus	5.9%	5	26	31	7.6%	7	33	40
	Taxi	0.2%	0	1	1	0.2%	0	1	1
	Motorcycle	0.5%	0	2	3	0.5%	0	2	3
	Car Driver	67.3%	62	296	358	60.5%	56	266	322
	Car Passenger	9.1%	8	40	49	10.8%	10	48	58
	Bicycle	1.2%	1	5	6	2.9%	3	13	15
	On foot	14.5%	13	64	77	16.1%	15	71	86
	HGV Driver	n/a	60	52	112	n/a	60	52	112
	Total	100%	152	492	644	100%	152	492	644

2.3.4 Vehicle Trip Distribution

Vehicle trip distribution is assumed on the basis of the approach set out in the submitted Transport Assessment and Fore Technical Note 1.

For the purposes of this assessment, vehicle trips at M1 Junction 36 assigned to the A6195 Dearne Valley Parkway for the purposes of the submitted Transport Assessment have been disaggregated, as summarised in Table 6. The supporting calculations are presented in full at Appendix C.

Table 6: Light Vehicle Trip Distribution

	Route	% of Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
			Arr	Dep	Tot	Arr	Dep	Tot
1	Billingley Green Ln	2.3%	6	1	7	1	6	7
2	Nicholas Lane	4.7%	12	2	14	3	12	15
3	Barrowfield Rd	4.7%	12	2	14	3	12	15
4	Red Hill Lane	0.8%	2	0	2	0	2	3
5	A1(M) (North)	1.0%	3	0	3	1	3	3
6	A635 Barnsley Rd	2.5%	6	1	7	1	7	8
7	A1(M) (South)	7.2%	18	3	21	4	19	23
8	Barnsley Road	6.1%	15	3	18	3	16	20
9	Highgate Lane	21.4%	54	9	63	12	57	69
10	A633 Manvers Way	1.8%	4	1	5	1	5	6
11	B6273 Pontefract Rd	12.1%	30	5	36	7	32	39
12	A633 Wath Rd	2.8%	7	1	8	2	7	9
13	Dearne Valley Parkway	10.5%	26	5	31	6	28	34
13A	Roebuck Hill	0.4%	1	0	1	0	1	1
13B	B6096	1.3%	3	1	4	1	3	4
13C	Sheffield Rd	0.6%	1	0	2	0	2	2
13D	M1 South	1.8%	4	1	5	1	5	6
13E	A61	3.2%	8	1	9	2	8	10
13F	M1 North	3.2%	8	1	10	2	9	10
14	A635 Doncaster Rd	12.9%	33	6	38	7	34	42
15	A6195 Park Spring Rd	9.2%	23	4	27	5	25	30
	Total	100%	251	44	295	56	266	322

The distribution of HGV trips is summarised in Table 7, disaggregated at M1 Junction 36 similarly. The supporting calculations are presented in full at Appendix C.

Table 7: HGV Trip Distribution

Route	% of Trips	Weekday AM Peak Hour			Weekday PM Peak Hour			
		Arr	Dep	Tot	Arr	Dep	Tot	
5	A1(M) (North)	10.6%	6	6	12	6	6	12
6	A635 Barnsley Rd	6.2%	3	4	7	4	3	7
7	A1(M) (South)	16.7%	9	9	19	10	9	19
10	A633 Manvers Way	4.6%	3	3	5	3	2	5
12	A633 Wath Rd	5.0%	3	3	6	3	3	6
13	Dearne Valley Parkway	33.8%	19	19	38	20	18	38
13D	M1 South	20.8%	12	12	23	12	11	23
13E	A61	6.3%	4	4	7	4	3	7
13F	M1 North	6.7%	4	4	8	4	4	8
14	A635 Doncaster Rd	13.5%	7	8	15	8	7	15
15	A6195 Park Spring Rd	9.7%	5	5	11	6	5	11
	Total	100%	55	57	112	60	52	112

2.3.5 Development Traffic Flows

The resulting development traffic flows for the weekday peak hour scenarios are demonstrated as follows:

- » Figure 104 for light vehicle trips.
- » Figure 105 for HGVs.
- » Figure 106 for total development traffic flows.

For the purposes of this assessment, HGV trips have been converted to Passenger Car Unit (PCU) values. It can be anticipated that the size of HGVs visiting the development will vary in practice and as such a conversion factor of 2.0 has been used.

2.4 2024 Opening Year Assessment

LinSig model outputs for the 2028 Opening Year scenario are summarised in Table 8, with the detailed LinSig output provided at Appendix D. For comparative purposes, the cycle time is assumed to be consistent with the 2024 Base Year scenario, though green times on individual links are optimised, to reflect the operation of the traffic signal controller in practice.

Table 8: M1 Junction 36 / Birdwell Roundabout – 2028 Opening Year Assessment

Link	AM Peak Hour				PM Peak Hour			
	2028 Do Minimum		2028 With Development		2028 Do Minimum		2028 With Development	
	DoS (%)	MMQ (pcu)	DoS (%)	MMQ (%)	DoS (%)	MMQ (pcu)	DoS (%)	MMQ (%)
M1 Junction 36								
Northbound Exit Slip Road	92.6	9.5	96.3	10.3	86.2	10.9	88.3	11.5
Circulatory at N/B Exit Slip Rd	79.6	12.5	81.5	13.3	78.5	14.5	79.9	14.9
Southbound Exit Slip Road	93.7	16.0	96.3	10.7	94.7	16.5	94.7	16.5
Circulatory at S/B Exit Slip Rd	86.6	10.5	88.4	11.6	79.0	14.6	80.9	15.1
A61 East	99.6	38.8	101.2	45.2	95.9	25.7	98.7	31.1
Circulatory at A61 East	93.2	12.1	93.7	12.4	84.2	6.4	86.4	7.2
A61 West	94.9	18.9	96.1	20.1	95.6	16.7	96.3	17.4
Circulatory at A61 West	78.3	10.0	79.9	10.4	69.6	7.7	71.0	7.8
Practical Reserve Capacity (%)	-10.6		-12.5		-6.5		-9.6	
Birdwell Roundabout								
A6195 DVP North	89.4	16.6	91.3	17.6	100.4	25.5	104.8	35.5
Circulatory at A6195 DVP North	82.4	9.3	82.4	9.3	86.4	17.1	86.4	17.1
Sheffield Road East	121.3	61.1	121.3	61.1	85.6	10.4	85.6	10.4
Circulatory at Sheffield Rd East	93.7	15.3	95.1	20.1	81.3	10.4	81.4	10.4
Sheffield Road West	93.0	14.7	93.7	15.3	96.5	20.3	96.5	20.0
Circulatory at Sheffield Rd West	64.2	1.0	66.8	1.1	76.7	1.8	78.8	2.0
A61 South	77.1	12.8	80.3	13.8	90.7	19.0	93.1	21.2
Circulatory at A61 South	76.0	6.9	76.0	6.9	83.0	11.7	83.1	11.7
Practical Reserve Capacity (%)	-34.8		-34.8		-11.6		-16.6	

The assessment demonstrates that:

- » All approaches to the M1 Junction 36 roundabout and Birdwell Roundabout would generally operate with a modelled DoS close to, or in excess of, the normal practical capacity threshold of 90%, regardless of whether the development is brought forward.
- » The changes in traffic flows associated with the development would be accommodated on all approaches with a minor (or in certain cases no) corresponding increase in modelled queues, which would not extend back through (or further affect the operation) of upstream junctions compared to the respective do minimum scenario.

In accordance with the provisions of Circular 01/2022, it is concluded that the changes in traffic flows associated with the proposed development in the Opening Year scenario are satisfactorily accommodated by the existing layout of M1 Junction 36 and Birdwell Roundabout, and consequently no mitigation measures in the form of physical changes to the junction are required.

2.5 Merge and Diverge Assessment

The predicted traffic impact at the slip roads of M1 Junction 36, and resultant merge and diverge assessment is provided within this section. The merge and diverge assessments have been undertaken using Figures 3.12b and 3.26b of CD 122 of DMRB and have been undertaken for the Base, Do Minimum and With Development assessment scenarios. Traffic flows on the M1 mainline have been derived from the WebTRIS database, with traffic flows obtained for the weekday AM and PM peak hours on Tuesday 12 March 2024; in accordance with the same date as the '2024 Base' traffic surveys were undertaken.

The merge and diverge diagrams for M1 Junction 36 are provided at Appendix E, and summarised in Table 9 and Table 10, with the table abbreviations outlined below:

- » TP = Time Period;
- » M Flow = Mainline Flow;
- » MD Flow = Merge / Diverge Flow;
- » T = Merge / Diverge Type;
- » CL = Connector Lane;
- » UM = Upstream Mainline;
- » DM = Downstream Mainline.

The assessment demonstrates that the recommended merge and diverge lane layouts remain the same for the 2028 Opening Year scenario, either with or without the proposed development in place. The predicted impacts of the proposed development will not result in a material change to the required slip road layouts, beyond those that may be required in any event as a result in growth to baseline traffic. As such, no changes to the future layout of M1 Junction 36 are considered necessary to satisfactorily accommodate traffic associated with the proposed development.

Table 9: Merge / Diverge Assessment - M1 Junction 36 Northbound Slip Roads

MD	Scenario	TP	M Flow	MD Flow	Future Layout				Recommended Layout			
					T	CL	UM	DM	T	CL	UM	DM
Merge	2022 Base	AM	3,224	1,328	A	2	3	3	D	1	2	3
		PM	3,587	1,048	A	2	3	3	D	1	2	3
	2028 DM	AM	3,312	1,467	A	2	3	3	E	2	2	3
		PM	3,689	1,190	A	2	3	3	B	1	3	3
	2028 WD	AM	3,312	1,476	A	2	3	3	E	2	2	3
		PM	3,689	1,205	A	2	3	3	B	1	3	3
Diverge	2022 Base	AM	3,224	564	A	2	3	3	C	1	3	2
		PM	3,587	821	A	2	3	3	C	1	3	2
	2028 DM	AM	3,312	691	A	2	3	3	C	1	3	2
		PM	3,689	917	A	2	3	3	A	1	3	3
	2028 WD	AM	3,312	718	A	2	3	3	C	1	3	2
		PM	3,689	942	A	2	3	3	A	1	3	3

Table 10: Merge / Diverge Assessment - M1 Junction 36 Southbound Slip Roads

MD	Scenario	TP	M Flow	MD Flow	Future Layout				Recommended Layout			
					T	CL	UM	DM	T	CL	UM	DM
Merge	2022 Base	AM	3,405	773	A	2	3	3	D	1	2	3
		PM	3,843	559	A	2	3	3	A	1	3	3
	2028 DM	AM	3,498	884	A	2	3	3	D	1	2	3
		PM	3,952	673	A	2	3	3	A	1	3	3
	2028 WD	AM	3,498	909	A	2	3	3	D	1	2	3
		PM	3,952	699	A	2	3	3	A	1	3	3
Diverge	2022 Base	AM	3,405	973	A	2	3	3	C	1	3	2
		PM	3,843	1,362	A	2	3	3	B	2	3	3
	2028 DM	AM	3,498	1,132	A	2	3	3	C	1	3	2
		PM	3,952	1,493	A	2	3	3	D	2	4	3
	2028 WD	AM	3,498	1,148	A	2	3	3	C	1	3	2
		PM	3,952	1,503	A	2	3	3	D	2	4	3

2.6 Road Safety

In accordance with the assessment presented within the submitted Transport Assessment, personal injury collision data has been obtained from BMBC for the period covering 2017 to date, excluding the years 2020 and 2021 given collision records on the network may have been affected by changes in traffic flows as a result of Covid pandemic restrictions.

The full collision data is provided at Appendix F and the collisions recorded in the vicinity of M1 Junction 36 and Birdwell Roundabout are described below:

M1 Junction 36 Slip Roads

- » Collision ref 17250434 (28 November 2017). Injury of slight severity suffered by driver of vehicle approaching slip road entry from the M1 northbound running lanes, which was struck to rear by following vehicle. The causation factor was recorded as "Failed to judge other persons path or speed".
- » Collision ref 18260902 (5 January 2018). Serious injury suffered by driver of vehicle which was struck to the rear by a HGV, and in turn collided with a preceding vehicle. The causation factor was recorded as "Failed to judge other persons path or speed".
- » Collision ref 19812379 (1 February 2019). Slight injury suffered by drivers of two vehicles colliding following a vehicle swerving to avoid a collision with another vehicle. The causation factor was recorded as "Loss of control".
- » Collision ref 221127667 (1 January 2022). Collision between multiple vehicles on the southbound exit slip road, resulting from the driver of a stolen vehicle attempting to travel around the roundabout in the anticlockwise direction, resulting in slight injury to the driver of the stolen vehicle.
- » Collision ref 221145582 (18 February 2022). Slight injury to driver of a vehicle on the southbound exit slip road, which was struck on the side by another vehicle. The causation factor was recorded as "Careless/Reckless/In a hurry".
- » Collision ref 221200574 (19 July 2022). Slight injury suffered by driver of a vehicle on the southbound exit slip road that swerved when braking to avoid colliding with traffic queuing at the junction. The narrative report highlights that the driver misjudged speed, and the causation factor was recorded as "Nervous/Uncertain/Panic".
- » Collision ref 221221309 (14 September 2022). Slight injury suffered by driver of a vehicle on the northbound exit slip road that was struck by another vehicle, which had been stolen. The causation factor was recorded as "Aggressive driving".

M1 Mainline

- » Collision ref 18345556 (12 November 2018). Slight injury suffered by passenger of a vehicle in Lane 3, which was struck to the side by a vehicle attempting to move from Lane 2, which resulted in a spin and whiplash injury. The causation factor was recorded as "Failed to look properly".
- » Collision ref 221235802 (18 February 2022). Injuries of serious and slight severity were suffered by a passenger and the driver of a vehicle that collided with a stationary / broken down vehicle in the offside lane of the southbound mainline carriageway between the exit and entry slip roads. No causation factors are identified in the narrative report.
- » Collision ref 221197760 (9 July 2022). A collision of slight severity occurred when a vehicle collided with the central reservation causing damage to the Armco barrier as the driver had fallen asleep at the wheel. The collision was recorded on the southbound mainline carriageway, north of Junction 36. The causation factor was recorded as "Fatigue".
- » Collision ref 231265003 (18 January 2023). Slight injury to driver of a car on the northbound carriageway of the M1, following a collision with another vehicle, in turn following a manoeuvre across all 3 lanes of the carriageway into the central reservation. It is noted that the collision was recorded south of the exit slip road at Junction 36. The causation factor was recorded as "Loss of control".

A6195 North Approach

- » Collision ref 19814411 (7 February 2019). Slight injury to passenger of a vehicle struck to the rear by another vehicle approaching the Junction 36 roundabout on the A61. No specific causation factor was identified, though the narrative report suggests "failure to look properly" and "following too close".

Birdwell Roundabout

- » Collision ref 18301351 (8 July 2018). Rider and passenger of a motorcycle suffered serious / slight injury respectively, after passing through traffic lights on the northbound Sheffield Road approach, and colliding with a vehicle circulating the junction. The causation factor was recorded as "Failed to judge other persons path or speed".
- » Collision ref 18322680 (18 August 2018). Slight injury to driver and passenger of vehicle waiting at red signal on southbound Sheffield Road approach, which was struck to the rear by a following vehicle. The causation factor was recorded as "Failed to look properly" and "Following too close".
- » Collision ref 19862534 (28 July 2019). Slight injuries to drivers of 2 vehicles colliding as a result of a vehicle travelling through a red light. The causation factor was recorded as "Disobeyed Give Way or Stop sign or markings".
- » Collision ref 221242055 (14 November 2022). Slight injury suffered by the driver of a vehicle that was struck by a goods vehicle when circulating Birdwell Roundabout. The causation factor was recorded as "Failed to judge other persons path or speed" and "Failed to look properly".

A total of 16 collisions were recorded in the vicinity of Junction 36 of the M1 and Birdwell Roundabout during the study period. Of this total, 3 resulted in serious injury, and no collisions resulting in fatal injuries were recorded. Given the daily traffic flows accommodated on the network in this area, the number of collisions occurring at the junctions is considered to be relatively low.

Notwithstanding this, the collision data indicates that the identified collisions occurred for reasons indicative of driver error, and there is no evidence of a specific highway safety issue on the network that would need to be addressed to safely accommodate the changes in traffic flows associated with the development.

3. Rockingham Roundabout

3.1 Existing and Future Traffic Flows

Traffic flow data for the 2024 Base Year scenario has been derived from classified turning count and queue length surveys undertaken during the AM and PM peak periods on 12 March 2024. On the basis of the surveys, AM and PM peak hours of 08:00 to 09:00 and 16:15 to 17:15 are identified respectively. The peak hour traffic flows are demonstrated on Figure 1.

Traffic flows for the 2028 Opening Year scenario as assessed consistent with the methodology set out in the previous chapter for the M1 Junction 36 and Birdwell Roundabout area.

3.2 2024 Base Year Assessment

A Junctions10 model of the existing junction layout has been developed. Junctions10 software calculates the Ratio of Flow to Capacity (RFC) to indicate the performance of approaches to a junction under a given set of traffic flows. An RFC of 0.85 is widely accepted as being at the level at which a junction's operational capacity is reached; however, an RFC in excess of 0.85 does not indicate a situation that is inherently unacceptable; it indicates that further consideration of operating conditions (including impacts on queues and delay) is appropriate.

The Junctions10 model has been run for the 2024 Base Year scenario, based on the surveyed traffic flows and the results are summarised in Table 11. The full Junctions10 output is provided at Appendix G.

Table 11: Rockingham Roundabout - 2024 Base Year Assessment

Link	AM Peak Hour		PM Peak Hour	
	RFC	Queue (pcu)	RFC	Queue (pcu)
Kestrel Way	0.21	0.3	0.35	0.5
A6195 Dearne Valley Parkway (North)	0.62	1.7	0.60	1.5
Sheffield Road	0.28	0.4	0.29	0.4
A6195 Dearne Valley Parkway (South)	0.61	1.7	0.76	3.2

The assessment indicates that the junction operates with a degree of spare capacity in both modelled peak hour scenarios. This accords with observations of queue lengths undertaken at the same time as the turning count survey, and the Junctions10 model is therefore fit for purpose in assessing the future operation of the junction with the development in place.

3.3 2028 Opening Year Assessment

The Junctions10 model outputs for the 2028 Opening Year scenario are summarised in Table 12, and provided in full at Appendix G.

Table 12: M1 Junction 36 / Birdwell Roundabout - 2028 Opening Year Assessment

Link	AM Peak Hour				PM Peak Hour			
	2028 Do Minimum		2028 With Development		2028 Do Minimum		2028 With Development	
	RFC	Queue (pcu)	RFC	Queue (pcu)	RFC	Queue (pcu)	RFC	Queue (pcu)
Kestrel Way	0.29	0.4	0.31	0.5	0.53	1.1	0.55	1.2
A6195 DVP (North)	0.81	4.5	0.84	5.3	0.77	3.4	0.80	4.1
Sheffield Road	0.47	0.9	0.49	1.0	0.46	0.9	0.48	0.9
A6195 DVP (South)	0.81	4.5	0.84	5.5	0.92	10.0	0.94	13.1

The assessment demonstrates:

- » The A6195 Dearne Valley Parkway approaches to the junction would operate with a modelled DoS close to, or in excess of, the normal practical capacity threshold of 0.85 regardless of whether the development is brought forward.
- » The changes in traffic flows associated with the development would be accommodated on all approaches with a minor corresponding increase in modelled queues. In the worst-case scenario (the northbound A6195 Dearne Valley Parkway approach, during the PM peak hour), the modelled queue would be increased by around 3pcu; however, such an increase would be comfortably accommodated without extending back through the upstream junctions, located approximately 250m to the south.

On this basis, it is concluded that the changes in traffic flows associated with the proposed development in the Opening Year scenario are satisfactorily accommodated by the existing layout of the junction, and consequently no mitigation measures in the form of physical changes to the junction are required.

3.4 Road Safety

Similar to M1 Junction 36 and Birdwell Roundabout, personal injury collision data has been obtained from BMBC for the period covering 2017 to date, excluding the years 2020 and 2021 (given collision records on the network may have been affected by changes in traffic flows as a result of the Covid pandemic restrictions).

The full collision data is provided at Appendix F and the collisions recorded in the vicinity of Rockingham Roundabout are described below:

- » Collision ref 17181437: (12 May 2017). A collision of serious severity occurred when a goods vehicle travelling along the Dearne Valley Parkway (around Rockingham roundabout) lost control and collided with a lamp post. The causation factor was recorded as "Overloaded or poorly loaded vehicle or trailer" and "Road layout (e.g. bend, hill etc.)".
- » Collision ref 17200109 (8 July 2017). A collision of slight severity occurred when a vehicle collided with the slow moving traffic on Dearne Valley Parkway and hit the rear of another vehicle. The causation factor was recorded as "Careless/Reckless/In a hurry" and "Failed to look properly".
- » Collision ref 17256804 (18 December 2017). Slight injury suffered by passenger of vehicle leaving Rockingham roundabout, which was struck by a vehicle that swerved to avoid another vehicle. The causation factor was recorded as "Careless/Reckless/In a hurry".
- » Collision ref 19860365 (22 July 2019). Collision between two motorcycles, travelling southbound on the A6195 Dearne Valley Parkway through the Rockingham Roundabout, resulting in serious injury to one rider. The causation factor was recorded as "Careless/Reckless/In a hurry" and "Failed to look properly".
- » Collision ref 19910750 (17 December 2019). Slight injury to driver of a vehicle approaching Rockingham Roundabout on Kestrel Way, which was struck to the rear by a following vehicle, the driver of which had been distracted. The causation factor was recorded as "Distraction in vehicle".
- » Collision ref 221192123 (26 June 2022). Slight injury suffered by motorcycle passenger that fell upon exiting the Rockingham Roundabout circulatory towards the Dearne Valley Parkway. The causation factor was recorded as "Poor or defective road surface".
- » Collision ref 231331337 (16 July 2023). Slight injury to driver of a car circulating Rockingham Roundabout, which was struck by another vehicle resulting in leaving the carriageway and striking a lamp post. The causation factor was recorded as "Failed to judge other persons path or speed" and "Failed to look properly".
- » Collision ref 231391158 (14 December 2023). Slight injury to driver of a car on the southbound A6195 Dearne Valley Parkway approach, following a collision with a vehicle that had suddenly changed lane, in turn resulting in a further collision with another vehicle. No specific causation factors are identified in the narrative report.

In summary, a total of 8 collisions were recorded in the vicinity of Rockingham Roundabout during the study period. Of this total, 2 resulted in serious injury, and no collisions resulting in fatal injuries were recorded. Given the daily traffic flows accommodated on the network in this area, the number of collisions occurring at the junctions is considered to be relatively low.

Notwithstanding this, the collision data indicates that the identified collisions occurred for reasons indicative of driver error, and there is no evidence of a specific highway safety issue on the network that would need to be addressed to safely accommodate the changes in traffic flows associated with the development.

4. A1(M) Junction 37

4.1 Base Year Assessment

Traffic flow data for the Base Year scenario has been derived from classified turning count and queue length surveys undertaken during the AM and PM peak periods on 21 June 2022, as part of the wider package of surveys undertaken for the purposes of the submitted Transport Assessment. On the basis of the surveys, AM and PM peak hours of 08:00 to 09:00 and 16:15 to 17:15 are identified respectively. The modelled traffic flow data is presented at Appendix A.

A Junctions10 model of the existing junction layout has been developed. The Junctions10 model has been run for the 2022 Base Year scenario, based on the surveyed traffic flows. The model results are summarised in Table 13 and presented in full at Appendix H.

Table 13: A1(M) Junction 37 - 2022 Base Year Assessment

Link	AM Peak Hour		PM Peak Hour	
	RFC	Queue (pcu)	RFC	Queue (pcu)
A1(M) Southbound Exit Slip Road	0.25	0.4	0.34	0.5
A635 Barnsley Road (East)	0.63	1.8	0.50	1.1
A1(M) Northbound Exit Slip Road	0.40	0.7	0.49	1.0
A635 Barnsley Road (West)	0.68	2.3	0.52	1.2

The assessment indicates that the junction operates with a degree of spare capacity in both modelled peak hour scenarios. This accords with observations of the junction operation in practice, and the Junctions10 model is therefore fit for purpose in assessing the future operation of the junction with the development in place.

4.2 2028 Opening Year Assessment

Assumptions in relation to committed development and traffic growth between 2022 and 2028 are consistent with those in the submitted Transport Assessment.

However, given the assumptions made to assess the residual traffic impacts (representing implementation of the proposed active travel works, public transport improvements and travel planning measures) as set out above, the resulting development traffic flows for the weekday peak hours are updated compared to the submitted Transport Assessment work, and demonstrated as follows (all for the weekday AM and PM peak hour scenarios respectively):

- » Figure 6 and 7 for light vehicle trips.
- » Figure 11 and 12 for total development traffic flows.

The resulting traffic flows for weekday AM and PM peak hours in the 2028 Opening Year scenario are demonstrated on:

- » Figure 19 and Figure 20 for the Do Minimum scenario (there is no change to this scenario compared to that submitted with the Transport Assessment, but is provided for completeness).
- » Figure 21 and Figure 22 for the With Development scenario.

The Junctions10 model outputs for the 2028 Opening Year scenario are summarised in Table 14, and presented in full at Appendix H.

Table 14: A1(M) Junction 37 - 2028 Opening Year Assessment

Link	AM Peak Hour				PM Peak Hour			
	2028 Do Minimum		2028 With Development		2028 Do Minimum		2028 With Development	
	RFC	Queue (pcu)	RFC	Queue (pcu)	RFC	Queue (pcu)	RFC	Queue (pcu)
A1(M) Southbound Exit Slip Rd	0.29	0.5	0.31	0.5	0.37	0.6	0.40	0.7
A635 Barnsley Road (East)	0.69	2.4	0.72	2.7	0.56	1.3	0.59	1.5
A1(M) Northbound Exit Slip Rd	0.44	0.9	0.47	1.0	0.57	1.4	0.59	1.5
A635 Barnsley Road (West)	0.76	3.5	0.79	4.1	0.58	1.5	0.62	1.7

The assessment demonstrates:

- » In the 2028 do minimum scenario, regardless of whether the development is brought forward, all approaches to the junction operate with a modelled DoS below the normal practical capacity threshold of 0.85. This indicates spare capacity would remain available at the junction in the future scenario.
- » The changes in traffic flows associated with the development would be accommodated on all approaches with a minor corresponding increase in modelled queues. On all approaches, the modelled increase in queues represents less than 1pcu, which can be comfortably accommodated without affecting the operation of the wider network.

On this basis, it is concluded that the changes in traffic flows associated with the proposed development in the Opening Year scenario are satisfactorily accommodated by the existing layout of the junction, and consequently no mitigation measures in the form of physical changes to the junction are required.

4.3 Merge and Diverge Assessment

The predicted traffic impact at the slip roads of A1(M) Junction 37, and resultant merge and diverge assessment is provided within this section. The merge and diverge assessments have been undertaken using Figures 3.12b and 3.26b of CD 122 of DMRB and have been undertaken for the Base, Do Minimum and With Development assessment scenarios. Traffic flows on the A1(M) mainline have been derived from the WebTRIS database, with traffic flows obtained for the weekday AM and PM peak hours on Tuesday 21 June 2022; in accordance with the same date as the '2022 Base' traffic surveys were undertaken.

The merge and diverge diagrams for A1(M) Junction 37 are provided at Appendix I, and summarised in Table 15 and Table 16.

Table 15: Merge / Diverge Assessment - A1(M) Junction 37 Northbound Slip Roads

MD	Scenario	TP	M Flow	MD Flow	Future Layout				Recommended Layout			
					T	CL	UM	DM	T	CL	UM	DM
Merge	2022 Base	AM	2,464	370	B	2	2	2	A	1	2	2
		PM	2,568	311	B	2	2	2	A	1	2	2
	2028 DM	AM	2,522	392	B	2	2	2	A	1	2	2
		PM	2,630	328	B	2	2	2	A	1	2	2
	2028 WD	AM	2,522	398	B	2	2	2	A	1	2	2
		PM	2,630	336	B	2	2	2	A	1	2	2
Diverge	2022 Base	AM	2,464	561	A	2	2	2	A	1	2	2
		PM	2,568	738	A	2	2	2	A	1	2	2
	2028 DM	AM	2,522	607	A	2	2	2	A	1	2	2
		PM	2,630	813	A	2	2	2	A	1	2	2
	2028 WD	AM	2,522	634	A	2	2	2	A	1	2	2
		PM	2,630	827	A	2	2	2	A	1	2	2

Table 16: Merge / Diverge Assessment - A1(M) Junction 37 Southbound Slip Roads

MD	Scenario	TP	M Flow	MD Flow	Future Layout				Recommended Layout			
					T	CL	UM	DM	T	CL	UM	DM
Merge	2022 Base	AM	2,418	748	B	2	2	2	A	1	2	2
		PM	2,650	550	B	2	2	2	A	1	2	2
	2028 DM	AM	2,475	826	B	2	2	2	B	1	2	2
		PM	2,714	601	B	2	2	2	A	1	2	2
	2028 WD	AM	2,475	839	B	2	2	2	B	1	2	2
		PM	2,714	629	B	2	2	2	A	1	2	2
Diverge	2022 Base	AM	2,418	264	A	2	2	2	A	1	2	2
		PM	2,650	429	A	2	2	2	A	1	2	2
	2028 DM	AM	2,475	278	A	2	2	2	A	1	2	2
		PM	2,714	452	A	2	2	2	A	1	2	2
	2028 WD	AM	2,475	287	A	2	2	2	A	1	2	2
		PM	2,714	459	A	2	2	2	A	1	2	2

The assessment demonstrates that the recommended merge and diverge lane layouts remain the same for the 2028 opening year scenario, either with or without the proposed development in place. The predicted impacts of the proposed development will not result in a material change to the required slip road layouts, beyond those that may be required in any event as a result in growth to baseline traffic. As such, no changes to the future layout of A1(M) Junction 37 are considered necessary to satisfactorily accommodate traffic associated with the proposed development.

4.4 Road Safety

Personal injury collision data recorded in the vicinity of Junction 37 of the A1(M) was obtained from the City of Doncaster Council (CDC) and assessed as part of the submitted Transport Assessment. For the purposes of this assessment, the collisions recorded in the vicinity of Junction 37 are re-represented below:

- » Collision ref A-00019-15 (6 January 2015): A collision of slight severity occurred on the motorway section as a HGV changed lanes and failed to spot a vehicle whilst turning, resulting in a four vehicle collision including vehicles travelling behind. The causation factors were recorded as "failed to look properly" and "failed to judge other person's path or speed".
- » Collision ref A-00280-15 (25 February 2015): A collision of slight severity occurred on the motorway section as a vehicle travelling southbound collided with the rear of a vehicle in front, in slowing traffic. The causation factor was recorded as "failed to judge other person's path or speed".
- » Collision ref A-01720-15 (20 November 2015): A collision of slight severity occurred at the roundabout as a vehicle travelling westbound braked sharply to avoid another vehicle. This caused two vehicles behind to collide with the rear of each vehicle. The causation factors were recorded as "following too close", "failed to judge other person's path or speed" and "sudden braking".
- » Collision ref 16113686 (4 October 2016): A collision of slight severity occurred on the motorway section as a vehicle travelling southbound collided with the rear of a vehicle in front, in slowing traffic. The causation factor was recorded as "failed to judge other person's path or speed".
- » Collision ref 16144740 (31 December 2016): A collision of slight severity occurred on the motorway section as a vehicle travelling southbound collided with the rear of a vehicle in front, in slowing traffic, pushing the vehicle into the central crash barrier. The vehicle drove away from the scene without stopping. The causation factor was recorded as "failed to look properly".
- » Collision ref 1678411 (12 June 2016): A collision of slight severity occurred on the motorway section as a vehicle travelling northbound collided with the rear of a vehicle in front, in slowing traffic. This caused a domino effect between six vehicles. The causation factor was recorded as "failed to judge other person's path or speed".
- » Collision ref 17168378 (16 March 2017): A collision of slight severity occurred at the roundabout as a vehicle entering from the southbound exit slip road collided with a vehicle travelling westbound across the roundabout, causing the vehicle to spin off into a bush. The causation factor was recorded as "careless, reckless or in a hurry".
- » Collision ref 17225987 (25 September 2017): A collision of slight severity occurred at the roundabout as a stationary motorcyclist parked at the junction was hit by a vehicle travelling eastbound towards the southbound entry slip road. The causation factor was recorded as "deposit on the road (e.g. oil, mud, chippings)".
- » Collision ref 17230383 (13 October 2017): A collision of slight severity occurred on the motorway section as a vehicle travelling southbound failed to react to slowing traffic and swerved into the central crash barrier. The causation factor was recorded as "failed to judge other person's path or speed".
- » Collision ref 17237478 (24 October 2017): A collision of slight severity occurred on the motorway section as a LGV travelling southbound collided with the rear of an LGV in front. The causation factors were recorded as "slippery road surface" and "failed to look properly".
- » Collision ref 17284681 (17 December 2017): A collision of slight severity occurred on the motorway section as a vehicle travelling northbound collided with the rear of a vehicle in front, in slowing traffic. This caused a domino effect between three vehicles. The causation factor was recorded as "failed to judge other person's path or speed".

- » Collision ref 18283270 (17 March 2018): A collision of slight severity occurred on the motorway section as a vehicle travelling northbound in poor weather conditions lost control and collided with a vehicle in front. The causation factor was recorded as "slippery road surface".
- » Collision ref 19818573 (25 February 2019): A collision of serious severity occurred on the A653, east of A1 Junction 47, as a vehicle travelling eastbound was "dazzled by the sun" and collided with a vehicle travelling in the opposite direction. The causation factor was recorded as "vision affected by dazzling sun".

Overall, thirteen collisions were recorded at A1(M) Junction 37 during the assessed period, though nine of these collisions occurred on the motorway section not relating to the roundabout or slip roads. One of the collisions resulted in serious injury, and there were no fatalities. The collision records indicate that the identified collisions occurred for reasons indicative of driver error, and there is no evidence of a specific highway safety issue on the network that would need to be addressed to safely accommodate the changes in traffic flows associated with the development.

5. Summary

This Technical Note sets out assessment of the impacts of the proposed development at the key junctions on the Strategic Road Network, in accordance with consultation by, and discussions with, National Highways in relation to the submitted planning application.

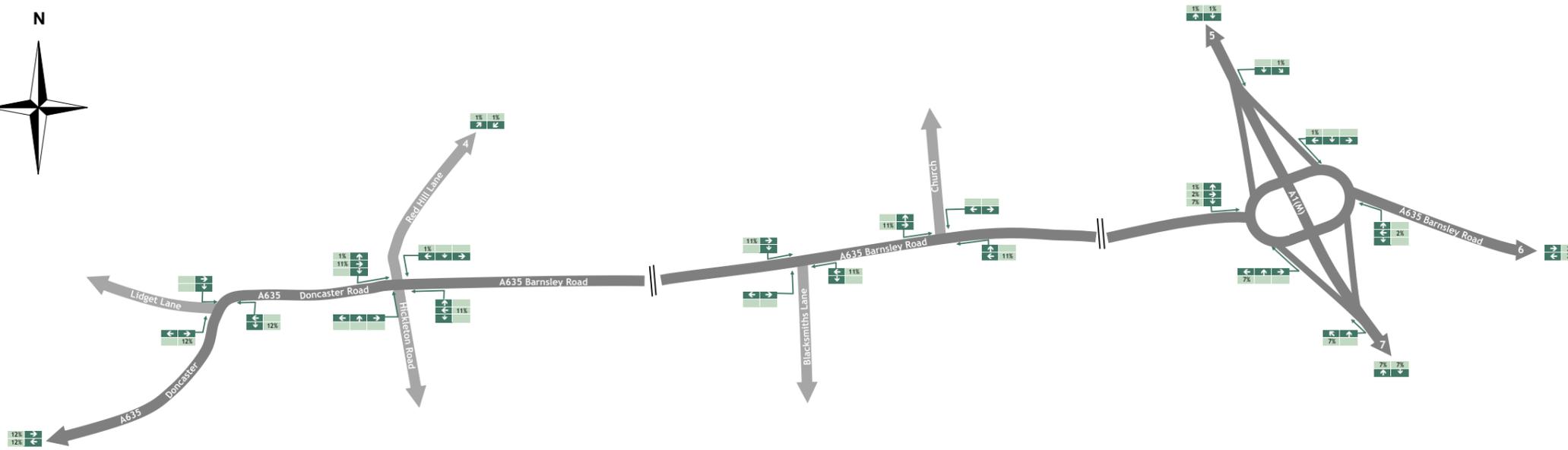
Specifically, this Technical Note assesses the impact of the development at M1 Junction 36 roundabout and "Birdwell Roundabout", which effectively comprise a linked traffic signal-controlled gyratory, as well as "Rockingham Roundabout" (a priority-controlled roundabout located 250m north of Birdwell Roundabout), and Junction 37 of the A1(M).

The assessment demonstrates that:

- » The changes in the traffic flows related to the development will not represent a significant impact on the future operation of the junctions assessed.
- » There is no evidence of a specific road safety issue related to the existing layout of the junctions considered, which needs to be addressed to safely accommodate changes in traffic flows associated with the development.

On this basis, and in accordance with the provisions of Circular 01/2022, it is concluded that the existing junctions on the Strategic Road Network can safely and efficiently accommodate changes in traffic flows associated with the development in the opening year scenario, and mitigation (in the form of physical changes to the junction layouts) is not necessary.

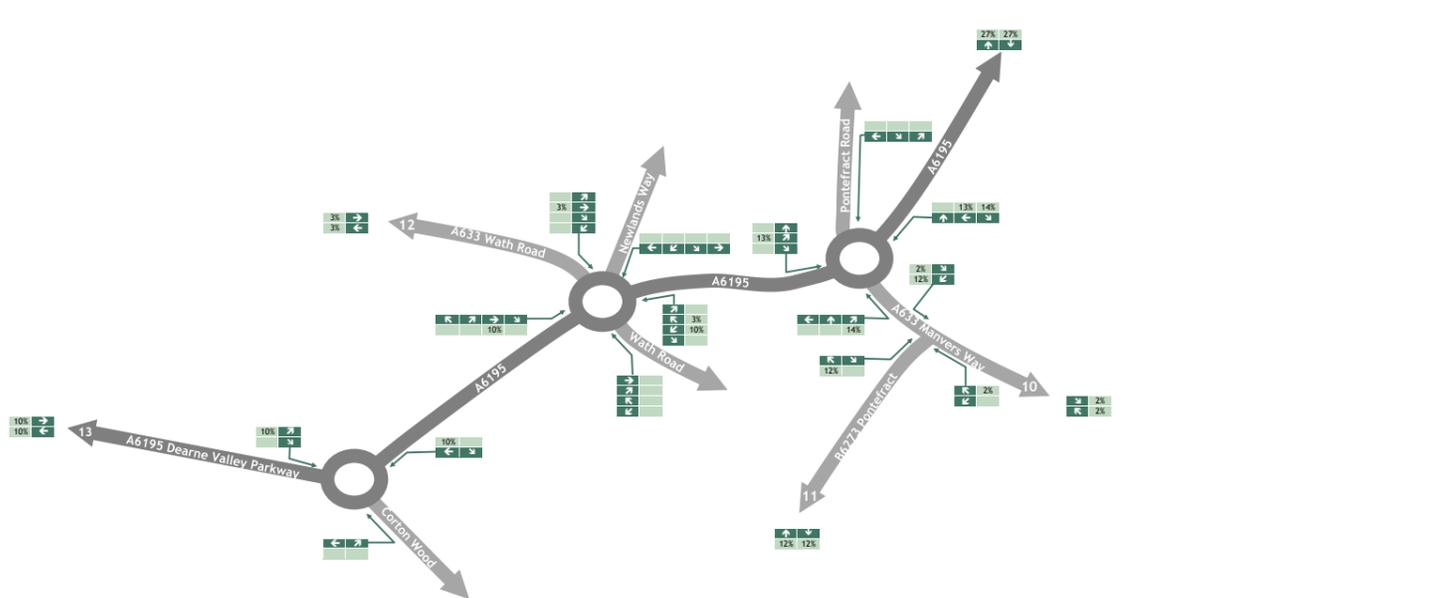
Figures



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane	2.3%	2.3%	2.3%
2	Nicholas Lane	4.7%	4.7%	4.7%
3	Barrowfield Road	4.7%	4.7%	4.7%
4	Red Hill Lane	0.8%	0.8%	0.8%
5	A1(M) (North)	1.0%	1.0%	1.0%
6	A635 Barnsley Road	2.5%	2.5%	2.5%
7	A1(M) (South)	7.2%	7.2%	7.2%
8	Barnsley Road	6.1%	6.1%	6.1%
9	Highgate Lane	21.4%	21.4%	21.4%
10	A633 Manvers Way	1.8%	1.8%	1.8%
11	B6273 Pontefract Road	12.1%	12.1%	12.1%
12	A633 Wath Road	2.8%	2.8%	2.8%
13	A6195 Dearne Valley Parkway	10.5%	10.5%	10.5%
14	A635 Doncaster Road	12.9%	12.9%	12.9%
15	A6195 Park Spring Road	9.2%	9.2%	9.2%
Total		100%	100%	100%

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Client:
 Equites Newlands (Goldthorpe) Ltd

Project:
 Land South of Dearne Valley Parkway, Goldthorpe

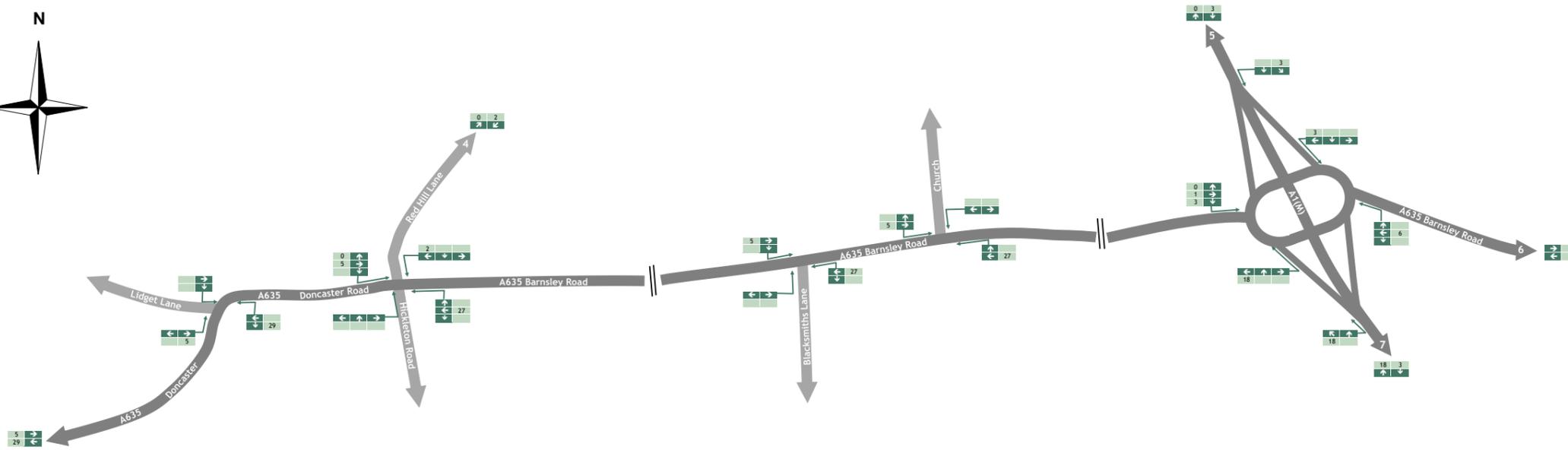
Figure Title:
 Light Vehicle/Car Trip Distribution (%)

Scale:
 Not to scale

Figure Status:
 Issue

Job Number:
 3465

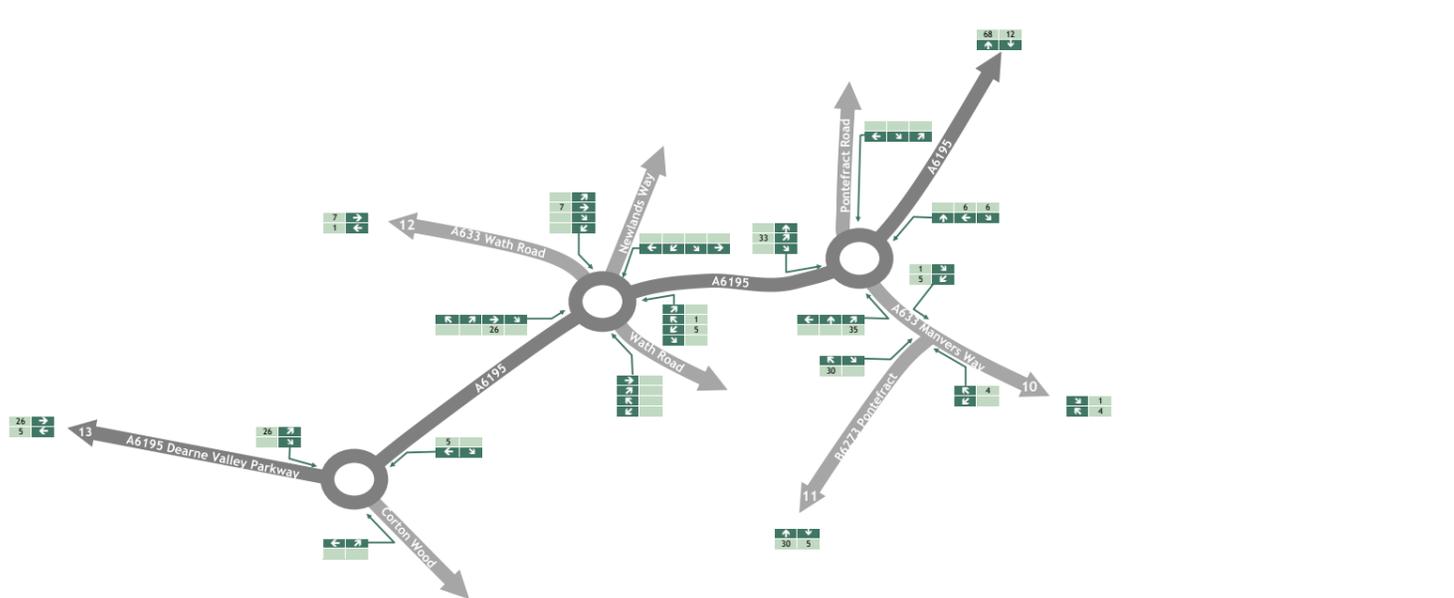
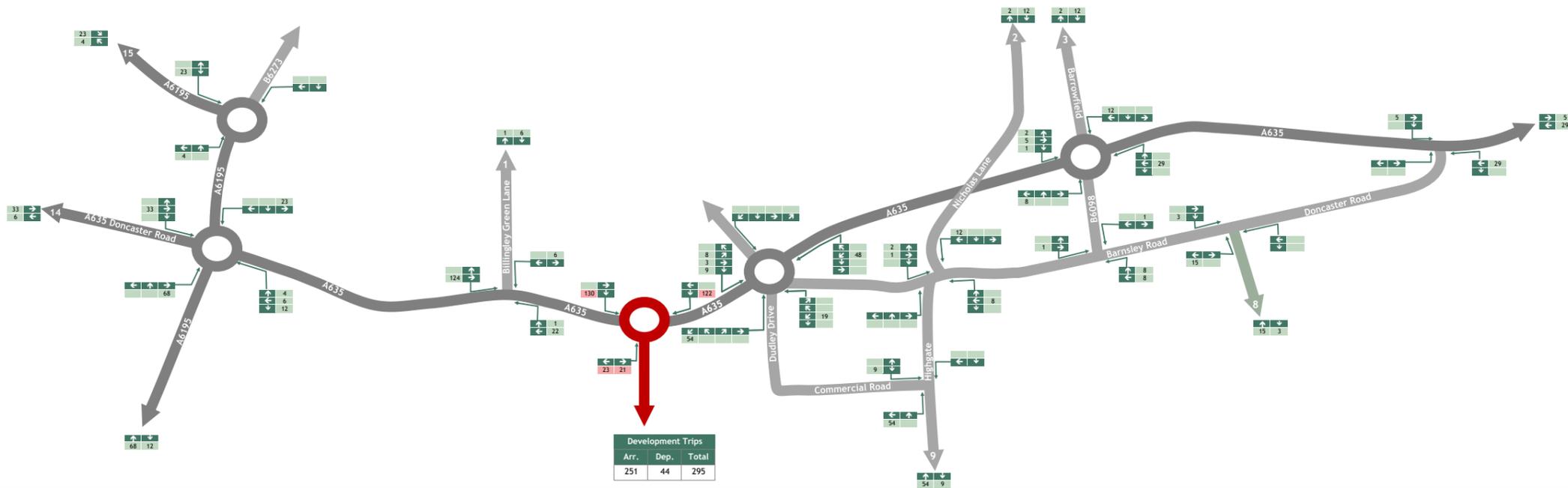
Figure Number:
 Figure 5



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane	6	1	7
2	Nicholas Lane	12	2	14
3	Barrowfield Road	12	2	14
4	Red Hill Lane	2	0	2
5	A1(M) (North)	3	0	3
6	A635 Barnsley Road	6	1	7
7	A1(M) (South)	18	3	21
8	Barnsley Road	15	3	18
9	Highgate Lane	54	9	63
10	A633 Manvers Way	4	1	5
11	B6273 Pontefract Road	30	5	36
12	A633 Wath Road	7	1	8
13	A6195 Dearne Valley Parkway	26	5	31
14	A635 Doncaster Road	33	6	38
15	A6195 Park Spring Road	23	4	27
Total		251	44	295

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Project:
 Land South of Dearne Valley Parkway, Goldthorpe

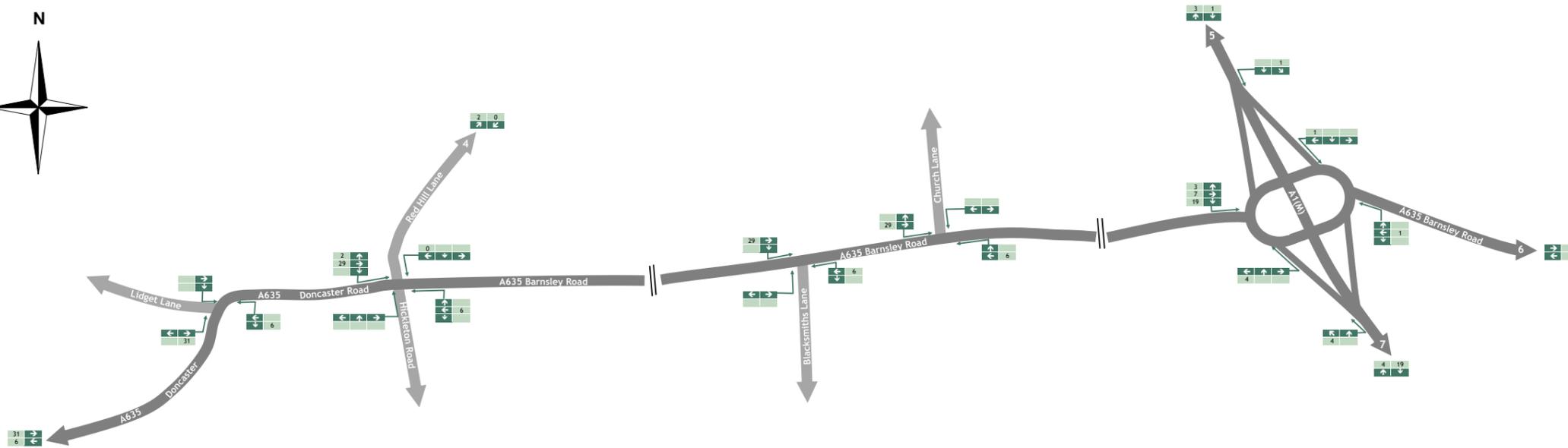
Figure Title:
 Light Vehicle/Car Traffic Flows - Weekday AM Peak Hour

Scale:
 Not to scale

Figure Status:
 Issue

Job Number:
 3465

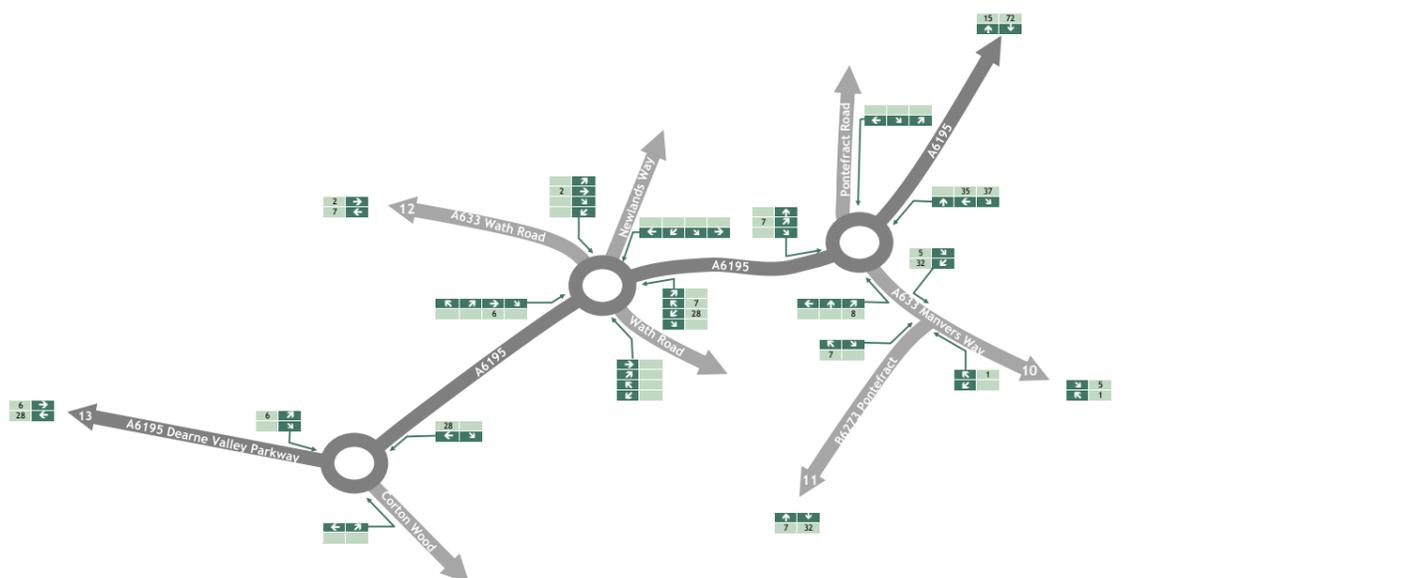
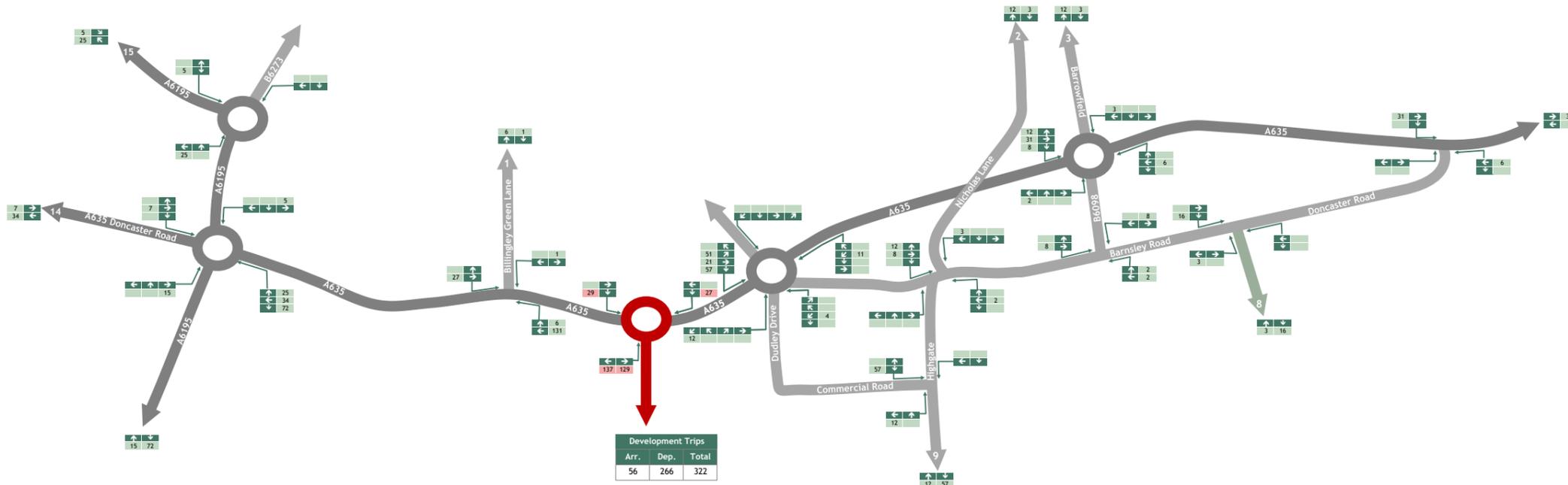
Figure Number:
 Figure 6



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane	1	6	7
2	Nicholas Lane	3	12	15
3	Barrowfield Road	3	12	15
4	Red Hill Lane	0	2	3
5	A1(M) (North)	1	3	3
6	A635 Barnsley Road	1	7	8
7	A1(M) (South)	4	19	23
8	Barnsley Road	3	16	20
9	Highgate Lane	12	57	69
10	A633 Manvers Way	1	5	6
11	B6273 Pontefract Road	7	32	39
12	A633 Wath Road	2	7	9
13	A6195 Dearne Valley Parkway	6	28	34
14	A635 Doncaster Road	7	34	42
15	A6195 Park Spring Road	5	25	30
Total		56	266	322

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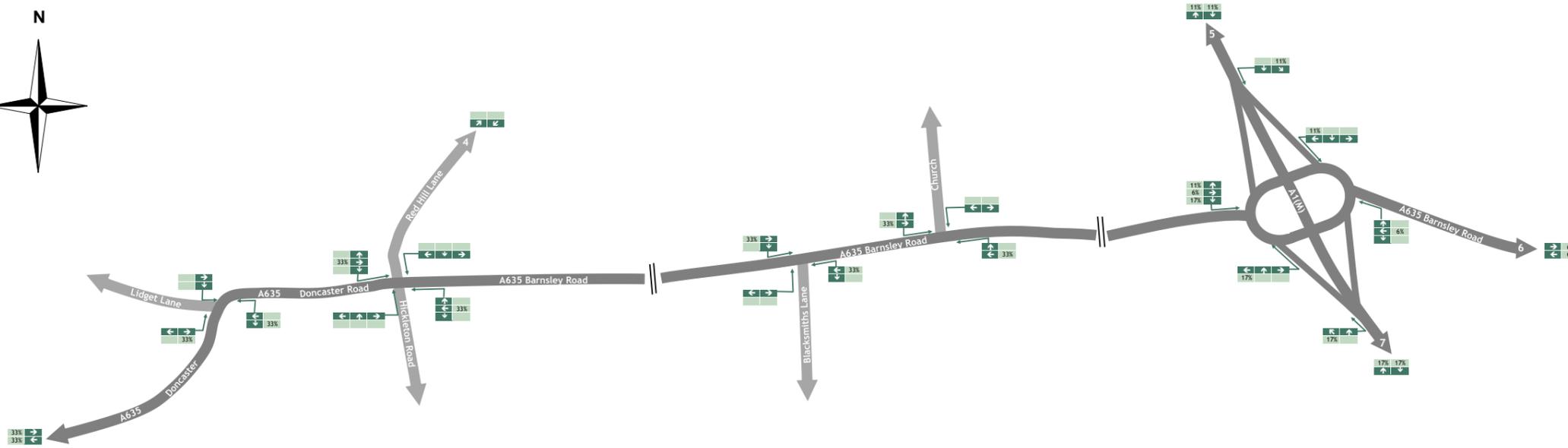
Client:
 Equites Newlands (Goldthorpe) Ltd

Project:
 Land South of Dearne Valley Parkway, Goldthorpe

Figure Title:
 Light Vehicle/Car Traffic Flows - Weekday PM Peak Hour

Scale: Not to scale
Figure Status: Issue

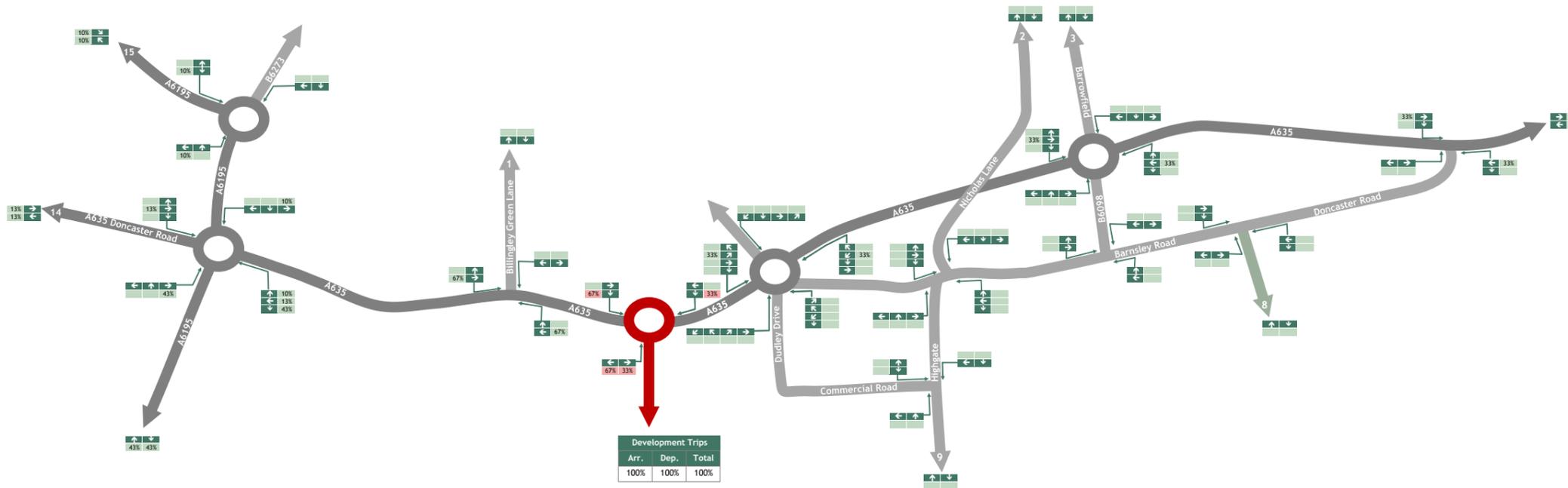
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Figure Number: Figure 7



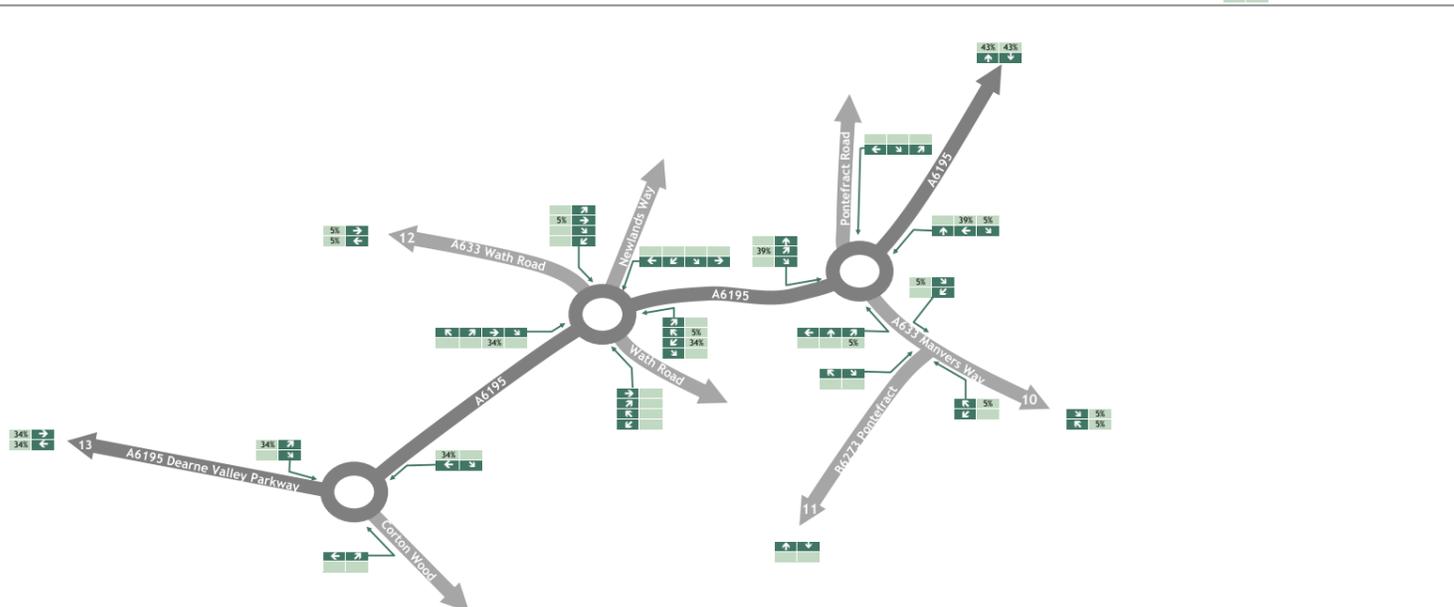
Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Development Trips		
Arr.	Dep.	Total
100%	100%	100%



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane	0.0%	0.0%	0.0%
2	Nicholas Lane	0.0%	0.0%	0.0%
3	Barrowfield Road	0.0%	0.0%	0.0%
4	Red Hill Lane	0.0%	0.0%	0.0%
5	A1(M) (North)	10.6%	10.6%	10.6%
6	A635 Barnsley Road	6.2%	6.2%	6.2%
7	A1(M) (South)	16.7%	16.7%	16.7%
8	Barnsley Road	0.0%	0.0%	0.0%
9	Highgate Lane	0.0%	0.0%	0.0%
10	A633 Manvers Way	4.6%	4.6%	4.6%
11	B6273 Pontefract Road	0.0%	0.0%	0.0%
12	A633 Wath Road	5.0%	5.0%	5.0%
13	A6195 Dearne Valley Parkway	33.8%	33.8%	33.8%
14	A635 Doncaster Road	13.5%	13.5%	13.5%
15	A6195 Park Spring Road	9.7%	9.7%	9.7%
Total		100%	100%	100%

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Figure Title:

HGV Trip Distribution (%)

Scale:

Not to scale

Figure Status:

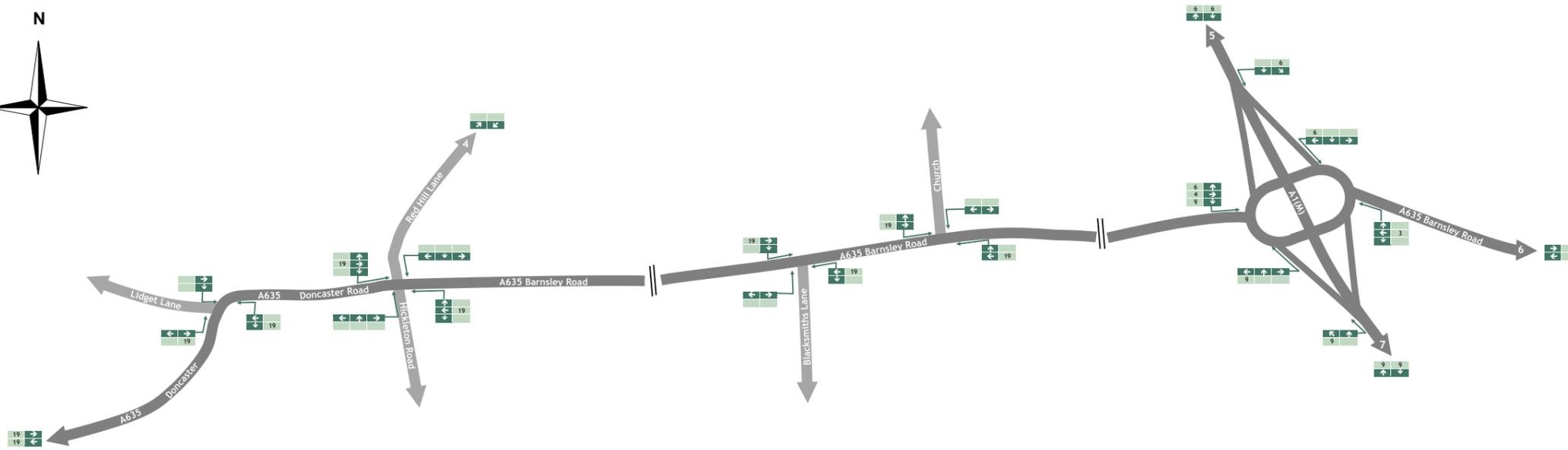
Issue

Job Number:

3465

Figure Number:

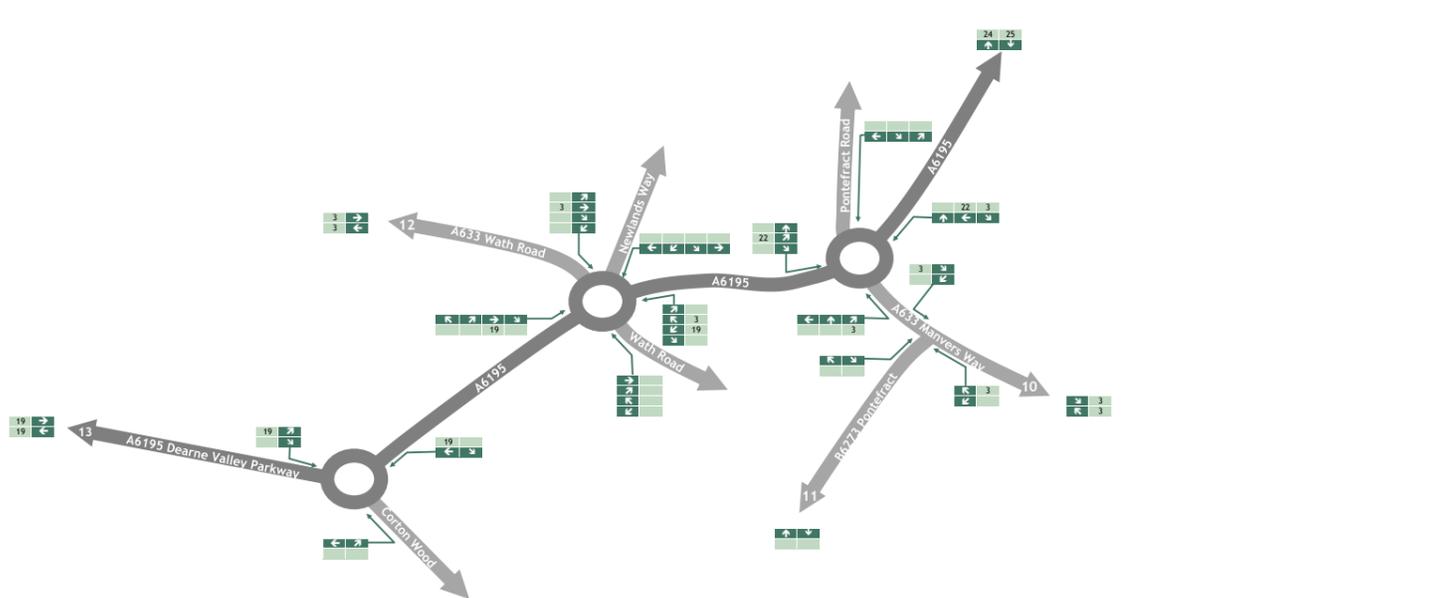
Figure 8



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane			
2	Nicholas Lane			
3	Barrowfield Road			
4	Red Hill Lane			
5	A1(M) (North)	6	6	12
6	A635 Barnsley Road	3	4	7
7	A1(M) (South)	9	9	19
8	Barnsley Road			
9	Highgate Lane			
10	A633 Manvers Way	3	3	5
11	B6273 Pontefract Road			
12	A633 Wath Road	3	3	6
13	A6195 Dearne Valley Parkway	19	19	38
14	A635 Doncaster Road	7	8	15
15	A6195 Park Spring Road	5	5	11
Total		55	57	112

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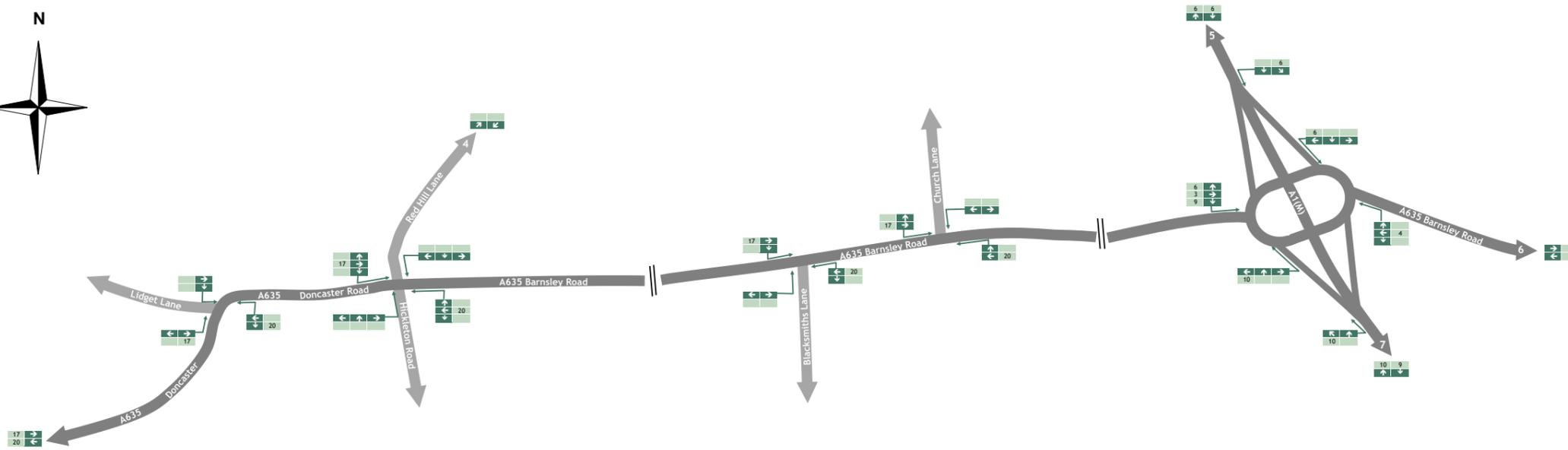
Figure Title:
 HGV Traffic Flows - Weekday AM Peak Hour

Scale:
 Not to scale

Figure Status:
 Issue

Job Number:
 3465

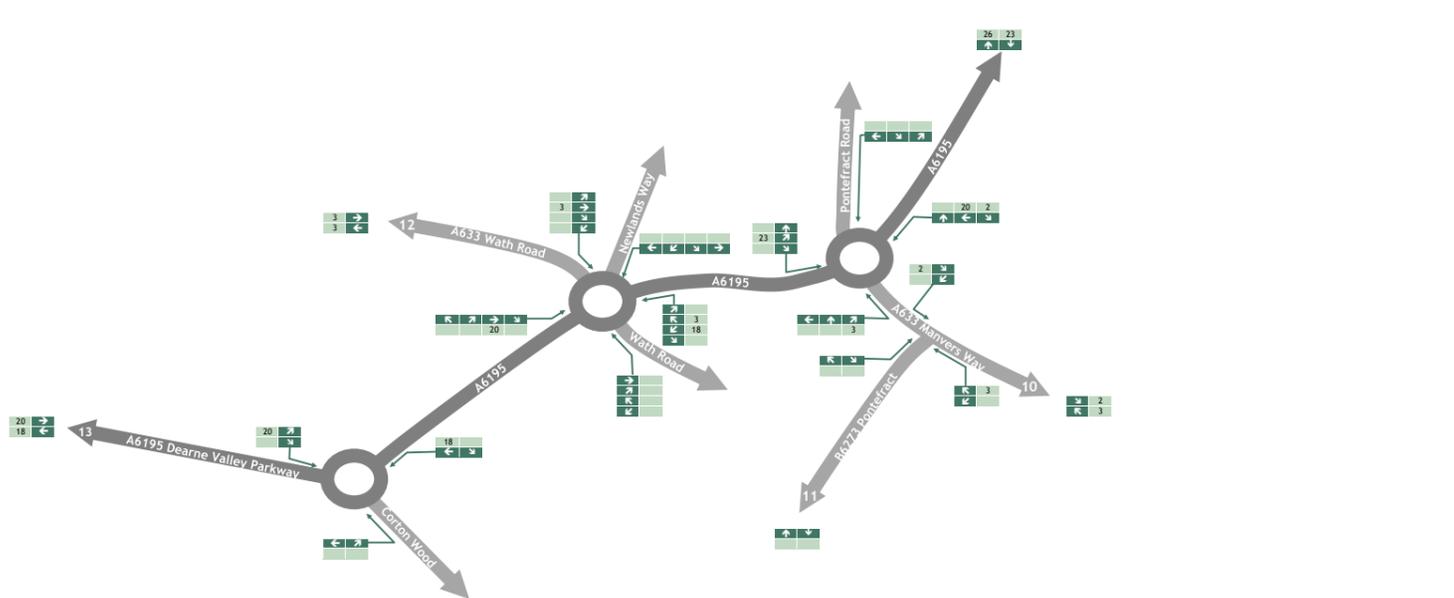
Figure Number:
 Figure 9



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane	0	0	0
2	Nicholas Lane	0	0	0
3	Barrowfield Road	0	0	0
4	Red Hill Lane	0	0	0
5	A1(M) (North)	6	6	12
6	A635 Barnsley Road	4	3	7
7	A1(M) (South)	10	9	19
8	Barnsley Road	0	0	0
9	Highgate Lane	0	0	0
10	A633 Manvers Way	3	2	5
11	B6273 Pontefract Road	0	0	0
12	A633 Wath Road	3	3	6
13	A6195 Dearn Valley Parkway	20	18	38
14	A635 Doncaster Road	8	7	15
15	A6195 Park Spring Road	6	5	11
Total		60	52	112

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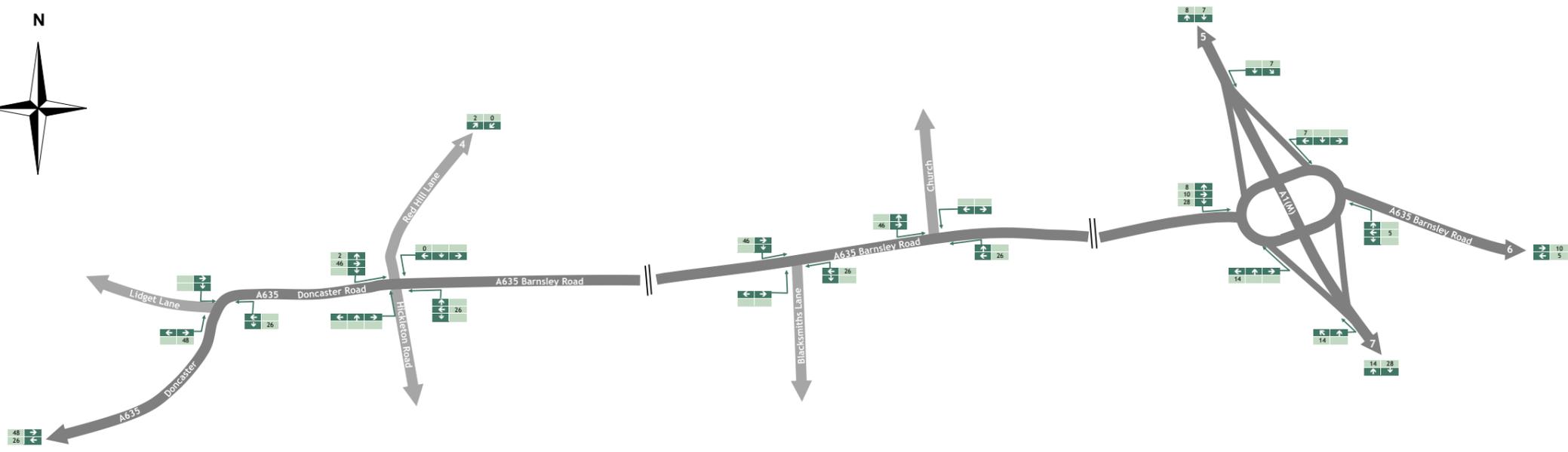
Figure Title:
 HGV Traffic Flows - Weekday PM Peak Hour

Scale:
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Figure Status:
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Job Number:
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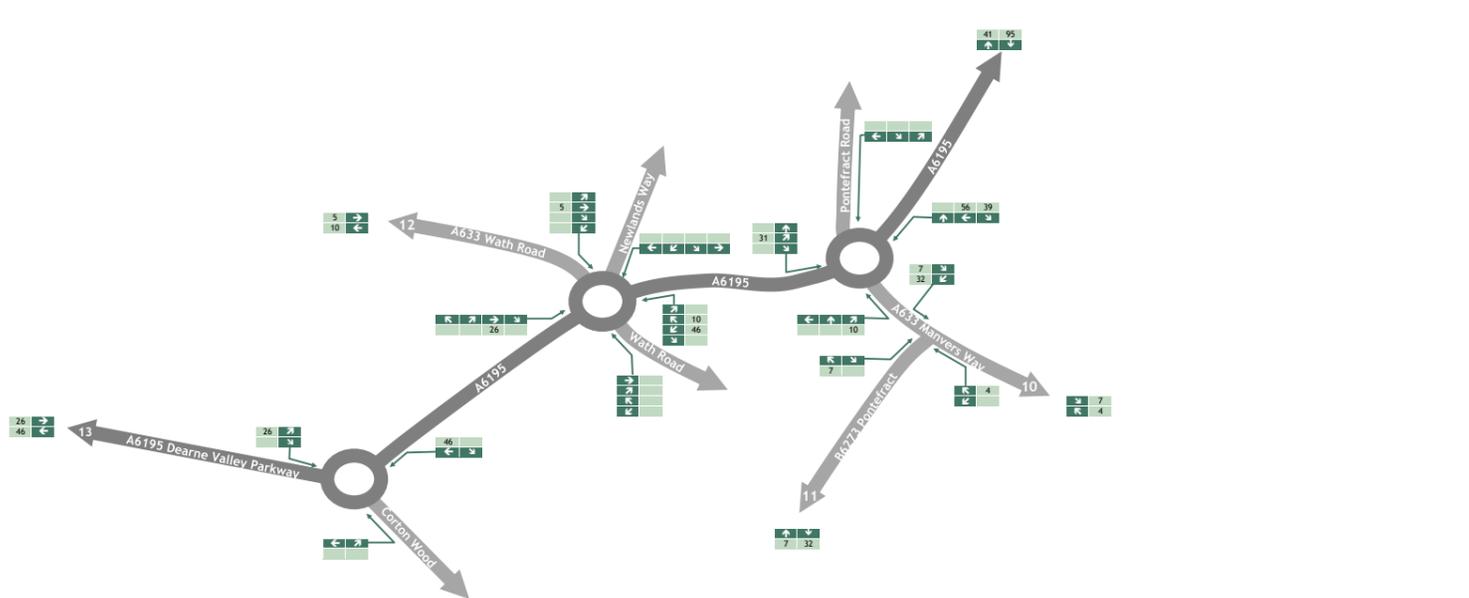
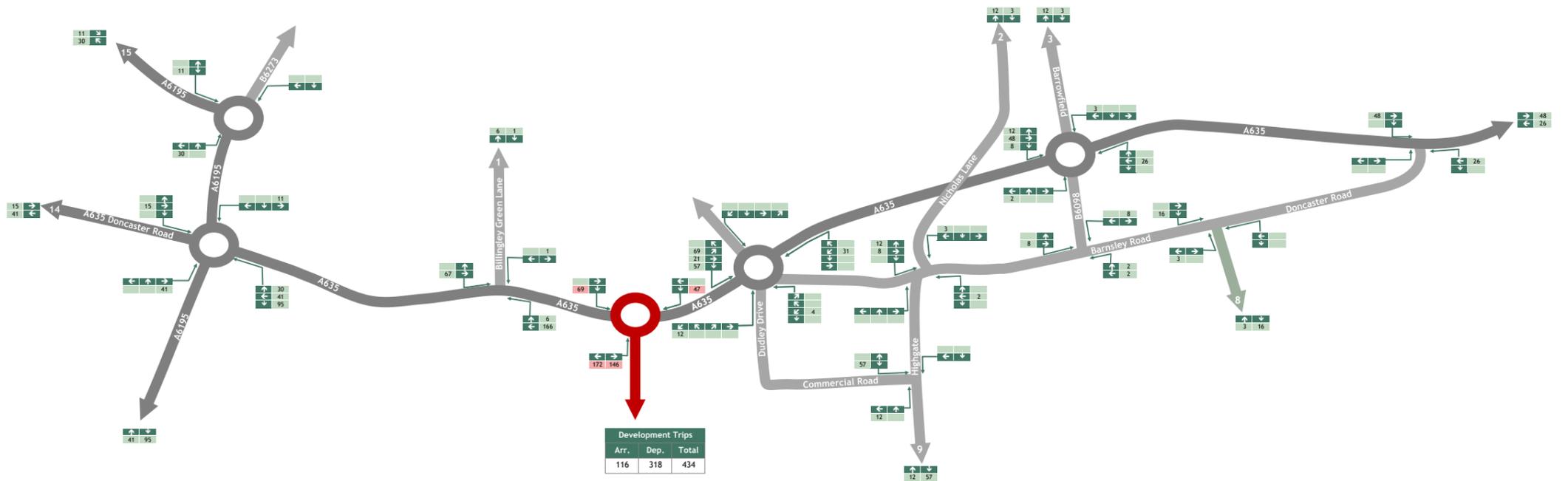
Figure Number:
 Figure 10



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane	1	6	7
2	Nicholas Lane	3	12	15
3	Barrowfield Road	3	12	15
4	Red Hill Lane	0	2	3
5	A1(M) (North)	7	8	15
6	A635 Barnsley Road	5	10	15
7	A1(M) (South)	14	28	42
8	Barnsley Road	3	16	20
9	Highgate Lane	12	57	69
10	A633 Manvers Way	4	7	11
11	B6273 Pontefract Road	7	32	39
12	A633 Wath Road	5	10	15
13	A6195 Dearne Valley Parkway	26	46	72
14	A635 Doncaster Road	15	41	57
15	A6195 Park Spring Road	11	30	41
Total		116	318	434

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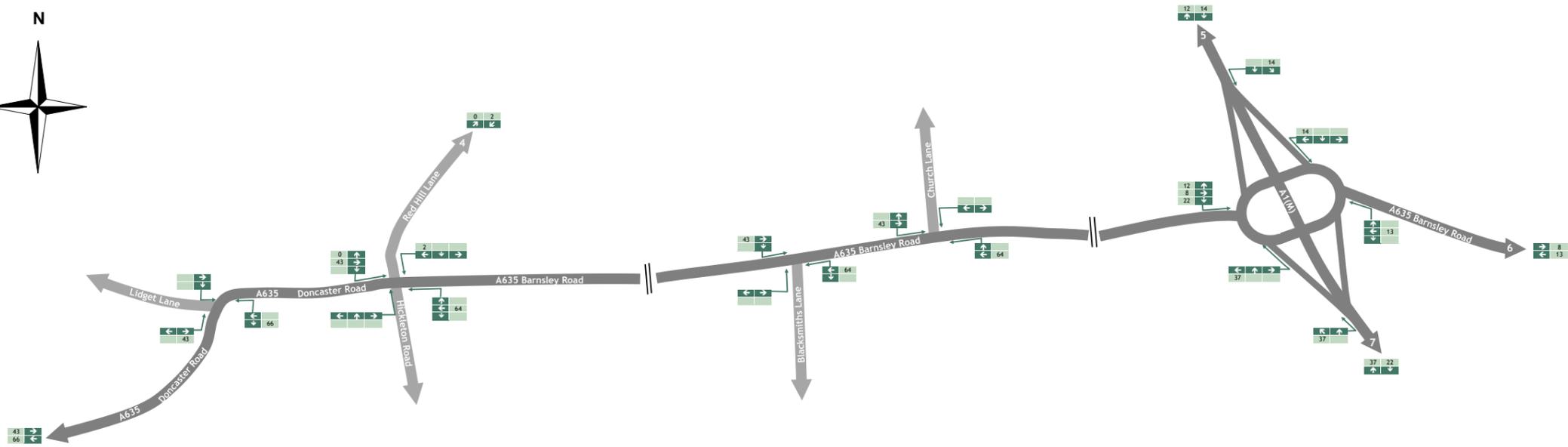
Figure Title:
 Total Vehicle Traffic Flows - Weekday PM Peak Hour

Scale:
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Figure Status:
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Job Number:
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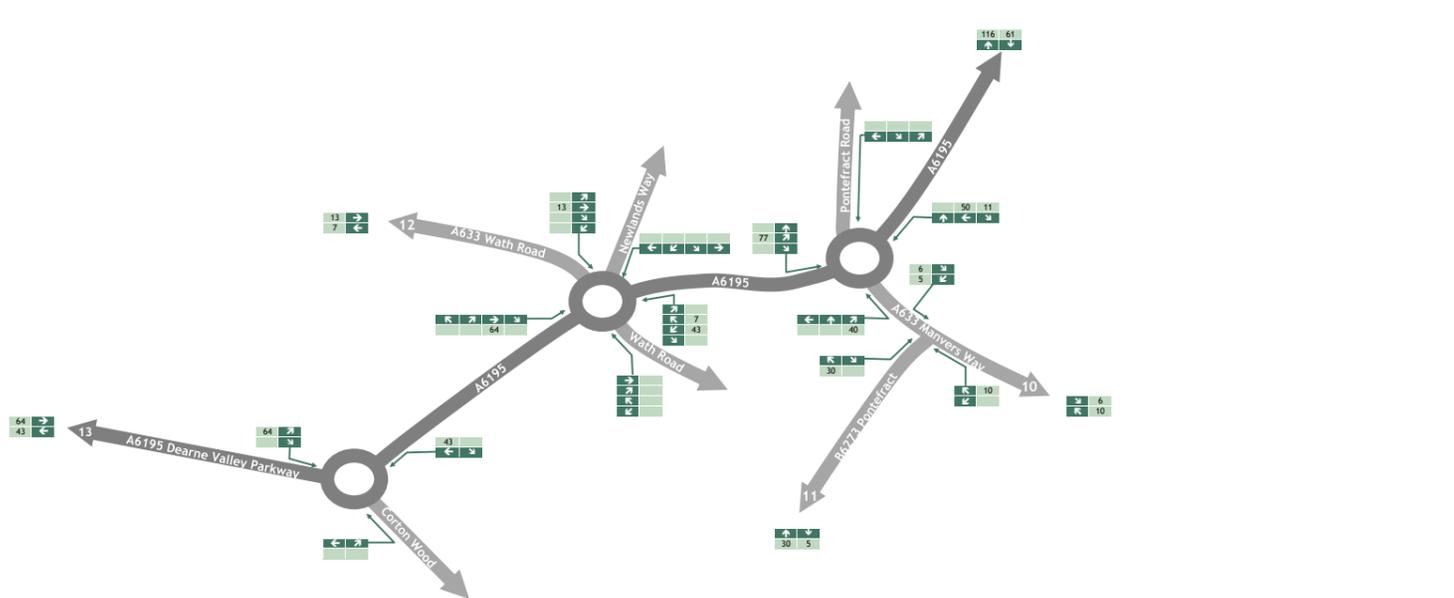
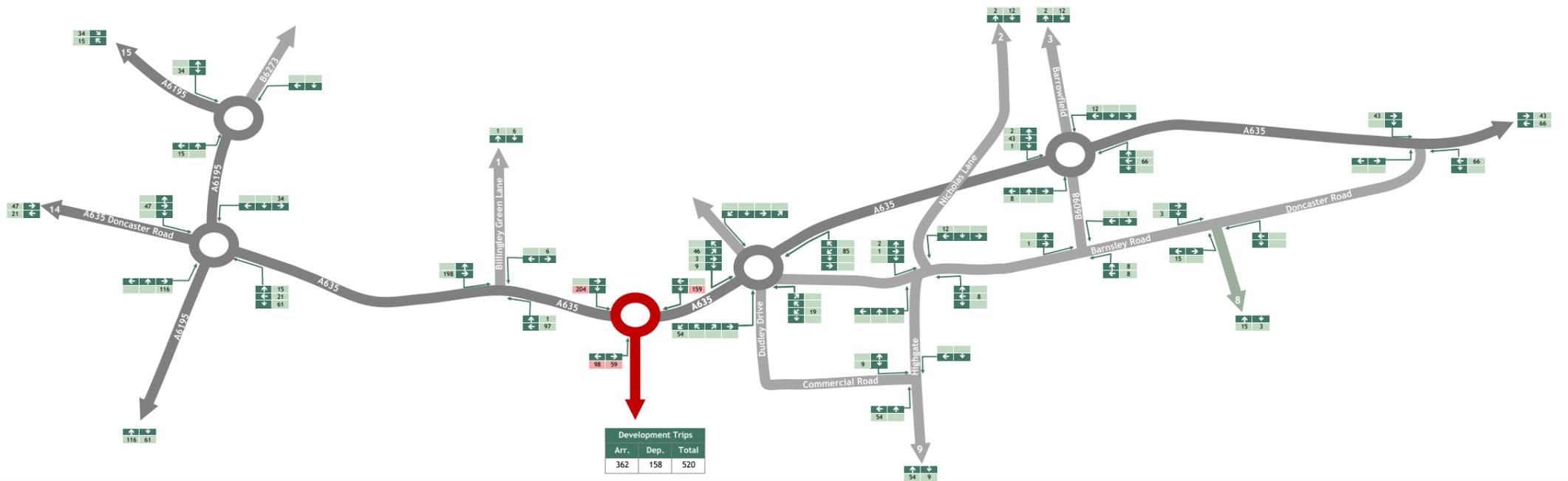
Figure Number:
 Figure 12



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane	6	1	7
2	Nicholas Lane	12	2	14
3	Barrowfield Road	12	2	14
4	Red Hill Lane	2	0	2
5	A1(M) (North)	14	12	27
6	A635 Barnsley Road	13	8	21
7	A1(M) (South)	37	22	59
8	Barnsley Road	15	3	18
9	Highgate Lane	54	9	63
10	A633 Manvers Way	10	6	16
11	B6273 Pontefract Road	30	5	36
12	A633 Wath Road	13	7	20
13	A6195 Dearne Valley Parkway	64	43	107
14	A635 Doncaster Road	47	21	68
15	A6195 Park Spring Road	34	15	49
Total		362	158	520

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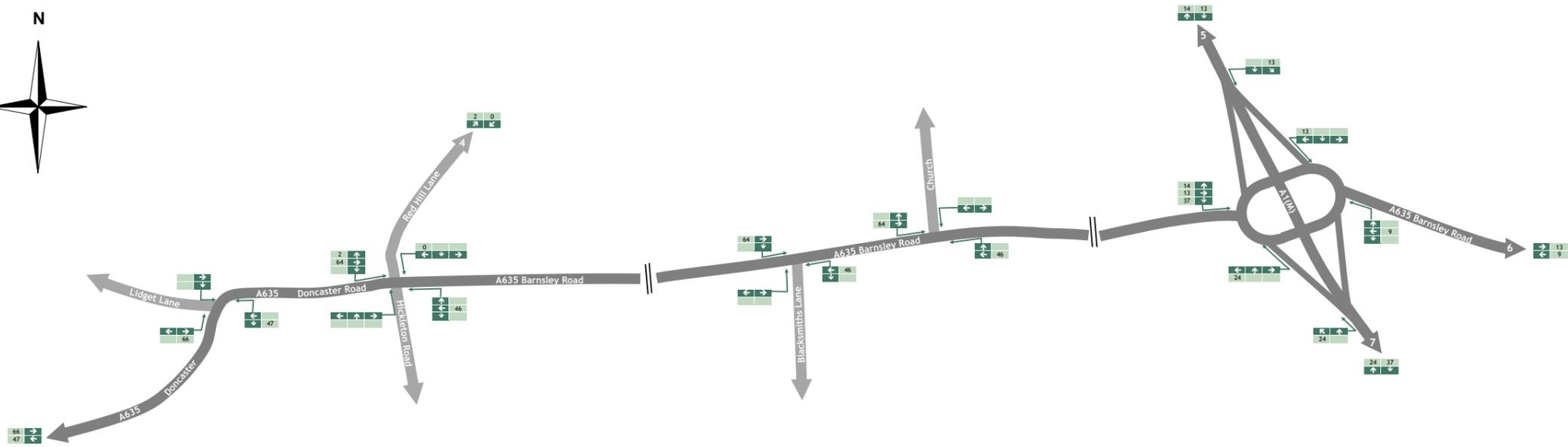
Client:
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Project:
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Figure Title:
 PCU Traffic Flows - Weekday AM Peak Hour

Scale: Not to scale | **Figure Status:** Issue

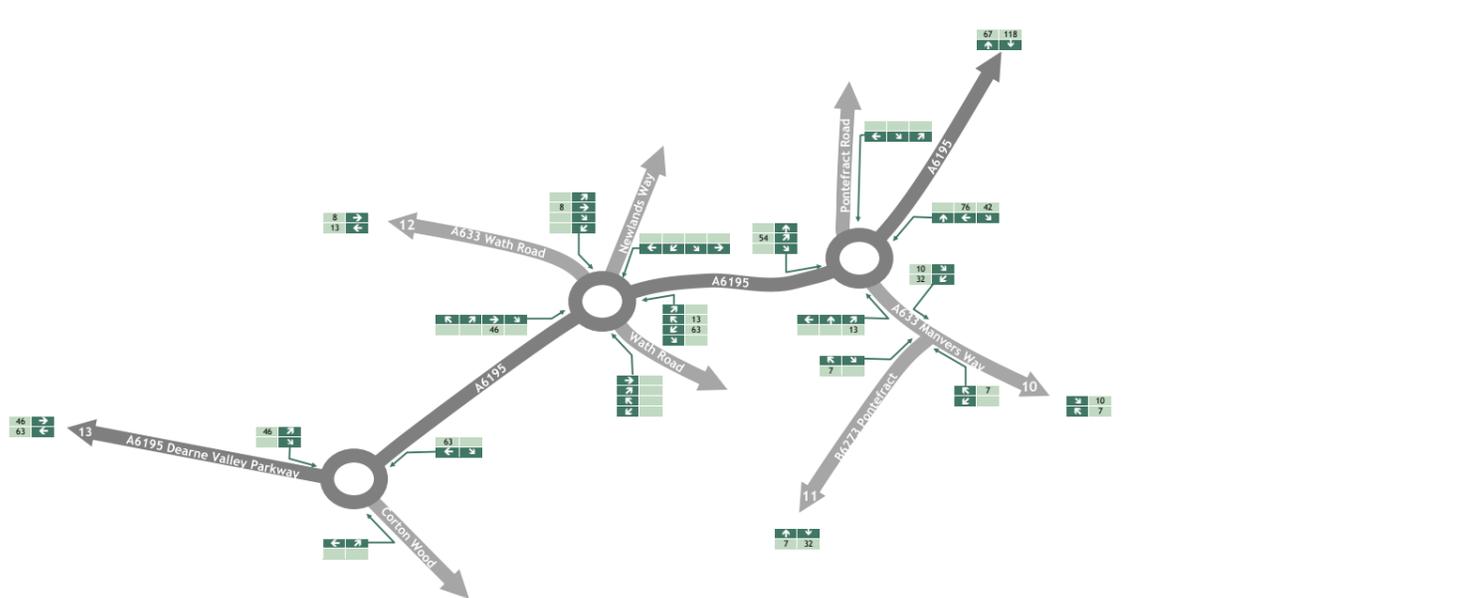
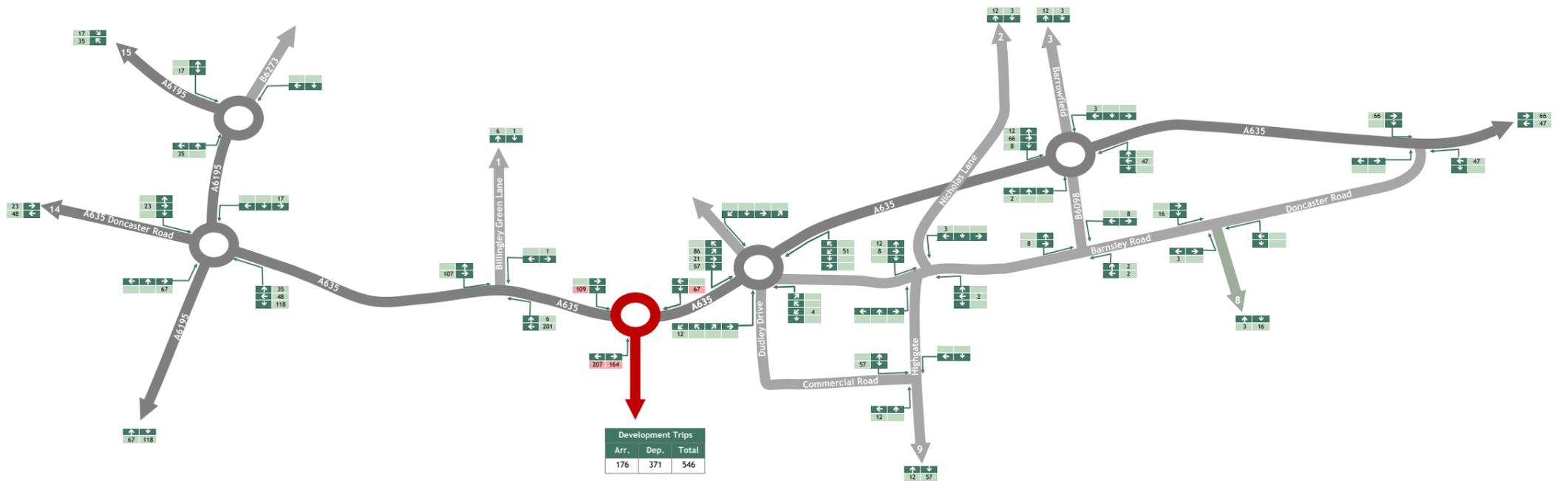
Job Number: 3465 | **Figure Number:** Figure 13



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Ref.	Route	Arr.	Dep.	Total
1	Billingley Green Lane	1	6	7
2	Nicholas Lane	3	12	15
3	Barrowfield Road	3	12	15
4	Red Hill Lane	0	2	3
5	A1(M) (North)	13	14	27
6	A635 Barnsley Road	9	13	22
7	A1(M) (South)	24	37	61
8	Barnsley Road	3	16	20
9	Highgate Lane	12	57	69
10	A633 Manvers Way	7	10	16
11	B6273 Pontefract Road	7	32	39
12	A633 Wath Road	8	13	20
13	A6195 Dearn Valley Parkway	46	63	110
14	A635 Doncaster Road	23	48	72
15	A6195 Park Spring Road	17	35	51
Total		176	371	546

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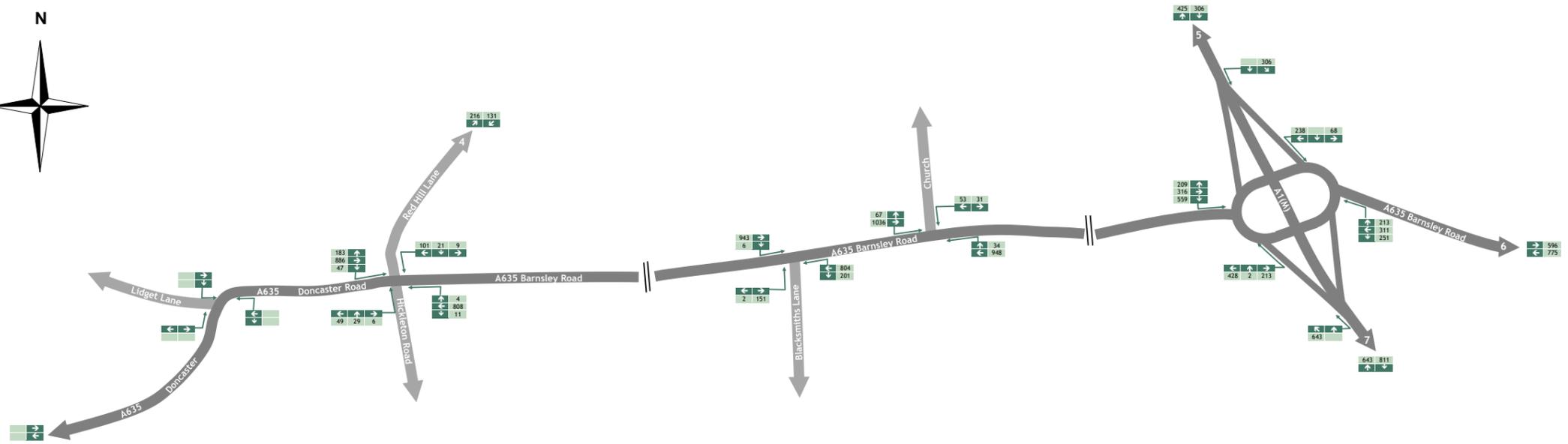
Client:
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Project:
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Figure Title:
PCU Traffic Flows - Weekday PM Peak Hour

Scale: Not to scale | **Figure Status:** Issue

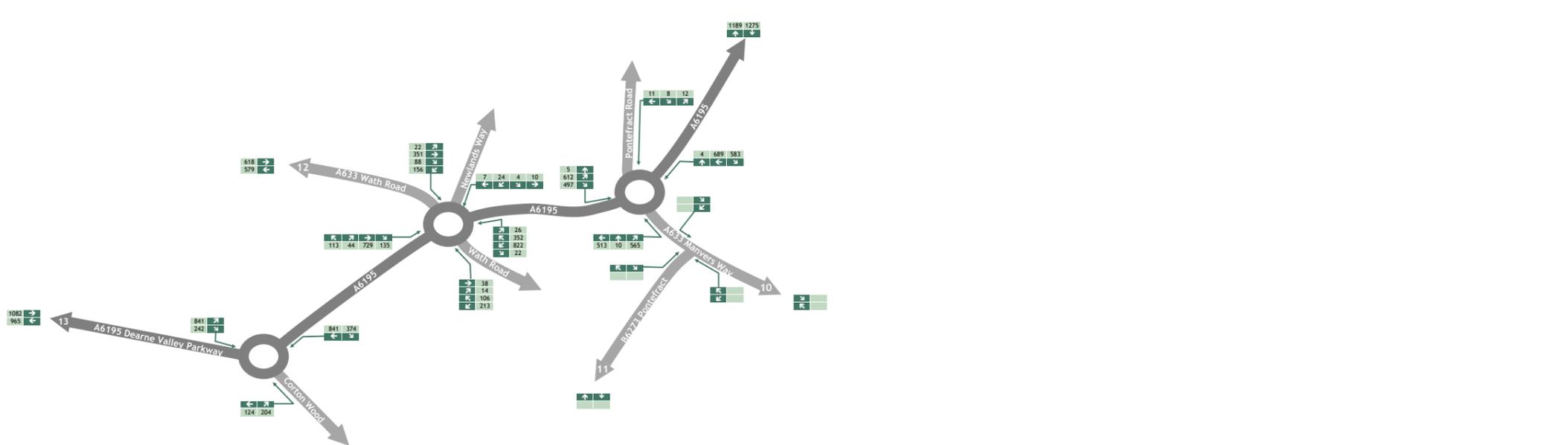
Job Number: 3465 | **Figure Number:** Figure 14



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



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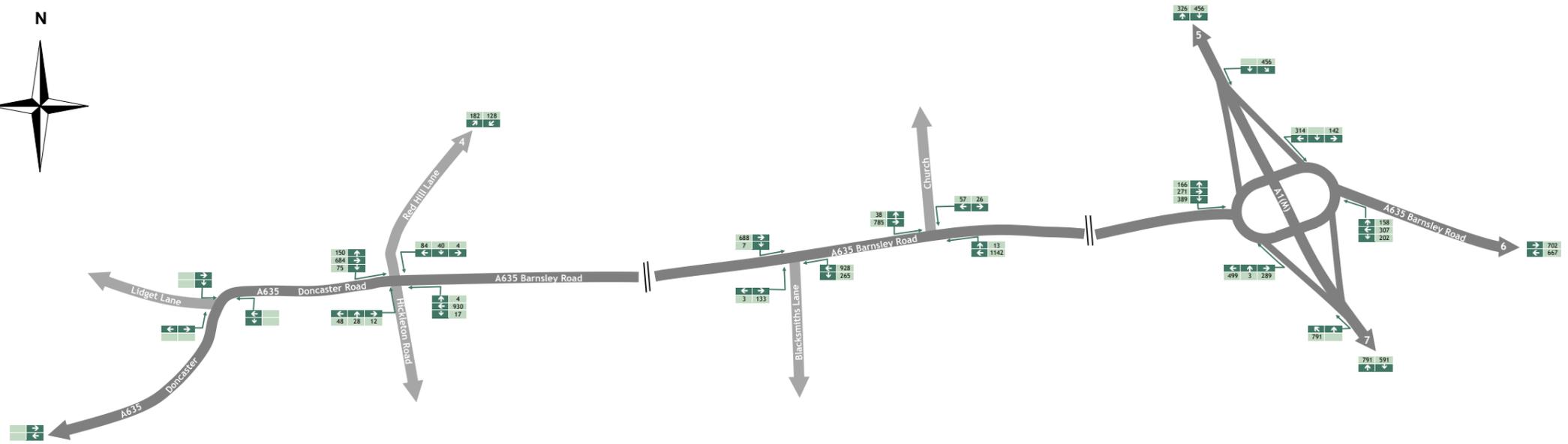
Figure Title:
 2022 Base Traffic Flows - Weekday AM Peak Hour

Scale:
 Not to scale

Figure Status:
 Issue

Job Number:
 3465

Figure Number:
 Figure 15



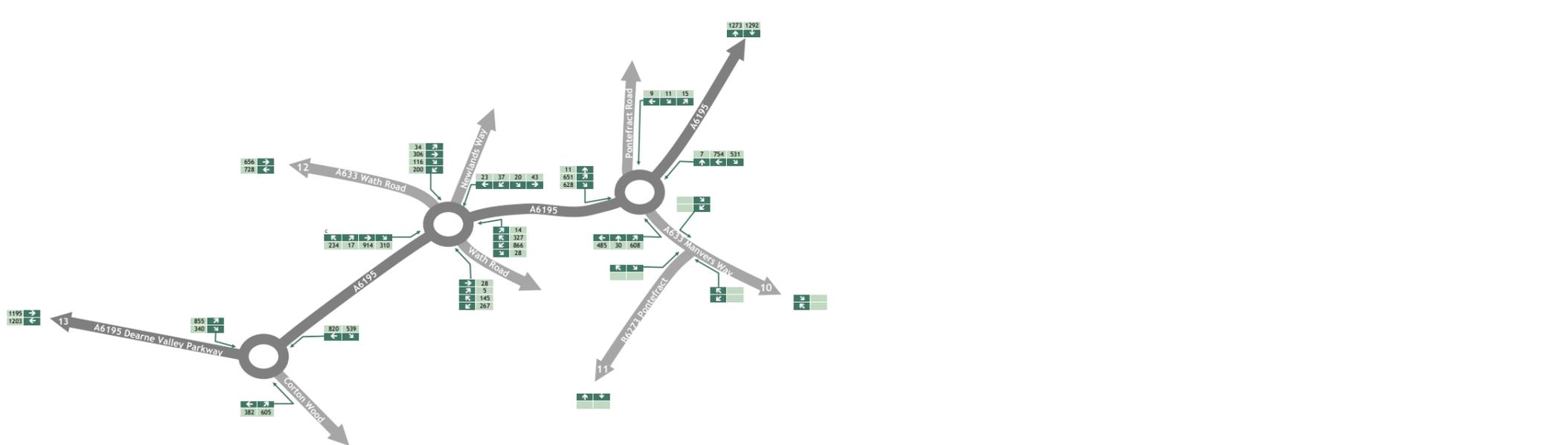
Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



Development Trips		
Arr.	Dep.	Total
0	0	0



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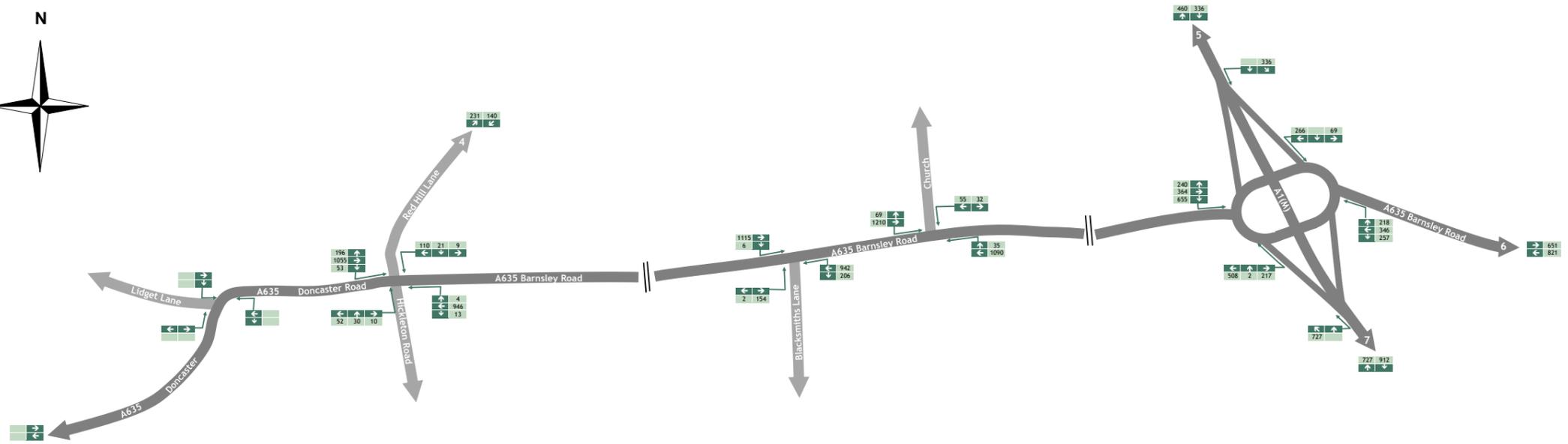
Figure Title:
 2022 Base Traffic Flows - Weekday PM Peak Hour

Scale:
 Not to scale

Figure Status:
 Issue

Job Number:
 3465

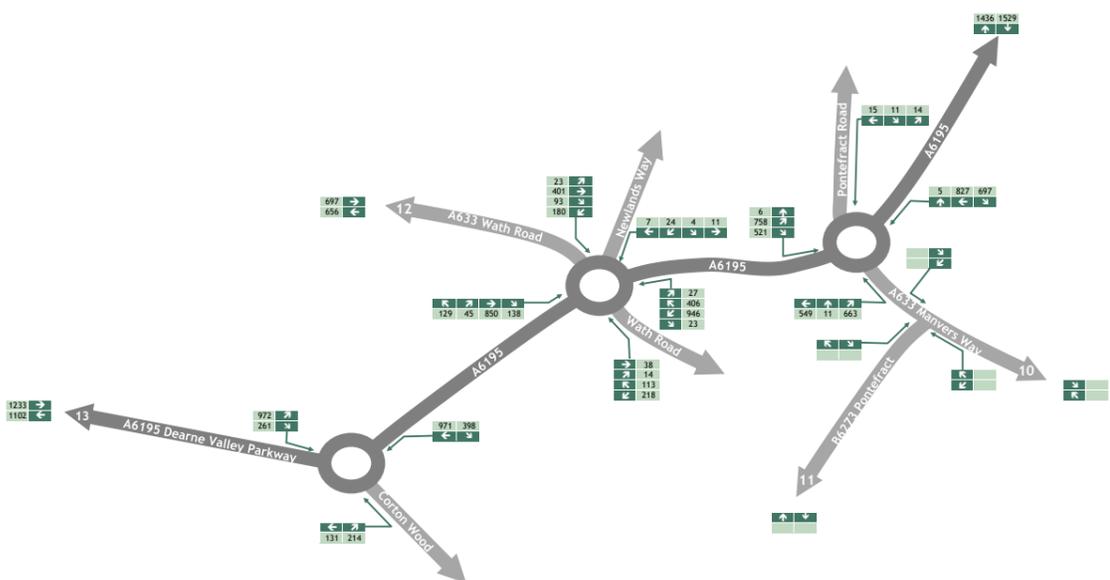
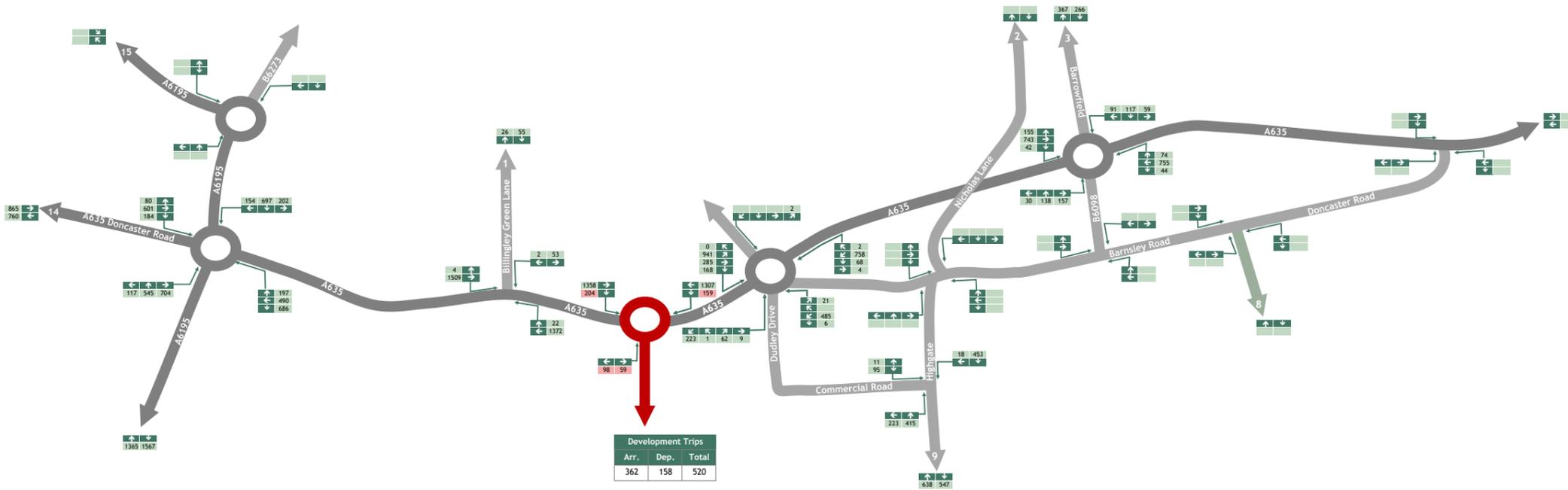
Figure Number:
 Figure 16



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



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Client:

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Project:

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Figure Title:

2028 With Development Traffic Flows - Weekday AM Peak Hour

Scale:

Not to scale

Figure Status:

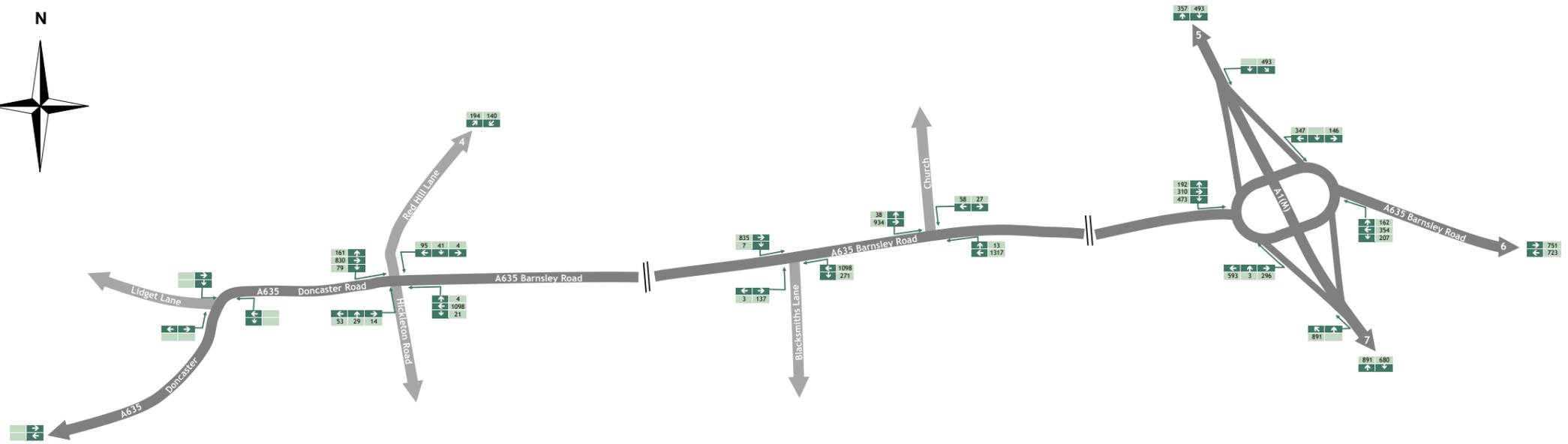
Issue

Job Number:

3465

Figure Number:

Figure 21



Key:

- Primary Road
- Secondary Road
- Traffic movements not explicitly represented in the network diagram (e.g. minor roads)
- Proposed Site Access

Note: The number in each arrowhead relates to the route reference used in the Vehicle Trip Distribution.



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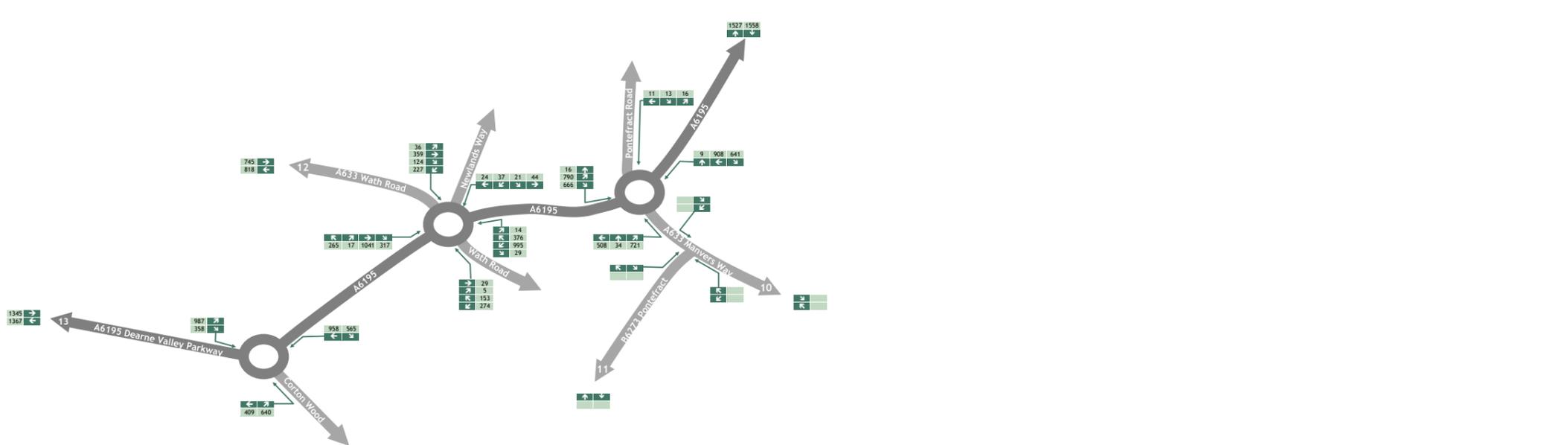
Client:
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Project:
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Figure Title:
 2028 With Development Traffic Flows - Weekday PM Peak Hour

Scale: Not to scale | Figure Status: Issue

Job Number: 3465 | Figure Number: Figure 22



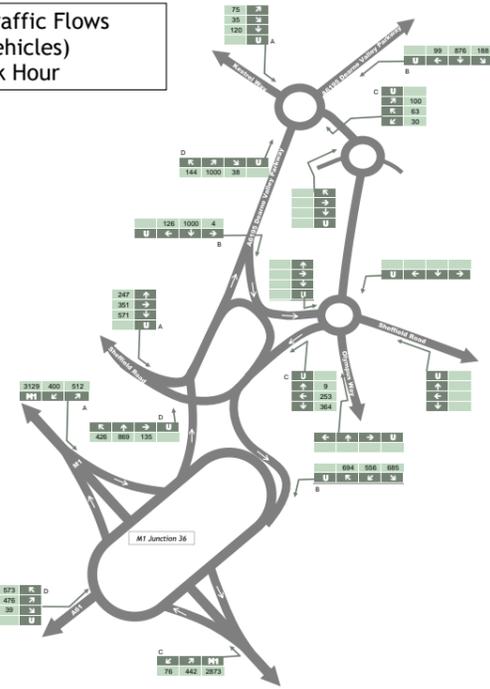


2024 Base Traffic Flows
(Total Vehicles)
AM Peak Hour

Rockingham Roundabout	A	B	C	D
From	75	36	120	230
To	99	158	876	1163
U	63	1000	0	30
U	144	1000	38	0
U	106	1176	261	1026

Birdwell Roundabout	A	B	C	D
From	247	351	571	1169
To	126	0	4	1000
U	253	9	0	364
U	426	869	136	0
U	805	1126	400	1395

M1 Junction 36 Roundabout	A	B	C	D
From	512	0	400	912
To	884	0	860	1066
U	0	442	0	76
U	873	476	39	0
U	1037	1430	704	1000

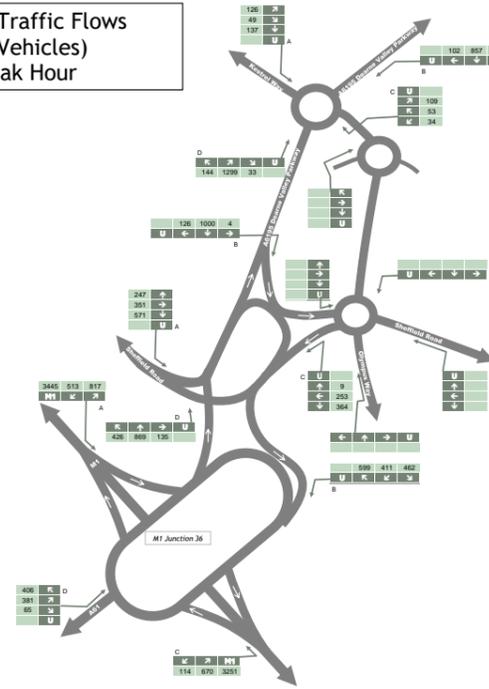


2024 Base Traffic Flows
(Total Vehicles)
PM Peak Hour

Rockingham Roundabout	A	B	C	D
From	126	48	137	312
To	102	0	157	807
U	63	1000	0	34
U	144	1000	38	0
U	299	1534	239	1026

Birdwell Roundabout	A	B	C	D
From	247	351	571	1169
To	126	0	4	1000
U	253	9	0	364
U	426	869	136	0
U	805	1126	400	1395

M1 Junction 36 Roundabout	A	B	C	D
From	817	0	513	1330
To	889	0	462	1111
U	0	470	0	114
U	406	381	66	0
U	1030	1368	521	1000

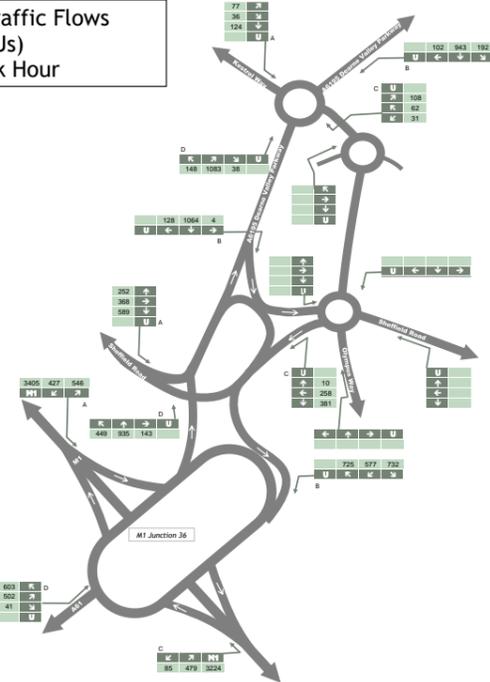


2024 Base Traffic Flows
(PCUs)
AM Peak Hour

Rockingham Roundabout	A	B	C	D
From	77	36	124	237
To	102	0	162	1236
U	62	1000	0	31
U	148	1000	38	0
U	312	1268	266	1007

Birdwell Roundabout	A	B	C	D
From	252	368	589	1209
To	128	0	4	1064
U	258	10	0	381
U	449	895	143	0
U	835	1197	515	1204

M1 Junction 36 Roundabout	A	B	C	D
From	545	0	427	973
To	725	0	732	977
U	0	476	0	86
U	803	502	41	0
U	1028	1526	773	1086

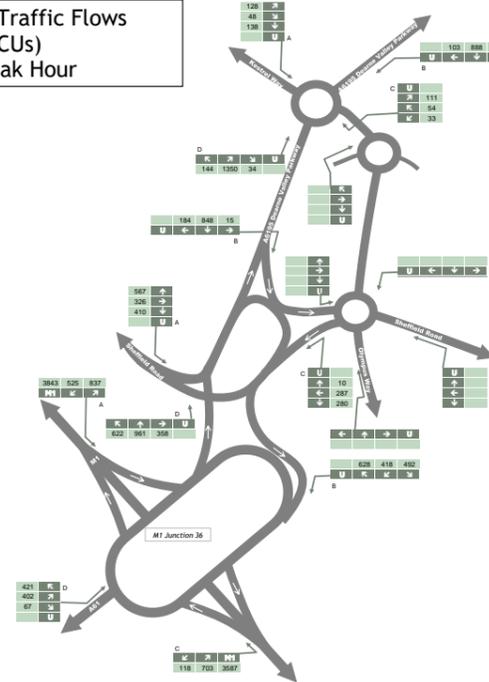


2024 Base Traffic Flows
(PCUs)
PM Peak Hour

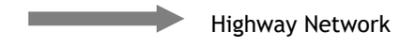
Rockingham Roundabout	A	B	C	D
From	126	48	136	316
To	103	0	158	1149
U	64	111	0	33
U	144	1000	34	0
U	300	1588	241	1059

Birdwell Roundabout	A	B	C	D
From	257	376	610	1302
To	134	0	5	1048
U	267	10	0	390
U	422	861	158	0
U	824	1208	531	1207

M1 Junction 36 Roundabout	A	B	C	D
From	827	0	525	1352
To	828	0	482	1181
U	0	708	0	116
U	421	402	67	0
U	1048	1341	559	1061



Key:



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Client:
Equites Newlands (Goldthorpe) Ltd

Project:
Land South of Dearne Valley Parkway, Goldthorpe

Figure Title:
M1 Junction 36 / Birdwell Roundabout
2024 Base Year Traffic Flows

Scale:
Not to scale

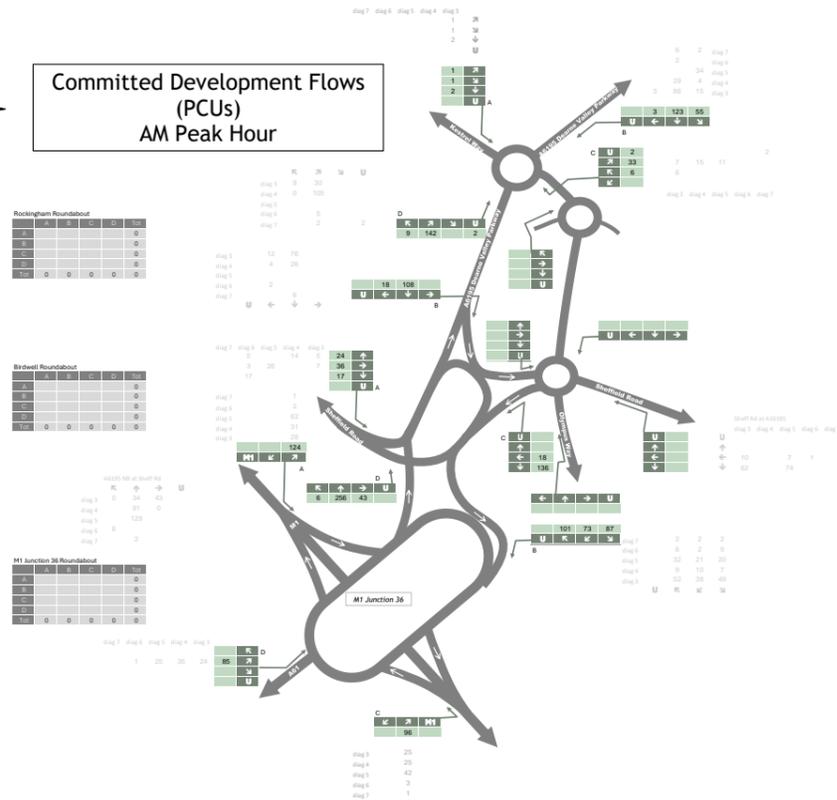
Figure Status:
Issue

Job Number:
3465

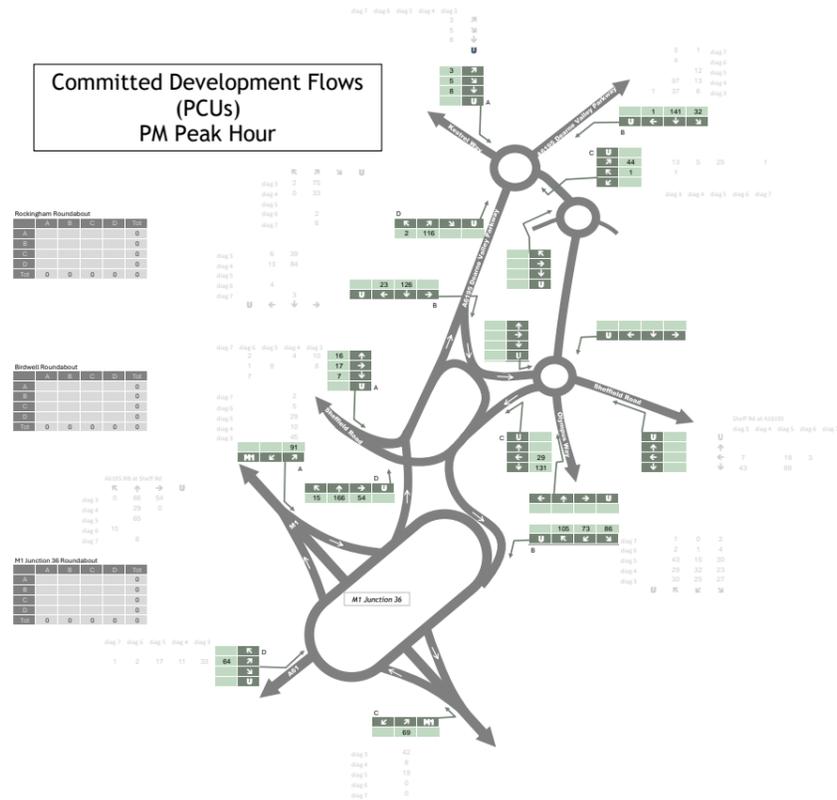
Figure Number:
Figure 101



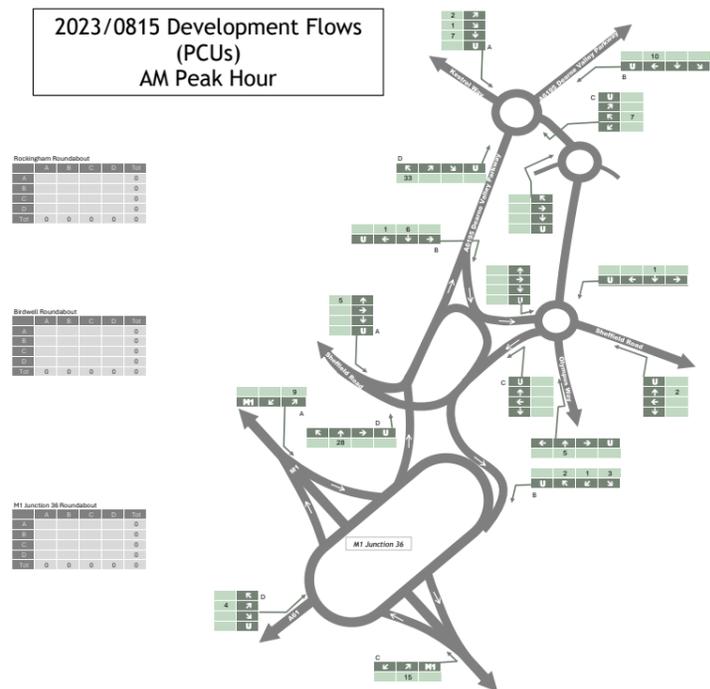
Committed Development Flows (PCUs) AM Peak Hour



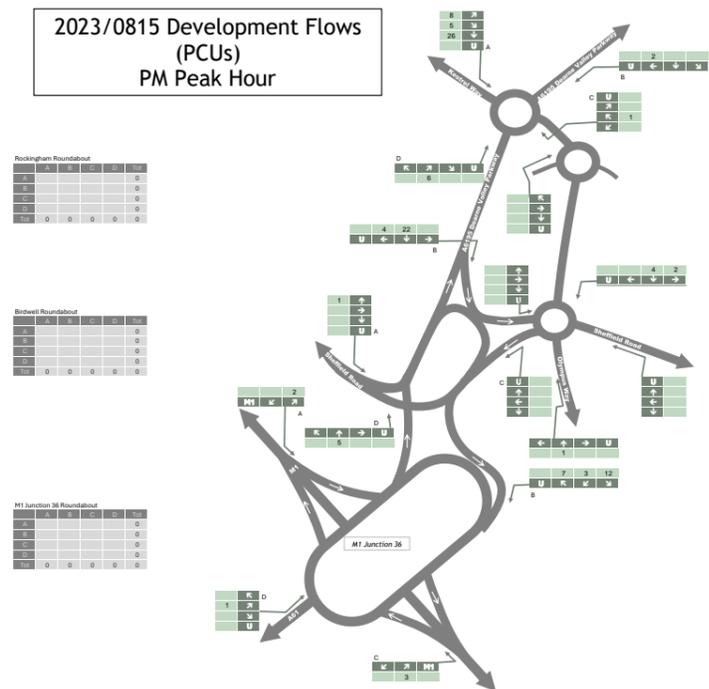
Committed Development Flows (PCUs) PM Peak Hour



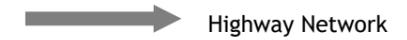
2023/0815 Development Flows (PCUs) AM Peak Hour



2023/0815 Development Flows (PCUs) PM Peak Hour



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Client:

Equites Newlands (Goldthorpe) Ltd

Project:

Land South of Dearne Valley Parkway, Goldthorpe

Figure Title:

M1 Junction 36 / Birdwell Roundabout
Committed Development Traffic Flows

Scale:

Not to scale

Figure Status:

Issue

Job Number:

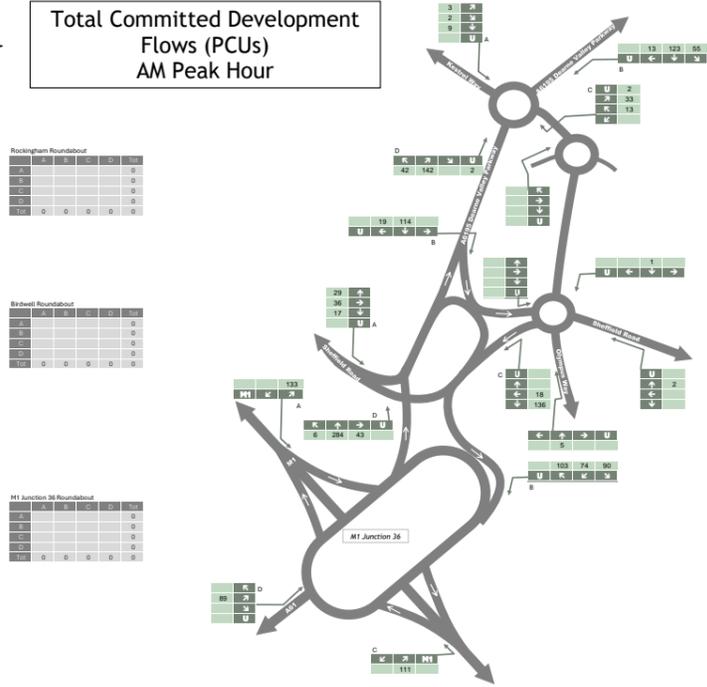
3465

Figure Number:

Figure 102



Total Committed Development Flows (PCUs) AM Peak Hour



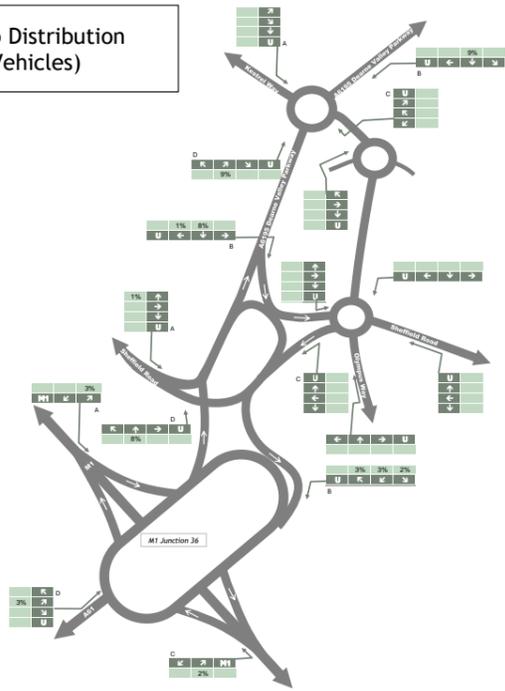


**Vehicle Trip Distribution
(Light Vehicles)**

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0%	0%	0%	0%
Birdwell Roundabout	0%	0%	0%	0%
M1 Junction 36 Roundabout	0%	0%	0%	0%
Total	0%	0%	0%	0%

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0%	0%	0%	0%
Birdwell Roundabout	0%	0%	0%	0%
M1 Junction 36 Roundabout	0%	0%	0%	0%
Total	0%	0%	0%	0%

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0%	0%	0%	0%
Birdwell Roundabout	0%	0%	0%	0%
M1 Junction 36 Roundabout	0%	0%	0%	0%
Total	0%	0%	0%	0%

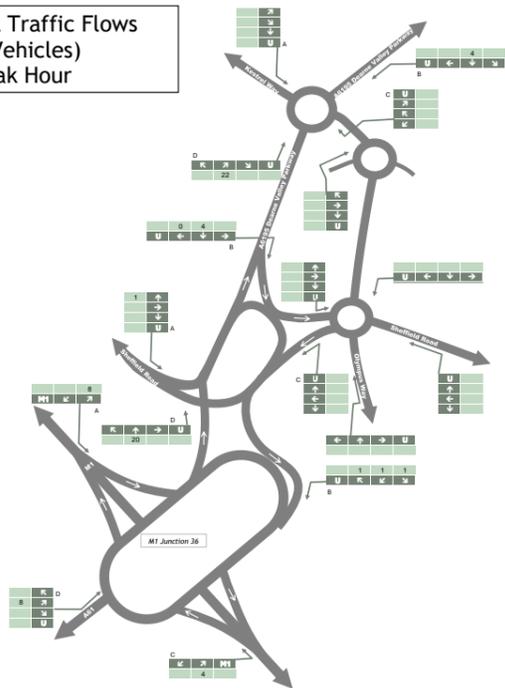


**Development Traffic Flows
(Light Vehicles)
AM Peak Hour**

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

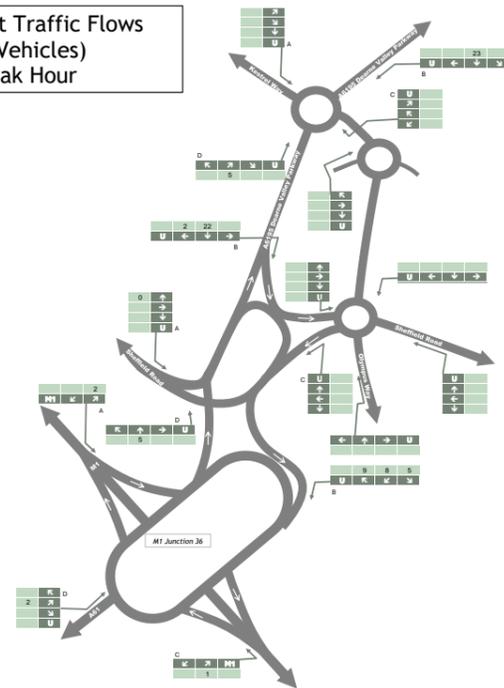


**Development Traffic Flows
(Light Vehicles)
PM Peak Hour**

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0



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Client:

Equites Newlands (Goldthorpe) Ltd

Project:

Land South of Dearne Valley Parkway, Goldthorpe

Figure Title:

M1 Junction 36 / Birdwell Roundabout
Development Traffic Flows
Light Vehicles

Scale:

Not to scale

Figure Status:

Issue

Job Number:

3465

Figure Number:

Figure 104

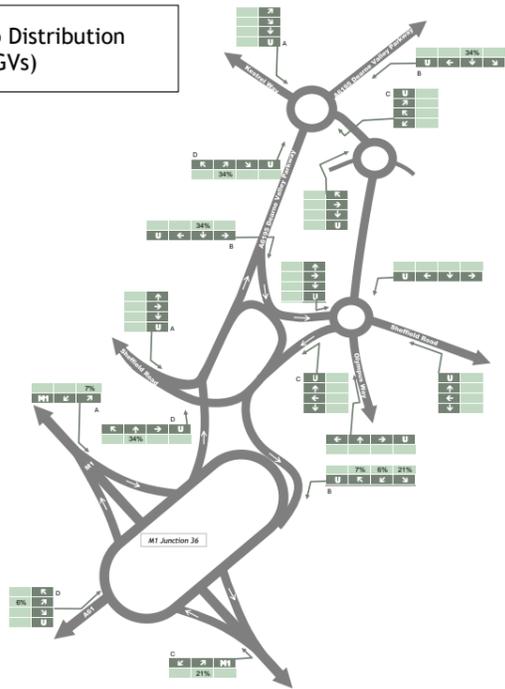


Vehicle Trip Distribution (HGVs)

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0%	0%	0%	0%
Birdwell Roundabout	0%	0%	0%	0%
M1 Junction 36 Roundabout	0%	0%	0%	0%
Total	0%	0%	0%	0%

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0%	0%	0%	0%
Birdwell Roundabout	0%	0%	0%	0%
M1 Junction 36 Roundabout	0%	0%	0%	0%
Total	0%	0%	0%	0%

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0%	0%	0%	0%
Birdwell Roundabout	0%	0%	0%	0%
M1 Junction 36 Roundabout	0%	0%	0%	0%
Total	0%	0%	0%	0%

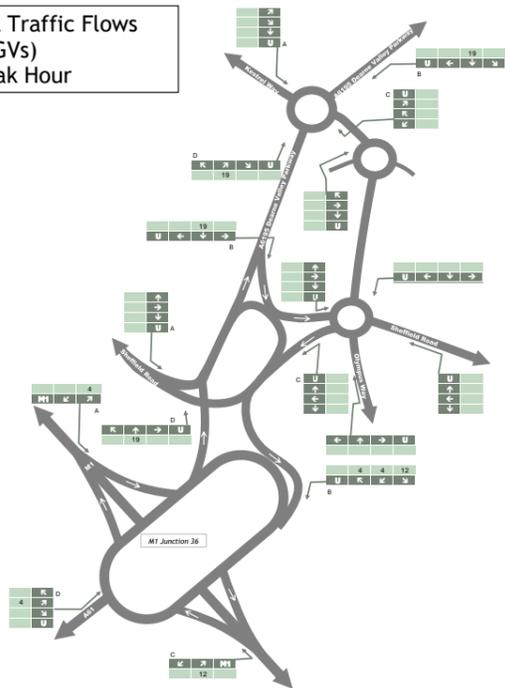


Development Traffic Flows (HGVs) AM Peak Hour

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

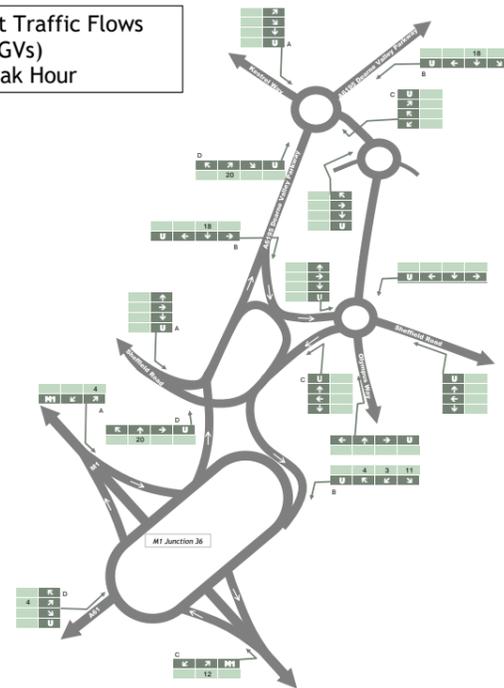


Development Traffic Flows (HGVs) PM Peak Hour

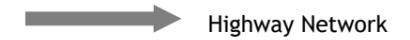
From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0

From \ To	Rockingham Roundabout	Birdwell Roundabout	M1 Junction 36 Roundabout	Total
Rockingham Roundabout	0	0	0	0
Birdwell Roundabout	0	0	0	0
M1 Junction 36 Roundabout	0	0	0	0
Total	0	0	0	0



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Client:

Equites Newlands (Goldthorpe) Ltd

Project:

Land South of Dearne Valley Parkway, Goldthorpe

Figure Title:

M1 Junction 36 / Birdwell Roundabout
 Development Traffic Flows
 HGVs

Scale:

Not to scale

Figure Status:

Issue

Job Number:

3465

Figure Number:

Figure 105

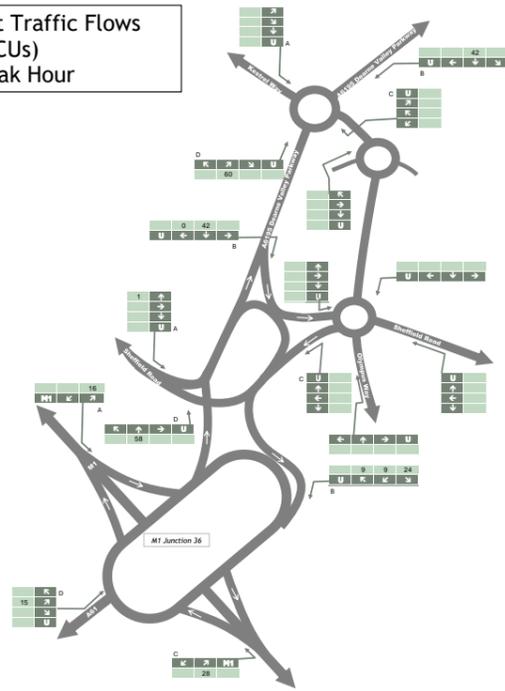


Development Traffic Flows (PCUs)
AM Peak Hour

From	To	PCUs
Rockingham Roundabout	Northbound	0
Rockingham Roundabout	Southbound	0
Rockingham Roundabout	Westbound	0
Rockingham Roundabout	Eastbound	0
Rockingham Roundabout	Other	0

From	To	PCUs
Birdwell Roundabout	Northbound	0
Birdwell Roundabout	Southbound	0
Birdwell Roundabout	Westbound	0
Birdwell Roundabout	Eastbound	0
Birdwell Roundabout	Other	0

From	To	PCUs
M1 Junction 36 Roundabout	Northbound	0
M1 Junction 36 Roundabout	Southbound	0
M1 Junction 36 Roundabout	Westbound	0
M1 Junction 36 Roundabout	Eastbound	0
M1 Junction 36 Roundabout	Other	0

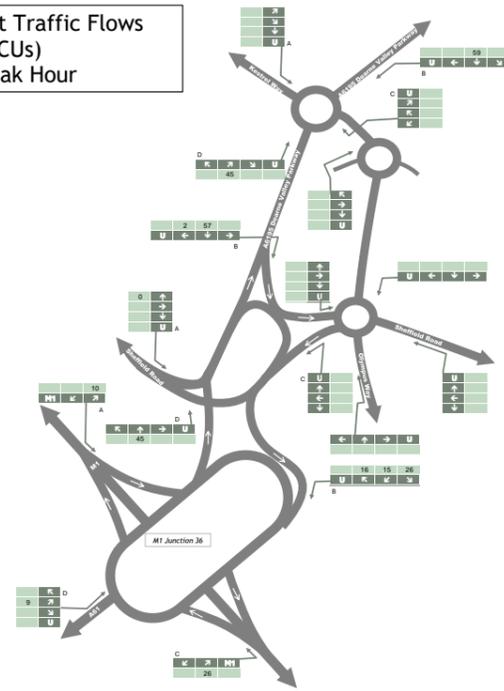


Development Traffic Flows (PCUs)
PM Peak Hour

From	To	PCUs
Rockingham Roundabout	Northbound	0
Rockingham Roundabout	Southbound	0
Rockingham Roundabout	Westbound	0
Rockingham Roundabout	Eastbound	0
Rockingham Roundabout	Other	0

From	To	PCUs
Birdwell Roundabout	Northbound	0
Birdwell Roundabout	Southbound	0
Birdwell Roundabout	Westbound	0
Birdwell Roundabout	Eastbound	0
Birdwell Roundabout	Other	0

From	To	PCUs
M1 Junction 36 Roundabout	Northbound	0
M1 Junction 36 Roundabout	Southbound	0
M1 Junction 36 Roundabout	Westbound	0
M1 Junction 36 Roundabout	Eastbound	0
M1 Junction 36 Roundabout	Other	0

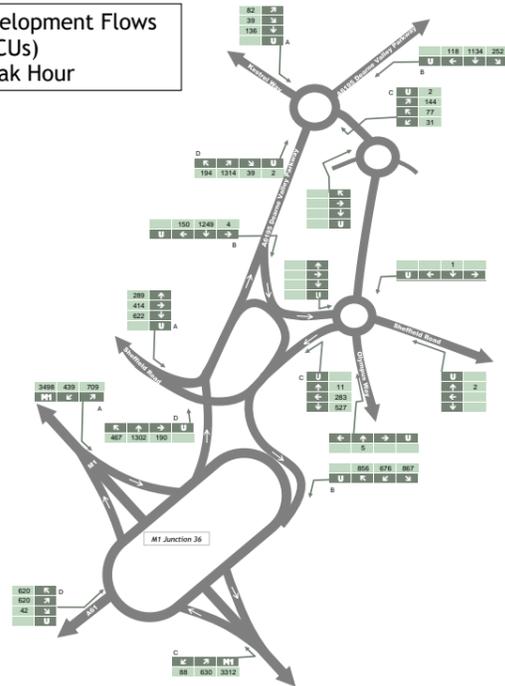


2028 With Development Flows (PCUs)
AM Peak Hour

From	To	PCUs
Rockingham Roundabout	Northbound	0
Rockingham Roundabout	Southbound	0
Rockingham Roundabout	Westbound	0
Rockingham Roundabout	Eastbound	0
Rockingham Roundabout	Other	0

From	To	PCUs
Birdwell Roundabout	Northbound	0
Birdwell Roundabout	Southbound	0
Birdwell Roundabout	Westbound	0
Birdwell Roundabout	Eastbound	0
Birdwell Roundabout	Other	0

From	To	PCUs
M1 Junction 36 Roundabout	Northbound	0
M1 Junction 36 Roundabout	Southbound	0
M1 Junction 36 Roundabout	Westbound	0
M1 Junction 36 Roundabout	Eastbound	0
M1 Junction 36 Roundabout	Other	0

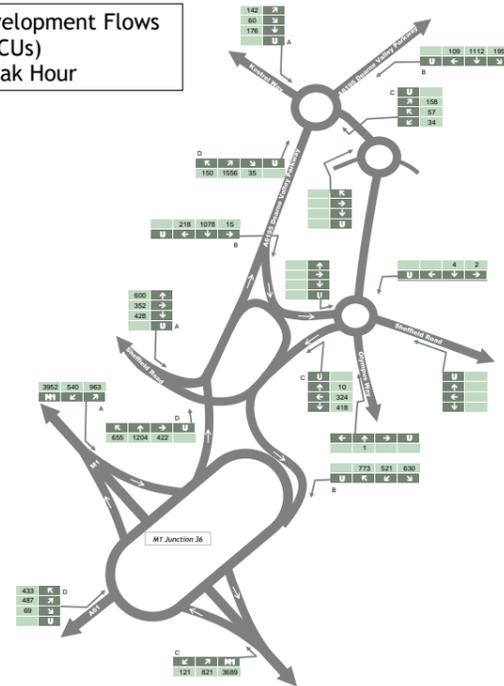


2028 With Development Flows (PCUs)
PM Peak Hour

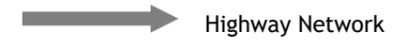
From	To	PCUs
Rockingham Roundabout	Northbound	0
Rockingham Roundabout	Southbound	0
Rockingham Roundabout	Westbound	0
Rockingham Roundabout	Eastbound	0
Rockingham Roundabout	Other	0

From	To	PCUs
Birdwell Roundabout	Northbound	0
Birdwell Roundabout	Southbound	0
Birdwell Roundabout	Westbound	0
Birdwell Roundabout	Eastbound	0
Birdwell Roundabout	Other	0

From	To	PCUs
M1 Junction 36 Roundabout	Northbound	0
M1 Junction 36 Roundabout	Southbound	0
M1 Junction 36 Roundabout	Westbound	0
M1 Junction 36 Roundabout	Eastbound	0
M1 Junction 36 Roundabout	Other	0



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Client:
Equites Newlands (Goldthorpe) Ltd

Project:
Land South of Dearne Valley Parkway, Goldthorpe

Figure Title:
M1 Junction 36 / Birdwell Roundabout
2028 With Development Traffic Flows
PCUs

Scale:
Not to scale

Figure Status:
Issue

Job Number:
3465

Figure Number:
Figure 106

Appendix A

Traffic Survey Data

M1 Junction 36 Barnsley
 Tuesday 12th March 2024
 Junction: 1
 Approach: M1 J36 Slip Road North

TIME	To A61 (E)										To M1 J36 Slip Road (S)										To A61 (W)									
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs			
07:00-07:15	0	0	47	17	10	3	0	77	88.9	0	0	0	0	0	0	0	0	0.0	0	0	55	24	7	6	0	92	103.3			
07:15-07:30	0	0	82	26	11	2	0	121	128.1	0	0	0	0	0	0	0	0	0.0	0	0	66	23	0	4	0	93	98.2			
07:30-07:45	0	0	89	43	7	5	0	144	154.0	0	0	0	0	0	0	0	0	0.0	0	0	55	20	2	4	0	81	87.2			
07:45-08:00	0	0	73	28	5	2	0	108	113.1	0	0	0	0	0	0	0	0	0.0	0	0	59	18	10	3	0	90	98.9			
Hourly Total	0	0	291	114	33	12	0	450	482.1	0	0	0	0	0	0	0	0	0.0	0	0	235	85	19	17	0	356	387.6			
08:00-08:15	0	0	95	28	5	5	0	133	142.0	0	0	0	0	0	0	0	0	0.0	0	0	87	26	9	0	0	122	128.5			
08:15-08:30	0	0	90	25	6	5	0	127	136.5	0	0	0	0	0	0	0	0	0.0	0	0	81	17	5	3	1	107	114.4			
08:30-08:45	0	0	83	24	4	7	1	119	131.1	0	0	0	0	0	0	0	0	0.0	0	0	66	14	10	4	0	94	104.2			
08:45-09:00	0	0	111	26	13	6	0	156	170.3	0	0	0	0	0	0	0	0	0.0	0	0	100	24	10	4	0	138	148.2			
Hourly Total	0	0	379	104	28	23	1	535	575.9	0	0	0	0	0	0	0	0	0.0	0	0	334	81	34	11	1	461	493.3			
TOTAL	0	0	670	218	61	35	1	985	1062.0	0	0	0	0	0	0	0	0	0.0	0	0	569	166	53	28	1	817	888.9			
15:00-15:15	0	0	87	42	7	10	0	146	162.5	0	0	0	0	0	0	0	0	0.0	0	0	65	20	3	0	0	88	89.5			
15:15-15:30	0	1	91	45	4	6	0	147	156.2	0	0	0	0	0	0	0	0	0.0	0	0	76	31	3	2	0	112	116.1			
15:30-15:45	0	0	105	54	7	6	0	172	183.3	0	0	0	0	0	0	0	0	0.0	0	0	67	22	8	2	0	99	105.6			
15:45-16:00	0	0	120	53	6	8	0	187	200.4	0	0	0	0	0	0	0	0	0.0	0	0	81	17	4	4	0	106	113.2			
Hourly Total	0	1	403	194	24	30	0	652	702.4	0	0	0	0	0	0	0	0	0.0	0	0	289	90	18	8	0	405	424.4			
16:00-16:15	0	0	123	68	7	0	0	198	201.5	0	0	0	0	0	0	0	0	0.0	0	0	98	33	3	4	0	138	144.7			
16:15-16:30	0	0	113	49	2	5	0	150	167.5	0	0	0	0	0	0	0	0	0.0	0	0	101	28	2	1	0	132	134.3			
16:30-16:45	0	0	146	74	5	3	0	228	234.4	0	0	0	0	0	0	0	0	0.0	0	0	101	19	2	0	0	122	123.0			
16:45-17:00	0	0	165	63	2	1	0	231	233.3	0	0	0	0	0	0	0	0	0.0	0	0	101	17	2	0	1	121	123.0			
Hourly Total	0	0	647	248	16	9	0	817	836.7	0	0	0	0	0	0	0	0	0.0	0	0	401	97	9	8	1	513	525.0			
17:00-17:15	0	1	135	41	3	2	1	183	187.5	0	0	0	0	0	0	0	0	0.0	0	0	81	19	2	0	0	102	103.0			
17:15-17:30	0	0	143	37	4	5	0	189	197.5	0	0	0	0	0	0	0	0	0.0	0	0	98	12	0	0	0	110	110.0			
17:30-17:45	0	1	136	44	3	6	0	190	198.7	0	0	0	0	0	0	0	0	0.0	0	1	106	10	0	0	0	117	116.4			
17:45-18:00	0	0	132	30	3	3	0	168	173.4	0	0	0	0	0	0	0	0	0.0	0	1	73	9	1	3	1	88	92.8			
Hourly Total	0	2	646	162	13	16	1	730	757.1	0	0	0	0	0	0	0	0	0.0	0	2	368	60	3	3	1	417	422.2			
TOTAL	0	3	1496	591	53	55	1	2199	2296.2	0	0	0	0	0	0	0	0	0.0	0	2	1048	237	30	16	2	1335	1371.8			

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 Junction 36 Barnsley
 Tuesday 12th March 2024
 Junction: 1
 Approach: A61 East

TIME	To M1 J36 Slip Road (S)										To A61 (W)										To M1 J36 Slip Road (N)									
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs			
07:00-07:15	0	0	120	42	19	3	0	184	197.4	0	2	88	52	9	1	2	104	108.6	0	0	121	91	6	3	0	221	227.9			
07:15-07:30	0	0	122	44	6	5	2	179	189.5	0	1	122	42	4	3	1	173	178.3	0	1	116	78	9	0	1	201	206.9			
07:30-07:45	0	0	130	44	12	6	0	192	208.8	0	0	101	38	6	0	0	145	148.0	0	0	123	49	13	1	0	186	193.8			
07:45-08:00	0	1	116	27	8	7	0	159	171.5	0	1	98	20	4	2	0	125	129.0	0	0	131	50	4	2	0	187	191.6			
Hourly Total	0	1	488	187	45	21	2	714	765.2	0	4	409	162	23	6	3	597	618.9	0	1	491	264	32	6	1	795	819.2			
08:00-08:15	0	0	115	25	9	3	0	162	170.4	0	1	106	39	2	3	1	143	148.3	0	1	135	27	12	1	0	176	182.7			
08:15-08:30	0	0	124	34	7	6	1	172	184.3	0	0	94	39	5	5	0	143	150.0	0	0	115	20	2	8	0	145	156.4			
08:30-08:45	0	0	66	32	11	6	0	115	128.3	0	1	76	13	2	1	0	93	94.7	0	0	130	41	9	1	1	182	188.8			
08:45-09:00	0	0	65	22	7	5	0	99	109.0	0	1	80	28	5	9	0	123	136.6	0	0	95	29	3	1	0	128	130.8			
Hourly Total	0	0	370	123	34	20	1	548	592.0	0	3	356	110	14	18	1	502	531.6	0	1	475	117	26	11	1	631	656.7			
TOTAL	0	1	858	280	79	41	3	1282	1387.2	0	7	785	262	37	24	4	1099	1148.5	0	2	966	381	58	17	2	1426	1477.9			
15:00-15:15	0	1	64	27	5	9	0	106	119.8	0	0	60	13	4	2	0	79	83.8	0	0	73	25	3	5	0	106	114.0			
15:15-15:30	0	1	54	18	8	6	0	87	98.2	0	0	74	28	2	5	0	109	116.5	0	0	89	24	5	8	0	126	138.9			
15:30-15:45	0	0	75	22	7	3	1	108	116.4	0	1	66	18	3	3	1	92	97.8	0	0	101	30	3	7	0	141	151.6			
15:45-16:00	0	0	72	22	10	4	0	108	118.2	0	1	96	23	1	0	0	121	120.9	0	0	93	34	4	6	0	137	146.8			
Hourly Total	0	2	265	89	30	22	1	409	452.4	0	2	296	82	10	10	1	401	418.8	0	0	386	113	18	26	0	510	551.3			
16:00-16:15	0	0	95	26	5	3	0	129	136.4	0	1	92	22	3	1	0	119	121.2	0	1	89	26	5	9	0	130	143.8			
16:15-16:30	0	0	96	23	5	7	0	111	122.6	0	0	96	27	2	0	1	128	128.0	0	0	101	39	3	2	0	145	148.1			
16:30-16:45	0	1	101	18	4	3	1	128	134.3	0	0	68	13	0	0	1	82	83.0	0	0	148	32	2	4	0	186	192.2			
16:45-17:00	0	0	79	9	3	3	0	94	99.4	1	0	68	12	1	1	1	84	86.0	0	0	115	17	4	2	0	138	142.6			
Hourly Total	0	1	381	78	17	16	1	462	491.7	1	1	324	74	6	2	3	411	418.2	0	1	483	114	14	17	0	699	727.5			
17:00-17:15	0	0	87	9	2	1	0	99	101.5	0	2	88	10	2	3	0	105	108.7	0	0	120	17	7	4	0	148	156.7			
17:15-17:30	0	0	84	18	3	2	0	107	111.1	0	0	75	4	2	0	1	82	84.0	0	0	95	19	0	5	0	119	125.5			
17:30-17:45	0	0	67	6	3	2	1	79	84.1	0	0	72	8	0	2	0	82	84.6	0	1	60	6	0	1	0	68	68.7			
Hourly Total	0	0	316	45	11	8	2	381	398.9	0	3	333	34	4	6	2	382	392.0	0	1	368	66	11	12	0	448	468.5			
TOTAL	0	3	931	210	58	46	4	1252	1343.0	1	6	953	190	20	18	6	1194	1229.0	0	2	1177	283	40	45	0	1557	1647.3			

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 Junction 36 Barnsley
 Tuesday 12th March 2024
 Junction: 1
 Approach: M1 J36 Slip Road South

TIME	To A61 (W)										To M1 J36 Slip Road (N)										To A61 (E)									
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs			
07:00-07:15	0	0	9	3	1	0	13	13.5	0	0	0	0	0	0	0	0	0	0.0	0	0	37	20	9	6	1	73	86.3			
07:15-07:30	0	0	13	4	0	2	20	23.6	0	0	0	0	0	0	0	0	0	0.0	0	0	64	27	11	9	0	111	128.2			
07:30-07:45	0	0	10	4	2	1	17	19.3	0	0	0	0	0	0	0	0	0	0.0	0	0	57	35	4	5	0	101	108.5			
07:45-08:00	0	0	15	3	0	2	20	22.6	0	0	0	0	0	0	0	0	0	0.0	0	0	68	26	10	2	0	106	113.6			
Hourly Total	0	0	47	14	3	5	70	79.0	0	0	0	0	0	0	0	0	0	0.0	0	0	226	108	34	22	1	391	437.6			
08:00-08:15	0	0	15	6	0	2	23	25.6	0	0	0	0	0	0	0	0	0	0.0	0	0	75	18	11	7	0	111	128.6			
08:15-08:30	0	0	30	4	1	1	36	39.5	0	0	0	0	0	0	0	0	0	0.0	0	0	92	38	5	2	1	134	150.1			
08:30-08:45	0	0	18	3	0	2	23	25.6	0	0	0	0	0	0	0	0	0	0.0	0	0	57	19	5	9	0	90	104.2			
08:45-09:00	0	0	22	3	0	1	26	27.3	0	0	0	0	0	0	0	0	0	0.0	0	0	49	22	10	4	1	86	97.2			
Hourly Total	0	0	65	16	1	8	88	96.3	0	0	0	0	0	0	0	0	0	0.0	0	0	263	93	31	22	2	411	457.1			
TOTAL	0	0	112	30	4	11	158	175.3	0	0	0	0	0	0	0	0	0	0.0	0	0	489	201	65	44	3	802	894.7			
15:00-15:15	0	0	13	3	0	2	18	20.6	0	0	0	0	0	0	0	0	0	0.0	0	0	83	32	8	4	1	128	138.2			
15:15-15:30	0	0	12	7	3	0	22	23.5	0	0	0	0	0	0	0	0	0	0.0	0	0	87	45	15	9	0	156	176.2			
15:30-15:45	0	0	17	5	0	2	24	26.6	0	0	0	0	0	0	0	0	0	0.0	0	0	106	37	10	5	1	159	174.5			
15:45-16:00	0	0	28	5	0	0	33	33.0	0	0	0	0	0	0	0	0	0	0.0	0	0	118	56	14	5	0	193	206.5			
Hourly Total	0	0	70	20	3	4	97	103.7	0	0	0	0	0	0	0	0	0	0.0	0	0	394	170	47	23	2	636	691.4			
16:00-16:15	0	0	23	10	2	0	35	36.9	0	0	0	0	0	0	0	0	0	0.0	0	0	100	42	10	6	0	168	176.8			
16:15-16:30	0	0	39	4	1	0	44	46.5	0	0	0	0	0	0	0	0	0	0.0	0	0	115	37	3	2	0	187	195.1			
16:30-16:45	0	0	24	4	0	0	28	28.0	0	0	0	0	0	0	0	0	0	0.0	0	0	132	38	3	4	0	177	183.7			
16:45-17:00	0	0	15	0	0	2	17	19.6	0	0	0	0	0	0	0	0	0	0.0	0	0	125	42	6	5	0	178	187.5			
Hourly Total	0	0	91	18	3	2	114	118.1	0	0	0	0	0	0	0	0	0	0.0	0	0	472	169	22	17	0	678	703.1			
17:00-17:15	0	0	25	1	0	1	27	28.3	0	0	0	0	0	0	0	0	0	0.0	0	1	124	49	1	7	1	183	193.0			
17:15-17:30	0	0	31	7	0	3	41	44.9	0	0	0	0	0	0	0	0	0	0.0	0	0	144	31	7	4	0	186	194.7			
17:30-17:45	0	0	34	3	0	0	37	37.0	0	0	0	0	0	0	0	0	0	0.0	0	0	131	27	2	2	0	162	166.6			
17:45-18:00	0	0	21	4	0	0	25	25.0	0	0	0	0	0	0	0	0	0	0.0	0	0	116	22	3	6	0	147	156.3			
Hourly Total	0	0	111	15	0	4	130	135.2	0	0	0	0	0	0	0	0	0	0.0	0	1	515	129	13	19	1	678	709.6			
TOTAL	0	0	272	63	6	10	341	357.0	0	0	0	0	0	0	0	0	0	0.0	0	1	1381	458	82	69	3	1984	2104.1			

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 Junction 36 Barnsley
 Tuesday 12th March 2024
 Junction: 1
 Approach: A61 West

TIME	To M1 J36 Slip Road (N)										To A61 (E)										To M1 J36 Slip Road (S)									
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs			
07:00-07:15	0	0	122	33	3	2	160	164.1	0	0	57	12	3	3	1	76	82.4	0	0	15	0	0	0	0	0	15	15.0			
07:15-07:30	0	1	126	29	7	3	157	163.8	0	0	74	11	1	3	0	89	93.4	0	0	14	4	0	1	0	1	19	20.3			
07:30-07:45	0	0	147	21	2	5	175	182.5	0	1	95	13	5	4	1	119	127.1	0	0	15	1	0	1	0	0	17	18.3			
07:45-08:00	0	0	122	19	6	2	149	154.6	0	0	91	19	4	3	0	117	122.9	0	0	7	0	2	0	0	0	9	10.0			
Hourly Total	0	1	517	93	18	12	641	665.0	0	1	317	55	13	13	2	401	425.8	0	0	51	5	2	2	0	0	60	63.6			
08:00-08:15	0	0	85	12	7	5	109	115.0	0	0	59	18	4	1	1	117	121.3	0	0	8	0	0	0	0	0	8	8.0			
08:15-08:30	0	0	115	16	6	3	140	146.9	0	0	91	22	6	2	2	123	130.6	0	0	3	2	0	0	0	0	5	5.0			
08:30-08:45	0	0	101	19	5	3	128	134.4	0	0	75	18	8	3	0	104	111.9	0	0	1	0	1	0	0	0	2	2.5			
08:45-09:00	0	0	89	18	4	3	114	119.9	0	1	96	17	4	5	0	123	130.9	0	0	7	0	2	2	1	1	12	12.6			
Hourly Total	0	0	390	65	22	14	491	520.2	0	1	355	75	22	11	3	467	494.7	0	0	19	2	3	2	1	27	32.1				
TOTAL	0	1	907	188	40	26	0	1132	1185.2	0	2	672	130	35	24	5	889	920.5	0	0	70	7	5	4	1	87	95.7			
15:00-15:15	0	0	65	27	4	4	100	107.2	0	2	52	8	5	0	1	68	70.3	0	0	19	4	1	2	0	0	26	28.1			
15:15-15:30	0	0	62	19	7	3	91	98.4	0	1	48	19	4	3	0	66	71.3	0	0	9	1	0	0	0	0	10	10.0			
15:30-15:45	0	0	73	25	3	2	103	107.1	1	1	50	19	3	1	1	76	78.4	0	0	11	2	0	3	0	0	16	19.9			
15:45-16:00	0	0	51	22	1	4	78	83.7	0	1	66	15	3	4	0	89	95.1	0	0	18	1	2	0	0	0	21	22.0			
Hourly Total	0	0	281	93	15	13	372	396.4	1	5	216	62	16	8	2	299	318.1	0	0	67	8	3	5	0	0	73	81.0			
16:00-16:15	0	0	78	18	4	1	101	106.3	0	1	70	20	11	3	1	106	115.8	0	1	19	2	1	1	0	0	24	25.2			
16:15-16:30	0	0	73	15	5	2	95	100.1	0	0	62	20	5	0	0	87	88.5	0	0	17	0	2	0	0	0	19	20.0			
16:30-16:45	0	0	89	17	2	1	109	111.3	0	1	62	26	5	1	1	96	100.2	0	0	6	1	0	0	0	0	7	7.0			
16:45-17:00	0	0	85	13	0	3	101	104.9	0	0	57	28	6	0	1	92	96.0	0	0	11	4	0	0	0	0	15	15.0			
Hourly Total	0	0	328	63	11	7	406	420.6	0	2	291	94	27	4	3	381	401.5	0	1	63	7	3	4	0	0	65	67.2			
17:00-17:15	0	0	29	3	1	0	108	110.8	0	3	51	22	2	2	0	89	81.8	0	0	11	0	1	0	0	0	12	12.5			
17:15-17:30	0	0	58	15	0	4	77	82.2	0	2	45	16	3	0	1	67	68.3	0	0	16	2	0	0	0	0	18	18.0			
17:30-17:45	0	0	65	10	0	2	77	79.0	0	0	71	14	1	4	0	90	95.7	0	0	8	1	0	0	0	0	9	9.0			
17:45-18:00	0	0	64	8	1	1	74	78.8	0	1	55	12	2	1	0	71	72.7	0	0	5	1	0	0	0	0	6	6.0			
Hourly Total	0	0	262	62	4	8	336	348.4	0	6	222	64	8	7	1	308	316.5	0	0	40	4	1	0	0	0	45	45.5			
TOTAL	0	0	838	218	30	28	0	1114	1168.4	1	13	689	210	60	19	6	988	1035.1	0	1	160	19	7	6	0	183	193.7			

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 J36 Barnsley
 Tuesday 12th March 2024
 Junction: 2
 Approach: A6195 North

TIME	To A6195 (E)								To A61								To Sheffield Road										
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00-07:15	0	0	0	0	0	0	0	0	0.0	0	1	161	93	22	5	0	282	296.9	0	0	8	5	1	0	0	14	14.5
07:15-07:30	0	0	0	2	0	1	0	3	4.3	0	1	173	101	12	5	0	292	302.9	0	0	6	3	0	0	0	9	9.8
07:30-07:45	0	0	1	1	0	0	0	2	2.0	0	0	174	74	18	5	0	271	286.5	0	0	14	6	0	0	0	20	20.0
07:45-08:00	0	0	1	0	0	0	0	1	1.0	0	0	181	63	10	7	0	261	278.1	0	0	26	8	0	1	0	38	36.3
Hourly Total	0	0	2	3	0	1	0	6	7.3	0	2	689	331	62	22	0	1106	1164.4	0	0	54	22	1	1	0	78	79.8
08:00-08:15	0	0	1	0	0	0	0	1	1.0	0	0	172	49	17	4	0	242	255.7	0	0	23	8	0	0	0	31	31.0
08:15-08:30	0	0	0	0	0	0	0	0	0.0	0	0	163	41	10	12	0	228	246.5	0	1	29	8	2	0	0	40	40.4
08:30-08:45	0	0	2	1	0	0	0	3	3.0	0	1	159	48	14	7	0	229	244.5	0	0	25	8	0	0	0	33	33.0
08:45-09:00	0	0	1	1	0	0	0	2	2.0	0	0	120	46	9	12	0	187	207.1	0	0	24	7	1	0	0	32	32.5
Hourly Total	0	0	4	2	0	0	0	8	8.0	0	1	614	184	50	35	0	884	953.9	0	1	101	31	3	0	0	136	136.9
TOTAL	0	0	6	5	0	1	0	12	13.3	0	3	1303	515	112	67	0	1990	2118.3	0	1	155	53	4	1	0	214	216.7
15:00-15:15	0	0	1	1	0	0	0	2	2.0	0	0	113	40	6	11	0	170	187.3	0	0	36	7	4	0	0	47	49.0
15:15-15:30	0	0	2	0	0	0	0	2	2.0	0	0	126	41	8	10	0	187	204.0	0	0	35	9	1	0	0	45	45.5
15:30-15:45	0	0	0	0	0	0	0	0	0.0	0	1	137	47	7	7	0	199	215.0	0	1	37	9	1	0	0	48	47.9
15:45-16:00	0	0	1	0	0	0	0	1	1.0	0	1	155	48	12	4	0	220	236.6	0	0	33	4	2	0	0	39	40.0
Hourly Total	0	0	6	1	0	0	0	7	7.0	0	2	533	176	33	32	0	776	832.9	0	1	141	29	8	0	0	179	182.4
16:00-16:15	0	0	0	1	0	0	0	1	1.0	0	1	145	43	6	10	0	205	228.4	0	1	31	6	0	0	0	38	37.4
16:15-16:30	0	0	0	1	0	0	0	1	1.0	0	0	136	55	5	5	0	201	216.0	0	1	44	3	0	0	0	47	47.4
16:30-16:45	0	0	3	0	0	0	0	3	3.0	0	1	176	37	2	5	0	221	227.9	0	0	40	5	0	0	0	45	45.0
16:45-17:00	0	0	9	0	0	0	0	9	9.0	0	0	154	21	7	2	0	184	196.1	0	0	39	14	1	0	0	54	54.5
Hourly Total	0	0	12	1	1	0	0	14	14.5	0	2	611	166	20	22	0	811	848.4	0	2	154	26	1	0	1	184	184.3
17:00-17:15	0	0	2	0	0	0	0	2	2.0	0	1	165	19	9	4	0	198	207.1	0	3	54	5	1	0	0	63	61.7
17:15-17:30	0	0	5	1	0	0	0	6	6.0	0	0	154	22	3	4	0	183	188.7	0	0	34	5	0	0	0	39	39.0
17:30-17:45	0	0	2	0	1	0	0	3	3.5	0	0	134	22	1	4	0	161	166.7	0	1	35	6	0	0	0	42	41.4
17:45-18:00	0	0	5	0	0	0	0	5	5.0	0	1	114	13	2	3	0	133	137.3	0	0	35	5	0	0	0	40	40.0
Hourly Total	0	0	14	1	1	0	0	16	16.5	0	2	587	78	15	16	0	675	706.8	0	4	168	21	1	0	0	184	182.1
TOTAL	0	0	32	3	2	0	0	37	38.0	0	6	1711	408	68	69	0	2262	2382.1	0	7	483	76	10	0	1	547	548.8

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 J36 Barnsley
 Tuesday 12th March 2024
 Junction: 2
 Approach: A6195 East

TIME	To A61								To Sheffield Road								To A6195 (N)										
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00-07:15	0	0	75	33	4	1	0	113	116.3	0	0	20	3	0	0	3	26	29.0	0	0	1	0	0	0	0	2	2.0
07:15-07:30	0	1	67	39	2	2	1	92	96.0	1	0	26	8	1	0	1	37	37.7	0	0	0	1	0	0	0	1	1.0
07:30-07:45	0	0	74	21	6	2	0	103	108.6	0	0	41	5	0	0	1	47	48.0	0	0	2	0	0	0	0	2	2.0
07:45-08:00	0	0	63	11	0	0	0	76	78.6	0	1	45	12	0	0	0	58	57.4	0	0	1	1	0	0	0	3	3.0
Hourly Total	0	1	279	64	12	3	1	384	399.5	1	1	132	28	1	0	5	168	172.1	0	0	4	3	0	1	0	8	8.0
08:00-08:15	0	1	78	21	4	1	1	106	109.7	0	0	56	10	0	0	2	69	70.9	0	0	0	0	0	0	0	0	0.0
08:15-08:30	0	0	52	22	2	3	0	79	83.9	0	0	75	1	2	0	2	80	83.0	0	0	3	1	0	0	0	4	4.0
08:30-08:45	0	0	37	14	3	0	1	55	57.5	0	0	62	5	2	1	1	71	74.3	0	0	3	0	0	0	0	3	3.0
08:45-09:00	0	0	50	12	2	1	0	65	67.3	0	0	79	9	0	1	1	90	92.3	0	0	2	2	0	0	0	4	4.0
Hourly Total	0	1	217	69	11	5	2	305	316.4	0	0	272	53	4	2	6	309	319.6	0	0	8	3	0	0	0	11	11.0
TOTAL	0	2	496	183	23	12	3	689	717.9	1	1	404	25	5	2	11	477	491.7	0	0	12	6	0	1	0	19	20.3
15:00-15:15	0	0	31	8	0	4	0	43	48.2	0	0	52	9	1	0	1	63	64.5	0	0	0	0	1	0	0	1	1.0
15:15-15:30	0	0	38	9	1	5	0	53	60.0	0	0	65	11	0	1	1	78	80.3	0	0	3	1	0	0	0	4	4.0
15:30-15:45	0	0	45	7	0	5	1	58	65.5	1	1	62	9	1	0	1	75	75.1	0	0	3	1	0	0	0	4	4.0
15:45-16:00	0	0	36	15	1	3	0	55	59.4	0	0	39	7	0	0	2	48	50.0	0	0	3	0	0	0	0	3	3.0
Hourly Total	0	0	150	39	2	17	1	209	233.1	1	1	218	36	2	1	5	264	269.9	0	0	9	2	1	0	0	12	12.5
16:00-16:15	0	0	50	12	4	2	0	78	82.6	0	2	65	11	0	0	1	80	78.8	0	0	4	2	0	0	0	6	6.0
16:15-16:30	0	0	50	16	3	4	0	73	79.7	0	1	61	10	3	0	1	76	77.9	0	0	0	1	0	0	0	1	1.0
16:30-16:45	0	0	39	13	2	2	1	57	61.6	0	0	55	6	0	0	2	63	65.0	0	0	0	1	0	0	0	1	1.0
16:45-17:00	0	0	43	8	0	2	0	53	55.6	0	0	52	9	1	0	1	63	64.5	0	0	1	1	0	0	0	2	2.0
Hourly Total	0	0	192	49	9	10	1	261	279.5	0	3	234	36	4	0	6	282	287.2	0	0	8	8	0	0	0	10	10.0
17:00-17:15	0	0	59	5	2	3	0	69	73.9	0	0	63	6	0	0	1	79	75.0	0	1	4	1	0	0	0	6	5.4
17:15-17:30	0	0	46	9	4	2	0	61	65.8	0	0	63	10	2	0	2	77	80.0	0	0	3	0	0	0	0	3	3.0
17:30-17:45	0	0	45	8	1	2	1	57	61.1	0	0	54	5	1	0	1	61	62.5	0	0	1	0	0	0	0	1	1.0
17:45-18:00	0	0	39	1	0	1	0	41	42.3	0	0	61	9	1	0	2	73	75.5	0	0	2	0	0	0	0	2	2.0
Hourly Total	0	0	189	23	7	8	1	228	242.9	0	0	241	30	4	0	6	281	296.0	0	1	10	1	0	0	0	12	11.4
TOTAL	0	0	531	111	18	35	3	698	755.5	1	4	693	102	10	1	16	827	846.1	0	1	24	8	1	0	0	34	33.9

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 J36 Barnsley
 Tuesday 12th March 2024
 Junction: 2
 Approach: A61

TIME	To Sheffield Road								To A6195 (N)								To A6195 (E)										
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00-07:15	0	0	26	17	8	4	1	56	66.2	0	0	102	31	13	4	0	150	161.7	0	0	13	1	1	4	1	20	26.7
07:15-07:30	0	0	73	12	9	4	0	97	106.7	0	0	124	45	12	8	0	169	206.4	0	0	24	7	2	2	0	35	36.6
07:30-07:45	0	0	73	21	4	2	1	101	106.6	0	1	153	64	12	11	0	241	266.7	0	0	15	6	0	1	0	22	23.3
07:45-08:00	0	0	84	20	6	1	0	111	116.3	0	0	127	48	12	5	0	192	204.8	0	0	21	5	1	1	0	28	29.8
Hourly Total	0	0	255	70	27	11	2	355	394.8	0	1	506	188	49	28	0	772	832.3	0	0	73	19	4	8	1	105	118.4
08:00-08:15	0	0	68	16	5	3	0	92	98.4	0	0	165	41	12	9	0	227	244.7	0	0	30	7	3	1	1	42	45.8
08:15-08:30	0	0	92	22	4	1	3	122	128.3	0	0	136	54	11	8	0	209	224.9	0	0	35	6	2	0	0	43	44.0
08:30-08:45	0	0	75	11	6	2	0	94	99.6	0	0	105	41	9	13	1	169	191.4	0	0	35	9	2	4	0	50	56.2
08:45-09:00	0	1	72	17	5	3	1	99	105.8	0	0	138	29	20	11	0	198	222.3	0	0	46	19	2	1	0	68	70.3
Hourly Total	0	1	307	68	20	9	4	407	432.1	0	0	544	165	52	41	1	803	883.3	0	0	146	41	9	6	1	203	216.3
TOTAL	0	1	562	136	47	20	6	772	826.9	0	1	1050	353	101	69	1	1575	1715.6	0	0	219	60	13	14	2	308	334.7
15:00-15:15	0	1	78	28	4	6	2	119	130.2	0	0	95	38	14	5	0	152	165.5	0	1	49	16	2	3	0	71	75.3
15:15-15:30	0	0	72	23	7	4	0	106	114.7	0	1	129	68	15	11	0	224	245.2	0	1	25	9	1	3	0	39	42.8
15:30-15:45	1	0	90	33	5	2	2	133	138.3	0	1	112	65	12	9	0	199	216.1	0	0	59	12	3	1	0	75	77.8
15:45-16:00	0	0	106	28	9	4	0	147	156.7	0	1	157	77	14	9	0	258	276.1	0	0	41	19	0	4	0	64	68.2
Hourly Total	1	1	346	112	28	16	4	505	540.9	0	3	493	248	55	34	0	833	902.9	0	2	174	58	6	11	0	249	265.1
16:00-16:15	0	0	102	42	5	0	0	149	151.5	0	1	133	67	20	6	0	227	244.2	0	0	58	21	3	3	1	86	92.4
16:15-16:30	0	0	106	31	5	1	0	143	146.8	0	0	131	52	4	4	0	191	198.2	0	0	53	14	1	2	0	70	73.1
16:30-16:45	0	0	117	31	2	0	0	150	151.0	0	1	162	80	7	7	0	237	258.0	0	0	61	27	4	1	1	94	98.3
16:45-17:00	0	0	132	31	5	1	0	169	172.8	0	0	141	83	8	5	1	238	248.5	0	0	74	19	1	0	0	94	94.5
Hourly Total	0	0	457	138	17	2	0	611	622.1	0	2	567	282	39	22	1	913	960.9	0	0	246	81	9	6	2	344	358.3
17:00-17:15	0	3	97	26	3	2	1	132	135.3	0	1	153	65	1	4	0	224	225.1	0	1	40	21	2	5	1	60	67.9
17:15-17:30	0	2	137	29	3	2	0	173	175.9	0	0	111	64	10	2	0	167	174.6	0	0	84	11	1	5	1	102	110.0
17:30-17:45	0	0	119	19	2	3	0	143	147.9	0	1	157	49	4	5	0	216	223.9	0	0	62	17	0	4	0	83	88.2
17:45-18:00	0	1	96	11	3	0	0	111	111.9	0	0	141	43	4	4	0	192	198.2	0	0	65	10	1	6	0	83	91.3
Hourly Total	0	6	449	85	11	7	1	559	571.0	0	2	562	291	19	16	0	799	826.8	0	1	272	89	4	20	2	358	387.4
TOTAL	1	7	1282	332	53	25	5	1675	1734.0	0	7	1622	731	113	71	1	2545	2690.6	0	3	692	198	19	37	4	951	1016.8

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 J36 Barnsley
 Tuesday 12th March 2024
 Junction: 2
 Approach: Sheffield Road

TIME	To A6195 (N)								To A6195 (E)								To A61										
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00-07:15	0	0	27	3	0	1	0	31	32.3	0	2	31	9	1	0	1	44	44.3	0	1	33	59	8	1	2	164	176.7
07:15-07:30	0	1	32	2	3	0	0	38	38.9	0	2	46	13	3	0	1	65	66.3	0	0	120	40	5	1	3	169	176.8
07:30-07:45	0	0	34	2	0	0	0	36	36.0	0	0	74	13	6	2	1	96	102.6	0	0	106	36	7	0	0	149	152.5
07:45-08:00	0	0	55	8	3	0	0	66	67.5	0	0	68	12	2	0	1	83	85.0	0	2	101	23	6	2	0	134	138.4
Hourly Total	0	1	148	15	6	1	0	171	174.7	0	4	219	47	12	2	4	288	298.2	0	3	420	168	26	4	8	616	637.4
08:00-08:15	0	0	53	12	1	0	0	66	65.5	0	0	63	22	3	3	2	97	100.4	0	1	106	22	2	2	0	123	126.0
08:15-08:30	0	0	67	8	3	1	0	79	81.8	0	1	62	14	1	0	1	79	79.9	0	0	118	30	2	4	1	155	162.2
08:30-08:45	0	0	112	2	7	0	0	121	124.5	0	0	70	6	1	1	2	80	83.8	0	0	76	24	5	1	0	106	108.8
08:45-09:00	0	0	81	21	0	0	0	102	102.0	0	0	58	7	4	0	0	69	71.0	0	1	70	21	4	2	0	98	102.0
Hourly Total	0	0	313	43	11	1	0	368	374.8	0	1	253	49	9	4	5	321	335.1	0	2	370	97	13	9	1	492	510.0
TOTAL	0	1	461	58	17	2	0	539	549.5	0	5	472	98	21	6	9	609	633.3	0	5	790	255	39	13	6	1108	1147.4
15:00-15:15	0	0	85	23	3	0	0	111	112.5	0	0	84	6	2	0	2	54	57.0	0	1	53	17	6	1	0	78	81.7
15:15-15:30	0	0	68	21	0	0	0	79	79.0	0	1	74	29	1	1	3	103	107.2	0	1	51	20	6	4	0	82	89.6
15:30-15:45	0	0	102	13	4	1	0	120	123.3	0	0	43	16	1	1	1	62	64.8	0	0	60	16	6	1	1	84	89.3
15:45-16:00	0	0	81	17	1	0	0	99	99.5	0	0	50	17	1	0	1	69	70.5	0	0	70	16	2	3	0	91	95.9
Hourly Total	0	0	336	64	8	1	0	409	414.3	0	1	211	62	5	2	7	288	299.5	0	2	234	69	20	9	1	335	356.5
16:00-16:15	0	0	106	11	3	0	0	120	121.5	0	0	65	11	1	1	2	80	83.8	0	1	71	19	3	1	0	95	97.2
16:15-16:30	0	0	104	15	2	9	0	130	142.7	0	1	58	15	0	1	0	76	76.7	0	0	87	18	2	0	0	108	110.0
16:30-16:45	0	0	145	18	2	0	0	165	166.0	0	1	68	12	0	0	0	81	80.4	0	0	102	13	2	0	1	118	120.0
16:45-17:00	0	0	125	10	1	0																					

M1 J36 Barnsley
 Tuesday 12th March 2024
 Junction: 3
 Approach: A6195 North

TIME	To Sheffield Road								To A6195 (S)								To Kestrel Way										
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00-07:15	0	0	15	12	0	0	0	27	27.0	0	1	151	82	18	5	0	247	271.9	0	0	16	8	0	0	0	24	24.0
07:15-07:30	0	0	22	12	1	0	0	35	36.5	0	1	165	91	10	5	0	272	292.9	0	0	12	8	3	0	0	23	24.5
07:30-07:45	0	0	21	6	2	0	0	29	30.0	0	0	161	65	14	5	0	245	258.5	0	0	17	6	3	0	0	26	27.5
07:45-08:00	0	0	22	17	1	0	0	40	40.5	0	0	187	63	9	8	0	267	281.9	0	0	15	6	2	0	0	23	24.0
Hourly Total	0	0	80	47	4	0	0	131	133.0	0	2	664	301	51	23	0	1041	1095.2	0	0	60	28	8	0	0	96	100.0
08:00-08:15	0	0	41	10	2	0	0	53	54.0	0	0	173	45	17	4	0	239	252.7	0	0	17	10	0	0	0	27	27.0
08:15-08:30	0	0	31	12	0	0	0	43	43.0	0	0	172	39	11	12	0	234	246.1	0	0	19	1	0	0	0	20	20.0
08:30-08:45	0	0	26	15	2	0	0	43	44.0	0	1	159	51	11	7	0	229	243.0	0	0	12	9	2	1	0	24	26.3
08:45-09:00	0	0	31	15	3	0	0	49	50.5	0	0	118	38	7	11	0	174	191.8	0	0	16	11	1	0	0	28	28.5
Hourly Total	0	0	129	52	7	0	0	188	191.5	0	1	622	173	46	34	0	878	942.6	0	0	64	31	3	1	0	99	101.8
TOTAL	0	0	209	99	11	0	0	319	324.5	0	3	1286	474	97	57	0	1917	2037.8	0	0	124	59	11	1	0	195	201.8
15:00-15:15	0	1	15	5	3	1	0	25	27.2	0	0	114	42	9	11	0	176	194.8	0	0	12	4	1	0	0	17	17.5
15:15-15:30	0	0	20	5	3	1	0	29	31.8	0	0	139	42	5	10	0	196	211.5	0	0	11	5	2	1	0	19	21.3
15:30-15:45	0	0	17	8	0	1	0	26	27.3	0	1	150	48	8	7	0	214	226.5	0	1	29	4	1	0	0	35	34.9
15:45-16:00	0	0	24	9	1	0	0	34	34.5	0	0	160	47	11	4	0	222	232.7	0	1	13	2	0	0	0	16	16.4
Hourly Total	0	1	76	27	7	3	0	114	120.8	0	1	563	179	33	32	0	808	865.5	0	2	65	16	4	1	0	87	88.1
16:00-16:15	0	0	21	10	0	0	0	31	31.9	0	2	148	41	6	9	0	206	219.5	0	0	23	4	0	0	0	27	27.0
16:15-16:30	0	2	27	2	0	0	0	31	29.8	0	0	154	52	5	5	1	217	227.0	0	0	16	3	0	0	0	19	19.0
16:30-16:45	0	0	33	16	0	1	0	50	51.3	0	1	184	33	2	5	0	225	231.9	0	0	22	2	1	0	0	25	25.5
16:45-17:00	0	0	25	7	0	1	0	33	34.3	0	0	156	27	6	2	0	191	196.6	0	0	20	4	1	0	0	25	25.5
Hourly Total	0	2	106	35	0	2	0	145	146.4	0	3	642	163	19	21	1	839	876.0	0	0	81	13	2	0	0	96	97.0
17:00-17:15	0	0	40	3	0	0	0	43	43.0	0	2	191	19	8	4	0	224	232.0	0	0	29	4	0	0	0	33	33.0
17:15-17:30	0	0	36	0	2	0	0	38	39.0	0	0	170	24	3	4	0	201	207.7	0	0	18	2	0	0	0	20	20.0
17:30-17:45	0	0	32	9	1	1	0	43	44.8	0	0	143	20	0	4	0	167	172.2	0	0	15	2	1	0	0	18	18.5
17:45-18:00	0	0	39	5	0	0	0	44	44.0	0	1	120	12	2	2	0	137	146.0	0	0	21	2	0	0	0	23	23.0
Hourly Total	0	0	147	17	3	1	0	168	170.8	0	3	624	75	13	14	0	729	751.9	0	0	83	10	1	0	0	94	94.5
TOTAL	0	3	329	79	10	6	0	427	438.0	0	7	1829	407	65	67	1	2376	2492.4	0	2	229	38	7	1	0	277	280.6

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 J36 Barnsley
 Tuesday 12th March 2024
 Junction: 3
 Approach: Sheffield Road

TIME	To A6195 (S)								To Kestrel Way								To A6195 (N)										
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	PCUs
07:00-07:15	0	0	2	0	0	0	0	2	2.0	0	1	1	0	0	0	0	2	2.0	0	1	5	0	0	0	0	6	6.4
07:15-07:30	0	0	4	8	0	0	0	12	12.0	0	3	2	0	0	0	0	5	5.0	0	0	7	2	0	0	0	9	9.8
07:30-07:45	0	0	7	0	1	0	0	8	8.5	0	4	5	0	0	0	0	9	9.0	0	0	15	2	1	1	0	19	20.8
07:45-08:00	0	0	2	3	0	0	0	5	5.0	0	0	3	1	0	0	0	4	4.0	0	0	17	3	0	0	0	20	20.0
Hourly Total	0	0	13	13	1	0	0	27	27.5	0	11	9	0	0	0	0	20	20.0	0	1	44	7	1	1	0	54	55.2
08:00-08:15	0	0	7	1	0	0	0	8	8.0	0	0	10	1	0	0	0	11	11.0	0	0	20	8	3	1	0	32	34.9
08:15-08:30	0	0	1	3	0	0	0	4	4.0	0	1	14	2	0	0	0	17	16.4	0	0	18	7	1	0	0	26	26.5
08:30-08:45	0	0	5	0	1	0	0	6	6.5	0	0	10	4	0	0	0	14	14.0	0	0	10	3	0	1	1	15	17.3
08:45-09:00	0	0	6	6	0	0	0	12	12.0	0	0	16	5	0	0	0	21	21.0	0	0	23	2	0	2	0	27	28.6
Hourly Total	0	0	19	10	1	0	0	30	30.5	0	1	50	12	0	0	0	63	62.4	0	0	71	20	4	4	1	100	106.2
TOTAL	0	0	32	23	2	0	0	57	58.0	0	1	81	21	0	0	0	83	82.4	0	1	115	27	5	5	1	154	163.4
15:00-15:15	0	0	6	0	0	0	0	6	6.0	0	4	1	0	0	0	0	6	6.0	0	0	13	1	0	0	0	14	14.0
15:15-15:30	0	0	5	3	1	0	0	9	9.5	0	6	0	0	0	0	0	6	6.0	0	0	12	3	3	1	0	19	21.8
15:30-15:45	0	0	5	2	0	0	0	7	7.0	0	0	12	1	0	0	0	13	13.0	0	0	15	5	0	0	0	20	20.0
15:45-16:00	0	0	10	1	0	0	0	11	11.0	0	0	3	0	0	0	0	3	3.0	0	0	13	6	1	0	0	20	20.5
Hourly Total	0	0	26	6	1	0	0	33	33.5	0	0	26	2	0	0	0	27	27.0	0	0	63	16	4	1	0	73	76.3
16:00-16:15	0	0	4	0	0	0	0	4	4.0	0	0	5	0	0	0	0	5	5.0	0	0	16	12	0	0	0	28	28.0
16:15-16:30	0	0	5	2	0	0	0	7	7.0	0	0	8	1	1	0	0	10	10.5	0	0	14	5	0	0	0	19	19.0
16:30-16:45	0	0	8	2	0	0	0	10	10.0	0	0	11	2	0	0	0	13	13.0	0	0	24	6	3	0	0	33	34.5
16:45-17:00	0	0	8	1	0	0	0	9	9.0	0	0	11	2	0	0	0	13	13.0	0	0	22	5	0	0	0	27	27.0
Hourly Total	0	0	28	8	0	0	0	30	30.0	0	0	36	6	1	0	0	41	41.5	0	0	76	28	3	0	0	107	108.5
17:00-17:15	0	1	5	2	0	0	0	8	7.4	0	0	14	3	0	0	0	17	17.0	0	0	24	6	0	0	0	30	30.0
17:15-17:30	0	0	2	1	0	0	0	3	3.0	0	0	9	2	0	0	0	11	11.0	0	0	15	2	0	0	0	17	17.0
17:30-17:45	0	0	1	0	1	0	0	2	2.5	0	0	10	1	0	0	0	11	11.0	0	0	26	0	0	0	0	26	26.0
17:45-18:00	0	0	3	1	0	0	0	4	4.0	0	0	6	1	0	0	0	7	7.0	0	0	22	2	0	0	0	24	24.0
Hourly Total	0	1	11	4	1	0	0	17	16.9	0	0	39	7	0	0	0	46	46.0	0	0	87	10	0	0	0	97	97.0
TOTAL	0	1	62	16	2	0	0	80	80.4	0	0	99	14	1	0	0	114	114.5	0	0	216	53	7	1	0	277	281.8

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	

M1136 Barnsley
 Tuesday 12th March 2024
 Junction: 3
 Approach: A6195 South

TIME	To Kestrel Way								To A6195 (N)								To Sheffield Road								
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	
07:00-07:15	0	0	15	5	2	0	0	22	23.0	0	0	111	28	11	5	0	155	167.0	0	0	4	2	0	0	6
07:15-07:30	0	1	14	6	2	0	0	23	23.4	0	0	140	39	13	8	0	200	216.9	0	0	2	3	0	0	5
07:30-07:45	0	1	28	11	1	0	0	41	46.9	0	0	155	50	10	11	0	226	245.3	0	0	6	5	1	0	12
07:45-08:00	0	0	24	9	3	0	0	36	37.5	0	0	152	44	10	6	0	212	224.8	0	0	7	4	2	0	13
Hourly Total	0	2	81	31	8	0	0	122	124.8	0	0	558	161	44	30	0	793	854.0	0	0	19	14	3	0	36
08:00-08:15	0	0	33	10	1	0	0	44	44.5	0	0	184	41	12	9	0	246	263.7	0	0	1	2	0	0	3
08:15-08:30	0	0	24	7	2	0	0	33	34.0	0	0	176	53	12	9	0	250	261.7	0	0	6	3	0	0	9
08:30-08:45	0	0	25	4	2	0	0	31	32.0	0	0	184	36	14	13	1	249	272.9	0	0	11	3	0	0	14
08:45-09:00	0	0	28	5	3	0	0	36	37.5	0	0	186	42	17	11	0	266	278.8	0	0	7	5	0	0	12
Hourly Total	0	0	110	28	8	0	0	144	145.0	0	0	730	172	55	42	1	1000	1083.1	0	0	25	13	0	0	38
TOTAL	0	2	191	57	16	0	0	266	272.8	0	0	1288	333	99	72	1	1793	1937.1	0	0	44	27	3	0	74

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1136 Barnsley
 Tuesday 12th March 2024
 Junction: 3
 Approach: Kestrel Way

TIME	To A6195 (N)								To Sheffield Road								To A6195 (S)							
	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
07:00-07:15	0	0	18	4	2	0	0	24	25.0	0	0	12	2	0	0	14	14.0	0	0	30	6	1	0	37
07:15-07:30	0	0	8	4	0	0	0	12	12.0	0	0	2	0	0	0	2	2.0	0	0	10	7	2	1	20
07:30-07:45	0	1	8	5	4	0	0	18	19.4	0	0	3	1	0	0	4	4.0	0	0	21	16	3	0	40
07:45-08:00	0	0	12	2	0	0	0	14	14.0	0	0	3	1	0	0	4	4.0	0	0	19	5	1	0	25
Hourly Total	0	1	42	13	5	0	0	61	62.9	0	0	12	4	1	0	17	17.5	0	0	68	42	11	1	122
08:00-08:15	0	0	22	12	2	0	0	26	27.0	0	0	10	1	1	0	12	12.5	0	0	16	11	0	0	27
08:15-08:30	0	0	8	6	2	0	0	16	17.0	0	0	7	1	0	0	8	8.0	0	1	19	7	1	0	28
08:30-08:45	0	0	10	3	0	0	0	13	13.0	0	0	4	2	1	0	7	7.5	0	0	22	6	2	0	30
08:45-09:00	0	0	17	3	0	0	0	20	20.0	0	0	6	2	0	0	8	8.0	0	0	21	10	3	1	35
Hourly Total	0	0	47	24	4	0	0	75	77.0	0	0	27	6	2	0	35	36.0	0	1	78	34	6	1	120
TOTAL	0	1	89	37	9	0	0	136	139.9	0	0	39	10	3	0	52	53.5	0	1	146	78	17	2	242
15:00-15:15	0	0	18	4	2	0	0	24	25.0	0	0	12	2	0	0	14	14.0	0	0	30	6	1	0	37
15:15-15:30	0	0	18	4	1	0	0	23	23.5	0	0	7	3	0	0	10	10.0	0	0	21	5	3	0	29
15:30-15:45	0	0	18	3	2	1	0	24	26.3	0	0	9	1	0	0	10	10.0	0	1	21	6	0	0	28
15:45-16:00	0	0	25	5	0	0	0	30	30.0	0	0	11	1	0	0	12	12.0	0	1	19	4	3	0	27
Hourly Total	0	0	79	16	8	1	0	101	104.8	0	0	39	7	0	0	46	46.0	0	2	91	21	7	0	121
16:00-16:15	0	0	19	6	0	0	0	25	25.0	0	0	10	4	1	0	15	15.5	0	0	24	9	0	1	34
16:15-16:30	0	0	25	6	3	0	0	34	35.5	0	0	10	1	0	0	11	11.0	0	1	21	2	1	0	25
16:30-16:45	0	0	23	2	0	0	0	25	25.0	0	0	11	3	0	0	14	14.0	0	0	27	7	0	0	34
16:45-17:00	0	0	33	7	0	0	0	40	40.0	0	0	9	2	0	0	11	11.0	0	0	35	7	2	0	47
Hourly Total	0	0	100	21	3	0	0	124	125.5	0	0	40	10	1	0	51	51.5	0	1	110	28	3	1	140
17:00-17:15	0	0	22	5	0	0	0	27	27.0	0	1	10	2	0	0	13	12.4	0	1	25	3	2	0	31
17:15-17:30	0	0	21	6	1	0	0	28	28.5	0	0	9	4	0	0	13	13.0	0	0	21	3	0	0	24
17:30-17:45	0	0	23	7	0	0	0	30	30.0	0	0	14	2	0	0	16	16.0	0	1	27	8	1	0	37
17:45-18:00	0	0	18	5	0	0	0	23	23.0	0	0	17	1	0	0	18	18.0	0	0	31	5	0	1	37
Hourly Total	0	0	84	23	1	0	0	108	108.5	0	1	50	9	0	0	60	59.4	0	2	104	19	3	1	129
TOTAL	0	0	263	60	9	1	0	333	338.8	0	1	129	26	1	0	157	156.9	0	5	305	65	13	2	390

PCU Factors:	
CYCLE	0.2
M/CYCLE	0.4
CAR	1.0
LGV	1.0
OGV1	1.5
OGV2	2.3
BUS	2.0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Lane 1 is nearside lane
Queues in PCUs at the end of every Red Light Phase

Time	M1 (North)			A61 (East)		M1 (South)		A61 (West)	
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
07:00	1	4	7	7	11	2	1	15	1
	0	2	2	10	4	9	3	13	6
	3	2	8	12	7	2	3	5	3
	3	7	5	0	17	3	0	2	5
07:05	0	1	10	13	7	2	4	8	5
	0	6	4	21	15	5	5	13	9
	4	4	4	21	14	1	1	10	2
	0	3	7	21	12	1	5	12	6
07:10	1	0	2	13	17	1	3	26	4
	0	5	2	7	11	4	0	30	4
	0	7	5	13	16	4	5	32	4
	1	6	4	12	4	0	0	15	3
07:15	0	3	5	18	13	4	11	12	3
	0	5	9	19	15	3	10	25	4
	0	8	6	7	3	2	3	31	7
	0	1	2	6	3	7	8	39	3
07:20	0	3	6	2	2	8	4	54	4
	1	15	6	5	2	5	1	56	0
	2	7	7	4	3	3	3	57	7
	1	10	5	9	5	2	8	62	2
07:25	1	0	4	21	12	5	1	70	3
	1	4	7	17	13	6	4	39	16
	1	8	5	16	15	4	5	59	11
	2	3	2	21	13	5	8	69	13
07:30	0	8	6	15	12	2	6	57	3
	2	9	10	7	8	1	2	65	6
	3	9	11	15	12	1	0	48	5
	2	10	6	20	7	6	4	71	7
07:35	1	8	2	17	11	3	4	60	11
	0	6	7	7	4	4	8	64	8
	5	7	7	3	6	5	5	49	10
	2	16	5	21	17	7	5	64	8
07:40	2	11	2	9	11	0	3	51	6
	0	6	7	7	7	3	8	63	2
	0	7	7	4	6	4	5	49	7
	1	5	4	15	12	5	5	64	8
07:45	1	8	3	3	5	5	2	38	9
	0	3	11	6	4	2	3	36	5
	0	8	7	5	6	2	1	42	10
	1	5	4	15	12	5	5	41	5
07:50	2	5	4	16	10	9	10	38	9
	0	3	10	8	9	5	7	35	5
	3	4	7	6	8	0	1	33	3
	0	3	5	8	6	4	1	30	8
07:55	2	5	8	8	6	4	3	27	6
	0	3	10	8	9	5	7	25	2
	3	4	7	6	8	0	1	35	5
	0	3	5	8	6	4	3	27	6
08:00	9	6	3	2	3	2	8	22	4
	0	10	13	7	7	2	7	17	7
	7	8	2	8	11	2	2	24	10
	1	11	8	14	0	3	3	11	2
08:05	1	12	8	13	15	3	5	11	3
	0	4	11	10	14	3	6	24	3
	0	6	10	3	4	2	3	15	3
	0	5	12	5	3	3	3	25	6
08:10	1	11	10	8	7	1	4	28	6
	2	7	7	15	4	3	3	18	5
	2	4	5	13	7	2	6	11	1
	0	12	4	2	2	2	2	14	2
08:15	2	2	7	2	2	2	6	16	7
	2	5	7	13	9	6	1	13	5
	1	5	4	7	3	4	8	12	4
	0	9	6	13	11	3	3	19	3
08:20	0	11	9	12	7	3	3	13	7
	0	12	5	4	2	4	2	8	4
	2	3	6	4	10	8	4	6	3
	2	5	2	6	6	4	6	12	8
08:25	1	8	6	21	9	3	3	19	5
	0	7	11	17	5	4	8	24	5
	8	8	6	21	7	4	6	19	2
	0	7	11	17	5	4	8	28	8
08:30	1	4	10	16	19	7	9	26	8
	2	9	16	15	7	3	7	22	9
	2	10	10	16	12	3	5	27	6
	2	12	7	21	18	2	4	29	1
08:35	1	13	6	9	0	5	5	2	3
	3	12	5	3	1	1	6	19	6
	1	13	7	7	8	2	2	26	6
	4	12	5	13	8	3	1	22	1
08:40	2	8	7	14	5	4	3	27	3
	0	3	3	13	6	7	10	12	4
	0	5	1	6	7	2	7	15	19
	4	16	6	1	3	5	5	13	6
08:45	2	8	2	0	2	2	7	20	3
	5	9	3	5	6	3	3	24	5
	2	6	5	1	5	2	7	27	3
	4	8	7	3	3	4	10	28	3
08:50	1	11	5	6	9	2	4	33	3
	1	11	5	6	9	2	4	27	6
	2	13	5	7	5	0	5	30	7
	4	10	7	9	6	3	9	28	6
08:55	2	12	4	5	8	9	1	14	5
	0	9	3	8	7	0	5	22	6
	2	4	12	14	9	2	2	6	2
	0	4	12	11	9	0	5	18	2
09:00	1	4	10	13	3	3	3	10	3
	0	4	10	13	2	3	3	17	6
	1	4	11	5	2	3	0	13	1
	0	3	9	1	4	2	4	26	3
09:05	0	5	10	14	1	4	5	28	2
	0	5	10	14	1	4	5	24	7
	1	3	9	1	4	2	4	28	2
	0	5	10	14	1	4	5	24	7
09:10	1	3	9	1	4	2	4	28	2
	0	5	10	14	1	4	5	24	7
	1	3	9	1	4	2	4	28	2
	0	5	10	14	1	4	5	24	7

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Lane 1 is nearside lane
Queues in PCUs at the end of every Red Light Phase

Time	M1 (North)			A61 (East)		M1 (South)		A61 (West)	
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
	1	8	7	9	1				
15:00	0	6	3	2	3	6	5	6	3
	2	6	4	2	3	2	9	8	1
	1	3	3	2	4	2	4	5	2
	0	10	2	21	4	1	1	7	3
	0	7	2	5	3	6	3	10	4
15:05	0	10	1	8	3	5	4	9	6
	1	9	6	4	11	8	1	10	5
	0	6	2	8	6	7	5	12	5
	3	14	2	21	6	1	5	15	5
	4	13	4	21	2	6	4	17	4
	1	8	4	10	4	6	2	20	2
	1	8	3	3	2	6	3	20	2
	0	3	10	6	2	1	5	13	2
	1	4	6	1	1	8	6	7	4
	2	3	2	1	2	6	1	6	1
	5	21	3	2	6	3	8	9	4
	1	12	4	9	0	2	8		
15:10	0	15	6	8	9	2	10	8	4
	3	17	5	18	8	8	1	9	1
	1	9	6	7	6	7	6	5	2
	0	5	3	5	12	5	7	28	3
	0	3	1	2	0			25	2
				0	2				
15:15	0	6	4	0	11	8	10	27	5
	0	11	7	10	3	4	5	20	6
	0	7	9	5	1	2	5	16	4
	1	7	8	4	3	2	12	11	7
	1	15	8	8	4				
	1	10	4	10	6				
15:20	1	7	10	9	4	6	12	26	6
	0	5	6	4	2	6	9	29	4
	0	2	2	1	2	7	15	29	7
	0	8	5	5	2	4	9	34	5
	3	4	7	2	1	7	10		
	1	9	7						
15:30	1	16	3	7	2	10	6	31	6
	1	17	6	6	5	2	10	29	8
	0	16	13	14	8	3	3	17	5
	1	22	11	11	10	8	5	32	2
	0	26	7	8	4			20	11
	1	28	4	9	12				
15:35	0	24	3	14	12	5	5	14	5
	1	14	4	7	0	3	2	17	4
	0	13	4	1	4	8	6	10	4
	1	9	2	1	2	3	2	6	5
	3	11	3	4	1	4	5	6	1
				2	7				
15:40	1	7	2	3	1	2	6	5	3
	2	6	3	6	3	2	1	6	4
	1	4	7	8	4	7	0	12	4
	1	12	3	2	5	6	6	9	5
	0	14	2	2	0	2	18	8	8
	2	15	6						
15:45	0	21	10	19	7	8	15	8	5
	2	15	3	14	5	5	5	9	
	1	20	6	11	7	1	5	10	7
	1	26	5	21	8	3	10	14	8
	1	16	2	21	4				
	1	24	4	20	2				
15:50	1	27	7	8	1	7	8	11	8
	0	22	3	4	1	11	12	9	4
	0	16	5	10	5	14	16	6	4
	1	18	5	2	2	6	9	11	5
	2	17	5	21	8	5	4	17	10
	5	18	6	18	8				
15:55	0	18	7	0	8	8	2	11	7
	1	24	4	6	1	4	4	13	8
	0	26	7	0	2	5	5	8	7
	1	31	4	6	0	5	6	5	6
	1	28	7	2	0	11	14		
16:00	5	17	14	12	3	1	2	13	6
	0	19	9	21	8	5	5	11	4
	1	9	7	9	6	6	8	9	4
	0	9	4	1	7	7	16	10	6
	2	16	10	3	2	4	16	8	10
16:05	0	8	8	21	2	3	17	6	6
	0	7	5	3	0	3	16	3	3
	3	19	3	2	2	9	8	15	10
	0	26	19	6	1	5	4	11	7
	0	21	7	1	2			24	4
16:10	1	16	9	8	6	18	6	31	9
	1	9	5	3	14	15	5	48	16
	3	19	15	4	10	7	5	56	19
	3	16	6	0	5	12	8	54	25
	1	19	5	0	3			24	19
16:15	0	12	5	0	1	12	5	34	28
	0	8	14	21	12	11	6	41	25
	1	14	12	6	7	5	9	27	17
	0	19	16	21	11	6	5	10	6
						12	15		
16:20	5	12	15	7	15	16	14	13	8
	2	13	19	18	7	8	10	15	6
	2	7	9	13	7	16	11	9	7
	0	28	17	21	9			8	6
16:25	0	22	8	21	3	14	2	8	5
	3	15	8	21	2	12	10	5	2
	3	24	4	11	1	2	10	6	2
	2	27	9	4	8	3	9	4	2
16:30	0	31	18	5	3	2	5	10	3
	3	24	12	3	2	11	14	18	4
	3	23	6	6	3	8	10	12	6
	1	18	13	14	0	4	6	27	6
				8	4			16	7
16:35	3	27	9	6	2	4	8	14	8
	0	18	6	3	3	12	8	27	4
	4	17	5	2	0	6	10	28	6
	6	5	5	0	0	8	12	26	5
						3			
16:40	2	26	6	9	1	10	9	12	3
	2	33	10	8	10	9	7	24	4
	2	38	12	6	6	12	1	14	5
	1	24	4	5	4	5	8	14	4
	4	25	7					12	3
16:45	2	16	3	6	0	9	7	14	9
	2	15	5	13	4	10	12	22	4
	2	13	6	9	7	10	10	26	3
	2	12	12	4	3	8	11	25	6
16:50	2	25	8	5	5	6	5	18	4
	2	27	12	2	3	4	4	8	6
	2	28	14	2	6	2	8	6	7
	4	25	19	3	2	7	5	7	7
						9	4	5	7
16:55	6	19	9	4	6	9	6	7	3
	0	21	20	6	0	4	9	6	2

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Lane 1 is nearside lane
Queues in PCUs at the end of every Red Light Phase

Time	M1 (North)			A61 (East)		M1 (South)		A61 (West)	
	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
	4	18	8	14	6	8	14	3	2
	1	17	10	12	5	18	25	5	3
								11	
17:00	0	11	8	8	9	18	25	13	8
	0	15	1	6	1	9	24	15	5
	6	18	5	1	7	8	18	13	5
	5	17	4	3	1	3	15	15	3
17:05	0	15	5	1	1	0	2	34	3
	1	20	8	11	4	9	5	26	4
	2	18	7	19	8	4	12	31	3
	0	22	7	15	8	6	9	20	4
17:10	0	23	9	5	0	9	6	22	4
	1	16	8	6	7	8	10	15	7
	0	24	9	1	6	1	4	24	1
	1	25	9	5	3	7	8	17	3
17:15	0	15	7	6	4			9	7
	1	27	12	4	1	12	15	14	5
	1	33	12	16	4	15	17	11	7
	2	31	4	13	4	12	6	13	2
17:20	2	26	10	4	8	18	12	20	8
	2	17	6	6	2	15	9	23	8
	1	24	11	3	3	12	8	27	5
	2	18	10	4	3	16	7	30	5
17:25	2	16	7	4	9	10	5	27	8
	0	15	7						
	3	18	5	5	6	8	3	26	5
	2	19	7	18	2	8	5	28	5
17:30	0	24	12	21	7	2	3	9	3
	0	28	7	18	12	8	5	11	4
						6	3		
	1	21	7	2	3	5	3	16	1
17:35	0	19	1	4	2	6	5	7	5
	0	18	16	7	4	9	5	1	7
	0	20	7	4	5	4	4	2	9
						4	2	9	8
17:40	0	21	6	7	4	4	0	5	4
	2	36	9	0	3	14	6	6	3
	2	23	6	6	1	12	5	6	1
	1	27	6	5	6	8	3	7	5
17:45								3	9
	4	26	10	7	1	7	5	9	6
	1	30	15	2	1	6	6	2	4
	0	31	7	1	3	8	5	11	2
17:50	1	29	8	5	2	8	6	8	7
				4	4	1	6	6	0
	6	10	6	6	6	5	3	9	1
	1	16	8	15	4	3	6	4	6
17:55	3	15	4	3	0	2	8	8	4
	5	18	3	2	1	2	3	1	2
	0	14	5			3	7	10	4
	3	20	3	3	1	7	14	7	5
17:55	1	15	2	3	6	8	12	6	5
	1	18	6	3	2	6	4	2	2
	2	18	3	7	2	5	2	5	3
						5	2	3	1
17:55	2	15	10	3	2	7	8	3	3
	1	17	6	8	4	6	7	1	1
	2	7	1	4	3	0	3	5	1
	1	3	4	6	1	3	5	0	1
17:55	1	8	2	1	1	2	4	5	2
						1	1	3	1

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase
Queues I, J and K carried out on Tuesday 23rd April

Time	A	B	C	D	E	F	G	H	I	J	K
07:00	2	1	4	10	0	5	2	0	5	10	5
	2	0	3	2	0	6	3	1	0	5	5
	0	0	2	0	0	6	9	0	7	1	0
	0	0	4	8	0	5	8	0	0	5	1
						7	5	0	3	6	2
07:05	1	1	3	3	1	9	5	0	5	7	3
	6	0	6	2	0	6	8	0	2	1	0
	7	2	0	5	0	10	5	0	6	2	0
	6	1	2	7	3	8	4	0	1	5	1
						5	1	0	2	7	1
						6	5	0	5	0	0
07:10	3	0	0	2	1	8	10	1	5	10	4
	4	3	1	3	0	10	10	0	9	8	7
	2	2	5	0	0	11	9	0	3	9	1
	4	2	2	9	1	8	9	0	6	4	3
						11	5	0	5	3	2
07:15	9	0	0	3	1	9	5	0	8	2	1
	10	7	2	0	1	9	4	0	5	4	2
	6	2	3	3	2	9	7	0	9	6	2
	8	0	3	10	0	8	5	0	6	5	6
									4	5	3
07:20	7	3	5	4	0	7	5	0	7	1	1
	8	1	5	0	1	5	4	0	6	3	0
	10	0	6	5	3	6	6	0	3	3	4
	6	4	2	7	0	4	5	0	9	10	2
						3	2	0	8	11	5
07:25	6	2	0	3	1	8	5	0	8	9	0
	5	1	4	4	0	10	8	0	7	8	1
	5	2	5	2	1	8	8	0	6	3	0
	5	2	6	10	0	8	8	0	6	2	1
						11	2	0	3	0	1
									2	3	0
07:30	0	0	11	3	0	8	6	0	3	2	1
	0	0	3	0	0	9	10	0	8	9	3
	5	1	2	6	0	4	6	0	3	5	3
	7	2	5	7	1	4	3	0	13	8	2
									10	6	3
07:35	3	0	2	5	1	8	2	0	7	6	3
	7	0	11	8	0	3	5	0	13	7	2
	4	0	3	10	2	6	4	0	4	7	4
	4	5	5	8	0	9	5	0	5	3	2
						7	9	0	7	9	4
07:40	6	2	5	6	1	8	4	0	12	8	4
	3	2	4	3	0	5	7	0	8	2	3
	0	0	5	5	3	4	7	0	5	2	1
	1	0	3	6	0	8	4	0	2	2	3
						5	5	0	4	6	1
07:45	4	3	7	5	0	10	8	0	1	1	2
	4	1	10	7	0	8	4	0	10	4	0
	1	1	0	8	1	5	6	0	5	3	0
	3	2	4	3	0	5	6	0	6	4	2
						4	7	0	2	0	4
07:50	0	0	4	2	0	3	5	0	3	7	3
	2	1	2	2	0	9	4	0	11	5	0
	4	2	4	5	2	5	2	0	8	3	0
	3	1	4	7	1	7	8	0	7	5	2
						6	6	0	10	4	5
07:55	2	0	5	10	1	7	4	2	9	7	4
	0	0	2	4	1	5	4	0	11	6	3
	7	1	3	7	0	6	4	0	4	6	2
	3	3	2	3	0	8	9	0	6	3	6
						7	4	0			
08:00	2	2	6	7	0	5	5	0	7	2	6
	8	3	6	4	1	4	3	0	2	0	0
	3	3	2	6	1	2	3	0	11	1	0
	3	1	6	12	1	4	1	0	9	8	3
						5	6	0	12	14	4
08:05	6	7	5	2	0	10	3	0	12	12	4
	5	4	4	0	0	9	7	0	16	15	3
	5	2	5	2	0	3	3	0	11	9	3

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase
Queues I, J and K carried out on Tuesday 23rd April

Time	A	B	C	D	E	F	G	H	I	J	K
08:10	7	1	5	6	0	4	2	0	15	12	7
			8	5	1	8	2	0			
	8	4	12	10	1	8	4	0	15	8	2
	5	2	5	11	0	9	9	0	9	8	5
	3	2	2	6	0	7	6	0	2	11	5
08:15	0	0	9	9	1	6	2	2	14	5	5
	2	0	4	9	1	6	2	2	6	2	0
	0	0	13	1	1	6	2	0	10	11	2
	5	0	12	13	0	6	4	0	7	8	1
	8	3	12	11	2	7	7	0	11	5	2
08:20	5	2	4	10	0	6	3	0	4	6	2
	7	2				10	6	0	6	8	4
	7	4	5	10	0	9	4	0	13	6	2
	2	7	3	8	1	7	3	0	6	6	2
	3	5	8	2	0	6	3	0	9	8	6
08:25	1	2	9	6	0	8	10	0	10	14	0
						4	7	0			
	1	1	4	7	0	10	5	0	8	3	0
	1	0	3	5	0	6	7	0	10	7	0
	1	2	3	11	0	4	2	0	5	5	0
08:30	2	1	8	11	0	11	4	0	4	3	5
						8	4	0	7	1	1
									8	8	5
	4	2	4	6	0	8	4	0	9	12	1
	1	2	10	7	1	6	3	0	8	6	0
08:35	4	5	8	9	0	6	4	0	9	4	0
	5	0	6	4	0	6	4	0	5	8	4
						6	3	0	13	11	4
	1	3	4	9	0	7	7	0	11	12	9
	0	0	2	0	0	3	3	0	18	14	1
08:40	3	2	1	3	0	6	2	0	18	11	0
	2	2	1	4	0	8	6	0	13	5	2
	0	0	0	0	0	3	5	0			
	0	0	0	4	0	5	1	0	2	2	1
	2	1	5	10	0	5	3	0	2	9	1
08:45	0	1	5	8	0	4	3	0	8	8	4
	2	0	5	10	1	5	4	0	7	1	0
	2	0	1	2	0				16	5	0
	0	0	5	4	0	6	4	0	14	7	1
	0	0	9	9	1	5	2	0	4	5	3
08:50	3	2	10	11	3	6	3	0	10	8	3
	3	2	7	2	0	6	3	0	8	13	3
	8	2	3	4	0	2	2	0	7	11	1
						8	3	0			
	7	2	5	1	0	4	5	0	5	9	0
08:55	0	0	2	3	0	1	0	1	6	2	0
	0	0	5	7	3	4	0	0	2	3	0
	2	2	3	8	0	5	5	0	11	8	5
	7	1	8	9	1				9	2	1
	3	3	3	6	1						

Time	A	B	C	D	E	F	G	H	I	J	K
15:00	0	0	8	5	2	4	1	0	1	3	1
	0	1	5	6	0	5	1	0	9	7	0
	5	3	3	6	0	4	1	0	10	0	0
	1	1	2	4	0	3	2	0	2	2	0
	2	0	2	6	0	2	3	0	6	4	4
15:05	7	1	5	8	1	5	3	0			
	5	0	4	8	0	2	2	0	9	3	1
	2	0	4	2	0	7	2	0	4	0	0
	2	2	1	0	0	4	3	0	3	2	0
	0	0	4	6	1	5	1	0	8	0	0
15:10	5	1	5	7	1				8	5	0
	3	1	7	6	0				6	4	2
	0	0	5	4	0	7	3	0	3	6	2
	1	0	0	5	0	1	4	0	8	5	1
	0	0	7	6	0	4	0	0	2	2	0
15:15	1	0	8	0	0	4	3	0	2	0	0
	4	0				4	1	0	1	5	2
	1	1				5	4	0			
	1	3	2	8	0	11	5	0	8	5	0
	0	0	2	6	1	9	8	0	14	9	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase
Queues I, J and K carried out on Tuesday 23rd April

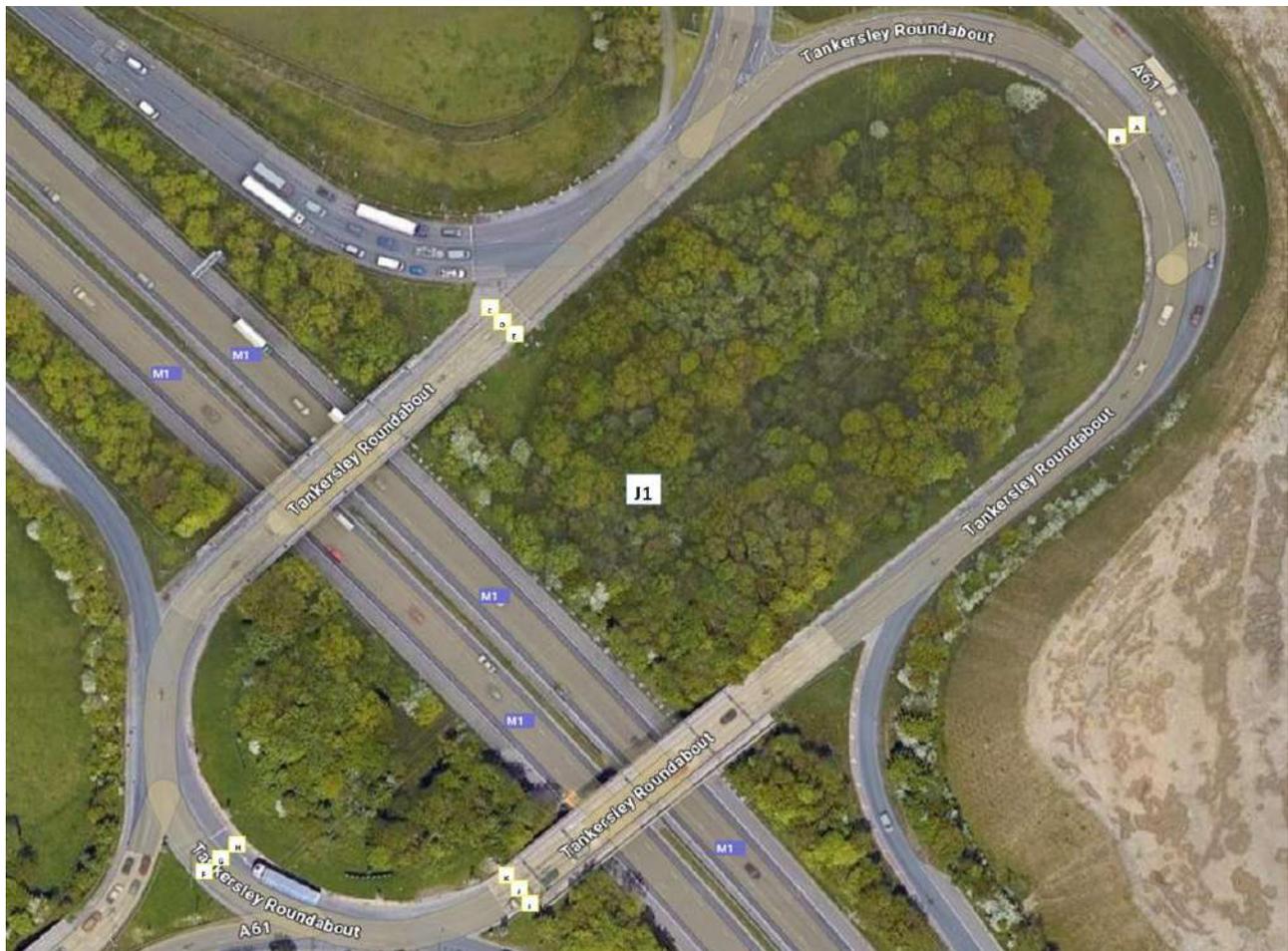
Time	A	B	C	D	E	F	G	H	I	J	K
16:30	6	5				5	1	0			
	7	5	9	7	1	4	2	0	16	10	2
	11	2	3	10	0	5	3	0	16	10	3
	5	3	11	13	2	8	1	1	20	10	0
16:35	4	1	6	10	0	2	3	0	23	10	0
						6	0	0			
	10	2	8	14	0	8	4	0	18	12	0
	5	1	11	9	1	8	4	0	12	8	2
16:40	4	2	8	16	1	6	4	0	12	9	5
	0	0	4	14	0	9	2	0	10	9	2
	2	1	6	12	1	7	4	0	13	7	3
	6	1	11	15	1	3	2	0	12	8	0
16:45	5	2	3	12	1	6	2	0	14	10	3
	3	2	4	5	0	10	3	0	10	9	3
	4	2	2	10	1	10	2	0	8	7	2
	2	2	11	13	3	8	5	0	8	8	4
16:50	7	2	7	18	3	7	3	0	8	6	2
	3	0	4	13	2	6	4	0	8	9	1
						6	2	0	9	6	1
	6	3	3	9	1	1	0	0	9	5	0
16:55	6	2	11	5	0	4	3	0	8	3	0
	4	2	4	8	0	6	5	0	10	4	0
	7	1	9	12	0	7	3	0	6	6	0
17:00	13	1	8	16	2	4	2	0	7	1	0
	8	3	5	14	1	9	3	0	11	1	1
	7	2	4	12	1	2	0	0	12	8	4
	6	3	8	10	0	1	4	5	11	8	1
17:05			9	12	0	2	0	0			
	4	2	11	13	1	7	5	0	11	5	0
	2	2	12	10	0	5	0	0	7	5	3
	1	0	5	15	0	10	1	0	9	5	1
17:10	5	0	5	11	2	8	1	0	7	3	0
	3	2							6	3	0
	6	1	5	10	1	5	1	0	10	9	1
	3	1	13	14	0	5	3	0	11	2	0
17:15	8	2	2	9	2	4	2	0	9	3	0
	7	1	2	5	1	6	2	0			
	7	1	8	9	2	9	4	0	6	5	2
	7	3	10	12	1	10	2	1	9	9	0
17:20	7	3	7	6	0	7	2	0	6	7	2
	7	0	7	5	0	8	3	0	6	8	1
						10	1	0	14	12	1
	7	2	8	6	0	11	3	0	16	14	0
17:25	10	3	12	14	1	7	3	0	13	15	2
	1	0	11	12	1	4	5	0	12	10	2
	5	2	15	13	1				5	11	2
17:30	4	1	15	18	1	8	8	0	5	7	3
	3	0	13	14	2	7	3	3	6	6	3
	8	2	8	15	5	4	4	2	2	3	1
	6	1	2	9	1	5	0	0	7	4	2
17:35									2	2	0
	3	2	2	9	2	4	1	0	5	1	0
	2	1	8	4	0	6	3	0	7	4	0
	6	1	7	9	2	4	1	1	6	3	0
17:40	4	0	3	3	0	6	2	0	5	1	0
						3	2	0	4	5	0
	2	2	0	6	0	8	2	0	1	4	0
	5	2	9	10	0	7	1	0	1	3	0
17:45	1	1	5	11	2	3	2	0	6	3	1
	6	1	7	9	1	7	2	0	4	4	0
			4	10	1	3	2	0	3	6	1
									0	7	0
17:50	8	3	4	7	0	7	0	0	11	4	2
	6	4	9	10	0	5	5	0	13	5	0
	4	4	10	9	0	5	4	0	14	4	0
	5	2	5	15	0	5	1	0	16	12	1
17:55	3	3							20	7	2
	1	0	9	15	1	8	1	0	15	8	4
	7	2	9	12	1	4	2	0	14	10	4
	8	2	6	10	0	3	0	0	21	13	4
18:00	4	2	6	11	1	3	1	1	10	8	3
						2	2	0			

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase
Queues I, J and K carried out on Tuesday 23rd April

Time	A	B	C	D	E	F	G	H	I	J	K
17:45	1	2	7	6	1	4	0	0	19	4	1
	2	3	4	9	1	6	1	0	18	3	0
	2	1	7	9	1	4	2	1	12	4	2
	2	1	3	8	0	3	0	1	13	6	1
						4	1	0	15	7	2
17:50	3	1	8	5	0	3	0	0	9	4	2
	3	1	7	13	1	4	0	0	13	6	0
	2	0	6	11	0	1	4	7	13	10	2
			6	3	0	0	5	3			
						0	1	1			
17:55	2	2	6	3	0	1	1	0	22	19	2
	1	0	4	4	0	4	2	0	23	20	2
	2	2	6	7	0	2	1	0	19	7	8
	0	1	0	4	1	0	1	0	20	18	10
			4	8	0	3	0	0			



M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Lane 1 is nearside lane
Queues in PCUs at the end of every Red Light Phase
* Queue behind the flared lanes

Time	A6195 (North)		A6195 (East)		A61			Sheffield Road			
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	* Lanes 1-3
07:00	5	3	8	0	8	9	5	6	8	3	
10	9	1	11	1	6	15	4	3	5	2	
15	0	11	1	0	4	2	0	1	4	2	
6	6	11	3	0	15	0	1	7	1	1	
		11	4					2	2	1	
07:05	2	9	11	4	0	11	2	1	5	1	
6	6	4	11	5	0	10	2	1	6	1	
5	4	0	4	0	4	7	2	1	6	1	
5	9	11	3	0	0	3	0	1	3	2	
7	1				5	15	4				
07:10	4	6	11	2	2	6	2	3	10	5	
6	5	11	2	2	2	8	3	1	12	3	
6	12	11	2	6	6	7	4	1	5	0	
6	12	6	0	0	0	9	5	3	2	1	
7	8	0	5	0				5	7	2	
07:15	5	7	8	4	2	6	4	0	5	2	
0	5	9	3	3	3	6	4	2	5	3	
9	6	4	1	2	2	15	6	5	1	2	
4	6	4	2	3	6	15	4	2	6	1	
6	9	11	3	1	1	11	4	3	8	6	
3	4	5	1	9	10	2	4	10	2	2	
5	8	2	4	2	10	5	3	4	11	3	14
13	12	10	2	3	10	9	6	2	8	4	
4	11	7	2	3	15	6	3	2	11	3	5
07:25	7	9	6	2	4	5	1	3	10	2	
7	5	11	4	2	4	15	2	5	6	4	
3	6	11	4	3	2	9	5	4	2	2	
12	3	11	3	1	5	8	1	3	6	2	
5	4	11	1	0	6	15	4	6	5	0	
07:30	5	9	9	1	0	15	4	0	5	1	
5	2	11	1	2	2	15	2	2	8	1	
3	5	11	4	5	0	15	7	4	5	3	
6	8	5	2	3	3	15	3	4	11	1	14
10	11	11	0	0				9	3	1	
07:35	9	14	11	3	6	15	9	4	10	3	
2	6	6	3	2	7	7	3	8	6	1	
4	11	5	7	6	4	2	3	11	7	4	14
0	5	9	6	2	15	5	3	3	11	3	1
		6	0	6	15	7					
07:40	13	7	10	6	10	15	9	9	8	1	
16	13	11	6	6	4	5	4	6	4	1	
10	6	8	0	4	0	4	1	4	3	4	
13	9	8	1	2	10	0	0	5	8	2	
6	9				16	6	1	10	3	0	
07:45	1	6	6	8	7	7	0	5	11	4	6
5	8	11	3	8	8	7	6	6	7	3	
6	9	7	2	9	9	9	5	6	3	1	
5	9	4	5	6	3	13	4	5	6	1	
8	12	5	3	4	4	4	3	7	4	4	
07:50	9	4	4	1	7	3	0	4	5	2	
1	10	9	5	6	9	15	6	4	6	4	
8	11	2	3	1	1	15	1	9	8	0	
4	12	5	4	1	13	5	6	5	5	0	
07:55	4	12	1	1	7	3	3	7	2	2	
6	18	8	3	2	6	13	4	3	2	3	
5	6	5	9	4	5	9	4	5	4	1	
5	5	6	5	4	6	9	4	11	8	1	1
14	6							4	4	2	
08:00	6	7	5	4	5	9	2	6	5	1	
2	4	2	4	2	2	15	10	4	10	3	
6	4	11	3	3	1	14	4	9	2	1	
3	5	6	3	2	2	15	4	7	6	2	
12	11	4	3	4	4	7	3	5	4	2	
08:05	5	5	6	7	6	15	6	6	7	7	
8	2	3	4	4	5	10	0	6	7	2	
15	9	4	4	4	7	15	4	3	6	1	
9	7	11	7	9	8	15	3	9	5	2	
08:10	1	6	8	1	6	11	1	1			
12	15	8	1	7	1	15	2	10	2	1	
5	12	8	4	6	10	15	8	9	4	2	
5	14	8	10	6	5	15	6	7	8	3	
1	9	2	10	4	6	2	4	6	2	2	
08:15	1	13		4	4	8	3	4	9	1	
3	16	11	3	0	14	7	4	8	4	4	
7	15	11	4	15	15	5	6	4	3	3	
11	5	4	6	15	15	7	4	4	5	5	
4	3	11	3	3	3	11	3	6	6	1	
08:20	4	7	3	9	11	15	8	6	8	0	
12	15	5	7	10	7	15	10	6	10	1	
3	12	10	3	5	5	15	6	5	5	6	
4	8	11	8	7	12	5	6	5	10	1	
08:25	5	4	7	4	4	11	5	4	10	1	
7	7	3	7	7	7	12	1	8	6	3	
7	14	3	10	3	10	0	3	8	5	3	
3	8	5	11	5	0	3	0	5	3	3	
6	3	7	9	6	9	4	3	2	2	1	
08:30	8	5	3	7	15	4	2	8	0	1	
6	3	5	7	11	8	2	3	2	3	2	
6	13	6	5	0	15	5	7	3	3	0	
3	4	10	4	6	15	8	4	7	4	0	
4	6	4	5	1	12			5	8	0	
08:35	12	9	2	5	0	7	4	6	3	1	
3	3	2	4	6	13	6	6	6	6	1	
13	5	4	4	8	8	15	5	5	5	2	
7	0	1	0	4	2	5	8	2	8	2	
08:40	5	8	2	6	5	8	3	6	9	1	
5	4	3	7	5	3	9	3	3	8	1	
2	6	3	2	8	11	7	9	4	4	1	
3	3	3	1	0	2	15	1	4	0	0	
08:45	4	9	0	5	5	7	6	5	5	1	
2	9	3	6	6	15	5	7	6	7	1	
7	6	3	5	15	15	11	8	3	7	4	
0	5	6	6	0	15	1	10	6	1	0	
3	3	1	6	4	3	10	3	4	4	4	
08:50	5	3	0	6	4	15	6	2	4	1	
6	9	5	3	4	15	7	4	1	1	3	
5	4	1	6	5	5	10	3	9	5	5	
3	6	3	7	6	14	8	8	5	0	0	
08:55	2	5	3	2	4	15	14	2	15	2	
3	5	2	7	9	2	9	4	9	5	2	
16	0	5	11	1	7	2	8	3	3	1	
7	0	3	4	2	12	2	4	5	3	0	
10	8	9	0	15	8	4	4	5	6	0	
18	10	2	5	5	11	3	6	2	2	2	
		2	4								
15:00	1	3	0	4	10	8	7	7	4	1	
2	1	2	1	6	3	3	5	2	2	1	
9	5	5	3	4	5	2	5	2	0	0	
5	5	2	6	2	2	3	2	3	2	2	
0	4	1	3	4	5	2	6	2	2	2	
15:05	4	6	6	0	6	6	3	1	1	0	
3	4	11	4	2	0	11	2	11	6	0	
2	2	6	3	10	3	10	3	3	3	0	
5	5	5	5	3	8	4	5	4	5	0	
3	3	2	5	1	13	5	2	1	0	0	
15:10	3	6	2	3	1	9	2	3	3	0	
6	0	0	4	13	8	4	0	0	0	0	
1	3	1	5	0	8	4	3	0	0	0	
4	8	0	3	0	10	8	3	4	2	3	
6	2	1	10	12	8	1	4	6	1	1	
0	4										
15:15	3	2	5	6	6	14	9	8	7	1	
9	10	5	3	3	15	10	8	1	0	0	
1	6	4	8	15	15	9	5	1	1	1	
4	4	1	4	3	12	4	4	2	4	1	
7	12	1	7				5	2	5	5	
15:20	6	2	4	2	4	9	4	2	1	1	
5	2	1	3	4	6	2	5	1	0	0	
8	5	1	6	2	10	6	8	6	2	2	
0	0	2	6	15	2	1	2	1	6	1	
15:25	6	2	5	7	6	11	4	8	4	5	
5	9	2	4	13	7	4	3	5	3	2	
6	8	3	4	0	15	7	4	2	2	2	
1	5	7	7	12	15	9	6	4	1	1	
7	6	5	0	11	15	9	11	3	5	5	

M1 J36 Barnsley Queues, Tuesday 12th March 2024

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* Queue behind the flared lanes

Time	A6195 (North)		A6195 (East)		A61			Sheffield Road			
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 3	Lane 1	Lane 2	Lane 3	* Lanes 1-3
15:30	3	10	0	7	2	13	9	4	7	2	
4	2	2	5	11	2	15	9	2	0	0	
4	1	7	7	16	14	9	1	3	2	2	
1	3	4	7	1	4	8	8	5	2	1	
4	8	6	6	1	7	1	1	1	2	1	
3	8	6	6	1	7	1	1	1	2	0	
4	6	2	2	3	8	10	5	2	0	0	
8	5	5	5	2	5	7	6	12	0	0	
2	10	4	4	1	3	14	12	6	0	0	
3	0	5	0	9	0	9	10	10	1	0	
10	8	1	1	3	1	9	3	3	2	0	
5	6	2	2	3	8	10	5	2	0	0	
15:40	0	4	2	4	11	13	15	4	11	4	1
10	8	4	4	4	7	12	4	9	7	1	
4	4	0	0	3	14	6	2	2	4	0	
0	5	9	2	4	7	3	4	5	3	0	
11	5	2	2	10	7	7	4	2	5	0	
15:45	4	5	2	1	16	9	9	7	6	3	
3	0	5	6	16	10	6	5	1	0	0	
7	9	2	2	16	15	5	6	8	0	0	
12	4	3	3	3	9	15	9	3	1	1	
4	6	3	3	14	9	7	3	2	2	2	
15:50	4	2	5	3	5	9	7	6	4	2	
7	6	4	8	0	12	5	9	4	4	1	
10	7	11	6	11	4	15	5	6	5	4	
2	7	3	6	4	2	15	7	9	4	4	
4	7	3	3	3	15	7	6	3	2	2	
3	8	10	4	2	14	10	4	5	2	2	
5	5	5	0	3	3	15	4	3	2	0	
3	5	3	2	2	10	12	5	4	5	0	
10	1	2	3	3	6	15	4	10	12	0	
16:00	9	6	1	1	11	15	11	15	7	1	
2	2	6	0	8	0	14	6	1	0	1	
13	5	2	11	9	9	8	10	6	6	3	
10	6	3	5	3	8	6	8	6	3	3	
9	3	3	5	4	3	0	15	4	0	0	
8	3	2	6	6	6	12	8	5	4	3	
5	6	3	1	1	8	5	6	1	2	2	
8	7	4	4	6	1	11	7	5	6	4	
11	4	3	6	5	15	15	7	6	7	7	
16:10	9	2	11	7	11	15	15	9	2	2	
5	2	11	3	0	13	7	5	3	2	2	
8	6	6	4	6	10	5	2	10	0	0	
8	6	5	4	1	6	5	4	10	0	0	
6	6	2	4	2	12	12	5	4	2	0	
4	4	2	2	2	11	9	1	11	1	1	
16:15	5	7	11	3	4	6	10	3	10	3	7
7	10	2	4	11	10	8	2	2	1	2	
5	4	6	6	6	16	3	7	15	6	2	
13	16	7	9	7	7	15	10	3	11	2	
4	10	4	7	0	15	12	11	11	2	2	
16:20	2	5	4	7	6	15	10	4	5	7	
10	5	4	11	4	15	12	12	4	2	2	
9	14	11	11	11	14	15	4	2	3	2	
4	3	7	8	12	15	5	0	3	2	2	
11	6	3	9	9	6	9	6	4	0	0	
16:25	5	2	1	5	16	15	7	9	5	0	
2	10	4	2	2	16	11	8	6	2	0	
6	11	2	2	16	13	3	4	4	0	0	
4	1	2	1	16	13	8	5	4	0	0	
16:30	2	6	5	1	7	15	5	9	6	0	
6	5	4	3	10	6	7	9	3	9	3	
12	4	2	3	2	10	15	10	2	11	2	7
9	4	4	8	8	9	15	12	11	6	2	9
7	10	6	2	12	12	14	5	10	8	2	
8	8	0	8	0	14	10	8	11	0	2	9
8	10	5	1	1	15	15	9	6	2	2	
12	7	0	4	4	15	9	7	0	0	0	
9	6	2	10	7	9	2	8	1	1	1	
3	2	7	7	6	4	12	9	5	2	14	
10	17	3	5	6	6	15	11	5	5	2	14
3	10	3	7	10	10	11	10	10	3	14	
4	3	1	4	9	2	15	11	8	2	14	
16:45	8	7	0	7	9	11	9	9	8	2	
8	11	1	3	15	1	4	14	6	1	16	
5	7	5	4	11	15	7	9	3	1	1	
4	6	2	2	11	14	11	10	1	6	14	
4	6	11	13	11	13	5	11	11	1	16	
16:50	2	7	3	9	13	15	4	11	9	1	17
8	3	1	5	7	15	8	11	2	3	16	
5	8	7	9	2	15	10	9	0	2	0	
4	7	1	2	4	15	15	2	4	1	1	
16:55	8	3	0	0	5	15	10	8	11	2	4
4	6	6	3	3	12	11	8	3	2	2	
7	5	3	3	3	15	8	0	8	0	0	
7	5	0	6	7	12	5	11	8	2	2	
4	4	1	15	11	12	12	11	8	2	2	
17:00	6	9	4	4	10	15	10	11	6	1	
5	11	5	7	12	15	4	6	1	0	0	
1	6	5	15	15	15	7	4	3	4	3	
4	7	1	0	13	12	5	6	8	0	0	
3	8	3	3	8	3	8	3	6	3	3	
17:05	15	18	10	4	15	15	11	2	2	0	
16	14	3	3	4	9	14	4	3	5	1	16
7	9	4	12	0	13	5	4	6	0	0	
5	6	3	4	4	11	5	6	5	0	0	
7	4	11	5	10	9	15	7	3	0	0	
3	3	6	5	10	15	8	5	2	0	0	
2	10	0	7	3	10	15	9	6	2	2	
8	3	4	11	1	13	4	11	4	3	10	
17:15	6	8	2	4	3	12	2	11	5	3	8
9	4	3	3	4	5	10	3	7	1	1	
10	6	3	4	16	3	12	6	9	5	1	
7	10	3	11	14	15	12	4	4	0	0	
2	7	8	10	3	12	8	7	2	1	1	
13	3	3	3	3	12	15	3	0	1	1	
17:20	4	6	4	3	15	15	7	3	3	0	
1	3	3	3	3	1	15	9	0	0	0	
10	3	4	3	4	2	15	5	2	1	1	
4	4	3	4	6	13	10	10	5	4	0	
17:25	4	7	1	4	5	10	3	2	4	2	
7	6	7	6	7	10	2	6	7	10	1	
4	7	7	2	9	8	7	1	5	8	3	
1	7	0	6	8	14	10	5	4	1	0	
17:30	4	1	3	7	11	10	3	4	0	0	
7	3	3	1	12	9	7	6	3	1	1	
3	10	5	8	15	3	7	11	2	1	1	
3	1	1	5	2	0	9	0	6	0	0	
4	3	5	2	5	12	3	5	2	1	1	
8	7	5	1	15	12	4	10	3	0	0	
4	4	11	4	15	4	15	4	5	1	1	
3	3	0	3	7	2	9	10	9	2	2	
4	11	1	5	3	15	8	1	5	2	1	
3	5	5	6	12	1	7	5	1	1	1	
17:40	4	3	1	7	12	9	8	2	5	2	
6	5	6	3	3	10	15	10	7	0	0	
5	6	7	3	3	0	15	10	4	1	1	
3	3	7	2	1	14	9	6	6	3	3	
17:45	2	3	2	2	5	8	3	7	1	1	
5	6	2	5	1	1	3	6	5	2	2	
9	5	4	6	0	8	10	4	1	0	0	
3	3	2	4	2	8	2	8	2	2	2	
6	6	2	4	4	5	9	9	5	2	2	
6	6	3	4	0	6	15	6	8	0	1	
3	3	2	1	0	8	2	1	8	2	0	
4	3	3	7	1	9	6	3	3	1	1	
4	2	2	7	4	0	7	4	2	4	2	
2	7	3	1	3	4	3	2	1	2	2	
7	8	2	3	5	4	3	3	3	1	1	
17:55	3	4	2	1	3	1	5	1	5	1	
0	2	6	9	8	7	2	4	5	1	1	
1	4	1	7	4	7	7	3	7	1	1	
1	3	3	4	7	6	3	3	3	0	0	

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase

Time	A	B	C	D	E	F	G	H	I
07:00	2	9	3	0	0	0	0	11	4
	2	11	5	0	0	0	0	9	0
	1	9	4	0	0	4	0	12	2
	3	5	4	1	0	1	0	4	3
	1	11	2						
07:05	5	5	0	0	0		0	14	3
	4	7	1	0	0		0	7	2
	2	11	7	0	0	1	0	11	2
	5	4	1	0	0	1	0	12	3
	2	3	2	0	0			4	0
07:10	2	13	3	0	0	0	0	3	1
	0	14	5	0	0	2		13	3
	2	10	1	0	0	2		12	3
	7	9	3	0	0	1		8	1
						3	1	6	3
07:15	5	9	4	0	1	0		7	0
	1	7	2	0	0	0		8	0
	3	8	3	0	0	0	1	6	2
	1	3	2	1	0	0	0	2	0
	1	8	2	0	0	3		8	0
07:20	4	10	6	0	0	1		8	2
	4	11	3	0	0	1		7	1
	4	10	2	0	0	2		8	0
	4	12	5	0	0	0		10	1
	3	9	6	0	0				
07:25	8	9	2	0	0	3		6	1
	6	7	6	0	0	0		13	2
	3	7	3	0	0	1		6	5
	3	6	3	0	0	0		8	2
								7	2
07:30	4	6	2	0	0	2		9	3
	10	8	2	0	0	0		8	2
	4	11	0	0	0	1		10	0
	5	10	3	0	0	1		7	1
	4	11	3	1	0	2		0	0
07:35	7	5	2	0	0	1		2	1
	5	9	6	0	0	5		10	7
	4	6	0	0	0	0		6	1
	8	5	2	0	0	0		5	1
	4	7	4	0	0				
07:40	6	9	4	1	0	2		5	1
	3	4	2	0	0	1		0	0
	6	4	4	0	0	3		9	0
	3	9	5	0	0	2		5	0
				0	0			6	4
07:45	5	3	3	3	0	2		2	2
	8	10	3	0	0	2		6	1
	6	8	1	0	0	1		4	0
	8	5	4	3	0	5		0	0
	5	6	2			4		7	0
07:50	2	7	7	0	0	1		7	5
	6	6	6	0	0	4		6	8
	2	8	2	0	0	4		7	2
	9	9	0	0	1	3		12	0
	6	6	4	0	0				

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase

Time	A	B	C	D	E	F	G	H	I
07:55	5	5	1	0	0	6		6	0
	4	2	1	0	0	3		4	1
	8	6	1	0	0	3		0	0
	10	7	1	0	0	4		5	0
						4		11	0
08:00	8	5	2	0	1	2		4	1
	7	7	1	0	0	5		0	0
	4	14	3	0	0	3		4	0
	5	3	0	0	0			13	0
	6	6	2	0	0			0	0
08:05	6	6	1	0	0	7		8	1
	5	6	0	0	0	2		7	0
	8	6	3	0	0	5		3	0
	2	7	2	0	0	5		8	2
	9	4	2	0	0				
08:10	9	3	2	0	0	4		9	4
	3	9	3	0	0	3		5	2
	2	9	3	0	0	3		10	1
	5	7	6	0	0	5		9	1
				0	0			7	5
08:15	4	11	10	0	0	2		10	0
	6	9	7	0	1	4		14	7
	4	8	0	0	1	5	1	10	2
	4	8	5	1	0	2		8	5
	8	6	5					6	5
08:20	6	8	2	0	0	1		11	2
	5	7	4	0	0	3		9	2
	2	9	3	0	0	3		11	3
	8	8	6	0	0	4		8	9
	8	8	2	0	0				
08:25	6	6	4	0	0	4		11	1
	5	7	2	0	0	1		4	2
	8	5	3	0	0	2		7	1
	6	5	2	0	0	3		4	2
				0	0	1		5	1
08:30	7	4	2	0	0	3		6	2
	5	4	2	1	0	3		3	0
	8	5	2	0	3	4		2	0
	2	0	0	0	0			0	0
	12	4	1						
08:35	4	7	3	1	0	4		9	2
	4	6	4	0	0	4		9	2
	6	7	5	0	0	1		7	5
	8	5	1	0	0	1		4	0
	10	6	0	0	0	2		5	0
08:40	5	8	3	0	0	5		5	0
	2	7	0	0	0	4		10	0
	7	3	1	0	0		1	0	0
	7	5	1	0	0	2		0	0
	6	0	0	0	0	3	1		
08:45	6	4	1	0	1	6		0	0
	4	5	2	0	0	5		1	0
	5	7	4	0	0	5		5	0
	8	1	0	0	0	5		5	1
	3	4	5	0	0			0	0
08:50	5	4	1	0	1	5		4	5
	5	4	3	0	0	1		3	1
	8	5	5	1	0	2		4	2
	4	4	0	0	0	1		6	5
	5	3	0	0	0			4	0
08:55	6	7	2	0	0	5		2	0
	3	6	2	0	0	5		8	3

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase

Time	A	B	C	D	E	F	G	H	I
	5	6	1	0	1	2	1	7	2
	7	6	1	0	0	0		11	2
	7	4	3	0	0			11	4

Time	A	B	C	D	E	F	G	H	I
15:00	5	3	2	0	1	5		4	1
	8	4	2	0	0	4		1	0
	4	3	1	0	0	3		2	0
	10	0	0	0	0	2		5	5
	3	5	4	0	0	4			
	5	1	2						
15:05	2	2	1	0	0	3		2	0
	10	7	2	0	0	2		1	0
	6	3	2	0	0	0		9	2
	11	1	0	0	1	2	1	3	0
	1	4	1	0	0	4		3	1
					1				
15:10	9	4	1	0	0	3		3	0
	0	3	2	0	0	1		0	0
	6	0	1	0	0	2		1	0
	0	0	1	0	0	3		0	0
	5	5	2	0	0			6	3
			0	0					
15:15	5	8	1	1	1	4	1	0	0
	6	5	1	0	0	4		5	0
	7	1	2	0	0	5		5	1
	6	0	1	1	0	3		0	1
	4	2	1			5		2	0
15:20	4	5	5	0	0	5		0	0
	0	2	1	0	0	4		4	3
	8	1	1	0	0	5		2	0
	7	6	2	0	0	5		1	0
	14	2	0	0	0			5	0
15:25	11	4	5	0	0	3		4	5
	5	5	4	0	0	0		3	0
	1	4	0	0	0	2		3	0
	7	5	0	0	0	3		5	0
	6	4	4	0	1	4			
15:30	0	6	2	0	0	3		5	2
	3	2	1	0	0	4		7	0
	8	2	2	0	0	4		2	1
	4	4	1	1	0	4		0	1
	1	4	1	0	0	4		5	2
							4	0	
15:35	11	0	0	0	0	3		0	0
	8	2	0	0	0	1		1	0
	15	4	0	0	0	3		5	7
	7	2	0	1	0	3		1	0
	4	1	1	0	0			1	1
			0	0					
15:40	2	4	1	0	0	3		4	1
	10	7	5	0	0	1		7	4
	5	6	1	0	1	3		7	1
	5	6	0	0	0	1		8	0
	4	4	5	0	0	3		3	5
	8	5	0						
15:45	2	6	5	0	1	2		5	0
	3	1	1	0	0	0		8	6
	8	6	3	0	0	3		0	1
	3	3	1	1	0	3		8	0
	8	2	3	0	0	3		4	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase

Time	A	B	C	D	E	F	G	H	I
								0	0
15:50	5	4	4	0	0	2		9	4
	2	5	1	0	0	1		2	0
	4	4	1	0	0	4		3	0
	5	7	6	0	0	3		8	4
	5	4	2	0	0	3			
15:55	4	3	3	0	0	4	1	0	0
	4	0	2	0	1	3		3	2
	5	4	0	0	0	2		0	0
	9	7	0	0	0	3		0	0
	4	5	0	0	0			5	0
16:00	5	7	3	0	0	2		4	0
	7	0	0	0	2	0		8	1
	7	6	1	0	0	3		0	0
	4	4	4	0	0			5	0
								4	2
16:05	4	1	0	0	0	4		1	0
	5	7	3	0	0	2		0	0
	2	4	2	0	0	4		2	0
	7	7	3	0	1	3		6	1
	10	4	6	0	0				
16:10	12	5	2	0	0	0		2	2
	10	3	2	0	0	3		6	1
	6	2	0	0	1	2		2	0
	14	5	0	0	1	2	1	2	1
	10	1	1	0	0	9		0	0
16:15	9	8	3	0	0	10		0	1
	0	2	1	0	0	5		12	3
	10	4	3	0	0	2		1	0
	5	3	2	0	0	8		3	0
								2	1
16:20	5	8	4	0	0	9		12	4
	4	6	5	0	0	10		10	4
	6	6	1	0	0	10		7	1
	4	3	2	0	0	9	1	4	1
	5	7	4	0	1			9	4
16:25	9	5	1	0	0	7		5	1
	12	5	0	0	0	6		4	0
	3	5	3	0	0	5		1	0
	4	5	0	0	0	5		2	0
	3	4	0	0	0				
16:30	3	4	1	0	0	2		1	0
	7	6	0	0	0	1		2	0
	8	8	3	0	0	3		0	0
	8	7	4	0	0	1		12	2
						4		4	0
16:35	10	6	3	0	0	5		2	1
	4	8	3	0	0	4		1	0
	7	5	2	0	0	5		1	0
	5	2	1	0	0	4		2	0
	6	2	1			3		1	0
16:40	7	4	2	0	1	5		1	0
	10	5	4	0	0	3		5	3
	9	1	3	0	0	4		1	3
	14	6	3	0	0	4		2	0
	8	8	2	0	0				
16:45	6	5	1	0	0	3		6	0
	4	2	2	0	0	4		0	0
	0	3	2	0	0	5		0	0
	11	1	2	0	0	4		0	0
				0	0			0	0
16:50	8	1	1	0	1	6		0	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase

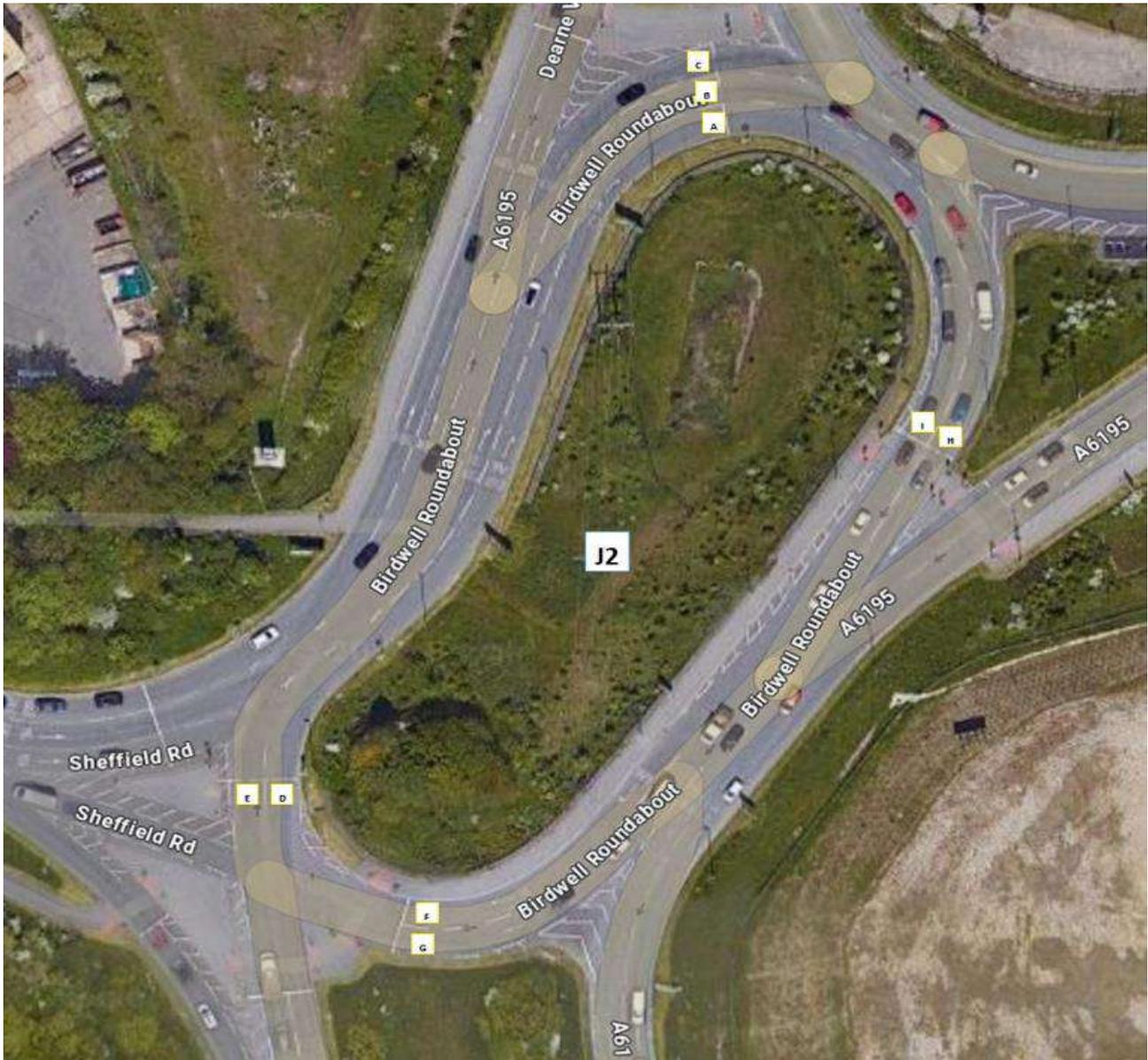
Time	A	B	C	D	E	F	G	H	I
	3	0	0	0	0	5		0	0
	9	6	1	0	0	8		4	1
	5	6	4			5		6	0
	11	3	2						
16:55	7	5	1	0	0	1		0	0
	7	9	2	0	1	5		3	0
	10	6	3	0	0	4		6	0
	11	3	0	0	0	7		1	0
	6	6	2	0	0			0	0
17:00	10	3	1	0	0	2		0	0
	5	1	2	0	0	8		0	0
	10	5	4	0	0	5		0	0
	7	7	0	0	1	4		7	0
					6				
17:05	7	9	2	0	0	3		11	1
	4	3	1	0	0	4		1	0
	10	3	0	0	0	3		3	0
	8	4	1	0	0	3		1	0
	6	4	0	1	0	3			
17:10	3	1	2	0	1	3		1	0
	6	7	1	0	1	3		3	1
	4	2	0	1	0	1		8	1
	7	2	3	0	0	3		1	0
	10	4	3	0	0			2	1
17:15	18	6	4	0	0	1		2	1
	8	6	3	0	0	2	1	5	3
	8	5	1	0	1	1		8	3
	5	4	1	0	0	6		5	1
17:20	6	5	0	0	0	2		0	0
	3	1	2	0	0	3		0	0
	11	2	0	0	0	2		0	0
	7	1	1	0	0	2		0	0
	7	1	1	0	0				
17:25	2	5	1	0	0	1		2	0
	7	7	1	0	0	4	1	9	1
	1	8	3	0	1	6		4	0
	7	5	2	0	0	2		2	0
	2	6	0	1	0				
17:30	10	5	1	0	0	4		5	1
	6	4	1	0	0	5		2	0
	4	2	0	0	0	4		5	0
	5	4	1	0	0	5		2	0
	6	3	2	0	1	2	1	5	0
17:35	11	6	1	0	0	5		2	1
	4	4	2	0	0	3		7	0
	5	3	2	0	0	4		5	2
	7	0	1	0	0	3		1	0
	7	1	1	0	0	3		1	0
17:40	9	5	2	0	0	1		0	0
	6	7	0	0	0	2		6	1
	2	4	3	0	0	6		4	0
	9	5	2	0	0	2		2	0
	2	4	1	0	0			1	0
17:45	9	3	1	0	0	3		1	0
	5	6	2	0	0	2		3	0
	2	0	0	0	0	4		1	0
	7	3	2	0	0	3		0	0
	8	5	2	0	0			3	0
17:50	8	1	1	0	0	3		2	1
	2	2	0	1	0	3	1	0	0
	9	1	1	0	0	4		1	0
	5	3	3	0	0	3		2	0
			0	0	3		0	0	

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues in PCUs at the end of every Red Light Phase

Time	A	B	C	D	E	F	G	H	I
17:55	1	1	1	0	0	4		1	0
	3	3	1	0	0	3		0	0
	6	1	2	1	0	1		1	0
	5	5	1	0	0	4		4	1
	2	1	1	0	0			0	0
4	4	0							



M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute
Lane 1 is nearside lane

	A6135	Sheffield Road	Olympus Way		A6196	
Time	Lane 1	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
07:00	0	0	0	0	0	0
07:01	0	0	0	0	0	0
07:02	1	1	1	0	0	0
07:03	0	0	0	0	0	0
07:04	0	0	1	1	0	0
07:05	0	0	0	0	0	0
07:06	0	0	0	0	0	0
07:07	0	0	0	0	0	0
07:08	0	0	0	0	0	0
07:09	0	0	0	0	0	0
07:10	0	0	0	0	0	0
07:11	0	0	3	0	0	0
07:12	0	0	0	0	0	0
07:13	0	0	0	0	0	0
07:14	0	0	0	0	0	0
07:15	0	0	0	0	0	0
07:16	0	0	0	0	0	0
07:17	0	0	0	0	0	0
07:18	0	0	0	0	0	3
07:19	0	0	0	0	0	0
07:20	0	0	0	0	0	0
07:21	0	0	0	0	0	0
07:22	0	0	2	1	0	0
07:23	0	0	1	0	0	0
07:24	0	1	0	0	0	0
07:25	0	0	0	0	0	0
07:26	0	0	0	1	0	0
07:27	0	0	2	0	0	0
07:28	0	0	0	0	0	0
07:29	0	0	0	0	0	0
07:30	0	0	0	0	0	0
07:31	0	0	0	0	0	0
07:32	0	0	0	0	0	0
07:33	0	0	0	0	0	0
07:34	0	0	0	0	0	0
07:35	0	0	0	0	0	0
07:36	0	2	0	0	0	0
07:37	0	0	0	0	0	0
07:38	0	2	0	0	0	0
07:39	0	0	0	0	0	0
07:40	0	1	0	0	0	0
07:41	0	1	0	0	0	0
07:42	0	0	0	0	0	0
07:43	0	0	0	0	0	0
07:44	0	0	0	1	0	0
07:45	0	0	0	0	0	0
07:46	0	1	0	0	0	0
07:47	0	0	0	0	0	0
07:48	0	0	0	0	0	0
07:49	0	0	1	0	0	0
07:50	0	0	0	0	0	0
07:51	0	0	3	0	0	0
07:52	0	1	0	0	0	0
07:53	0	0	0	0	0	0
07:54	0	1	0	0	0	0
07:55	0	0	0	0	0	0
07:56	0	0	0	0	0	0
07:57	0	0	2	0	0	0
07:58	0	0	4	0	0	0
07:59	0	0	0	0	0	0
08:00	0	1	0	0	0	0
08:01	0	0	0	0	0	0
08:02	0	0	0	1	0	0
08:03	0	0	0	2	0	0
08:04	0	0	1	1	0	0
08:05	0	0	0	0	0	0
08:06	0	0	0	0	0	0
08:07	8	1	0	0	0	0
08:08	0	0	1	0	0	0
08:09	0	0	0	0	0	0
08:10	0	1	0	0	0	0
08:11	0	0	0	0	0	0
08:12	0	1	0	0	0	0
08:13	0	7	0	0	0	0
08:14	0	0	2	1	0	0
08:15	0	0	2	0	0	0
08:16	0	0	0	0	0	0
08:17	0	0	1	0	0	0
08:18	0	3	0	0	0	0
08:19	0	0	0	0	0	0
08:20	0	2	0	0	0	0
08:21	0	0	0	0	0	0
08:22	0	0	1	0	0	0
08:23	0	0	0	0	1	2

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute
Lane 1 is nearside lane

	A6135	Sheffield Road	Olympus Way		A6196	
Time	Lane 1	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
08:24	0	2	0	0	2	3
08:25	0	0	1	2	0	0
08:26	0	4	0	0	0	0
08:27	0	0	0	0	0	0
08:28	0	0	2	1	0	0
08:29	2	0	0	0	0	0
08:30	0	0	0	0	0	0
08:31	0	1	0	0	0	0
08:32	0	0	0	0	0	0
08:33	0	5	0	0	0	0
08:34	0	4	0	1	0	0
08:35	0	4	0	0	0	0
08:36	0	0	0	0	0	0
08:37	0	0	0	0	0	0
08:38	2	0	0	0	0	0
08:39	0	0	0	0	0	0
08:40	1	4	1	1	0	1
08:41	0	0	1	0	0	0
08:42	0	0	0	0	0	0
08:43	0	0	0	0	0	0
08:44	0	0	0	0	0	0
08:45	0	1	0	0	0	0
08:46	0	1	0	0	0	0
08:47	0	2	0	0	0	0
08:48	0	0	0	0	0	0
08:49	0	0	0	0	0	0
08:50	0	0	1	0	1	1
08:51	0	0	0	0	0	0
08:52	0	0	0	0	0	0
08:53	0	0	0	0	0	0
08:54	0	0	0	1	0	0
08:55	0	4	4	0	0	0
08:56	1	0	0	0	0	0
08:57	0	1	2	0	0	0
08:58	0	1	0	0	0	0
08:59	0	0	0	0	0	0
15:00	0	0	0	0	0	0
15:01	0	0	0	0	0	0
15:02	0	0	0	0	0	0
15:03	0	0	0	0	0	0
15:04	0	0	0	0	0	0
15:05	0	0	0	0	0	0
15:06	0	0	0	0	0	0
15:07	0	0	0	0	0	0
15:08	0	0	0	0	0	0
15:09	2	0	0	0	0	0
15:10	0	2	0	0	0	0
15:11	0	0	0	0	0	0
15:12	0	0	0	0	0	0
15:13	0	0	0	0	0	0
15:14	0	0	2	0	0	0
15:15	0	0	2	1	0	0
15:16	0	7	0	0	0	0
15:17	0	0	0	0	0	0
15:18	0	0	0	0	0	0
15:19	0	0	0	0	0	0
15:20	0	0	0	0	0	0
15:21	0	0	0	0	0	0
15:22	0	0	0	0	0	0
15:23	0	6	0	0	0	0
15:24	2	0	0	0	0	0
15:25	0	1	0	0	0	0
15:26	1	1	2	0	0	0
15:27	0	0	1	0	0	0
15:28	0	0	0	0	0	0
15:29	0	0	0	0	0	0
15:30	0	3	2	0	0	0
15:31	0	0	0	0	0	0
15:32	0	2	1	1	0	0
15:33	0	1	0	1	0	0
15:34	2	0	0	0	0	0
15:35	0	0	0	0	0	0
15:36	0	0	0	0	0	0
15:37	5	0	0	0	0	0
15:38	0	1	1	0	0	0
15:39	0	0	0	0	0	0
15:40	0	0	0	0	0	0
15:41	0	0	1	0	0	0
15:42	0	0	0	0	0	0
15:43	0	0	0	0	0	0
15:44	0	0	0	0	0	0
15:45	0	0	0	0	0	0
15:46	0	0	0	0	0	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute
Lane 1 is nearside lane

	A6135	Sheffield Road	Olympus Way		A6196	
Time	Lane 1	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
15:47	0	0	0	0	0	0
15:48	5	2	0	0	0	0
15:49	3	2	0	0	0	0
15:50	0	5	0	0	0	0
15:51	3	3	1	0	0	0
15:52	0	0	0	0	0	0
15:53	0	0	0	0	0	0
15:54	0	0	0	0	0	0
15:55	0	0	0	0	1	0
15:56	0	0	0	0	0	0
15:57	1	0	0	0	6	1
15:58	1	0	1	0	0	0
15:59	0	0	0	0	0	0
16:00	0	0	2	0	0	0
16:01	0	0	0	0	0	0
16:02	0	0	0	0	0	0
16:03	0	0	0	0	0	0
16:04	0	0	0	0	0	0
16:05	0	0	0	0	0	0
16:06	0	0	0	0	0	0
16:07	0	0	1	0	0	0
16:08	2	5	0	0	0	0
16:09	1	0	0	0	0	0
16:10	1	4	1	0	0	0
16:11	0	0	1	0	0	0
16:12	0	0	1	0	4	0
16:13	0	0	0	0	0	0
16:14	0	0	0	0	0	0
16:15	0	0	4	0	0	0
16:16	0	0	1	0	0	0
16:17	0	0	0	0	0	0
16:18	0	0	1	0	0	0
16:19	0	0	2	0	0	0
16:20	0	1	0	0	0	0
16:21	0	1	1	0	0	0
16:22	0	0	3	0	0	0
16:23	2	2	0	0	0	0
16:24	0	0	0	0	0	0
16:25	0	1	2	0	0	0
16:26	0	0	0	0	0	0
16:27	1	1	0	0	0	0
16:28	0	0	0	0	0	0
16:29	0	0	0	0	0	0
16:30	1	0	0	0	0	0
16:31	0	0	0	0	0	0
16:32	0	0	0	0	0	0
16:33	0	0	0	0	0	0
16:34	0	0	0	0	0	0
16:35	0	3	1	1	0	0
16:36	0	0	0	0	0	0
16:37	0	0	0	0	0	0
16:38	0	2	1	0	0	0
16:39	0	2	0	0	0	0
16:40	0	0	0	0	0	0
16:41	0	1	0	0	0	0
16:42	1	2	2	0	0	0
16:43	0	0	2	0	0	0
16:44	0	1	0	0	0	0
16:45	4	0	0	0	0	0
16:46	1	0	0	0	0	0
16:47	0	1	0	0	0	0
16:48	0	0	0	0	0	0
16:49	0	0	0	0	0	0
16:50	0	0	0	0	0	0
16:51	0	1	1	0	0	0
16:52	0	0	0	0	0	0
16:53	0	0	0	0	0	0
16:54	0	0	0	0	0	0
16:55	1	0	0	0	0	0
16:56	0	0	0	0	0	0
16:57	0	4	0	0	0	0
16:58	0	2	0	0	0	0
16:59	0	0	0	0	0	0
17:00	0	0	0	0	0	0
17:01	0	0	0	0	0	0
17:02	0	1	0	0	0	0
17:03	0	1	1	0	0	0
17:04	0	1	0	0	0	0
17:05	0	2	1	0	0	0
17:06	0	0	0	0	0	0
17:07	0	3	1	0	0	1
17:08	0	2	2	0	0	0
17:09	0	0	2	0	0	0
17:10	0	2	0	0	0	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute
Lane 1 is nearside lane

	A6135	Sheffield Road	Olympus Way		A6196	
Time	Lane 1	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
17:11	3	1	2	0	0	0
17:12	0	0	0	0	0	0
17:13	0	0	3	0	5	0
17:14	0	1	0	0	0	0
17:15	0	0	0	0	0	0
17:16	0	0	0	0	0	0
17:17	0	0	0	0	0	0
17:18	0	3	2	1	0	0
17:19	1	0	0	0	0	0
17:20	0	1	1	0	0	0
17:21	0	0	0	0	0	0
17:22	0	0	0	0	0	0
17:23	0	1	0	0	0	0
17:24	0	2	0	0	0	0
17:25	0	1	0	0	0	0
17:26	0	0	7	0	0	0
17:27	0	0	0	0	0	0
17:28	0	0	1	1	0	0
17:29	0	0	0	0	0	0
17:30	0	0	0	0	0	0
17:31	0	1	0	0	0	0
17:32	2	0	0	0	0	0
17:33	0	0	0	0	0	0
17:34	0	0	0	1	0	0
17:35	0	0	0	0	0	0
17:36	0	0	1	0	0	0
17:37	2	0	0	0	0	0
17:38	0	1	0	0	0	0
17:39	0	1	0	0	0	0
17:40	0	3	3	1	0	0
17:41	2	0	0	0	0	0
17:42	0	0	0	0	0	0
17:43	0	2	0	1	0	0
17:44	0	2	0	0	0	0
17:45	0	0	0	0	0	0
17:46	0	0	1	0	3	2
17:47	0	0	1	0	0	0
17:48	0	0	0	0	0	0
17:49	0	0	2	0	0	0
17:50	0	2	0	0	0	0
17:51	0	0	0	0	0	0
17:52	0	0	0	0	0	0
17:53	0	0	0	0	0	0
17:54	0	0	0	0	0	0
17:55	0	0	0	0	0	0
17:56	0	0	1	0	0	0
17:57	0	3	0	0	0	0
17:58	0	0	0	0	0	0
17:59	0	0	0	0	0	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute
Lane 1 is nearside lane

Time	A6195 (North)		Sheffield Road	A6195 (South)		Kestrel Way	
	Lane 1	Lane 2	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
07:00	1	0	0	0	0	0	0
07:01	0	0	1	0	0	0	1
07:02	4	3	0	0	0	0	0
07:03	0	0	0	0	0	0	1
07:04	0	0	0	0	0	0	0
07:05	0	0	0	0	0	1	0
07:06	0	0	0	0	0	0	1
07:07	0	0	0	0	0	0	0
07:08	0	0	0	0	0	0	0
07:09	0	0	0	0	0	0	0
07:10	0	0	1	0	0	0	0
07:11	0	0	1	0	0	0	0
07:12	0	0	0	0	0	0	0
07:13	3	4	0	0	0	0	0
07:14	0	2	0	0	0	0	0
07:15	1	2	0	0	0	0	0
07:16	1	1	0	0	0	0	0
07:17	0	0	0	0	0	0	0
07:18	0	0	0	0	0	0	0
07:19	0	0	0	0	0	0	0
07:20	1	1	0	1	0	0	0
07:21	0	0	2	0	0	0	0
07:22	0	0	2	0	0	0	1
07:23	0	0	0	0	0	0	0
07:24	0	3	0	0	0	0	0
07:25	0	0	0	0	0	0	0
07:26	2	1	0	0	0	0	0
07:27	0	0	0	0	0	0	0
07:28	2	2	0	0	0	0	2
07:29	2	0	0	0	0	0	0
07:30	0	1	0	2	0	0	0
07:31	0	0	0	0	0	0	1
07:32	1	1	0	0	0	1	2
07:33	0	0	0	0	0	0	0
07:34	0	0	0	0	0	0	0
07:35	0	0	0	0	0	0	1
07:36	0	0	0	0	0	0	0
07:37	0	0	0	1	2	0	0
07:38	0	0	0	0	0	0	0
07:39	3	0	0	0	0	0	1
07:40	0	0	0	0	0	0	0
07:41	0	0	0	0	0	0	0
07:42	1	1	0	0	0	0	0
07:43	0	0	3	0	0	0	0
07:44	0	0	0	0	0	0	0
07:45	0	4	0	0	0	0	0
07:46	3	1	0	0	0	0	0
07:47	3	0	0	0	0	0	2
07:48	0	0	1	0	0	0	0
07:49	4	0	1	0	0	0	0
07:50	0	0	0	0	0	1	0
07:51	0	0	0	0	0	0	1
07:52	0	0	0	0	0	0	0
07:53	0	0	0	0	0	0	0
07:54	1	0	0	0	0	1	0
07:55	3	1	0	0	0	0	1
07:56	6	5	2	0	0	0	0
07:57	3	0	0	1	0	0	0
07:58	0	0	0	0	0	0	0
07:59	2	5	0	0	0	0	0
08:00	0	0	0	0	0	0	0
08:01	0	0	0	0	0	0	0
08:02	0	1	0	2	0	2	1
08:03	0	0	0	1	0	0	0
08:04	5	2	0	2	2	2	0
08:05	0	0	2	0	0	0	0
08:06	0	0	0	0	0	1	2
08:07	6	8	2	0	0	0	0
08:08	0	0	2	0	1	0	1
08:09	0	0	4	0	0	1	0
08:10	0	0	0	0	0	0	0
08:11	0	0	3	0	0	1	0
08:12	3	5	0	0	0	0	0
08:13	0	0	0	0	0	0	0
08:14	0	0	0	5	0	1	1
08:15	2	3	3	0	0	0	1
08:16	0	0	0	3	0	0	0
08:17	2	0	0	0	0	0	0
08:18	2	0	0	0	0	0	0
08:19	0	0	0	0	0	0	0
08:20	0	0	0	0	0	0	1
08:21	0	0	1	0	0	0	0
08:22	0	0	2	2	0	0	2
08:23	0	0	0	0	2	0	0
08:24	0	2	3	0	0	0	0
08:25	0	0	0	0	0	0	0
08:26	0	0	1	0	0	2	0
08:27	1	0	0	0	0	0	0
08:28	0	0	0	0	0	0	0
08:29	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0
08:31	0	0	0	0	0	0	0
08:32	1	0	3	0	0	1	0
08:33	0	0	0	0	0	0	0
08:34	0	0	1	1	0	0	1
08:35	0	0	0	1	0	0	0
08:36	0	0	0	1	1	0	0
08:37	0	0	2	2	1	0	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute
Lane 1 is nearside lane

Time	A6195 (North)		Sheffield Road	A6195 (South)		Kestrel Way	
	Lane 1	Lane 2	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
08:38	0	0	1	6	2	0	0
08:39	5	7	0	0	0	0	1
08:40	0	0	0	5	0	0	0
08:41	0	0	0	0	1	0	0
08:42	0	0	0	0	0	0	2
08:43	0	0	0	0	0	0	1
08:44	0	0	0	2	1	0	2
08:45	0	0	0	1	2	0	1
08:46	2	1	0	0	0	1	1
08:47	0	0	0	0	0	1	0
08:48	0	0	0	0	1	0	0
08:49	0	2	0	0	0	0	0
08:50	0	0	0	0	0	0	0
08:51	1	1	0	1	0	3	2
08:52	0	0	0	0	0	0	0
08:53	0	0	0	0	0	0	0
08:54	0	0	10	2	1	0	1
08:55	3	0	0	0	0	0	0
08:56	1	0	0	2	0	0	0
08:57	0	0	0	0	0	1	2
08:58	0	1	0	0	0	0	0
08:59	2	1	0	0	0	0	0

15:00	1	0	1	0	0	0	0
15:01	0	0	0	0	0	1	3
15:02	0	0	0	0	0	0	0
15:03	1	0	0	0	0	0	0
15:04	4	0	0	0	0	0	0
15:05	0	0	0	0	0	0	0
15:06	0	0	0	0	0	0	1
15:07	0	0	0	0	0	1	0
15:08	4	0	2	5	0	0	0
15:09	0	0	0	0	0	0	0
15:10	0	0	0	0	0	2	1
15:11	0	0	0	0	0	0	0
15:12	0	0	0	0	0	1	1
15:13	0	0	0	0	0	0	0
15:14	0	0	0	0	1	0	0
15:15	0	0	0	0	0	0	0
15:16	0	0	0	0	0	0	0
15:17	1	1	0	0	0	0	0
15:18	1	0	0	0	0	0	0
15:19	0	0	0	0	0	2	2
15:20	0	0	0	1	1	0	0
15:21	2	0	0	0	0	0	1
15:22	0	0	0	0	0	0	1
15:23	0	0	0	0	0	2	1
15:24	2	0	0	0	0	1	1
15:25	0	0	0	0	0	1	0
15:26	0	0	0	3	1	0	1
15:27	0	0	0	0	0	0	0
15:28	0	0	0	0	0	1	0
15:29	0	0	0	0	0	1	0
15:30	0	0	0	0	0	1	2
15:31	0	0	0	0	2	0	1
15:32	0	0	1	0	8	0	2
15:33	0	0	1	2	0	0	0
15:34	0	0	0	2	0	0	0
15:35	0	0	0	0	0	3	0
15:36	0	0	0	0	0	0	0
15:37	0	0	0	7	2	0	1
15:38	4	1	0	1	0	0	1
15:39	0	0	0	0	0	1	0
15:40	0	0	1	0	0	0	0
15:41	0	0	0	0	0	0	1
15:42	0	0	0	3	0	0	0
15:43	0	0	0	0	0	1	0
15:44	2	0	4	1	1	0	0
15:45	0	0	0	1	1	0	0
15:46	13	0	0	1	2	0	0
15:47	0	0	1	0	0	1	0
15:48	0	0	0	0	0	4	0
15:49	0	0	0	0	0	1	1
15:50	0	0	0	0	0	1	0
15:51	0	0	0	0	0	1	0
15:52	0	0	0	0	0	0	2
15:53	0	0	0	0	0	1	2
15:54	0	1	0	5	2	2	2
15:55	3	1	1	4	3	0	0
15:56	1	0	0	0	0	0	1
15:57	0	0	0	0	0	0	0
15:58	0	0	0	0	0	0	0
15:59	0	0	0	3	2	0	0
16:00	0	0	0	0	0	0	1
16:01	3	0	0	4	0	3	1
16:02	0	0	0	0	0	0	1
16:03	0	0	0	0	0	0	5
16:04	0	0	0	0	0	1	0
16:05	0	0	0	0	0	1	0
16:06	0	0	0	0	0	1	3
16:07	0	0	0	0	0	1	0
16:08	2	0	0	2	2	1	1
16:09	1	0	0	2	0	0	2
16:10	0	0	0	3	0	0	0
16:11	1	1	0	0	0	1	0
16:12	0	0	0	0	0	1	1
16:13	0	0	0	0	0	0	1
16:14	0	0	0	0	0	0	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute
Lane 1 is nearside lane

Time	A6195 (North)		Sheffield Road	A6195 (South)		Kestrel Way	
	Lane 1	Lane 2	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
16:15	0	3	0	0	0	0	0
16:16	0	0	0	0	0	0	0
16:17	2	0	0	0	0	1	0
16:18	1	3	0	0	0	0	0
16:19	0	1	0	0	0	1	3
16:20	1	0	0	0	0	0	0
16:21	0	0	0	0	0	1	2
16:22	0	0	0	5	1	0	0
16:23	0	0	0	0	0	0	0
16:24	0	0	0	0	0	0	1
16:25	0	0	0	3	1	1	0
16:26	0	0	0	0	0	2	0
16:27	0	0	0	0	0	0	0
16:28	1	0	0	0	0	1	1
16:29	0	0	0	0	0	0	0
16:30	0	0	0	0	0	1	0
16:31	0	0	0	0	0	0	0
16:32	0	0	0	0	0	0	0
16:33	0	0	0	0	0	1	2
16:34	2	2	0	4	0	3	1
16:35	0	0	0	0	0	1	2
16:36	0	0	0	0	0	1	0
16:37	0	0	0	0	0	0	0
16:38	3	2	0	0	0	1	1
16:39	0	0	5	0	0	2	3
16:40	1	0	0	0	0	0	3
16:41	9	0	0	0	0	0	2
16:42	3	0	0	0	0	0	0
16:43	0	0	0	0	0	1	0
16:44	0	0	0	0	0	0	2
16:45	0	1	0	0	0	1	2
16:46	0	0	0	0	0	1	0
16:47	1	0	0	0	0	0	1
16:48	3	2	0	0	0	0	0
16:49	1	1	0	0	0	1	0
16:50	0	3	0	0	0	1	2
16:51	0	0	0	0	0	2	1
16:52	2	1	0	0	0	0	0
16:53	0	0	0	5	0	0	0
16:54	0	0	0	0	0	2	0
16:55	0	0	0	7	1	1	2
16:56	0	0	0	0	0	2	0
16:57	0	0	0	0	0	4	2
16:58	0	1	0	0	0	3	0
16:59	0	0	0	0	0	2	1
17:00	0	0	0	0	0	0	0
17:01	0	0	0	0	0	2	1
17:02	1	0	0	0	0	0	2
17:03	0	0	0	0	0	1	0
17:04	4	1	0	0	0	1	1
17:05	8	0	0	0	0	0	1
17:06	0	0	0	0	0	1	0
17:07	2	0	0	0	0	1	3
17:08	0	0	0	0	0	2	1
17:09	1	1	0	0	0	1	0
17:10	1	1	0	0	0	1	0
17:11	0	1	0	0	0	0	0
17:12	0	0	0	0	0	2	1
17:13	0	0	0	0	0	2	0
17:14	4	1	0	0	0	4	1
17:15	0	0	0	0	0	0	0
17:16	1	0	0	0	0	1	0
17:17	0	0	0	0	0	0	0
17:18	0	0	0	0	0	1	1
17:19	3	1	0	0	0	2	0
17:20	0	0	0	1	0	0	1
17:21	0	0	0	0	0	4	0
17:22	0	0	0	0	0	0	0
17:23	0	1	0	0	0	1	1
17:24	0	0	0	4	2	0	0
17:25	0	0	0	0	0	0	3
17:26	3	2	0	0	0	0	0
17:27	0	0	0	2	0	0	0
17:28	0	0	0	0	0	0	0
17:29	1	0	0	0	0	0	0
17:30	2	0	1	0	0	1	1
17:31	0	0	0	0	0	0	0
17:32	0	0	0	0	0	3	0
17:33	0	0	0	1	1	2	0
17:34	1	1	2	0	0	0	0
17:35	0	2	0	0	0	0	0
17:36	1	1	0	0	0	1	0
17:37	0	2	0	0	0	1	1
17:38	0	0	0	0	0	2	0
17:39	1	0	0	2	1	0	0
17:40	0	0	0	0	0	1	0
17:41	0	0	0	0	0	1	0
17:42	0	0	0	0	0	0	0
17:43	0	0	0	0	0	0	1
17:44	0	0	0	2	2	0	1
17:45	0	0	0	0	0	1	2
17:46	2	0	0	0	0	1	0
17:47	0	0	0	0	0	0	0
17:48	0	0	0	1	0	0	1
17:49	0	0	1	0	0	1	0
17:50	1	1	0	0	0	0	0
17:51	0	1	2	5	1	1	0
17:52	0	0	1	0	0	2	1

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute
Lane 1 is nearside lane

	A6195 (North)		Sheffield Road	A6195 (South)		Kestrel Way	
Time	Lane 1	Lane 2	Lane 1	Lane 1	Lane 2	Lane 1	Lane 2
17:53	0	1	0	0	0	1	0
17:54	1	0	0	0	0	0	0
17:55	0	0	0	0	0	0	0
17:56	0	0	0	0	0	0	0
17:57	0	0	0	0	0	0	0
17:58	0	0	0	0	0	0	0
17:59	0	0	0	0	0	0	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute

	A6135 (North)	A6135 (South)	Starbucks Coffee
Time	Lane 1	Lane 1	Lane 1
07:00	0	0	0
07:01	0	0	0
07:02	0	0	0
07:03	0	0	0
07:04	0	0	0
07:05	0	0	0
07:06	0	0	0
07:07	0	0	0
07:08	0	0	0
07:09	0	0	0
07:10	0	0	0
07:11	0	0	0
07:12	0	0	0
07:13	0	0	0
07:14	0	0	0
07:15	0	0	0
07:16	0	0	0
07:17	0	0	0
07:18	0	0	0
07:19	0	0	0
07:20	0	0	0
07:21	0	0	0
07:22	0	0	0
07:23	0	0	0
07:24	0	0	0
07:25	0	0	0
07:26	0	0	0
07:27	0	0	0
07:28	0	0	0
07:29	0	0	0
07:30	0	0	0
07:31	0	0	0
07:32	0	0	0
07:33	0	0	0
07:34	0	0	0
07:35	0	0	0
07:36	0	0	0
07:37	0	0	0
07:38	0	0	0
07:39	0	0	0
07:40	0	0	0
07:41	0	0	0
07:42	0	0	0
07:43	0	0	0
07:44	0	0	0
07:45	0	0	0
07:46	0	0	0
07:47	0	0	0
07:48	0	0	0
07:49	0	0	0
07:50	0	0	0
07:51	0	0	0
07:52	0	0	0
07:53	0	0	0
07:54	0	0	0
07:55	0	0	0
07:56	0	0	0
07:57	0	0	0
07:58	0	0	0
07:59	0	0	0
08:00	0	0	0
08:01	0	0	0
08:02	0	0	0
08:03	0	0	0
08:04	0	1	0
08:05	0	0	0
08:06	0	0	0
08:07	0	0	0
08:08	0	0	0
08:09	0	0	0
08:10	0	0	0
08:11	0	0	0
08:12	0	0	0
08:13	0	0	0
08:14	0	0	0
08:15	0	0	0
08:16	0	0	0
08:17	0	0	0
08:18	0	0	0
08:19	0	0	0
08:20	0	0	0
08:21	0	0	0
08:22	0	0	0
08:23	0	0	0
08:24	0	0	0
08:25	0	0	0
08:26	0	0	0
08:27	0	0	0
08:28	0	0	0
08:29	0	0	0
08:30	0	0	0
08:31	0	0	0
08:32	0	0	0
08:33	0	0	0
08:34	0	0	0
08:35	0	0	0

	A6135 (North)	A6135 (South)	Starbucks Coffee
Time	Lane 1	Lane 1	Lane 1
15:00	0	0	0
15:01	0	0	0
15:02	0	0	0
15:03	0	0	0
15:04	0	0	0
15:05	0	0	0
15:06	0	0	0
15:07	0	0	1
15:08	0	1	0
15:09	0	0	0
15:10	0	0	0
15:11	0	0	0
15:12	0	0	0
15:13	0	0	0
15:14	0	0	0
15:15	0	0	0
15:16	0	0	0
15:17	0	1	0
15:18	0	0	0
15:19	0	0	0
15:20	0	0	0
15:21	0	0	0
15:22	0	0	0
15:23	0	0	0
15:24	0	0	0
15:25	0	0	0
15:26	0	0	0
15:27	0	0	0
15:28	0	0	0
15:29	0	0	0
15:30	0	0	0
15:31	0	0	0
15:32	0	0	0
15:33	0	0	0
15:34	0	0	0
15:35	0	0	0
15:36	0	0	0
15:37	0	0	0
15:38	0	0	0
15:39	0	0	0
15:40	0	0	0
15:41	0	0	0
15:42	0	0	0
15:43	0	0	0
15:44	0	0	0
15:45	0	0	0
15:46	0	0	0
15:47	0	0	0
15:48	0	0	0
15:49	0	0	0
15:50	0	0	0
15:51	0	0	0
15:52	0	0	0
15:53	0	0	0
15:54	0	0	0
15:55	0	0	0
15:56	0	0	0
15:57	0	0	0
15:58	0	0	0
15:59	0	0	0
16:00	0	0	0
16:01	0	0	0
16:02	0	0	0
16:03	0	0	0
16:04	0	0	0
16:05	0	0	0
16:06	0	0	0
16:07	0	0	0
16:08	0	0	0
16:09	0	0	0
16:10	0	0	0
16:11	0	0	0
16:12	0	0	0
16:13	0	0	0
16:14	0	0	0
16:15	0	0	0
16:16	0	0	0
16:17	0	0	0
16:18	0	0	0
16:19	0	0	0
16:20	0	0	0
16:21	0	0	0
16:22	0	0	0
16:23	0	0	0
16:24	0	0	0
16:25	0	0	0
16:26	0	0	0
16:27	0	0	0
16:28	0	0	0
16:29	0	0	0
16:30	0	0	0
16:31	0	0	0
16:32	0	0	0
16:33	0	0	0
16:34	0	0	0
16:35	0	0	0

M1 J36 Barnsley Queues, Tuesday 12th March 2024

Produced by Road Data Services Ltd.

Queues are snap queues in PCUs each minute

	A6135 (North)	A6135 (South)	Starbucks Coffee
Time	Lane 1	Lane 1	Lane 1
08:36	0	0	0
08:37	0	0	0
08:38	0	0	0
08:39	0	0	0
08:40	0	0	0
08:41	0	0	0
08:42	0	0	0
08:43	0	0	0
08:44	0	0	0
08:45	0	0	0
08:46	0	0	0
08:47	0	0	0
08:48	0	0	0
08:49	0	0	0
08:50	0	0	0
08:51	0	0	0
08:52	0	0	0
08:53	0	0	0
08:54	0	0	0
08:55	0	0	0
08:56	0	0	0
08:57	0	0	0
08:58	0	0	0
08:59	0	0	0

	A6135 (North)	A6135 (South)	Starbucks Coffee
Time	Lane 1	Lane 1	Lane 1
16:36	0	0	0
16:37	0	0	0
16:38	0	0	0
16:39	0	0	0
16:40	0	0	0
16:41	0	0	0
16:42	0	0	0
16:43	0	0	0
16:44	0	0	0
16:45	0	0	0
16:46	0	0	0
16:47	0	0	0
16:48	0	0	0
16:49	0	0	0
16:50	0	0	0
16:51	0	0	0
16:52	0	0	0
16:53	0	0	0
16:54	0	0	0
16:55	0	0	0
16:56	0	0	0
16:57	0	0	0
16:58	0	0	0
16:59	0	0	0
17:00	0	0	0
17:01	0	0	0
17:02	0	0	0
17:03	0	0	0
17:04	0	0	0
17:05	0	0	0
17:06	0	0	0
17:07	0	0	0
17:08	0	0	0
17:09	0	0	0
17:10	0	0	0
17:11	0	0	0
17:12	0	0	0
17:13	0	0	0
17:14	0	0	0
17:15	0	0	0
17:16	0	0	0
17:17	0	0	0
17:18	0	0	0
17:19	0	0	0
17:20	0	0	0
17:21	0	0	0
17:22	0	0	0
17:23	0	0	0
17:24	0	0	0
17:25	0	0	0
17:26	0	0	0
17:27	0	0	0
17:28	0	0	0
17:29	0	0	0
17:30	0	0	0
17:31	0	0	0
17:32	0	0	0
17:33	0	0	0
17:34	0	0	0
17:35	0	0	0
17:36	0	0	0
17:37	0	0	0
17:38	0	0	0
17:39	0	0	0
17:40	0	0	0
17:41	0	0	0
17:42	0	0	0
17:43	0	0	0
17:44	0	0	0
17:45	0	0	0
17:46	0	0	0
17:47	0	0	0
17:48	0	0	0
17:49	0	0	0
17:50	0	0	0
17:51	0	0	0
17:52	0	0	0
17:53	0	0	0
17:54	0	0	0
17:55	0	0	0
17:56	0	0	0
17:57	0	0	0
17:58	0	0	0
17:59	0	0	0



For and on behalf of:



GOLDTHORPE

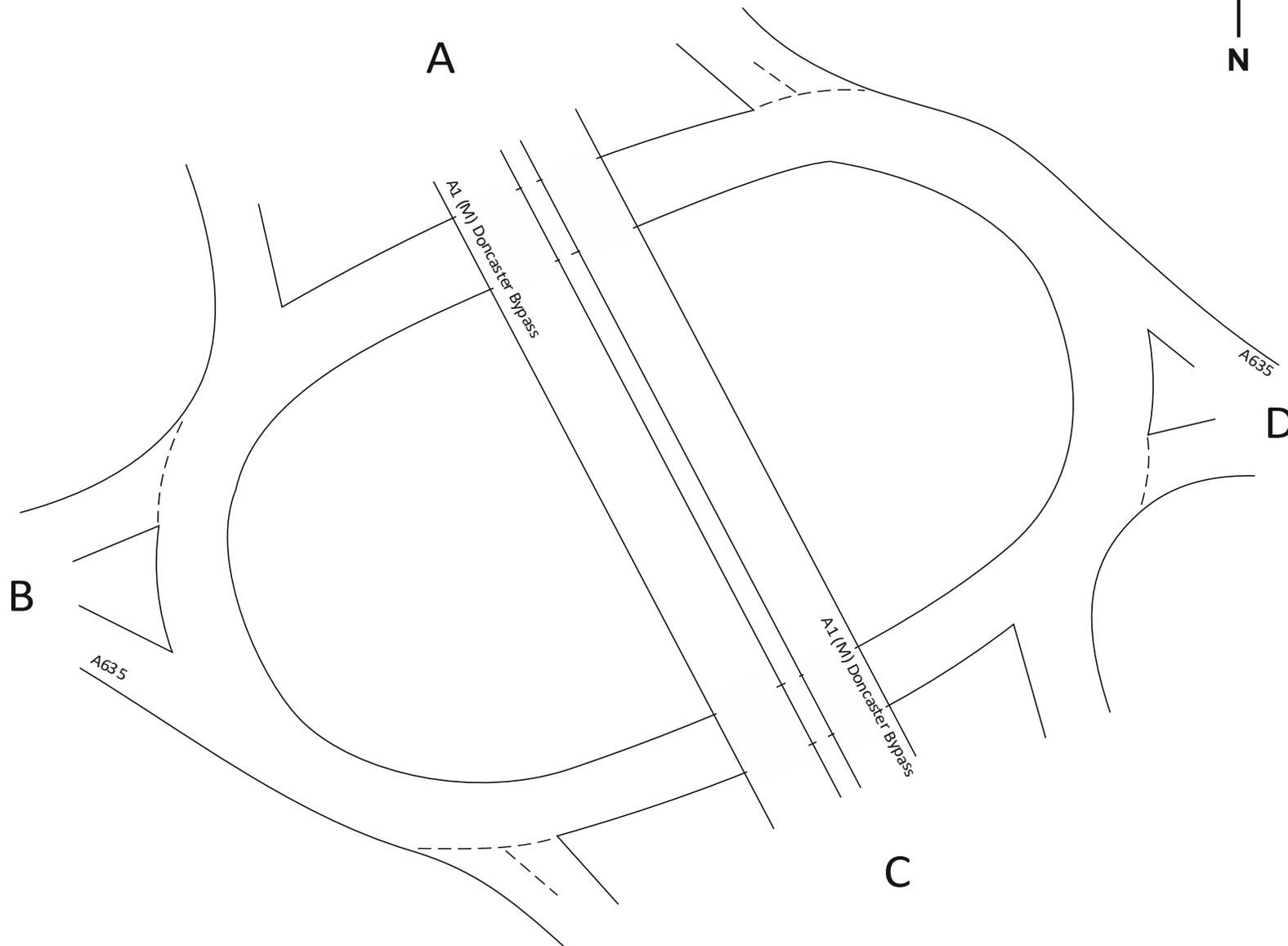
Tuesday 21 June 2022

0700-0900
1500-1800

Drawing N°: 27267 - 08

Site: 8

Location: A1 (M) Doncaster Bypass /
A635



MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

DATE: 21/06/2022

DAY: TUESDAY

TIME	B - A FROM A635 (W) TO A1 (M) DONCASTER BYPASS (N)								B - D FROM A635 (W) TO A635 (E)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	28	15	2	3	0	0	0	48	61	15	5	2	0	1	0	84
07:15	20	12	2	3	0	1	0	38	68	14	1	1	1	2	0	87
07:30	19	18	3	2	0	0	0	42	42	18	0	1	1	1	0	63
07:45	15	13	3	16	0	1	0	48	55	14	2	2	0	0	0	73
H/TOT	82	58	10	24	0	2	0	176	226	61	8	6	2	4	0	307
08:00	19	10	4	7	0	0	0	40	61	14	3	2	1	0	0	81
08:15	13	4	1	8	0	1	0	27	53	18	1	0	2	3	0	77
08:30	15	10	6	17	0	0	0	48	48	6	6	3	0	0	0	63
08:45	15	9	3	12	0	0	0	39	50	6	2	0	1	0	0	59
H/TOT	62	33	14	44	0	1	0	154	212	44	12	5	4	3	0	280
P/TOT	144	91	24	68	0	3	0	330	438	105	20	11	6	7	0	587

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

DATE: 21/06/2022

DAY: TUESDAY

TIME	B - A FROM A635 (W) TO A1 (M) DONCASTER BYPASS (N)								B - D FROM A635 (W) TO A635 (E)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
15:00	19	10	4	8	0	2	0	43	44	7	0	2	1	0	0	54
15:15	15	3	0	4	0	0	0	22	51	7	2	3	0	0	0	63
15:30	14	9	2	2	0	0	0	27	46	4	5	0	0	3	0	58
15:45	20	5	1	2	0	0	0	28	44	8	2	0	0	1	0	55
H/TOT	68	27	7	16	0	2	0	120	185	26	9	5	1	4	0	230
16:00	15	10	2	6	0	0	0	33	36	19	3	1	1	0	0	60
16:15	15	3	2	4	0	0	0	24	48	12	1	0	0	1	0	62
16:30	22	6	1	1	0	0	0	30	31	8	0	0	1	3	0	43
16:45	25	11	1	4	0	0	0	41	47	8	0	2	0	2	0	59
H/TOT	77	30	6	15	0	0	0	128	162	47	4	3	2	6	0	224
17:00	25	6	1	0	0	0	0	32	50	16	0	0	0	0	0	66
17:15	34	2	1	2	0	0	0	39	59	14	1	0	1	4	0	79
17:30	31	9	1	1	0	1	0	43	51	13	0	1	0	0	0	65
17:45	21	2	0	0	0	1	0	24	36	11	5	1	1	0	0	54
H/TOT	111	19	3	3	0	2	0	138	196	54	6	2	2	4	0	264
P/TOT	256	76	16	34	0	4	0	386	543	127	19	10	5	14	0	718

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

DATE: 21/06/2022

LOCATION: A1 (M) DONCASTER BYPASS / A635

DAY: TUESDAY

TIME	C - B FROM A1 (M) DONCASTER BYPASS (S) TO A635 (W)								C - A FROM A1 (M) DONCASTER BYPASS (S) TO A1 (M) DONCASTER BYPASS (N)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	21	16	1	12	1	0	0	51	1	0	0	1	0	0	0	2
07:15	43	20	5	12	1	1	0	82	1	0	0	0	0	0	0	1
07:30	53	14	4	13	0	0	0	84	1	0	0	0	0	0	0	1
07:45	61	19	2	13	0	0	0	95	0	0	0	0	0	0	0	0
H/TOT	178	69	12	50	2	1	0	312	3	0	0	1	0	0	0	4
08:00	59	18	5	12	0	0	0	94	0	0	0	0	0	0	0	0
08:15	73	17	5	13	0	0	0	108	0	0	0	0	0	0	0	0
08:30	57	12	6	10	0	0	0	85	0	0	0	0	0	0	0	0
08:45	50	18	4	15	0	0	0	87	0	0	0	0	0	0	0	0
H/TOT	239	65	20	50	0	0	0	374	0	0	0	0	0	0	0	0
P/TOT	417	134	32	100	2	1	0	686	3	0	0	1	0	0	0	4

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

DATE: 21/06/2022

LOCATION: A1 (M) DONCASTER BYPASS / A635

DAY: TUESDAY

TIME	C - B FROM A1 (M) DONCASTER BYPASS (S) TO A635 (W)								C - A FROM A1 (M) DONCASTER BYPASS (S) TO A1 (M) DONCASTER BYPASS (N)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
15:00	35	26	8	17	0	0	0	86	0	0	0	0	0	0	0	0
15:15	48	26	8	15	0	0	0	97	0	0	0	0	0	0	0	0
15:30	51	24	17	12	0	0	0	104	0	0	0	0	0	0	0	0
15:45	53	19	6	13	0	0	0	91	0	0	0	0	0	0	0	0
H/TOT	187	95	39	57	0	0	0	378	0	0	0	0	0	0	0	0
16:00	71	34	5	7	0	1	0	118	0	0	0	0	0	0	0	0
16:15	83	30	8	11	0	1	0	133	0	0	1	0	0	0	0	1
16:30	53	24	3	4	0	0	0	84	0	0	0	0	0	0	0	0
16:45	87	30	4	9	0	0	0	130	0	1	0	0	0	0	0	1
H/TOT	294	118	20	31	0	2	0	465	0	1	1	0	0	0	0	2
17:00	67	24	3	7	0	1	0	102	0	0	1	0	0	0	0	1
17:15	84	24	4	5	0	1	0	118	0	0	0	0	0	0	0	0
17:30	79	17	2	8	0	1	0	107	0	0	0	0	0	0	0	0
17:45	67	19	3	9	0	1	0	99	0	1	0	0	0	0	0	1
H/TOT	297	84	12	29	0	4	0	426	0	1	1	0	0	0	0	2
P/TOT	778	297	71	117	0	6	0	1269	0	2	2	0	0	0	0	4

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

DATE: 21/06/2022

DAY: TUESDAY

TIME	D - C FROM A635 (E) TO A1 (M) DONCASTER BYPASS (S)								D - B FROM A635 (E) TO A635 (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	35	17	1	0	0	0	0	53	35	15	4	0	0	1	0	55
07:15	41	17	0	3	0	0	0	61	52	16	3	0	0	2	0	73
07:30	41	16	2	1	0	0	0	60	67	11	3	1	1	1	1	85
07:45	37	10	2	0	1	0	0	50	55	15	4	2	0	0	0	76
H/TOT	154	60	5	4	1	0	0	224	209	57	14	3	1	4	1	289
08:00	55	14	2	0	0	0	0	71	50	13	3	0	1	0	0	67
08:15	28	9	2	1	2	0	0	42	53	14	2	1	0	0	0	70
08:30	58	14	2	1	1	0	0	76	51	15	3	1	1	0	0	71
08:45	33	13	2	2	1	0	0	51	45	18	3	0	0	0	0	66
H/TOT	174	50	8	4	4	0	0	240	199	60	11	2	2	0	0	274
P/TOT	328	110	13	8	5	0	0	464	408	117	25	5	3	4	1	563

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

DATE: 21/06/2022

DAY: TUESDAY

TIME	D - C FROM A635 (E) TO A1 (M) DONCASTER BYPASS (S)								D - B FROM A635 (E) TO A635 (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
15:00	29	3	0	1	0	0	0	33	60	11	5	1	0	1	0	78
15:15	38	12	0	2	0	0	0	52	53	15	2	0	0	0	0	70
15:30	20	2	0	2	0	0	0	24	69	19	1	0	3	1	0	93
15:45	28	7	5	2	0	0	0	42	57	10	0	0	1	1	0	69
H/TOT	115	24	5	7	0	0	0	151	239	55	8	1	4	3	0	310
16:00	32	7	1	1	0	0	0	41	54	20	1	1	0	0	0	76
16:15	19	6	0	0	0	1	0	26	74	18	1	0	0	1	0	94
16:30	28	5	3	0	0	0	0	36	72	8	2	0	1	3	0	86
16:45	35	3	2	1	0	0	0	41	53	13	2	1	0	0	0	69
H/TOT	114	21	6	2	0	1	0	144	253	59	6	2	1	4	0	325
17:00	41	7	2	1	0	0	0	51	76	11	0	0	1	0	0	88
17:15	39	3	2	1	0	0	0	45	68	3	2	0	0	0	0	73
17:30	47	8	2	0	0	0	0	57	64	4	1	0	1	2	0	72
17:45	22	4	3	0	0	0	0	29	55	6	1	2	0	1	0	65
H/TOT	149	22	9	2	0	0	0	182	263	24	4	2	2	3	0	298
P/TOT	378	67	20	11	0	1	0	477	755	138	18	5	7	10	0	933

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

DATE: 21/06/2022

DAY: TUESDAY

TIME	TO ARM A A1 (M) DONCASTER BYPASS (N)								FROM ARM A A1 (M) DONCASTER BYPASS (N)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	51	23	4	4	0	0	0	82	29	17	7	7	0	0	0	60
07:15	60	25	3	6	0	1	0	95	45	11	6	4	0	0	0	66
07:30	48	38	10	2	0	0	0	98	30	10	3	9	0	0	0	52
07:45	41	25	5	18	0	1	0	90	45	11	4	6	0	0	0	66
H/TOT	200	111	22	30	0	2	0	365	149	49	20	26	0	0	0	244
08:00	49	25	5	8	0	0	0	87	53	16	4	7	0	0	0	80
08:15	37	15	2	10	0	1	0	65	49	16	3	7	1	0	0	76
08:30	42	14	8	17	0	0	0	81	53	21	2	15	0	0	0	91
08:45	34	14	6	16	0	0	0	70	47	18	5	18	0	0	0	88
H/TOT	162	68	21	51	0	1	0	303	202	71	14	47	1	0	0	335
P/TOT	362	179	43	81	0	3	0	668	351	120	34	73	1	0	0	579

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

DATE: 21/06/2022

DAY: TUESDAY

TIME	TO ARM A A1 (M) DONCASTER BYPASS (N)								FROM ARM A A1 (M) DONCASTER BYPASS (N)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
15:00	44	18	6	10	0	2	0	80	36	21	5	6	0	0	0	68
15:15	35	7	3	6	0	0	0	51	61	26	1	4	0	0	0	92
15:30	38	18	2	4	1	0	0	63	53	28	2	4	0	0	0	87
15:45	46	8	2	3	0	0	0	59	50	19	5	8	0	0	0	82
H/TOT	163	51	13	23	1	2	0	253	200	94	13	22	0	0	0	329
16:00	43	18	3	6	0	1	0	71	48	24	5	7	0	3	0	87
16:15	38	8	3	6	0	0	0	55	80	35	5	3	0	4	0	127
16:30	57	10	1	3	0	1	0	72	93	41	4	3	0	1	0	142
16:45	59	15	1	6	0	0	0	81	77	22	4	3	0	0	0	106
H/TOT	197	51	8	21	0	2	0	279	298	122	18	16	0	8	0	462
17:00	56	9	3	0	0	0	0	68	65	27	2	6	0	1	0	101
17:15	63	4	1	3	0	1	0	72	72	26	7	4	0	1	0	110
17:30	70	16	2	1	0	1	0	90	83	23	4	2	0	0	0	112
17:45	55	6	1	1	0	2	0	65	69	24	1	4	0	0	0	98
H/TOT	244	35	7	5	0	4	0	295	289	100	14	16	0	2	0	421
P/TOT	604	137	28	49	1	8	0	827	787	316	45	54	0	10	0	1212

MANUAL CLASSIFIED COUNTS

JOB REF: 27267
 JOB NAME: GOLDTHORPE
 SITE: 8
 LOCATION: A1 (M) DONCASTER BYPASS / A635



DATE: 21/06/2022
 DAY: TUESDAY

TIME	TO ARM B A635 (W)								FROM ARM B A635 (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	74	43	8	18	1	1	0	145	164	78	12	18	0	2	0	274
07:15	128	43	13	15	1	3	0	203	180	68	11	13	1	3	0	276
07:30	142	33	10	21	1	1	1	209	131	69	12	11	1	3	0	227
07:45	148	44	9	21	0	0	0	222	153	57	10	24	1	1	0	246
H/TOT	492	163	40	75	3	5	1	779	628	272	45	66	3	9	0	1023
08:00	150	44	10	19	1	0	0	224	148	47	14	17	1	2	0	229
08:15	156	40	8	19	0	0	0	223	129	42	11	19	2	4	0	207
08:30	141	42	10	26	1	0	0	220	112	34	20	30	0	2	0	198
08:45	118	47	11	31	0	0	0	207	102	33	10	27	1	0	0	173
H/TOT	565	173	39	95	2	0	0	874	491	156	55	93	4	8	0	807
P/TOT	1057	336	79	170	5	5	1	1653	1119	428	100	159	7	17	0	1830

MANUAL CLASSIFIED COUNTS

JOB REF: 27267
 JOB NAME: GOLDTHORPE
 SITE: 8
 LOCATION: A1 (M) DONCASTER BYPASS / A635



DATE: 21/06/2022
 DAY: TUESDAY

TIME	TO ARM B A635 (W)								FROM ARM B A635 (W)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
15:00	119	52	14	21	0	1	0	207	96	34	7	18	1	2	0	158
15:15	134	57	11	18	0	0	0	220	133	30	5	15	1	0	0	184
15:30	155	66	20	15	3	1	0	260	108	33	9	6	1	4	0	161
15:45	149	47	9	19	1	1	0	226	115	27	6	11	0	1	0	160
H/TOT	557	222	54	73	4	3	0	913	452	124	27	50	3	7	0	663
16:00	155	72	11	14	0	3	0	255	104	44	8	17	1	0	0	174
16:15	213	76	12	14	0	5	0	320	114	29	5	14	0	1	0	163
16:30	183	56	9	7	1	4	0	260	119	31	6	8	1	3	0	168
16:45	193	60	10	12	0	0	0	275	140	36	3	12	0	2	0	193
H/TOT	744	264	42	47	1	12	0	1110	477	140	22	51	2	6	0	698
17:00	185	56	4	13	1	2	0	261	142	30	4	4	0	0	0	180
17:15	196	44	11	9	0	2	0	262	165	25	4	10	1	4	0	209
17:30	199	36	5	9	1	3	0	253	149	39	1	7	0	2	0	198
17:45	165	43	5	15	0	2	0	230	107	20	5	8	1	2	0	143
H/TOT	745	179	25	46	2	9	0	1006	563	114	14	29	2	8	0	730
P/TOT	2046	665	121	166	7	24	0	3029	1492	378	63	130	7	21	0	2091

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

DATE: 21/06/2022

DAY: TUESDAY

TIME	TO ARM C A1 (M) DONCASTER BYPASS (S)								FROM ARM C A1 (M) DONCASTER BYPASS (S)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	110	65	6	13	0	1	0	195	42	24	5	13	1	0	0	85
07:15	133	59	8	12	0	0	0	212	74	25	6	14	1	1	0	121
07:30	111	49	11	9	0	2	0	182	107	27	6	15	0	0	0	155
07:45	120	40	7	6	2	0	0	175	98	29	3	13	0	0	0	143
H/TOT	474	213	32	40	2	3	0	764	321	105	20	55	2	1	0	504
08:00	123	37	9	8	0	2	0	179	90	34	5	13	0	0	0	142
08:15	91	29	11	13	3	0	0	147	107	23	6	15	0	0	0	151
08:30	111	33	10	11	1	2	0	168	97	26	7	10	0	0	0	140
08:45	71	31	7	17	1	0	0	127	72	25	7	17	0	0	0	121
H/TOT	396	130	37	49	5	4	0	621	366	108	25	55	0	0	0	554
P/TOT	870	343	69	89	7	7	0	1385	687	213	45	110	2	1	0	1058

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

DATE: 21/06/2022

DAY: TUESDAY

TIME	TO ARM C A1 (M) DONCASTER BYPASS (S)								FROM ARM C A1 (M) DONCASTER BYPASS (S)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
15:00	62	20	3	9	0	0	0	94	66	35	10	20	1	0	0	132
15:15	106	34	3	10	1	0	0	154	81	36	9	18	0	0	0	144
15:30	68	22	2	6	1	1	0	100	80	44	19	13	0	0	0	156
15:45	79	21	8	11	0	0	0	119	94	37	7	13	0	1	0	152
H/TOT	315	97	16	36	2	1	0	467	321	152	45	64	1	1	0	584
16:00	85	22	4	11	0	0	0	122	109	49	7	10	0	1	0	176
16:15	70	20	2	10	0	1	0	103	127	56	13	12	0	1	0	209
16:30	94	22	8	7	0	0	0	131	102	40	4	4	0	0	0	150
16:45	103	20	4	7	0	0	0	134	136	54	7	10	0	0	0	207
H/TOT	352	84	18	35	0	1	0	490	474	199	31	36	0	2	0	742
17:00	108	15	5	5	0	0	0	133	118	37	7	8	0	2	0	172
17:15	111	12	4	9	0	0	0	136	134	35	5	6	1	1	0	182
17:30	114	25	2	5	0	1	0	147	135	28	4	9	0	1	0	177
17:45	72	11	3	7	0	1	0	94	122	32	3	11	0	1	0	169
H/TOT	405	63	14	26	0	2	0	510	509	132	19	34	1	5	0	700
P/TOT	1072	244	48	97	2	4	0	1467	1304	483	95	134	2	8	0	2026

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

DATE: 21/06/2022

LOCATION: A1 (M) DONCASTER BYPASS / A635

DAY: TUESDAY

TIME	TO ARM D A635 (E)								FROM ARM D A635 (E)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
07:00	92	28	13	3	0	1	0	137	92	40	7	0	0	1	0	140
07:15	110	23	3	4	1	2	0	143	132	46	4	6	0	2	0	190
07:30	103	33	2	5	1	1	0	145	136	47	12	2	1	1	1	200
07:45	105	25	4	2	0	0	0	136	118	37	8	4	1	0	0	168
H/TOT	410	109	22	14	2	4	0	561	478	170	31	12	2	4	1	698
08:00	104	33	5	3	1	0	0	146	135	42	6	1	1	0	0	185
08:15	106	31	4	3	2	3	0	149	105	34	5	4	2	0	0	150
08:30	104	25	8	3	0	0	0	140	136	33	7	2	2	0	0	180
08:45	95	20	6	4	1	0	0	126	97	36	8	6	1	0	0	148
H/TOT	409	109	23	13	4	3	0	561	473	145	26	13	6	0	0	663
P/TOT	819	218	45	27	6	7	0	1122	951	315	57	25	8	4	1	1361

MANUAL CLASSIFIED COUNTS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

DATE: 21/06/2022

LOCATION: A1 (M) DONCASTER BYPASS / A635

DAY: TUESDAY

TIME	TO ARM D A635 (E)								FROM ARM D A635 (E)							
	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT	CAR	LGV	OGV1	OGV2	PSV	MCL	PCL	TOT
15:00	87	22	6	8	2	0	0	125	114	22	7	4	0	1	0	148
15:15	111	25	3	7	0	0	0	146	111	31	5	4	0	0	0	151
15:30	93	29	7	2	0	3	0	134	113	30	1	4	4	1	0	153
15:45	96	27	5	2	0	2	0	132	111	20	6	3	1	1	0	142
H/TOT	387	103	21	19	2	5	0	537	449	103	19	15	5	3	0	594
16:00	92	40	5	5	1	1	0	144	114	35	3	2	0	1	0	155
16:15	116	45	7	1	0	2	0	171	116	29	1	2	0	2	0	150
16:30	115	41	1	0	1	3	0	161	135	17	5	2	1	4	0	164
16:45	120	36	3	4	0	2	0	165	122	19	4	4	0	0	0	149
H/TOT	443	162	16	10	2	8	0	641	487	100	13	10	1	7	0	618
17:00	124	35	4	1	0	1	0	165	148	21	3	1	1	0	0	174
17:15	137	34	4	1	2	4	0	182	136	8	4	2	0	1	0	151
17:30	134	32	4	3	0	0	0	173	150	19	4	0	1	2	0	176
17:45	117	29	5	3	1	0	0	155	111	13	5	3	0	2	0	134
H/TOT	512	130	17	8	3	5	0	675	545	61	16	6	2	5	0	635
P/TOT	1342	395	54	37	7	18	0	1853	1481	264	48	31	8	15	0	1847

QUEUE LENGTHS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

DATE: 21/06/2022

LOCATION: A1 (M) DONCASTER BYPASS / A635

DAY: TUESDAY

NOTE: Queue Lengths recorded by the number of vehicles queuing at each 1-minute interval, by lane

TIME	ARM A		ARM B		ARM C		ARM D	TIME	ARM A		ARM B		ARM C		ARM D
	A1 (M) (N)		A635 (W)		A1 (M) (S)		A635 (E)		A1 (M) (N)		A635 (W)		A1 (M) (S)		A635 (E)
	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1		LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1
07:00	0	0	0	0	0	0	0	15:00	0	0	0	0	1	3	2
07:01	0	0	0	0	1	0	1	15:01	0	0	0	0	0	1	0
07:02	0	0	0	0	0	0	0	15:02	0	0	0	0	0	0	0
07:03	0	0	0	0	0	0	1	15:03	0	0	0	0	0	0	0
07:04	0	0	0	0	0	0	0	15:04	0	0	0	0	0	0	0
07:05	1	1	0	0	0	0	0	15:05	2	0	0	0	0	0	3
07:06	0	1	0	0	1	1	0	15:06	0	0	0	0	2	0	0
07:07	1	0	0	0	0	0	4	15:07	0	0	0	0	0	0	0
07:08	0	2	0	0	0	0	3	15:08	0	0	0	0	0	0	0
07:09	0	2	0	0	0	0	2	15:09	0	2	0	0	1	2	0
07:10	1	1	0	0	0	0	0	15:10	0	0	0	0	2	0	0
07:11	0	0	0	0	0	0	0	15:11	1	0	0	0	3	1	0
07:12	0	1	0	0	0	0	0	15:12	0	0	0	0	0	0	0
07:13	1	1	0	0	0	0	0	15:13	0	0	0	0	2	0	0
07:14	0	1	0	0	0	0	0	15:14	1	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	15:15	0	0	0	0	5	0	0
07:16	0	2	0	0	0	0	0	15:16	0	0	0	0	2	1	1
07:17	0	1	0	0	0	0	0	15:17	0	0	0	0	1	0	0
07:18	0	1	0	0	3	0	3	15:18	0	0	0	0	0	0	0
07:19	0	4	0	0	0	0	5	15:19	1	4	0	0	0	0	1
07:20	0	2	0	0	0	0	0	15:20	0	5	0	0	0	0	0
07:21	0	0	0	0	1	0	0	15:21	0	0	0	0	1	0	0
07:22	0	2	0	0	0	0	3	15:22	0	0	0	0	1	1	0
07:23	0	1	0	0	1	0	0	15:23	1	0	0	0	1	0	0
07:24	0	0	0	0	1	0	0	15:24	1	0	0	0	0	0	2
07:25	0	0	0	0	1	2	0	15:25	0	0	0	0	2	0	0
07:26	1	0	0	0	0	0	3	15:26	0	0	0	0	0	0	0
07:27	0	0	0	0	0	0	0	15:27	0	0	0	0	0	0	0
07:28	0	0	0	3	0	0	4	15:28	0	0	0	0	0	0	1
07:29	0	0	0	0	0	0	4	15:29	0	0	0	0	0	0	0
07:30	0	0	0	0	1	0	0	15:30	0	0	0	0	1	0	0
07:31	0	1	0	0	0	0	2	15:31	0	1	0	0	0	0	1
07:32	0	0	0	0	0	0	0	15:32	0	0	0	0	0	0	4
07:33	0	0	0	0	1	1	0	15:33	0	0	0	0	2	0	1
07:34	1	1	0	0	1	1	0	15:34	0	0	0	0	0	0	4
07:35	0	1	0	0	1	1	0	15:35	0	1	0	0	0	0	0
07:36	0	0	0	0	1	0	0	15:36	0	0	0	0	4	0	0
07:37	0	0	0	0	1	0	2	15:37	0	3	0	0	1	1	0
07:38	0	1	0	0	2	2	0	15:38	0	0	0	0	0	0	0
07:39	0	0	0	0	2	1	5	15:39	1	0	0	0	0	1	1
07:40	0	1	0	0	4	2	2	15:40	1	0	0	0	3	0	0
07:41	0	0	0	0	0	0	0	15:41	0	0	0	0	0	0	1
07:42	0	0	0	0	1	2	0	15:42	0	1	0	0	1	0	0
07:43	1	3	0	0	2	2	0	15:43	0	2	0	0	0	0	0
07:44	0	1	0	0	1	6	0	15:44	0	0	0	0	0	0	0
07:45	0	1	0	0	0	0	0	15:45	0	0	0	0	2	3	0
07:46	0	0	0	0	0	0	4	15:46	1	1	0	0	1	0	5
07:47	0	0	0	0	1	0	0	15:47	1	0	0	0	0	0	1
07:48	0	0	0	0	2	0	2	15:48	0	0	0	0	0	0	0
07:49	0	2	0	0	4	0	0	15:49	0	0	0	0	1	1	0
07:50	0	2	0	1	0	0	0	15:50	0	0	0	1	0	0	2
07:51	0	1	0	0	0	1	0	15:51	1	0	0	0	1	1	0
07:52	1	1	0	0	0	1	0	15:52	0	1	0	0	0	0	0
07:53	0	0	0	0	1	0	0	15:53	0	0	0	0	0	0	0
07:54	1	2	0	2	2	2	0	15:54	0	0	0	0	0	0	0
07:55	0	1	0	0	0	0	3	15:55	0	0	0	0	2	2	0
07:56	0	3	0	0	3	1	0	15:56	0	0	0	0	0	0	0
07:57	0	0	0	0	7	1	0	15:57	0	4	0	0	0	0	0
07:58	0	0	0	0	7	2	1	15:58	0	0	0	0	1	3	1
07:59	1	1	0	0	4	0	0	15:59	0	5	0	0	0	0	0
08:00	0	1	0	0	2	0	0	16:00	0	0	0	0	0	0	0

QUEUE LENGTHS



JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

DATE: 21/06/2022

LOCATION: A1 (M) DONCASTER BYPASS / A635

DAY: TUESDAY

NOTE: Queue Lengths recorded by the number of vehicles queuing at each 1-minute interval, by lane

TIME	ARM A		ARM B		ARM C		ARM D	TIME	ARM A		ARM B		ARM C		ARM D
	A1 (M) (N)		A635 (W)		A1 (M) (S)		A635 (E)		A1 (M) (N)		A635 (W)		A1 (M) (S)		A635 (E)
	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1		LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1
08:01	0	0	0	0	0	0	0	16:01	0	0	0	0	0	1	0
08:02	0	0	0	0	0	0	0	16:02	0	0	0	0	3	2	0
08:03	0	4	0	0	0	0	1	16:03	0	0	2	0	1	1	0
08:04	0	0	0	4	2	1	0	16:04	1	0	0	0	2	1	0
08:05	0	0	0	0	2	0	4	16:05	0	0	0	0	0	0	0
08:06	0	1	0	0	0	1	2	16:06	0	1	1	0	3	0	0
08:07	0	1	0	0	0	0	0	16:07	0	1	0	0	0	0	0
08:08	0	2	0	0	0	0	0	16:08	0	1	0	0	2	2	0
08:09	0	1	0	0	0	0	0	16:09	0	0	0	0	0	0	0
08:10	0	0	0	0	0	0	0	16:10	0	0	0	0	1	1	0
08:11	0	1	0	0	1	0	2	16:11	0	0	0	0	0	0	0
08:12	2	6	1	0	0	0	2	16:12	0	0	0	0	0	1	0
08:13	1	5	0	0	0	0	3	16:13	0	2	0	0	5	0	1
08:14	0	3	0	0	0	0	3	16:14	0	1	0	0	0	0	1
08:15	0	0	0	2	0	0	0	16:15	0	0	0	0	0	0	2
08:16	0	0	0	0	2	0	0	16:16	0	5	0	0	0	0	0
08:17	0	0	0	0	0	1	0	16:17	0	0	0	0	0	0	1
08:18	0	0	0	2	1	0	0	16:18	0	0	0	0	3	0	0
08:19	0	0	0	0	0	0	0	16:19	0	0	0	1	2	0	0
08:20	2	2	0	0	0	0	3	16:20	0	0	0	0	4	1	3
08:21	1	5	0	0	1	0	0	16:21	1	5	0	0	2	2	0
08:22	0	1	0	0	2	0	1	16:22	0	3	0	0	2	1	0
08:23	0	0	0	0	1	0	0	16:23	1	1	0	0	0	0	0
08:24	0	0	0	0	0	0	0	16:24	1	3	0	0	0	0	1
08:25	0	0	0	0	2	0	0	16:25	1	0	0	0	8	5	0
08:26	2	0	0	0	1	0	3	16:26	0	0	0	0	0	0	0
08:27	0	0	0	0	0	0	1	16:27	0	4	0	0	0	0	0
08:28	0	0	0	0	0	0	0	16:28	0	4	0	0	0	0	2
08:29	0	0	0	0	0	0	2	16:29	0	5	0	0	2	3	0
08:30	0	0	0	0	1	0	0	16:30	0	0	0	0	5	4	0
08:31	0	0	0	1	0	0	0	16:31	3	5	1	0	2	2	0
08:32	0	0	0	0	0	0	0	16:32	0	0	0	0	0	0	1
08:33	1	1	0	0	1	1	1	16:33	0	2	0	0	2	0	3
08:34	0	0	0	0	0	0	0	16:34	0	0	1	0	3	1	0
08:35	0	2	0	0	0	0	0	16:35	0	1	0	0	3	2	0
08:36	0	0	0	0	0	0	0	16:36	0	0	0	0	0	0	0
08:37	0	0	0	0	3	0	0	16:37	0	0	0	0	0	0	5
08:38	0	0	0	0	1	1	1	16:38	0	0	0	0	0	6	0
08:39	2	0	0	0	0	0	0	16:39	1	0	0	0	2	6	0
08:40	0	1	0	0	0	0	0	16:40	2	3	0	0	0	2	0
08:41	2	4	0	0	5	2	2	16:41	0	4	0	0	2	0	0
08:42	0	0	0	0	5	0	0	16:42	0	0	0	1	2	1	1
08:43	2	2	0	0	6	1	0	16:43	1	1	0	0	0	0	0
08:44	0	1	0	0	2	2	0	16:44	1	1	0	0	1	0	1
08:45	0	1	0	0	1	0	0	16:45	0	0	0	0	3	2	0
08:46	1	0	0	0	0	0	0	16:46	1	0	0	0	4	1	2
08:47	1	2	0	0	0	0	0	16:47	0	0	0	0	3	2	0
08:48	0	1	0	0	0	0	0	16:48	0	0	0	0	0	0	1
08:49	0	0	0	0	1	0	3	16:49	0	0	0	0	0	0	1
08:50	0	0	0	0	2	2	0	16:50	0	0	0	0	3	3	0
08:51	2	3	0	0	0	0	0	16:51	0	1	0	0	0	1	0
08:52	0	0	0	0	0	0	0	16:52	0	0	0	0	0	0	0
08:53	0	0	0	0	0	1	0	16:53	0	0	0	0	1	1	1
08:54	0	0	0	0	1	1	0	16:54	0	0	0	0	0	0	0
08:55	0	0	0	0	2	0	0	16:55	0	0	2	0	2	0	0
08:56	0	0	0	0	1	0	0	16:56	0	0	0	0	0	1	0
08:57	0	0	0	0	3	0	0	16:57	0	1	0	0	6	1	0
08:58	0	0	0	0	3	0	0	16:58	1	0	0	0	0	0	0
08:59	0	0	2	0	0	0	0	16:59	0	1	0	0	0	0	0
09:00	2	1	0	0	2	2	0	17:00	0	0	0	0	8	2	0

QUEUE LENGTHS

JOB REF: 27267

JOB NAME: GOLDTHORPE

SITE: 8

LOCATION: A1 (M) DONCASTER BYPASS / A635

NOTE: Queue Lengths recorded by the number of vehicles queuing at each 1-minute interval, by lane



DATE: 21/06/2022

DAY: TUESDAY

TIME	ARM A A1 (M) (N)		ARM B A635 (W)		ARM C A1 (M) (S)		ARM D A635 (E)
	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1	LANE 2	LANE 1
	17:01	0	0	0	0	0	0
17:02	0	0	0	0	0	0	0
17:03	2	1	0	0	0	0	1
17:04	0	0	0	0	0	0	0
17:05	1	1	0	0	0	0	0
17:06	0	0	0	0	2	0	1
17:07	0	0	0	0	2	2	0
17:08	0	3	0	0	0	0	0
17:09	0	1	0	0	1	0	0
17:10	0	0	0	0	0	2	0
17:11	0	0	0	0	0	0	4
17:12	0	2	0	0	1	1	0
17:13	0	0	1	1	2	1	0
17:14	0	2	0	0	0	1	0
17:15	1	2	0	0	4	3	0
17:16	0	0	0	0	0	0	1
17:17	0	0	0	2	0	0	0
17:18	0	2	0	0	0	0	2
17:19	0	1	0	0	0	5	0
17:20	0	0	0	0	1	0	0
17:21	0	3	0	0	0	0	0
17:22	0	1	0	0	0	0	2
17:23	2	0	0	0	1	0	0
17:24	1	2	0	0	2	1	1
17:25	0	0	0	0	6	0	0
17:26	0	0	0	0	0	0	0
17:27	1	2	0	0	0	0	0
17:28	0	0	0	0	0	0	0
17:29	0	0	0	0	0	0	1
17:30	1	2	0	0	2	1	1
17:31	0	0	0	0	5	0	0
17:32	1	2	0	0	3	1	0
17:33	0	3	0	0	0	0	0
17:34	0	2	0	0	1	0	0
17:35	0	2	0	0	1	1	0
17:36	0	0	0	0	0	0	1
17:37	1	1	2	0	2	0	1
17:38	0	0	0	0	0	0	3
17:39	0	0	0	0	4	0	0
17:40	0	0	0	0	1	1	0
17:41	1	3	0	2	0	1	2
17:42	0	0	0	0	3	2	0
17:43	0	0	0	0	1	0	0
17:44	0	1	0	0	0	0	0
17:45	1	0	0	0	1	0	0
17:46	1	0	0	0	0	0	1
17:47	0	0	0	0	0	0	0
17:48	0	0	0	0	0	0	0
17:49	0	1	0	0	0	0	1
17:50	0	0	0	0	2	3	1
17:51	0	0	0	0	3	4	0
17:52	0	0	0	0	0	0	0
17:53	0	1	0	0	2	0	0
17:54	0	0	0	0	0	0	0
17:55	0	0	0	0	0	0	0
17:56	0	1	0	0	3	3	0
17:57	2	1	0	0	1	0	0
17:58	0	0	0	0	0	0	0
17:59	1	0	0	0	0	0	0
18:00	0	1	0	0	0	0	0

Appendix B

NTEM / TEMPro Traffic Growth

Traffic Growth Factors

TEMPro v8.1

Barnsley District

A Roads

Updated May 2024 for M1 J36 testing

Time Period	No Alternative Assumptions	With Alternative Assumptions
	2024-2028	2024-2028
Weekday AM Peak	1.0367	1.0274
Weekday PM Peak	1.0369	1.0284

Alternative Assumptions applied to account for proposed development and cumulative sites

Growth Period	TEMPro Projections						Alternative Assumptions					
	Base Jobs	Future Jobs	Increase	Base HH	Future HH	Increase	Base Jobs	Future Jobs	Increase	Base HH	Future HH	Increase
2024-2028	93,053	94,548	1,495	109,875	112,509	2,634	93,053	93,053	0	109,875	112,308	2,433

Predicted Jobs Associated with the Proposed Development

Employees per sqm as per Employment Density Guide 3rd Edition

Floor Area (sqm)	204,000
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Use	Split	Floor Area (sqm)	sqm/Employee	Employees
B8	70%	142,800	77	1,855
B2	30%	61,200	36	1,700
Total				3,555

Predicted Jobs Associated with Cumulative Developments

Use	Quantum	sqm/Employee	Employees
B1 Floor Area (sqm)	2,323	12	194
B2 Floor Area (sqm)	69,192	36	1,922
B8 Floor Area (sqm)	147,258	77	1,912
Total			4,028

Total Jobs (Proposed and Cumulative Developments)

Total Jobs	7,583
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Number of jobs considered for proposed and cumulative developments outstrips the TEMPro job increases for the Barnsley district for 2028. Future job projections therefore reduced to base level.

Predicted Households Associated with Cumulative Developments

Households	201
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Number of jobs households for cumulative developments (118+83) is less than than TEMPro household increase for the Barnsley district for 2028. Future household projections reduced accordingly.

Appendix C

Vehicle Trip Distribution

LGV Trip Distribution

Source: WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level), 2011 Census, Place of Work: Barnsley 022 and 025

Reference	Route	Trip %					Total	Car/LGV Trips by Route					
		A	B	C	D	E		AM Peak Hour			PM Peak Hour		
								Arr.	Dep.	Total	Arr.	Dep.	Total
1	Billingley Green Lane	2.3%					2.3%	6	1	7	1	6	7
2	Nicholas Lane	4.7%					4.7%	12	2	14	3	12	15
3	Barrowfield Road		4.7%				4.7%	12	2	14	3	12	15
4	Red Hill Lane	0.8%					0.8%	2	0	2	0	2	3
5	A1(M) North	1.0%	0.1%				1.0%	3	0	3	1	3	3
6	A635 Barnsley Road	2.5%					2.5%	6	1	7	1	7	8
7	A1(M) South	5.6%	1.6%				7.2%	18	3	21	4	19	23
8	Barnsley Road	6.1%					6.1%	15	3	18	3	16	20
9	Highgate Lane (South)	17.9%	3.6%				21.4%	54	9	63	12	57	69
10	A633 Manvers Way	1.5%	0.3%				1.8%	4	1	5	1	5	6
11	B6273 Pontefract Road	9.9%	1.8%	0.4%			12.1%	30	5	36	7	32	39
12	A633 Wath Road	2.8%					2.8%	7	1	8	2	7	9
13	A6195 Dearne Valley Parkway	6.1%	4.3%				10.5%	26	5	31	6	28	34
13A	Roebuck Hill		0.4%				0.4%	1	0	1	0	1	1
13B	B6096	1.3%					1.3%	3	1	4	1	3	4
13C	Sheffield Road		0.6%				0.6%	1	0	2	0	2	2
13D	M1 South		1.8%				1.8%	4	1	5	1	5	6
13E	A61	2.8%	0.4%				3.2%	8	1	9	2	8	10
13F	M1 North	2.1%	1.2%				3.2%	8	1	10	2	9	10
14	A635 Doncaster Road	9.8%	3.1%				12.9%	33	6	38	7	34	42
15	A6195 Park Spring Road	8.2%	1.1%				9.2%	23	4	27	5	25	30
		79.0%	20.6%	0.4%	0.0%	0.0%	100.0%	251	44	295	56	266	322

< Includes 10% reduction in line with DFT Circular

Place of Usual Residence	Vehicle Trips		Route Assignment					Proportion by Route (%)					Trips by Route (%)						
	Number of Trips	%	A	B	C	D	E	A	B	C	D	E	Total	A	B	C	D	E	Total
E02001509 : Barnsley 001	11	0.6%	15					100%					100.0%	0.6%					0.6%
E02001510 : Barnsley 002	15	0.8%	15					100%					100.0%	0.8%					0.8%
E02001511 : Barnsley 003	17	0.9%	15					100%					100.0%	0.9%					0.9%
E02001512 : Barnsley 004	21	1.1%	14	15				50%	50%				100.0%	0.6%	0.6%				1.1%
E02001513 : Barnsley 005	12	0.6%	13F					100%					100.0%	0.6%					0.6%
E02001514 : Barnsley 006	18	1.0%	15					100%					100.0%	1.0%					1.0%
E02001515 : Barnsley 007	19	1.0%	14	15				50%	50%				100.0%	0.5%	0.5%				1.0%
E02001516 : Barnsley 008	17	0.9%	14					100%					100.0%	0.9%					0.9%
E02001517 : Barnsley 009	27	1.5%	14					100%					100.0%	1.5%					1.5%
E02001518 : Barnsley 010	18	1.0%	14					100%					100.0%	1.0%					1.0%
E02001519 : Barnsley 011	15	0.8%	14					100%					100.0%	0.8%					0.8%
E02001520 : Barnsley 012	20	1.1%	13F	14				50%	50%				100.0%	0.5%	0.5%				1.1%
E02001521 : Barnsley 013	16	0.9%	14					100%					100.0%	0.9%					0.9%
E02001522 : Barnsley 014	173	9.3%	2	3				50%	50%				100.0%	4.7%	4.7%				9.3%
E02001523 : Barnsley 015	35	1.9%	14					100%					100.0%	1.9%					1.9%
E02001524 : Barnsley 016	11	0.6%	13F					100%					100.0%	0.6%					0.6%
E02001525 : Barnsley 017	7	0.4%	14					100%					100.0%	0.4%					0.4%
E02001526 : Barnsley 018	8	0.4%	14					100%					100.0%	0.4%					0.4%
E02001527 : Barnsley 019	11	0.6%	13F	14				50%	50%				100.0%	0.3%	0.3%				0.6%
E02001528 : Barnsley 020	84	4.5%	1	14				50%	50%				100.0%	2.3%	2.3%				4.5%
E02001529 : Barnsley 021	19	1.0%	14					100%					100.0%	1.0%					1.0%
E02001530 : Barnsley 022	129	7.0%	8	9				50%	50%				100.0%	3.5%	3.5%				7.0%
E02001531 : Barnsley 023	19	1.0%	12					100%					100.0%	1.0%					1.0%
E02001532 : Barnsley 024	19	1.0%	13E					100%					100.0%	1.0%					1.0%
E02001533 : Barnsley 025	198	10.7%	9					100%					100.0%	10.7%					10.7%
E02001534 : Barnsley 026	33	1.8%	12					100%					100.0%	1.8%					1.8%
E02001535 : Barnsley 027	4	0.2%	13E					100%					100.0%	0.2%					0.2%
E02001536 : Barnsley 028	22	1.2%	13B	13C				50%	50%				100.0%	0.6%	0.6%				1.2%
E02001537 : Barnsley 029	16	0.9%	11	13A				50%	50%				100.0%	0.4%	0.4%				0.9%
E02001538 : Barnsley 030	13	0.7%	13B					100%					100.0%	0.7%					0.7%
E02001540 : Doncaster 002	2	0.1%	4					100%					100.0%	0.1%					0.1%
E02001542 : Doncaster 004	3	0.2%	6	7				50%	50%				100.0%	0.1%	0.1%				0.2%
E02001543 : Doncaster 005	5	0.3%	4					100%					100.0%	0.3%					0.3%
E02001544 : Doncaster 006	1	0.1%	6	7				50%	50%				100.0%	0.0%	0.0%				0.1%
E02001545 : Doncaster 007	11	0.6%	6	7				50%	50%				100.0%	0.3%	0.3%				0.6%
E02001546 : Doncaster 008	6	0.3%	6	7				50%	50%				100.0%	0.2%	0.2%				0.3%
E02001547 : Doncaster 009	8	0.4%	4					100%					100.0%	0.4%					0.4%
E02001548 : Doncaster 010	1	0.1%	6					100%					100.0%	0.1%					0.1%
E02001549 : Doncaster 011	3	0.2%	6	7				50%	50%				100.0%	0.1%	0.1%				0.2%
E02001550 : Doncaster 012	4	0.2%	6					100%					100.0%	0.2%					0.2%
E02001551 : Doncaster 013	2	0.1%	6					100%					100.0%	0.1%					0.1%
E02001552 : Doncaster 014	1	0.1%	6	7				50%	50%				100.0%	0.0%	0.0%				0.1%
E02001553 : Doncaster 015	2	0.1%	6					100%					100.0%	0.1%					0.1%
E02001554 : Doncaster 016	8	0.4%	6					100%					100.0%	0.4%					0.4%
E02001555 : Doncaster 017	4	0.2%	6	7				50%	50%				100.0%	0.1%	0.1%				0.2%
E02001556 : Doncaster 018	4	0.2%	6	7				50%	50%				100.0%	0.1%	0.1%				0.2%
E02001557 : Doncaster 019	9	0.5%	6	7				50%	50%				100.0%	0.2%	0.2%				0.5%
E02001558 : Doncaster 020	39	2.1%	8					100%					100.0%	2.1%					2.1%
E02001559 : Doncaster 021	9	0.5%	8					100%					100.0%	0.5%					0.5%
E02001560 : Doncaster 022	1	0.1%	6	7				50%	50%				100.0%	0.0%	0.0%				0.1%
E02001561 : Doncaster 023	1	0.1%	7					100%					100.0%	0.1%					0.1%
E02001562 : Doncaster 024	4	0.2%	6	7				50%	50%				100.0%	0.1%	0.1%				0.2%
E02001563 : Doncaster 025	6	0.3%	6	7				50%	50%				100.0%	0.2%	0.2%				0.3%
E02001564 : Doncaster 026	4	0.2%	7					100%					100.0%	0.2%					0.2%
E02001565 : Doncaster 027	5	0.3%	6	7				50%	50%				100.0%	0.1%	0.1%				0.3%
E02001566 : Doncaster 028	5	0.3%	7					100%					100.0%	0.3%					0.3%
E02001568 : Doncaster 030	13	0.7%	9					100%					100.0%	0.7%					0.7%
E02001569 : Doncaster 031	42	2.3%	9					100%					100.0%	2.3%					2.3%
E02001570 : Doncaster 032	3	0.2%	9					100%					100.0%	0.2%					0.2%
E02001571 : Doncaster 033	11	0.6%	7					100%					100.0%	0.6%					0.6%
E02001572 : Doncaster 034	2	0.1%	7					100%					100.0%	0.1%					0.1%
E02001573 : Doncaster 035	13	0.7%	9					100%					100.0%	0.7%					0.7%
E02001574 : Doncaster 036	1	0.1%	7					100%					100.0%	0.1%					0.1%
E02001576 : Doncaster 038	2	0.1%	7					100%					100.0%	0.1%					0.1%
E02001577 : Doncaster 039	7	0.4%	7					100%					100.0%	0.4%					0.4%
E02001611 : Sheffield 001	3	0.2%	13E					100%					100.0%	0.2%					0.2%
E02001613 : Sheffield 003	2	0.1%	13E					100%					100.0%	0.1%					0.1%
E02001614 : Sheffield 004	2	0.1%	11					100%					100.0%	0.1%					0.1%
E02001615 : Sheffield 005	3	0.2%	13E					100%					100.0%	0.2%					0.2%
E02001616 : Sheffield 006	4	0.2%	11					100%					100.0%	0.2%					0.2%
E02001618 : Sheffield 008	3	0.2%	13E					100%					100.0%	0.2%					0.2%
E02001619 : Sheffield 009	1	0.1%	13E					100%					100.0%	0.1%					0.1%
E02001620 : Sheffield 010	1	0.1%	11					100%					100.0%	0.1%					0.1%
E02001621 : Sheffield 011	2	0.1%	11					100%											

LGV Trip Distribution

Source: WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level), 2011 Census, Place of Work: Barnsley 022 and 025

Reference	Route	Trip %					Total	Car/LGV Trips by Route					
		A	B	C	D	E		AM Peak Hour			PM Peak Hour		
								Arr.	Dep.	Total	Arr.	Dep.	Total
1	Billingley Green Lane	2.3%					2.3%	6	1	7	1	6	7
2	Nicholas Lane	4.7%					4.7%	12	2	14	3	12	15
3	Barrowfield Road		4.7%				4.7%	12	2	14	3	12	15
4	Red Hill Lane	0.8%					0.8%	2	0	2	0	2	3
5	A1(M) North	1.0%	0.1%				1.0%	3	0	3	1	3	3
6	A635 Barnsley Road	2.5%					2.5%	6	1	7	1	7	8
7	A1(M) South	5.6%	1.6%				7.2%	18	3	21	4	19	23
8	Barnsley Road	6.1%					6.1%	15	3	18	3	16	20
9	Highgate Lane (South)	17.9%	3.6%				21.4%	54	9	63	12	57	69
10	A633 Manvers Way	1.5%	0.3%				1.8%	4	1	5	1	5	6
11	B6273 Pontefract Road	9.9%	1.8%	0.4%			12.1%	30	5	36	7	32	39
12	A633 Wath Road	2.8%					2.8%	7	1	8	2	7	9
13	A6195 Dearne Valley Parkway	6.1%	4.3%				10.5%	26	5	31	6	28	34
13A	Roebuck Hill		0.4%				0.4%	1	0	1	0	1	1
13B	B6096	1.3%					1.3%	3	1	4	1	3	4
13C	Sheffield Road		0.6%				0.6%	1	0	2	0	2	2
13D	M1 South		1.8%				1.8%	4	1	5	1	5	6
13E	A61	2.8%	0.4%				3.2%	8	1	9	2	8	10
13F	M1 North	2.1%	1.2%				3.2%	8	1	10	2	9	10
14	A635 Doncaster Road	9.8%	3.1%				12.9%	33	6	38	7	34	42
15	A6195 Park Spring Road	8.2%	1.1%				9.2%	23	4	27	5	25	30
		79.0%	20.6%	0.4%	0.0%	0.0%	100.0%	251	44	295	56	266	322

< Includes 10% reduction in line with DFT Circular

Place of Usual Residence	Vehicle Trips		Route Assignment					Proportion by Route (%)					Trips by Route (%)						
	Number of Trips	%	A	B	C	D	E	A	B	C	D	E	Total	A	B	C	D	E	Total
E02001579 : Rotherham 002	24	1.3%	10	11				50%	50%				100.0%	0.6%	0.6%				1.3%
E02001580 : Rotherham 003	33	1.8%	9					100%					100.0%	1.8%					1.8%
E02001581 : Rotherham 004	16	0.9%	9					100%					100.0%	0.9%					0.9%
E02001582 : Rotherham 005	5	0.3%	10	11				50%	50%				100.0%	0.1%	0.1%				0.3%
E02001583 : Rotherham 006	7	0.4%	10	11				50%	50%				100.0%	0.2%	0.2%				0.4%
E02001584 : Rotherham 007	14	0.8%	11					100%					100.0%	0.8%					0.8%
E02001585 : Rotherham 008	11	0.6%	10	11				50%	50%				100.0%	0.3%	0.3%				0.6%
E02001586 : Rotherham 009	8	0.4%	11					100%					100.0%	0.4%					0.4%
E02001587 : Rotherham 010	9	0.5%	9	10	11			33%	33%	33%			100.0%	0.2%	0.2%	0.2%			0.5%
E02001588 : Rotherham 011	8	0.4%	11					100%					100.0%	0.4%					0.4%
E02001589 : Rotherham 012	8	0.4%	9	10	11			33%	33%	33%			100.0%	0.1%	0.1%	0.1%			0.4%
E02001590 : Rotherham 013	3	0.2%	11					100%					100.0%	0.2%					0.2%
E02001591 : Rotherham 014	7	0.4%	10	11				50%	50%				100.0%	0.2%	0.2%				0.4%
E02001592 : Rotherham 015	15	0.8%	11					100%					100.0%	0.8%					0.8%
E02001593 : Rotherham 016	6	0.3%	11					100%					100.0%	0.3%					0.3%
E02001594 : Rotherham 017	3	0.2%	11					100%					100.0%	0.2%					0.2%
E02001595 : Rotherham 018	5	0.3%	7					100%					100.0%	0.3%					0.3%
E02001596 : Rotherham 019	4	0.2%	11					100%					100.0%	0.2%					0.2%
E02001597 : Rotherham 020	1	0.1%	7	9				50%	50%				100.0%	0.0%	0.0%				0.1%
E02001598 : Rotherham 021	11	0.6%	9	11				50%	50%				100.0%	0.3%	0.3%				0.6%
E02001599 : Rotherham 022	3	0.2%	9	11				50%	50%				100.0%	0.1%	0.1%				0.2%
E02001600 : Rotherham 023	5	0.3%	11					100%					100.0%	0.3%					0.3%
E02001601 : Rotherham 024	8	0.4%	11					100%					100.0%	0.4%					0.4%
E02001602 : Rotherham 025	8	0.4%	11					100%					100.0%	0.4%					0.4%
E02001603 : Rotherham 026	4	0.2%	7					100%					100.0%	0.2%					0.2%
E02001604 : Rotherham 027	2	0.1%	11					100%					100.0%	0.1%					0.1%
E02001605 : Rotherham 028	2	0.1%	7	9				50%	50%				100.0%	0.1%	0.1%				0.1%
E02001606 : Rotherham 029	3	0.2%	7	13D				50%	50%				100.0%	0.1%	0.1%				0.2%
E02001607 : Rotherham 030	3	0.2%	7	13D				50%	50%				100.0%	0.1%	0.1%				0.2%
E02001608 : Rotherham 031	1	0.1%	7	13D				50%	50%				100.0%	0.0%	0.0%				0.1%
E02001609 : Rotherham 032	1	0.1%	7	13D				50%	50%				100.0%	0.0%	0.0%				0.1%
E02001610 : Rotherham 033	2	0.1%	7	13D				50%	50%				100.0%	0.1%	0.1%				0.1%
Redcar and Cleveland	3	0.2%	5					100%					100.0%	0.2%					0.2%
Hyndburn	1	0.1%	13E	13F				50%	50%				100.0%	0.0%	0.0%				0.1%
Bury	2	0.1%	13E	13F				50%	50%				100.0%	0.1%	0.1%				0.1%
Manchester	1	0.1%	13E	13F				50%	50%				100.0%	0.0%	0.0%				0.1%
Oldham	1	0.1%	13E	13F				50%	50%				100.0%	0.0%	0.0%				0.1%
Salford	1	0.1%	13E	13F				50%	50%				100.0%	0.0%	0.0%				0.1%
Kingston upon Hull, City of	2	0.1%	5	7				50%	50%				100.0%	0.1%	0.1%				0.1%
East Riding of Yorkshire	1	0.1%	5	7				50%	50%				100.0%	0.0%	0.0%				0.1%
North East Lincolnshire	1	0.1%	7					100%					100.0%	0.1%					0.1%
North Lincolnshire	16	0.9%	7					100%					100.0%	0.9%					0.9%
Hambleton	1	0.1%	5					100%					100.0%	0.1%					0.1%
Harrogate	3	0.2%	5					100%					100.0%	0.2%					0.2%
Selby	2	0.1%	1	5				50%	50%				100.0%	0.1%	0.1%				0.1%
Bradford	4	0.2%	5	13F				50%	50%				100.0%	0.1%	0.1%				0.2%
Kirklees	18	1.0%	13E	13F				50%	50%				100.0%	0.5%	0.5%				1.0%
Leeds	15	0.8%	5	13F				50%	50%				100.0%	0.4%	0.4%				0.8%
Wakefield	90	4.9%	15					100%					100.0%	4.9%					4.9%
Amber Valley	2	0.1%	7	13D				50%	50%				100.0%	0.1%	0.1%				0.1%
Chesterfield	1	0.1%	7	13D				50%	50%				100.0%	0.0%	0.0%				0.1%
High Peak	3	0.2%	13E					100%					100.0%	0.2%					0.2%
North East Derbyshire	3	0.2%	7	13D	11			33%	33%	33%			100.0%	0.1%	0.1%	0.1%			0.2%
North West Leicestershire	1	0.1%	7	13D				50%	50%				100.0%	0.0%	0.0%				0.1%
Boston	1	0.1%	7					100%					100.0%	0.1%					0.1%
South Holland	1	0.1%	7					100%					100.0%	0.1%					0.1%
South Kesteven	1	0.1%	7					100%					100.0%	0.1%					0.1%
West Lindsey	1	0.1%	7					100%					100.0%	0.1%					0.1%
Ashfield	1	0.1%	7	13D				50%	50%				100.0%	0.0%	0.0%				0.1%
Bassetlaw	19	1.0%	7					100%					100.0%	1.0%					1.0%
Broxtowe	1	0.1%	7	13D				50%	50%				100.0%	0.0%	0.0%				0.1%
Newark and Sherwood	2	0.1%	7					100%					100.0%	0.1%					0.1%
Wychavon	2	0.1%	7					100%					100.0%	0.1%					0.1%
Solihull	1	0.1%	7					100%					100.0%	0.1%					0.1%
Peterborough	1	0.1%	7					100%					100.0%	0.1%					0.1%
Castle Point	1	0.1%	7					100%					100.0%	0.1%					0.1%
North Hertfordshire	1	0.1%	7					100%					100.0%	0.1%					0.1%
Mid Suffolk	1	0.1%	7					100%					100.0%	0.1%					0.1%
Barnet	1	0.1%	7					100%					100.0%	0.1%					0.1%
Cardiff	1	0.1%	7					100%					100.0%	0.1%					0.1%
Total	1,852	100.0%												79.0%	20.6%	0.4%	0.0%	0.0%	100.0%

HGV Trip Distribution - Gravity Model

Reference	Route	Trip Dist %				Total	AM Peak Hour			PM Peak Hour		
		A	B	C	D		Arr.	Dep.	Total	Arr.	Dep.	Total
1	Billingley Green Lane					0.0%	0	0	0	0	0	0
2	Nicholas Lane					0.0%	0	0	0	0	0	0
3	Barrowfield Road					0.0%	0	0	0	0	0	0
4	Red Hill Lane					0.0%	0	0	0	0	0	0
5	A1(M) North	9.9%	0.4%		0.3%	10.6%	6	6	12	6	6	12
6	A635 Barnsley Road	6.2%				6.2%	3	4	7	4	3	7
7	A1(M) South	7.7%	9.0%			16.7%	9	9	19	10	9	19
8	B6098					0.0%	0	0	0	0	0	0
9	Highgate Lane (South)					0.0%	0	0	0	0	0	0
10	A633 Manvers Way	4.6%				4.6%	3	3	5	3	2	5
11	B6273 Pontefract Road					0.0%	0	0	0	0	0	0
12	A633 Wath Road	5.0%				5.0%	3	3	6	3	3	6
13	A6195 Dearne Valley Parkway	16.2%	17.7%			33.8%	19	19	38	20	18	38
13A	Roebuck Hill					0.0%	0	0	0	0	0	0
13B	B6096					0.0%	0	0	0	0	0	0
13C	Sheffield Road					0.0%	0	0	0	0	0	0
13D	M1 South	11.4%	9.4%			20.8%	12	12	23	12	11	23
13E	A61	4.3%	2.0%			6.3%	4	4	7	4	3	7
13F	M1 North	0.5%	6.2%			6.7%	4	4	8	4	4	8
14	A635 Doncaster Road		5.3%	8.1%		13.5%	7	8	15	8	7	15
15	A6195 Park Spring Road			5.3%	4.4%	9.7%	5	5	11	6	5	11
		49.5%	32.4%	13.5%	4.6%	100.0%	55	57	112	60	52	112

Population data derived from 2011 Census data

- 2 Distance coefficient
- 350 Maximum travel time

Origin Zone	Population (P)	Distance (D) (m)	Travel Time (seconds)	Travel Time (mins)	P / D ⁿ	% of Total	Trip Distribution									
							Route Assumptions					Trips Per Route				
							A	B	C	D	Count	A	B	C	D	Total
Barnsley	231,221	14955	1288	21	0	15%	12	14	15		3	5.01%	5.01%	5.01%		15.04%
Wakefield	325,837	18447.0	1466	24	0	14%	5	13F	14	15	4	3.48%	3.48%	3.48%	3.48%	13.93%
Doncaster	302,402	18898	1465	24	0	12%	6	7			2	6.16%	6.16%			12.31%
Rotherham	257,280	20116	1550	26	0	9%	10	13D			2	4.62%	4.62%			9.25%
Sheffield	552,698	30131	2109	35	0	9%	13D				1	8.85%				8.85%
Kirklees	422,458	35618	2831	47	0	5%	13E	13F	14		3	1.61%	1.61%	1.61%		4.84%
Leeds	751,485	56074	3034	51	0	3%	5	13F	14	15	4	0.87%	0.87%	0.87%	0.87%	3.48%
Bradford	522,452	79800	4373	73	0	1%	13F	14	15	5	4	0.30%	0.30%	0.30%	0.30%	1.19%
Manchester	503,127	81229	4878	81	0	1%	5	13E	14		3	0.37%	0.37%			1.11%
Tameside	219,324	57164	3682	61	0	1%	13E				1	0.98%				0.98%
Bassetlaw	112,863	42337	2108	35	0	1%	7				1	0.92%				0.92%
Oldham	224,897	61761	3972	66	0	1%	13E				1	0.86%				0.86%
Stockport	283,275	69967	4418	74	0	1%	13E				1	0.84%				0.84%
Birmingham	1,073,045	158525	6788	113	0	1%	7	13D			2	0.31%	0.31%			0.62%
East Riding of Yorkshire	334,179	89085	3950	66	0	1%	5	7			2	0.31%	0.31%			0.61%
Nottingham	305,680	85693	3882	65	0	1%	13D	7			2	0.30%	0.30%			0.61%
York	198,051	72550.0	3385	56	0	1%	5				1	0.55%				0.55%
Chesterfield	103,788	53630	2859	48	0	1%	13D	7			2	0.26%	0.26%			0.52%
Selby	83,449	48951	2345	39	0	1%	5				1	0.51%				0.51%
Cheshire East	370,127	105299	6110	102	0	0%	5	13E	14		3	0.16%	0.16%	0.16%		0.49%
Trafford	226,578	85305	4803	80	0	0%	5	13E	14		3	0.15%	0.15%	0.15%		0.45%
North Lincolnshire	167,446	74868	3352	56	0	0%	7				1	0.43%				0.43%
Liverpool	466,415	127281	6296	105	0	0%	5	13E	14		3	0.14%	0.14%	0.14%		0.42%
Derby	248,752	93112	4163	69	0	0%	7	13D			2	0.21%	0.21%			0.42%
Newark and Sherwood	114,817	65103	3083	51	0	0%	7	13D			2	0.20%	0.20%			0.39%
Mansfield	104,466	62209	2938	49	0	0%	7	13D			2	0.20%	0.20%			0.39%
Kingston upon Hull, City of	256,406	97547	4277	71	0	0%	7	5			2	0.20%	0.20%			0.39%
Calderdale	203,826	87270	4407	73	0	0%	13F	5			2	0.19%	0.19%			0.39%
Salford	233,933	94091	4977	83	0	0%	5	13E	14		3	0.13%	0.13%	0.13%		0.38%
Bury	185,060	86667	5039	84	0	0%	5	13E	14		3	0.12%	0.12%	0.12%		0.36%
Ashfield	119,497	71428	3382	56	0	0%	13D	7			2	0.17%	0.17%			0.34%
North East Derbyshire	99,023	65389	3046	51	0	0%	7	13D			2	0.17%	0.17%			0.34%
Bolsover	75,866	58099.0	2641	44	0	0%	7	13D			2	0.16%	0.16%			0.33%
High Peak	90,892	63778	4985	83	0	0%	13D	7			2	0.16%	0.16%			0.32%
Harrogate	157,869	84331.0	3938	66	0	0%	5				1	0.32%				0.32%
County Durham	513,242	154567.0	6484	108	0	0%	5				1	0.31%				0.31%
Rochdale	211,699	99568	4433	74	0	0%	5	13E	14		3	0.10%	0.10%	0.10%		0.31%
Cheshire West and Chester	329,608	124433	6727	112	0	0%	5	13E	14		3	0.10%	0.10%	0.10%		0.31%
Gedling	113,543	75414	3697	62	0	0%	7	13D			2	0.15%	0.15%			0.29%
Leicester	329,839	129769	5687	95	0	0%	13D	7			2	0.14%	0.14%			0.28%
Warrington	202,228	102452	5458	91	0	0%	5	13E	14		3	0.09%	0.09%	0.09%		0.28%
Wigan	317,849	130366	5605	93	0	0%	5	13E	14		3	0.09%	0.09%	0.09%		0.27%
Amber Valley	122,309	81688	3670	61	0	0%	13D	7			2	0.13%	0.13%			0.27%
Bolton	276,786	124484.0	5201	87	0	0%	5	13E	14		3	0.09%	0.09%	0.09%		0.26%
North East Lincolnshire	159,616	98354	4275	71	0	0%	7				1	0.24%				0.24%
Wirral	319,783	142025	6729	112	0	0%	5	13E	14		3	0.08%	0.08%	0.08%		0.23%
Lincoln	93,541	77156.0	3788	63	0	0%	7				1	0.23%				0.23%
West Lindsey	89,250	76770	4235	71	0	0%	7				1	0.22%				0.22%
Broxtowe	109,487	88852	4012	67	0	0%	7	13D			2	0.10%	0.10%			0.20%
Walsall	269,323	142942	6307	105	0	0%	7	13D			2	0.10%	0.10%			0.19%
St. Helens	175,308	117101	6356	106	0	0%	5	13E	14		3	0.06%	0.06%	0.06%		0.19%
Erewash	112,081	94898.0	4111	69	0	0%	7	13D			2	0.09%	0.09%			0.18%
Sefton	273,790	149441.0	7351	123	0	0%	5	13D	14		3	0.06%	0.06%	0.06%		0.18%
Charnwood	166,100	119104	5146	86	0	0%	13D	7			2	0.09%	0.09%			0.17%
Rushcliffe	111,129	97849	4042	67	0	0%	13D	7			2	0.08%	0.08%			0.17%
Stoke-on-Trent	249,008	147537	6338	106	0	0%	13D	7			2	0.08%	0.08%			0.17%
Coventry	316,960	167440	6870	115	0	0%	13D	7			2	0.08%	0.08%			0.16%
North Kesteven	107,766	98970	4303	72	0	0%	7				1	0.16%				0.16%
South Kesteven	133,788	111331	4650	78	0	0%	7				1	0.16%				0.16%
Sandwell	308,063	171109	7236	121	0	0%	13D	7			2	0.08%	0.08%			0.15%
Dudley	312,925	173812.0	8104	135	0	0%	13D	7			2	0.08%	0.08%			0.15%
Stockton-on-Tees	191,610	138668	5400	90	0	0%	5				1	0.14%				0.14%
Wolverhampton	249,470	158249	7011	117	0	0%	13D	7			2	0.07%	0.07%			0.14%
Halton	125,746	113259	6039	101	0	0%	5	13E	14		3	0.05%	0.05%	0.05%		0.14%
East Lindsey	136,401	119144	6069	101	0	0%	7				1	0.14%				0.14%
Derbyshire Dales	71,116	86846	4594	77	0	0%	7	13D			2	0.07%	0.07%			0.14%
Knowsley	145,893	124981	6128	102	0	0%	5	13E	14		3	0.05%	0.05%	0.05%		0.14%
Pendle	89,452	101104	5927	99	0	0%	5	13F	14		3	0.04%	0.04%	0.04%		0.13%
Sunderland	275,506	177583.0	6646	111	0	0%	5				1	0.13%				0.13%

HGV Trip Distribution - Gravity Model

Reference	Route	Trip Dist %				Total	AM Peak Hour			PM Peak Hour		
		A	B	C	D		Arr.	Dep.	Total	Arr.	Dep.	Total
1	Billingley Green Lane					0.0%	0	0	0	0	0	0
2	Nicholas Lane					0.0%	0	0	0	0	0	0
3	Barrowfield Road					0.0%	0	0	0	0	0	0
4	Red Hill Lane					0.0%	0	0	0	0	0	0
5	A1(M) North	9.9%	0.4%		0.3%	10.6%	6	6	12	6	6	12
6	A635 Barnsley Road	6.2%				6.2%	3	4	7	4	3	7
7	A1(M) South	7.7%	9.0%			16.7%	9	9	19	10	9	19
8	B6098					0.0%	0	0	0	0	0	0
9	Highgate Lane (South)					0.0%	0	0	0	0	0	0
10	A633 Manvers Way	4.6%				4.6%	3	3	5	3	2	5
11	B6273 Pontefract Road					0.0%	0	0	0	0	0	0
12	A633 Wath Road	5.0%				5.0%	3	3	6	3	3	6
13	A6195 Dearne Valley Parkway	16.2%	17.7%			33.8%	19	19	38	20	18	38
13A	Roebuck Hill					0.0%	0	0	0	0	0	0
13B	B6096					0.0%	0	0	0	0	0	0
13C	Sheffield Road					0.0%	0	0	0	0	0	0
13D	M1 South	11.4%	9.4%			20.8%	12	12	23	12	11	23
13E	A61	4.3%	2.0%			6.3%	4	4	7	4	3	7
13F	M1 North	0.5%	6.2%			6.7%	4	4	8	4	4	8
14	A635 Doncaster Road		5.3%	8.1%		13.5%	7	8	15	8	7	15
15	A6195 Park Spring Road			5.3%	4.4%	9.7%	5	5	11	6	5	11
		49.5%	32.4%	13.5%	4.6%	100.0%	55	57	112	60	52	112

Population data derived from 2011 Census data

- 2 Distance coefficient
- 350 Maximum travel time

Origin Zone	Population (P)	Distance (D) (m)	Travel Time (seconds)	Travel Time (mins)	P / D ⁿ	% of Total	Trip Distribution									
							Route Assumptions				Trips Per Route					
							A	B	C	D	Count	A	B	C	D	Total
Hambleton	89,140	103088	4041	67	0	0%	5				1	0.12%				0.12%
South Derbyshire	94,611	106354	4647	77	0	0%	13D	7		2	0.06%	0.06%				0.12%
Solihull	206,674	159534	6104	102	0	0%	13D	7		2	0.06%	0.06%				0.12%
Blackburn with Darwen	147,489	134896.0	5971	100	0	0%	5	13F	14	3	0.04%	0.04%	0.04%			0.12%
Peterborough	183,631	152523	6056	101	0	0%	7	13D		2	0.06%	0.06%				0.11%
East Staffordshire	113,583	121087	5248	87	0	0%	7	13D		2	0.06%	0.06%				0.11%
Middlesbrough	138,412	134271	5235	87	0	0%	5			1	0.11%					0.11%
Flintshire	152,506	144814.0	7247	121	0	0%	7	13E		2	0.05%	0.05%				0.11%
Newcastle upon Tyne	280,177	196486	8067	134	0	0%	5			1	0.11%					0.11%
Shropshire	306,129	205999.0	8589	143	0	0%	7	13D		2	0.05%	0.05%				0.10%
Rossendale	67,982	98693	5397	90	0	0%	7	13D		2	0.05%	0.05%				0.10%
North West Leicestershire	93,468	117394	4639	77	0	0%	7	13D		2	0.05%	0.05%				0.10%
Redcar and Cleveland	135,177	141919	5827	97	0	0%	5			1	0.10%					0.10%
Northampton	212,069	182016.0	7688	128	0	0%	7	13D		2	0.05%	0.05%				0.09%
Hyndburn	80,734	112348.0	5830	97	0	0%	7	13E		2	0.05%	0.05%				0.09%
Lichfield	100,654	128512	5526	92	0	0%	7	13D		2	0.04%	0.04%				0.09%
Huntingdonshire	169,508	168591	6674	111	0	0%	7	13D		2	0.04%	0.04%				0.09%
Burnley	87,059	121911	6097	102	0	0%	5	13E	14	3	0.03%	0.03%	0.03%			0.09%
Hinckley and Bosworth	105,078	134866	5865	98	0	0%	13D	7		2	0.04%	0.04%				0.08%
Staffordshire Moorlands	97,106	129846	6016	100	0	0%	13D	7		2	0.04%	0.04%				0.08%
Gateshead	200,214	187149	7528	125	0	0%	5			1	0.08%					0.08%
Stafford	130,869	151860.0	6922	115	0	0%	13D	7		2	0.04%	0.04%				0.08%
Northumberland	316,028	237406	10294	172	0	0%	5			1	0.08%					0.08%
Scarborough	108,793	140724	7504	125	0	0%	5			1	0.08%					0.08%
Wrexham	134,844	156702	7575	126	0	0%	13D	7		2	0.04%	0.04%				0.08%
Central Bedfordshire	254,381	217037	8559	143	0	0%	7	13D		2	0.04%	0.04%				0.08%
Darlington	105,564	139966	5478	91	0	0%	5			1	0.08%					0.08%
Preston	140,202	161326	6415	107	0	0%	5	13E	14	3	0.03%	0.03%	0.03%			0.08%
North Tyneside	200,801	194200	7500	125	0	0%	5			1	0.08%					0.08%
Chorley	107,155	141874	5641	94	0	0%	5	13E	14	3	0.03%	0.03%	0.03%			0.08%
Barnet	356,386	259898	10293	172	0	0%	7	13D		2	0.04%	0.04%				0.08%
Blaby	93,915	133797	5447	91	0	0%	13D	7		2	0.04%	0.04%				0.08%
Nuneaton and Bedworth	125,252	154620	6311	105	0	0%	13D	7		2	0.04%	0.04%				0.08%
Cannock Chase	97,462	140133	6268	104	0	0%	13D	7		2	0.04%	0.04%				0.07%
Newcastle-under-Lyme	123,871	158541	6906	115	0	0%	13D	7		2	0.04%	0.04%				0.07%
King's Lynn and West Norfolk	147,451	174135	7923	132	0	0%	7			1	0.07%					0.07%
South Ribble	109,057	150409.0	6020	100	0	0%	5	13F	14	3	0.02%	0.02%	0.02%			0.07%
Milton Keynes	248,821	229047	8974	150	0	0%	7	13D		2	0.03%	0.03%				0.07%
Telford and Wrekin	166,641	187447	8031	134	0	0%	13D	7		2	0.03%	0.03%				0.07%
Bristol, City of	428,234	306884.0	11886	198	0	0%	13D	7		2	0.03%	0.03%				0.07%
Enfield	312,466	262755	10611	177	0	0%	7	13D		2	0.03%	0.03%				0.07%
Ealing	338,449	274929	11637	194	0	0%	7	13D		2	0.03%	0.03%				0.07%
Warwick	137,648	175546	6971	116	0	0%	13D	7		2	0.03%	0.03%				0.06%
South Holland	88,270	141554	6369	106	0	0%	7	13D		2	0.03%	0.03%				0.06%
Blackpool	142,065	180858	7184	120	0	0%	5	13F	14	3	0.02%	0.02%	0.02%			0.06%
Ryedale	51,751	109257	4872	81	0	0%	5			1	0.06%					0.06%
South Staffordshire	108,131	159412	6969	116	0	0%	7	13D		2	0.03%	0.03%				0.06%
Craven	55,409	114676	6859	114	0	0%	5	13F	14	3	0.02%	0.02%	0.02%			0.06%
South Tyneside	148,127	187589	7246	121	0	0%	5			1	0.06%					0.06%
West Lancashire	110,685	163003	7335	122	0	0%	5	13E	14	3	0.02%	0.02%	0.02%			0.06%
Wiltshire	470,981	339657	13878	231	0	0%	13D	7		2	0.03%	0.03%				0.06%
Boston	64,637	125874	5560	93	0	0%	7	13D		2	0.03%	0.03%				0.06%
Brent	311,215	278094	10762	179	0	0%	13D	7		2	0.03%	0.03%				0.06%
Hartlepool	92,028	151719	6048	101	0	0%	5			1	0.06%					0.06%
Bedford	157,479	200785.0	8412	140	0	0%	7	13D		2	0.03%	0.03%				0.06%
Harborough	85,382	148006	6564	109	0	0%	13D	7		2	0.03%	0.03%				0.06%
Tamworth	76,813	140742	5647	94	0	0%	13D	7		2	0.03%	0.03%				0.06%
Newham	307,984	284392	11064	184	0	0%	7	13D		2	0.03%	0.03%				0.06%
Wandsworth	306,995	285543	13244	221	0	0%	7	13D		2	0.03%	0.03%				0.05%
Luton	203,201	233421.0	9239	154	0	0%	13D	7		2	0.03%	0.03%				0.05%
Melton	50,376	117607	5033	84	0	0%	7	13D		2	0.03%	0.03%				0.05%
Lancaster	138,375	195189	7669	128	0	0%	5	13F	14	3	0.02%	0.02%	0.02%			0.05%
Rugby	100,075	166483	6732	112	0	0%	7	13D		2	0.03%	0.03%				0.05%
Ribble Valley	57,132	126379	7145	119	0	0%	5	13F	14	3	0.02%	0.02%	0.02%			0.05%
Redbridge	278,970	279606	10727	179	0	0%	7	13D		2	0.03%	0.03%				0.05%
South Cambridgeshire	148,755	204534	7940	132	0	0%	7	13D		2	0.03%	0.03%				0.05%
Aylesbury Vale	174,137	221520	9700	162	0	0%	13D	7		2	0.03%	0.03%				0.05%
Wyre	107,749	174930	7175	120	0	0%	5	13F		2	0.03%	0.03%				0.05%
Kettering	93,475	164080	6856	114	0	0%	7	13D		2	0.03%	0.03%				0.05%
Denbighshire	93,734	165920	8463	141	0	0%	7	13E		2	0.02%	0.02%				0.05%

HGV Trip Distribution - Gravity Model

Reference	Route	Trip Dist %				Total	AM Peak Hour			PM Peak Hour		
		A	B	C	D		Arr.	Dep.	Total	Arr.	Dep.	Total
1	Billingley Green Lane					0.0%	0	0	0	0	0	0
2	Nicholas Lane					0.0%	0	0	0	0	0	0
3	Barrowfield Road					0.0%	0	0	0	0	0	0
4	Red Hill Lane					0.0%	0	0	0	0	0	0
5	A1(M) North	9.9%	0.4%		0.3%	10.6%	6	6	12	6	6	12
6	A635 Barnsley Road	6.2%				6.2%	3	4	7	4	3	7
7	A1(M) South	7.7%	9.0%			16.7%	9	9	19	10	9	19
8	B6098					0.0%	0	0	0	0	0	0
9	Highgate Lane (South)					0.0%	0	0	0	0	0	0
10	A633 Manvers Way	4.6%				4.6%	3	3	5	3	2	5
11	B6273 Pontefract Road					0.0%	0	0	0	0	0	0
12	A633 Wath Road	5.0%				5.0%	3	3	6	3	3	6
13	A6195 Dearne Valley Parkway	16.2%	17.7%			33.8%	19	19	38	20	18	38
13A	Roebuck Hill					0.0%	0	0	0	0	0	0
13B	B6096					0.0%	0	0	0	0	0	0
13C	Sheffield Road					0.0%	0	0	0	0	0	0
13D	M1 South	11.4%	9.4%			20.8%	12	12	23	12	11	23
13E	A61	4.3%	2.0%			6.3%	4	4	7	4	3	7
13F	M1 North	0.5%	6.2%			6.7%	4	4	8	4	4	8
14	A635 Doncaster Road		5.3%	8.1%		13.5%	7	8	15	8	7	15
15	A6195 Park Spring Road			5.3%	4.4%	9.7%	5	5	11	6	5	11
		49.5%	32.4%	13.5%	4.6%	100.0%	55	57	112	60	52	112

Population data derived from 2011 Census data
 2 Distance coefficient
 350 Maximum travel time

Origin Zone	Population (P)	Distance (D) (m)	Travel Time (seconds)	Travel Time (mins)	P / D ⁿ	% of Total	Trip Distribution											
							Route Assumptions				Trips Per Route							
							A	B	C	D	Count	A	B	C	D	Total		
Croydon	363,378	328925	13194	220	0	0%	7	13D				2	0.02%	0.02%				0.05%
Harrow	239,056	266973.0	10722	179	0	0%	7	13D				2	0.02%	0.02%				0.05%
Hillingdon	273,936	286402	11069	184	0	0%	7	13D				2	0.02%	0.02%				0.05%
Stratford-on-Avon	120,485	190180	7649	127	0	0%	7	13D				2	0.02%	0.02%				0.05%
East Northamptonshire	86,765	161922	6718	112	0	0%	7	13D				2	0.02%	0.02%				0.05%
Lambeth	303,086	302717	13306	222	0	0%	7	13D				2	0.02%	0.02%				0.05%
Wattham Forest	258,249	279624.0	10579	176	0	0%	7	13D				2	0.02%	0.02%				0.05%
Southwark	288,283	299625	12612	210	0	0%	7	13D				2	0.02%	0.02%				0.05%
Haringey	254,926	281767	11440	191	0	0%	7	13D				2	0.02%	0.02%				0.05%
South Gloucestershire	262,767	291956	11345	189	0	0%	7	13D				2	0.02%	0.02%				0.04%
Bromley	309,392	317677	12242	204	0	0%	7	13D				2	0.02%	0.02%				0.04%
Lewisham	275,885	300109	12339	206	0	0%	7	13D				2	0.02%	0.02%				0.04%
Tower Hamlets	254,096	289308	11428	190	0	0%	7	13D				2	0.02%	0.02%				0.04%
North Warwickshire	62,014	143456.0	5941	99	0	0%	7	13D				2	0.02%	0.02%				0.04%
Fenland	95,262	177862	7287	121	0	0%	7					1	0.04%					0.04%
Cardiff	346,090	339123.0	13113	219	0	0%	7	13D				2	0.02%	0.02%				0.04%
Hackney	246,270	286617	11491	192	0	0%	7	13D				2	0.02%	0.02%				0.04%
Oadby and Wigston	56,170	136890	5841	97	0	0%	7	13D				2	0.02%	0.02%				0.04%
Havering	237,232	282422	11074	185	0	0%	7	13D				2	0.02%	0.02%				0.04%
Breckland	130,491	209617	9882	165	0	0%	7	13D				2	0.02%	0.02%				0.04%
Hounslow	253,957	292500	11598	193	0	0%	7	13D				2	0.02%	0.02%				0.04%
Cherwell	141,868	219666	9069	151	0	0%	7	13D				2	0.02%	0.02%				0.04%
Cambridge	123,867	205618	8144	136	0	0%	7	13D				2	0.02%	0.02%				0.04%
Greenwich	254,557	295444	11744	196	0	0%	7	13D				2	0.02%	0.02%				0.04%
Conwy	115,228	200576	9782	163	0	0%	7	13E				2	0.02%	0.02%				0.04%
Richmondshire	51,965	135396	5850	98	0	0%	5					1	0.04%					0.04%
Camden	220,338	280233	11216	187	0	0%	13D	7				2	0.02%	0.02%				0.04%
Daventry	77,843	166788.0	6521	109	0	0%	13D	7				2	0.02%	0.02%				0.04%
Herefordshire, County of	183,477	260815	11002	183	0	0%	13D	7				2	0.02%	0.02%				0.04%
North Hertfordshire	127,114	217152	8435	141	0	0%	7	13D				2	0.02%	0.02%				0.04%
Bromsgrove	93,637	188729	7340	122	0	0%	13D	7				2	0.02%	0.02%				0.04%
Islington	206,125	280855	11645	194	0	0%	13D	7				2	0.02%	0.02%				0.04%
Corby	61,255	154655	6506	108	0	0%	7	13D				2	0.02%	0.02%				0.04%
Medway	263,925	322400	12414	207	0	0%	7	13D				2	0.02%	0.02%				0.04%
Bexley	231,997	302824	11934	199	0	0%	7	13D				2	0.02%	0.02%				0.04%
Fylde	75,757	173677	6755	113	0	0%	5	13D	14			3	0.01%	0.01%	0.01%			0.04%
Wycharon	116,944	216561	8565	143	0	0%	7	13D				2	0.02%	0.02%				0.04%
Norwich	132,512	234271.0	10962	183	0	0%	7	13D				2	0.02%	0.02%				0.04%
Wycombe	171,644	266841	10691	178	0	0%	7	13D				2	0.02%	0.02%				0.04%
Swindon	209,156	294952	11252	188	0	0%	7	13D				2	0.02%	0.02%				0.03%
Hammersmith and Fulham	182,493	277739	12190	203	0	0%	7	13D				2	0.02%	0.02%				0.03%
Redditch	84,214	189167	7475	125	0	0%	7	13D				2	0.02%	0.02%				0.03%
South Northamptonshire	85,189	190306	7711	129	0	0%	7	13D				2	0.02%	0.02%				0.03%
Wyre Forest	97,975	206420	8681	145	0	0%	7	13D				2	0.02%	0.02%				0.03%
East Hertfordshire	137,687	245372	9778	163	0	0%	7	13D				2	0.02%	0.02%				0.03%
Oxford	151,906	257736	10106	168	0	0%	7	13D				2	0.02%	0.02%				0.03%
St Albans	140,664	249286	9742	162	0	0%	7	13D				2	0.02%	0.02%				0.03%
Chelmsford	168,310	273394	10866	181	0	0%	7	13D				2	0.02%	0.02%				0.03%
Worcester	98,768	209590	8229	137	0	0%	7	13D				2	0.02%	0.02%				0.03%
Barking and Dagenham	185,911	288649.0	11193	187	0	0%	7	13D				2	0.02%	0.02%				0.03%
Wellingborough	75,356	183896	7861	131	0	0%	7	13D				2	0.02%	0.02%				0.03%
Richmond upon Thames	186,990	293425	12660	211	0	0%	7	13D				2	0.02%	0.02%				0.03%
Broadland	124,646	241622	11245	187	0	0%	7	13D				2	0.02%	0.02%				0.03%
Powys	132,976	249866	12730	212	0	0%	7	13D				2	0.02%	0.02%				0.03%
Rutland	37,369	132673	5807	97	0	0%	7	13D				2	0.02%	0.02%				0.03%
Dacorum	144,847	261272	10482	175	0	0%	7	13D				2	0.02%	0.02%				0.03%
South Lakeland	103,658	224175	8560	143	0	0%	5	13F	14			3	0.01%	0.01%	0.01%			0.03%
Basildon	174,497	292213	11317	189	0	0%	7	13D				2	0.01%	0.01%				0.03%
Colchester	173,074	293323	11462	191	0	0%	7	13D				2	0.01%	0.01%				0.03%
Southampton	236,882	344449	13792	230	0	0%	7	13D				2	0.01%	0.01%				0.03%
South Norfolk	124,012	249588	11444	191	0	0%	7	13D				2	0.01%	0.01%				0.03%
West Berkshire	153,822	278334	11380	190	0	0%	7	13D				2	0.01%	0.01%				0.03%
Kensington and Chelsea	158,649	284412	11997	200	0	0%	7	13D				2	0.01%	0.01%				0.03%
North Norfolk	101,499	227642	10810	180	0	0%	7	13D				2	0.01%	0.01%				0.03%
East Cambridgeshire	83,818	207709	9237	154	0	0%	7	13D				2	0.01%	0.01%				0.03%
Braintree	147,084	277301	10590	177	0	0%	7	13D				2	0.01%	0.01%				0.03%
North Somerset	202,566	325985	12534	209	0	0%	7	13D				2	0.01%	0.01%				0.03%
Gloucester	121,688	253070	9990	167	0	0%	7	13D				2	0.01%	0.01%				0.03%
Gwynedd	121,874	254569	12746	212	0	0%	7	13D				2	0.01%	0.01%				0.03%
Cheltenham	115,732	249060	9765	163	0	0%	7	13D				2	0.01%	0.01%				0.03%

HGV Trip Distribution - Gravity Model

Reference	Route	Trip Dist %				Total	AM Peak Hour			PM Peak Hour		
		A	B	C	D		Arr.	Dep.	Total	Arr.	Dep.	Total
1	Billingley Green Lane					0.0%	0	0	0	0	0	0
2	Nicholas Lane					0.0%	0	0	0	0	0	0
3	Barrowfield Road					0.0%	0	0	0	0	0	0
4	Red Hill Lane					0.0%	0	0	0	0	0	0
5	A1(M) North	9.9%	0.4%		0.3%	10.6%	6	6	12	6	6	12
6	A635 Barnsley Road	6.2%				6.2%	3	4	7	4	3	7
7	A1(M) South	7.7%	9.0%			16.7%	9	9	19	10	9	19
8	B6098					0.0%	0	0	0	0	0	0
9	Highgate Lane (South)					0.0%	0	0	0	0	0	0
10	A633 Manvers Way	4.6%				4.6%	3	3	5	3	2	5
11	B6273 Pontefract Road					0.0%	0	0	0	0	0	0
12	A633 Wath Road	5.0%				5.0%	3	3	6	3	3	6
13	A6195 Dearne Valley Parkway	16.2%	17.7%			33.8%	19	19	38	20	18	38
13A	Roebuck Hill					0.0%	0	0	0	0	0	0
13B	B6096					0.0%	0	0	0	0	0	0
13C	Sheffield Road					0.0%	0	0	0	0	0	0
13D	M1 South	11.4%	9.4%			20.8%	12	12	23	12	11	23
13E	A61	4.3%	2.0%			6.3%	4	4	7	4	3	7
13F	M1 North	0.5%	6.2%			6.7%	4	4	8	4	4	8
14	A635 Doncaster Road		5.3%	8.1%		13.5%	7	8	15	8	7	15
15	A6195 Park Spring Road			5.3%	4.4%	9.7%	5	5	11	6	5	11
		49.5%	32.4%	13.5%	4.6%	100.0%	55	57	112	60	52	112

Population data derived from 2011 Census data
 2 Distance coefficient
 350 Maximum travel time

Origin Zone	Population (P)	Distance (D) (m)	Travel Time (seconds)	Travel Time (mins)	P / D ⁿ	% of Total	Trip Distribution											
							Route Assumptions				Trips Per Route							
							A	B	C	D	Count	A	B	C	D	Total		
Merton	199,693	327292.0	12790	213	0	0%	7	13D				2	0.01%	0.01%				0.03%
St Edmundsbury	111,008	244390.0	9310	155	0	0%	7	13D				2	0.01%	0.01%				0.03%
West Oxfordshire	104,779	237631	10356	173	0	0%	7	13D				2	0.01%	0.01%				0.03%
Brighton and Hove	273,369	383947	14588	243	0	0%	7	13D				2	0.01%	0.01%				0.03%
Epping Forest	124,659	259434.0	9629	160	0	0%	7	13D				2	0.01%	0.01%				0.03%
Welwyn Hatfield	110,535	244734	9596	160	0	0%	7	13D				2	0.01%	0.01%				0.03%
Carlisle	107,524	242479	9785	163	0	0%	5	13F	14			3	0.01%	0.01%	0.01%			0.03%
Thurrock	157,705	293867	11542	192	0	0%	7	13D				2	0.01%	0.01%				0.03%
Basingstoke and Deane	167,799	305389	13013	217	0	0%	7	13D				2	0.01%	0.01%				0.03%
Vale of White Horse	120,988	259686	10782	180	0	0%	7	13D				2	0.01%	0.01%				0.03%
Southend-on-Sea	173,658	311878	12633	211	0	0%	7	13D				2	0.01%	0.01%				0.03%
Sutton	190,146	330391	13366	223	0	0%	7	13D				2	0.01%	0.01%				0.03%
Windsor and Maidenhead	144,560	290645	11591	193	0	0%	7	13D				2	0.01%	0.01%				0.02%
Reading	155,698	301689.0	12356	206	0	0%	7	13D				2	0.01%	0.01%				0.02%
Bath and North East Somerset	176,016	320970	12853	214	0	0%	7	13D				2	0.01%	0.01%				0.02%
South Oxfordshire	134,257	282564.0	10617	177	0	0%	7	13D				2	0.01%	0.01%				0.02%
Allerdale	96,422	239859	9845	164	0	0%	5	13F	14			3	0.01%	0.01%	0.01%			0.02%
Stevenage	83,957	223984	8842	147	0	0%	7	13D				2	0.01%	0.01%				0.02%
Caerphilly	178,806	327227	13190	220	0	0%	7	13D				2	0.01%	0.01%				0.02%
Slough	140,205	294620	11581	193	0	0%	7	13D				2	0.01%	0.01%				0.02%
Ipswich	133,384	287714	11355	189	0	0%	7	13D				2	0.01%	0.01%				0.02%
Stroud	112,779	268702	10258	171	0	0%	7	13D				2	0.01%	0.01%				0.02%
Kingston upon Thames	160,060	321411.0	12398	207	0	0%	7	13D				2	0.01%	0.01%				0.02%
Waveney	115,254	273840	13042	217	0	0%	7	13D				2	0.01%	0.01%				0.02%
Hertsmere	100,031	256516.0	10063	168	0	0%	7	13D				2	0.01%	0.01%				0.02%
Wokingham	154,380	321806.0	11988	200	0	0%	7	13D				2	0.01%	0.01%				0.02%
Eden	52,564	188372	7362	123	0	0%	5	13F	14			3	0.01%	0.01%	0.01%			0.02%
Malvern Hills	74,631	225174	9068	151	0	0%	7	13D				2	0.01%	0.01%				0.02%
Newport	145,736	315090.0	12193	203	0	0%	7	13D				2	0.01%	0.01%				0.02%
Cotswold	82,881	238772	10482	175	0	0%	7	13D				2	0.01%	0.01%				0.02%
Broxbourne	93,609	255462.0	10543	176	0	0%	7	13D				2	0.01%	0.01%				0.02%
Swansea	239,023	408270	15772	263	0	0%	7	13D				2	0.01%	0.01%				0.02%
Tendring	138,048	312676	12088	201	0	0%	7	13D				2	0.01%	0.01%				0.02%
Tewkesbury	81,943	241397	9515	159	0	0%	7	13D				2	0.01%	0.01%				0.02%
Elmbridge	130,875	307635.0	12196	203	0	0%	7	13D				2	0.01%	0.01%				0.02%
Great Yarmouth	97,277	267835	12180	203	0	0%	7	13D				2	0.01%	0.01%				0.02%
Suffolk Coastal	124,298	305307	12112	202	0	0%	7	13D				2	0.01%	0.01%				0.02%
Watford	90,301	260478	10117	169	0	0%	7	13D				2	0.01%	0.01%				0.02%
Guildford	137,183	322187	12311	205	0	0%	7	13D				2	0.01%	0.01%				0.02%
New Forest	176,462	366208	14832	247	0	0%	7	13D				2	0.01%	0.01%				0.02%
Maidstone	155,143	343724	13086	218	0	0%	7	13D				2	0.01%	0.01%				0.02%
Portsmouth	205,056	395335	15132	252	0	0%	7	13D				2	0.01%	0.01%				0.02%
Three Rivers	87,317	261840	10147	169	0	0%	7	13D				2	0.01%	0.01%				0.02%
Reigate and Banstead	137,835	329773	12640	211	0	0%	7	13D				2	0.01%	0.01%				0.02%
Hartlow	81,944	256182	9883	165	0	0%	7	13D				2	0.01%	0.01%				0.02%
Uttlesford	79,443	252502	9969	166	0	0%	7	13D				2	0.01%	0.01%				0.02%
Bournemouth	183,491	387154	15352	256	0	0%	7	13D				2	0.01%	0.01%				0.02%
Mid Suffolk	96,731	281164	10871	181	0	0%	7	13D				2	0.01%	0.01%				0.02%
Chiltern	92,635	278538	11198	187	0	0%	7	13D				2	0.01%	0.01%				0.02%
Isle of Angelsey	69,751	242504	11185	186	0	0%	7	13D				2	0.01%	0.01%				0.02%
Tonbridge and Malling	120,805	321623	12204	203	0	0%	7	13D				2	0.01%	0.01%				0.02%
Babergh	87,740	276327	11503	192	0	0%	7	13D				2	0.01%	0.01%				0.02%
Sevenoaks	114,893	318511	12030	201	0	0%	7	13D				2	0.01%	0.01%				0.02%
Forest of Dean	81,961	269213	10870	181	0	0%	7	13D				2	0.01%	0.01%				0.02%
Wealden	148,915	363035	14274	238	0	0%	7	13D				2	0.01%	0.01%				0.02%
Canterbury	151,145	367300	14029	234	0	0%	7	13D				2	0.01%	0.01%				0.02%
Dartford	97,365	297772	11259	188	0	0%	7	13D				2	0.01%	0.01%				0.02%
Spelthorne	95,598	295374.0	11609	193	0	0%	7	13D				2	0.01%	0.01%				0.02%
Plymouth	256,384	485259	17757	296	0	0%	7	13D				2	0.01%	0.01%				0.02%
Monmouthshire	91,323	291721	11192	187	0	0%	7	13D				2	0.01%	0.01%				0.02%
Waverley	121,572	337042	13106	218	0	0%	7	13D				2	0.01%	0.01%				0.02%
Bracknell Forest	113,205	325382	12129	202	0	0%	7	13D				2	0.01%	0.01%				0.02%
Mid Sussex	139,860	361980	13895	232	0	0%	7	13D				2	0.01%	0.01%				0.02%
Neath Port Talbot	139,812	362473	14711	245	0	0%	7	13D				2	0.01%	0.01%				0.02%
Swale	135,835	357726.0	13644	227	0	0%	7	13D				2	0.01%	0.01%				0.02%
Woking	99,198	306018	11978	200	0	0%	7	13D				2	0.01%	0.01%				0.02%
Arun	149,518	375928.0	15276	255	0	0%	7	13D				2	0.01%	0.01%				0.02%
Forest Heath	59,748	237685	9081	151	0	0%	7	13D				2	0.01%	0.01%				0.02%
Barrow-in-Furness	69,087	256394	10095	168	0	0%	5	13F	14			3	0.01%	0.01%	0.01%			0.02%
Test Valley	116,398	333177	13235	221	0	0%	7	13D				2	0.01%	0.01%				0.02%

HGV Trip Distribution - Gravity Model

Reference	Route	Trip Dist %				Total	AM Peak Hour			PM Peak Hour		
		A	B	C	D		Arr.	Dep.	Total	Arr.	Dep.	Total
1	Billingley Green Lane					0.0%	0	0	0	0	0	0
2	Nicholas Lane					0.0%	0	0	0	0	0	0
3	Barrowfield Road					0.0%	0	0	0	0	0	0
4	Red Hill Lane					0.0%	0	0	0	0	0	0
5	A1(M) North	9.9%	0.4%		0.3%	10.6%	6	6	12	6	6	12
6	A635 Barnsley Road	6.2%				6.2%	3	4	7	4	3	7
7	A1(M) South	7.7%	9.0%			16.7%	9	9	19	10	9	19
8	B6098					0.0%	0	0	0	0	0	0
9	Highgate Lane (South)					0.0%	0	0	0	0	0	0
10	A633 Manvers Way	4.6%				4.6%	3	3	5	3	2	5
11	B6273 Pontefract Road					0.0%	0	0	0	0	0	0
12	A633 Wath Road	5.0%				5.0%	3	3	6	3	3	6
13	A6195 Dearne Valley Parkway	16.2%	17.7%			33.8%	19	19	38	20	18	38
13A	Roebuck Hill					0.0%	0	0	0	0	0	0
13B	B6096					0.0%	0	0	0	0	0	0
13C	Sheffield Road					0.0%	0	0	0	0	0	0
13D	M1 South	11.4%	9.4%			20.8%	12	12	23	12	11	23
13E	A61	4.3%	2.0%			6.3%	4	4	7	4	3	7
13F	M1 North	0.5%	6.2%			6.7%	4	4	8	4	4	8
14	A635 Doncaster Road		5.3%	8.1%		13.5%	7	8	15	8	7	15
15	A6195 Park Spring Road			5.3%	4.4%	9.7%	5	5	11	6	5	11
		49.5%	32.4%	13.5%	4.6%	100.0%	55	57	112	60	52	112

Population data derived from 2011 Census data

- 2 Distance coefficient
- 350 Maximum travel time

Origin Zone	Population (P)	Distance (D) (m)	Travel Time (seconds)	Travel Time (mins)	P / D ⁿ	% of Total	Trip Distribution									
							Route Assumptions				Count	Trips Per Route				
							A	B	C	D		A	B	C	D	Total
Winchester	116,595	334109	13266	221	0	0%	7	13D			2	0.01%	0.01%			0.02%
Gravesham	101,720	312745	12015	200	0	0%	7	13D			2	0.01%	0.01%			0.02%
Bridgend	139,178	365962	14105	235	0	0%	7	13D			2	0.01%	0.01%			0.02%
Horsham	131,301	357378.0	14177	236	0	0%	7	13D			2	0.01%	0.01%			0.01%
South Somerset	161,243	399934	14945	249	0	0%	7	13D			2	0.01%	0.01%			0.01%
Carmarthenshire	183,777	435647	16941	282	0	0%	7	13D			2	0.01%	0.01%			0.01%
Iste of Wight	138,265	378624	20150	336	0	0%	7	13D			2	0.01%	0.01%			0.01%
Mendip	109,279	337070	14094	235	0	0%	7	13D			2	0.01%	0.01%			0.01%
Poole	147,645	393478	15770	263	0	0%	7	13D			2	0.01%	0.01%			0.01%
Tunbridge Wells	115,049	347680	13070	218	0	0%	7	13D			2	0.01%	0.01%			0.01%
Eastleigh	125,199	363031	13908	232	0	0%	7	13D			2	0.01%	0.01%			0.01%
Brentwood	73,601	279997	10404	173	0	0%	7	13D			2	0.01%	0.01%			0.01%
Castle Point	88,011	306345	12239	204	0	0%	7	13D			2	0.01%	0.01%			0.01%
Torfaen	91,075	312968	12365	206	0	0%	7	13D			2	0.01%	0.01%			0.01%
East Hampshire	115,608	352706	13811	230	0	0%	7	13D			2	0.01%	0.01%			0.01%
Sedgemoor	114,588	352314	13218	220	0	0%	7	13D			2	0.01%	0.01%			0.01%
Rushmoor	93,807	320134	12287	205	0	0%	7	13D			2	0.01%	0.01%			0.01%
Thanet	134,186	385398	14372	240	0	0%	7	13D			2	0.01%	0.01%			0.01%
Copeland	70,603	279896	12473	208	0	0%	5	13F	14	3	0.00%	0.00%	0.00%			0.01%
Rochford	83,287	304194	12787	213	0	0%	7	13D			2	0.01%	0.01%			0.01%
Surrey Heath	86,144	310779	12159	203	0	0%	7	13D			2	0.01%	0.01%			0.01%
Runnymede	80,510	301752	11554	193	0	0%	7	13D			2	0.01%	0.01%			0.01%
Fareham	111,581	355662.0	14848	247	0	0%	7	13D			2	0.01%	0.01%			0.01%
Ashford	117,956	366362	14064	234	0	0%	7	13D			2	0.01%	0.01%			0.01%
Crawley	106,597	349395	13143	219	0	0%	7	13D			2	0.01%	0.01%			0.01%
Hart	91,033	324930	12682	211	0	0%	7	13D			2	0.01%	0.01%			0.01%
Chichester	113,794	365405	15080	251	0	0%	7	13D			2	0.01%	0.01%			0.01%
Ceredigion	75,922	302191	15915	265	0	0%	7	13D			2	0.01%	0.01%			0.01%
South Bucks	66,867	286707	11413	190	0	0%	7	13D			2	0.01%	0.01%			0.01%
East Devon	132,457	406550	15943	266	0	0%	7	13D			2	0.01%	0.01%			0.01%
Mole Valley	85,375	328352	12776	213	0	0%	7	13D			2	0.01%	0.01%			0.01%
Havant	120,684	390755.0	14886	248	0	0%	7	13D			2	0.01%	0.01%			0.01%
Dover	111,674	385061	14549	242	0	0%	7	13D			2	0.01%	0.01%			0.01%
Tandridge	82,998	334159	12534	209	0	0%	7	13D			2	0.01%	0.01%			0.01%
Taunton Deane	110,187	385504.0	14394	240	0	0%	7	13D			2	0.01%	0.01%			0.01%
Epsom and Ewell	75,102	321682	12635	211	0	0%	7	13D			2	0.01%	0.01%			0.01%
Worthing	104,640	381472	15413	257	0	0%	7	13D			2	0.01%	0.01%			0.01%
Blaenau Gwent	69,814	321312	12861	214	0	0%	7	13D			2	0.00%	0.00%			0.01%
Exeter	117,773	418456.0	15541	259	0	0%	7	13D			2	0.00%	0.00%			0.01%
Eastbourne	99,412	386736	15775	263	0	0%	7	13D			2	0.00%	0.00%			0.01%
Rother	90,588	369879	14338	239	0	0%	7	13D			2	0.00%	0.00%			0.01%
Maldon	61,629	306553	12835	214	0	0%	7	13D			2	0.00%	0.00%			0.01%
Teignbridge	124,220	441151	16375	273	0	0%	7	13D			2	0.00%	0.00%			0.01%
Torbay	130,959	454965	16898	282	0	0%	7	13D			2	0.00%	0.00%			0.01%
Hastings	90,254	377918	14923	249	0	0%	7	13D			2	0.00%	0.00%			0.01%
Lewes	97,502	396552.0	15014	250	0	0%	7	13D			2	0.00%	0.00%			0.01%
Gosport	82,622	365914	15492	258	0	0%	7	13D			2	0.00%	0.00%			0.01%
East Dorset	87,166	385227	15351	256	0	0%	7	13D			2	0.00%	0.00%			0.01%
West Dorset	99,264	426327	16463	274	0	0%	7	13D			2	0.00%	0.00%			0.01%
Merthyr Tydfil	58,802	331554	12745	212	0	0%	7	13D			2	0.00%	0.00%			0.01%
Pembrokeshire	122,439	484259.0	19023	317	0	0%	7	13D			2	0.00%	0.00%			0.01%
North Devon	93,667	440349	16568	276	0	0%	7	13D			2	0.00%	0.00%			0.01%
Mid Devon	77,750	409886	15566	259	0	0%	7	13D			2	0.00%	0.00%			0.01%
North Dorset	68,583	389223.0	16548	276	0	0%	7	13D			2	0.00%	0.00%			0.01%
Adur	61,182	392402	14733	246	0	0%	7	13D			2	0.00%	0.00%			0.01%
South Hams	83,140	468551	17253	288	0	0%	7	13D			2	0.00%	0.00%			0.01%
Weymouth and Portland	65,167	449767	17812	297	0	0%	7	13D			2	0.00%	0.00%			0.00%
Christchurch	47,752	385626	15391	257	0	0%	7	13D			2	0.00%	0.00%			0.00%
Torrif	63,839	469207	18558	309	0	0%	7	13D			2	0.00%	0.00%			0.00%
Purbeck	44,973	406824	16629	277	0	0%	7	13D			2	0.00%	0.00%			0.00%
West Devon	53,553	477199.0	19039	317	0	0%	7	13D			2	0.00%	0.00%			0.00%
West Somerset	34,675	406957	15892	265	0	0%	7	13D			2	0.00%	0.00%			0.00%
Total	54,845,950	80,137,011	3,285,164	54,753	0	100%						49.53%	32.37%	13.45%	4.65%	100.00%

Appendix D

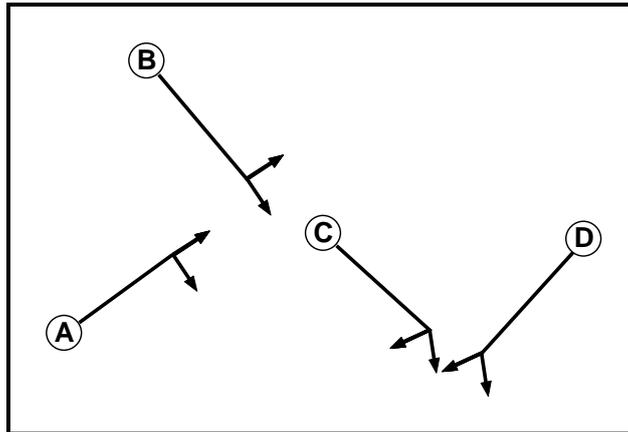
M1 Junction 36 / Birdwell Roundabout LinSig Model

Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	2024-06-24 M1 J36.lsg3x
Author:	
Company:	
Address:	

Full Input Data And Results
C1 - M1 Junction 36 - North
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7
C	Traffic	2		7	7
D	Traffic	2		7	7

Phase Intergreens Matrix

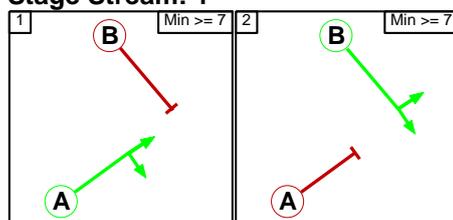
		Starting Phase			
		A	B	C	D
Terminating Phase	A		7	-	-
	B	7		-	-
	C	-	-		7
	D	-	-	7	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D

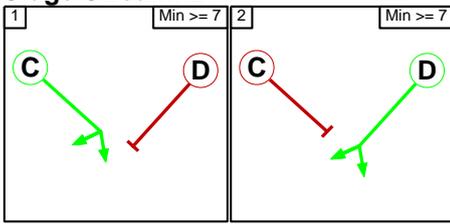
Stage Diagram

Stage Stream: 1



Full Input Data And Results

Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

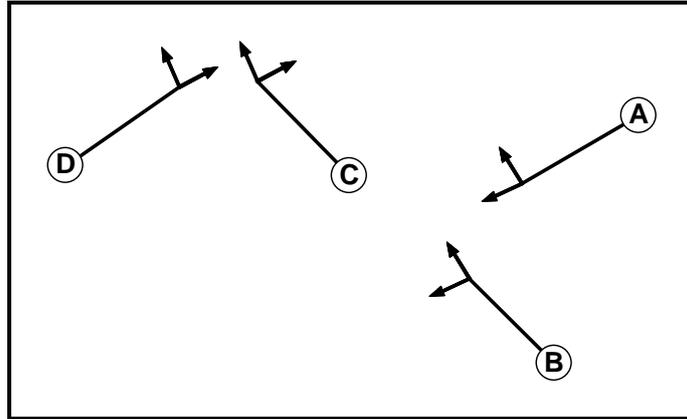
Stage Stream: 1

		To Stage	
		1	2
From Stage	1		7
	2	7	

Stage Stream: 2

		To Stage	
		1	2
From Stage	1		7
	2	7	

Full Input Data And Results
C2 - M1 Junction 36 - South
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Traffic	2		-9999	7
D	Traffic	2		-9999	7

Phase Intergreens Matrix

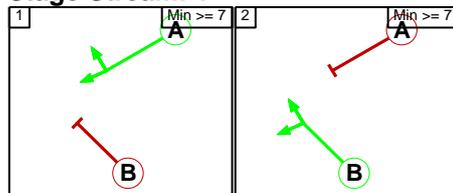
		Starting Phase			
		A	B	C	D
Terminating Phase	A	7	-	-	
	B	7		-	-
	C	-	-		7
	D	-	-	7	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B
2	1	C
2	2	D

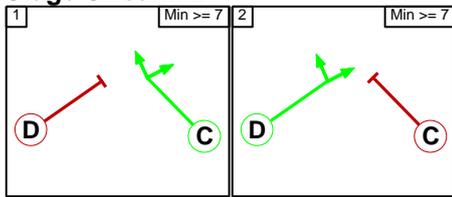
Stage Diagram

Stage Stream: 1



Full Input Data And Results

Stage Stream: 2



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

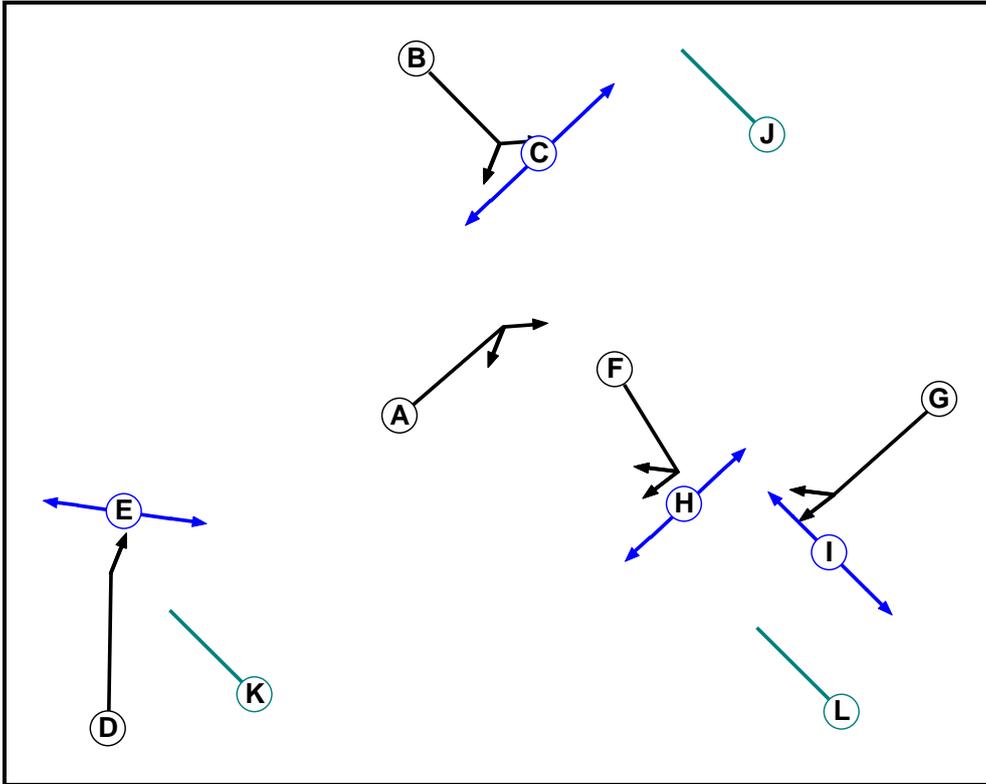
Stage Stream: 1

		To Stage	
		1	2
From Stage	1		7
	2	7	

Stage Stream: 2

		To Stage	
		1	2
From Stage	1		7
	2	7	

Full Input Data And Results
C3 - Birdwell Rbt - North
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		-9999	7
B	Traffic	1		-9999	7
C	Pedestrian	1		-9999	6
D	Traffic	2		-9999	7
E	Pedestrian	2		-9999	6
F	Traffic	3		-9999	7
G	Traffic	3		-9999	7
H	Pedestrian	3		-9999	6
I	Pedestrian	3		-9999	6
J	Dummy	1		-9999	3
K	Dummy	2		-9999	3
L	Dummy	3		-9999	3

Phase Intergrens Matrix

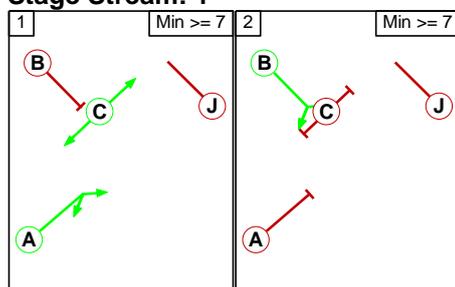
		Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A		5	-	-	-	-	-	-	-	3	-	-
	B	6		5	-	-	-	-	-	-	3	-	-
	C	-	10		-	-	-	-	-	-	3	-	-
	D	-	-	-		5	-	-	-	-	3	-	-
	E	-	-	-	8		-	-	-	-	3	-	-
	F	-	-	-	-	-		5	5	-	-	-	3
	G	-	-	-	-	-	5		-	5	-	-	3
	H	-	-	-	-	-	8	-		-	-	-	3
	I	-	-	-	-	-	-	8	-		-	-	3
	J	2	2	2	-	-	-	-	-	-		-	-
	K	-	-	-	2	2	-	-	-	-	-		-
	L	-	-	-	-	-	2	2	2	2	-	-	

Phases in Stage

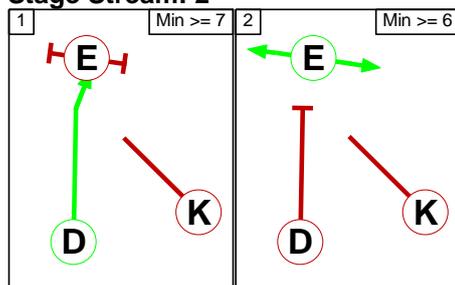
Stream	Stage No.	Phases in Stage
1	1	A C
1	2	B
2	1	D
2	2	E
3	1	F I
3	2	G H

Stage Diagram

Stage Stream: 1

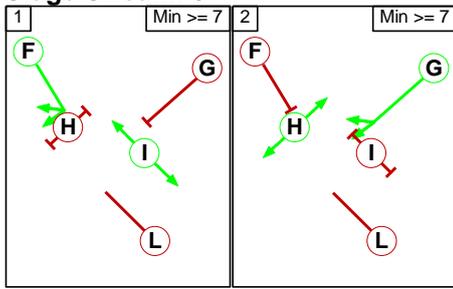


Stage Stream: 2



Full Input Data And Results

Stage Stream: 3



Phase Delays

Stage Stream: 1

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 2

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Stage Stream: 3

Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

		To Stage	
		1	2
From Stage	1		10
	2	6	

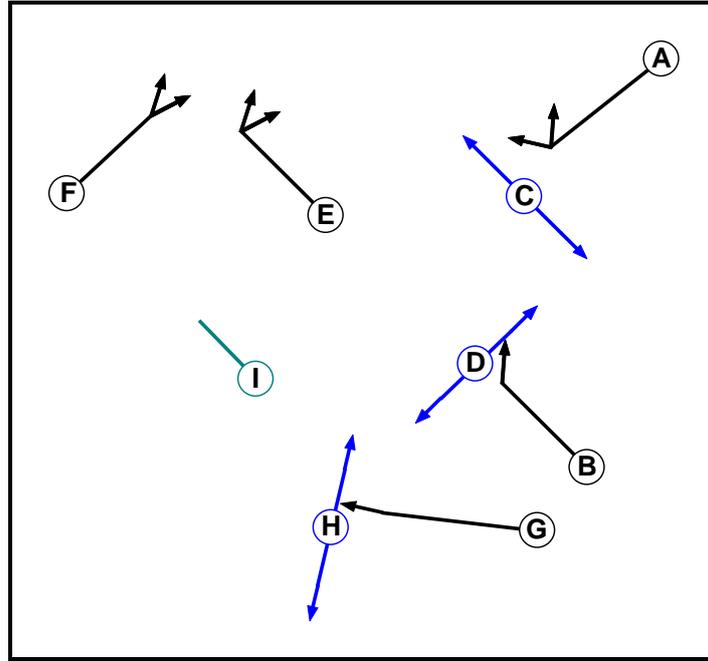
Stage Stream: 2

		To Stage	
		1	2
From Stage	1		5
	2	8	

Stage Stream: 3

		To Stage	
		1	2
From Stage	1		8
	2	8	

Full Input Data And Results
C4 - Birdwell Rbt - South
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Pedestrian		5	5
D	Pedestrian		5	5
E	Traffic		7	3
F	Traffic		7	7
G	Traffic		7	7
H	Pedestrian		5	5
I	Dummy		3	3

Full Input Data And Results

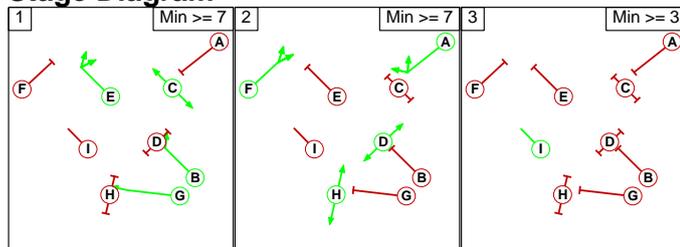
Phase Intergrens Matrix

Terminating Phase	Starting Phase									
		A	B	C	D	E	F	G	H	I
	A		5	5	-	-	-	8	-	3
	B	5		-	5	-	-	-	-	3
	C	8	-		-	-	-	-	-	3
	D	-	7	-		-	-	-	-	3
	E	-	-	-	-		5	-	-	3
	F	-	-	-	-	5		-	-	3
	G	5	-	-	-	-	-		5	3
	H	-	-	-	-	-	-	7		3
I	2	2	2	2	2	2	2	2		

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	E	Losing	4	4
1	3	E	Losing	4	4

Prohibited Stage Change

From Stage	To Stage			
	1	2	3	
	1		9	7
	2	8		3
3	2	2		

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: M1 Junction 36 (Tankersley Roundabout)

There are no Opposed Lanes in this Junction

Junction: J2: Birdwell Roundabout

There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: M1 Junction 36 (Tankersley Roundabout)												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J1:1/1 (M1 Southbound Off Slip)	U	B	2	3	19.8	User	1900	-	-	-	-	-
J1:1/2 (M1 Southbound Off Slip)	U	B	2	3	62.6	User	1900	-	-	-	-	-
J1:1/3 (M1 Southbound Off Slip)	U	B	2	3	90.4	User	1900	-	-	-	-	-
J1:2/1 (A61- East)	U	D	2	3	20.5	User	1900	-	-	-	-	-
J1:2/2 (A61- East)	U	D	2	3	20.5	User	1900	-	-	-	-	-
J1:3/1 (M1 Northbound Off Slip)	U	B	2	3	71.3	User	1900	-	-	-	-	-
J1:3/2 (M1 Northbound Off Slip)	U	B	2	3	48.7	User	1900	-	-	-	-	-
J1:4/1 (A61 - West)	U	D	2	3	60.0	User	1900	-	-	-	-	-
J1:4/2 (A61 - West)	U	D	2	3	60.0	User	1900	-	-	-	-	-
J1:5/1 (Northern Circulatory)	U	A	2	3	28.2	User	1900	-	-	-	-	-
J1:5/2 (Northern Circulatory)	U	A	2	3	28.2	User	1900	-	-	-	-	-
J1:5/3 (Northern Circulatory)	U	A	2	3	28.2	User	1900	-	-	-	-	-
J1:6/1 (Eastern Circulatory)	U	C	2	3	13.9	User	1900	-	-	-	-	-
J1:6/2 (Eastern Circulatory)	U	C	2	3	30.4	User	1900	-	-	-	-	-
J1:7/1 (Western Circulatory)	U	A	2	3	43.5	User	1900	-	-	-	-	-
J1:7/2 (Western Circulatory)	U	A	2	3	43.5	User	1900	-	-	-	-	-
J1:7/3 (Western Circulatory)	U	A	2	3	43.5	User	1900	-	-	-	-	-
J1:8/1 (Eastern Circulatory)	U	C	2	3	13.0	User	1900	-	-	-	-	-

Full Input Data And Results

J1:8/2 (Eastern Circulatory)	U	C	2	3	13.0	User	1900	-	-	-	-	-
J1:8/3 (Eastern Circulatory)	U	C	2	3	13.0	User	1900	-	-	-	-	-
J1:9/1 (M1 - Northbound On Slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:9/2 (M1 - Northbound On Slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:10/1 (M1 Southbound On Slip)	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:11/1 (A61 - East (Exit))	U		2	3	10.4	Inf	-	-	-	-	-	-
J1:11/2 (A61 - East (Exit))	U		2	3	10.4	Inf	-	-	-	-	-	-
J1:12/1 (A61 - West (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:12/2 (A61 - West (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: Birdwell Roundabout												
Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
J2:1/1 (A61 Sheffield Road)	U	F	2	3	8.9	User	1900	-	-	-	-	-
J2:1/2 (A61 Sheffield Road)	U	F	2	3	8.9	User	1900	-	-	-	-	-
J2:1/3 (A61 Sheffield Road)	U	F	2	3	60.0	User	1900	-	-	-	-	-
J2:2/1 (A6195 Dearne Valley Parkway)	U	B	2	3	41.7	User	1900	-	-	-	-	-
J2:2/2 (A6195 Dearne Valley Parkway)	U	B	2	3	41.7	User	1900	-	-	-	-	-
J2:3/1 (A6195 - East)	U	G	2	3	13.0	User	1900	-	-	-	-	-
J2:3/2 (A6195 - East)	U	G	2	3	13.0	User	1900	-	-	-	-	-
J2:4/1 (A61)	U	G	2	3	20.0	User	1900	-	-	-	-	-
J2:4/2 (A61)	U	B	2	3	17.4	User	1900	-	-	-	-	-
J2:4/3 (A61)	U	B	2	3	17.4	User	1900	-	-	-	-	-
J2:5/1 (North West Circulatory)	U	A	2	3	24.3	User	1900	-	-	-	-	-
J2:5/2 (North West Circulatory)	U	A	2	3	24.3	User	1900	-	-	-	-	-
J2:5/3 (North West Circulatory)	U	A	2	3	24.3	User	1900	-	-	-	-	-
J2:6/1 (South West Circulatory)	U	E	2	3	6.1	User	1900	-	-	-	-	-
J2:6/2 (South West Circulatory)	U	E	2	3	6.1	User	1900	-	-	-	-	-
J2:7/1 (North East Circulatory)	U	F	2	3	15.3	User	1900	-	-	-	-	-
J2:7/2 (North East Circulatory)	U	F	2	3	15.3	User	1900	-	-	-	-	-
J2:8/1 (South East Circulatory)	U	A	2	3	20.3	User	1900	-	-	-	-	-
J2:8/2 (South East Circulatory)	U	A	2	3	20.3	User	1900	-	-	-	-	-

Full Input Data And Results

J2:9/1 (A61 Sheffield Road (Exit))	U		2	3	60.0	User	1900	-	-	-	-	-
J2:10/1 (A6195 Dearne Valley Parkway (Exit))	U	D	2	3	23.0	User	1900	-	-	-	-	-
J2:10/2 (A6195 Dearne Valley Parkway (Exit))	U	D	2	3	23.0	User	1900	-	-	-	-	-
J2:11/1 (A6195 Dearne Valley Parkway (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:11/2 (A6195 Dearne Valley Parkway (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:12/1 (A6195 - East (Exit))	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:13/1 (A61 (Exit))	U		2	3	13.9	Inf	-	-	-	-	-	-
J2:13/2 (A61 (Exit))	U		2	3	13.9	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2024 Base AM'	07:30	08:30	01:00	
2: '2024 Base PM'	16:00	17:00	01:00	
3: '2028 Do Mnimum AM'	07:30	08:30	01:00	
4: '2028 Do Minimum PM'	16:00	17:00	01:00	
5: '2028 With Development AM'	07:30	08:30	01:00	
6: '2028 With Development PM'	16:00	17:00	01:00	

Full Input Data And Results

Scenario 1: '2023 Base AM' (FG1: '2024 Base AM', Plan 1: 'v1')

Traffic Flows, Desired

Desired Flow :

		Destination								
		A	B	C	D	E	F	G	H	Tot.
Origin	A	0	546	3	427	0	0	0	0	976
	B	725	0	732	577	0	0	0	0	2034
	C	0	479	0	85	0	0	0	0	564
	D	603	502	41	0	0	0	0	0	1146
	E	0	0	0	0	0	252	368	589	1209
	F	0	0	0	0	128	0	4	1064	1196
	G	0	0	0	0	258	10	0	381	649
	H	0	0	0	0	449	935	143	0	1527
	Tot.	1328	1527	776	1089	835	1197	515	2034	9301

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2023 Base AM
Junction: J1: M1 Junction 36 (Tankersley Roundabout)	
J1:1/1 (short)	160
J1:1/2 (with short)	546(In) 386(Out)
J1:1/3	430
J1:2/1	1033
J1:2/2	1001
J1:3/1 (with short)	564(In) 299(Out)
J1:3/2 (short)	265
J1:4/1	623
J1:4/2	523
J1:5/1	234
J1:5/2	747
J1:5/3	41
J1:6/1 (short)	278
J1:6/2 (with short)	471(In) 193(Out)
J1:7/1	535
J1:7/2	760
J1:7/3	434
J1:8/1	291
J1:8/2	648
J1:8/3	265
J1:9/1	593
J1:9/2	735
J1:10/1	776
J1:11/1	277
J1:11/2	1250
J1:12/1	577
J1:12/2	512
Junction: J2: Birdwell Roundabout	
J2:1/1	440
J2:1/2 (short)	449
J2:1/3 (with short)	769(In) 320(Out)
J2:2/1	608
J2:2/2	588
J2:3/1	381
J2:3/2	268
J2:4/1	449

Full Input Data And Results

J2:4/2 (with short)	1078(In) 533(Out)
J2:4/3 (short)	545
J2:5/1	511
J2:5/2	269
J2:5/3	320
J2:6/1	536
J2:6/2	552
J2:7/1	873
J2:7/2	908
J2:8/1	386
J2:8/2	10
J2:9/1	835
J2:10/1	613
J2:10/2	584
J2:11/1	613
J2:11/2	584
J2:12/1	515
J2:13/1	1064
J2:13/2	970

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M1 Junction 36 (Tankersley Roundabout)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (M1 Southbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/2 (M1 Southbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/3 (M1 Southbound Off Slip Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/1 (A61- East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/2 (A61- East Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/1 (M1 Northbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/2 (M1 Northbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/1 (A61 - West Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/2 (A61 - West Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/1 (Northern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/2 (Northern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/3 (Northern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/1 (Western Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/2 (Western Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/3 (Western Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/3 (Eastern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:9/1 (M1 - Northbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/2 (M1 - Northbound On Slip Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (M1 Southbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

J1:11/1 (A61 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:11/2 (A61 - East (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J1:12/1 (A61 - West (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:12/2 (A61 - West (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Junction: J2: Birdwell Roundabout									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A61 Sheffield Road Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/2 (A61 Sheffield Road Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/3 (A61 Sheffield Road Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/1 (A6195 Dearne Valley Parkway Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/2 (A6195 Dearne Valley Parkway Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/1 (A6195 - East Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/2 (A6195 - East Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/1 (A61 Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/2 (A61 Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/3 (A61 Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/1 (North West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/2 (North West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/3 (North West Circulatory Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/1 (South West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/2 (South West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/1 (North East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/2 (North East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/1 (South East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/2 (South East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:9/1 (A61 Sheffield Road (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:11/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

J2:11/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J2:12/1 (A6195 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/1 (A61 (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/2 (A61 (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 2: '2023 Base PM' (FG2: '2024 Base PM', Plan 1: 'v1')

Traffic Flows, Desired

Desired Flow :

	Destination									
	A	B	C	D	E	F	G	H	Tot.	
Origin	A	0	837	0	525	0	0	0	0	1362
	B	628	0	492	418	0	0	0	0	1538
	C	0	703	0	118	0	0	0	0	821
	D	421	402	67	0	0	0	0	0	890
	E	0	0	0	0	0	567	326	410	1303
	F	0	0	0	0	184	0	15	848	1047
	G	0	0	0	0	287	10	0	280	577
	H	0	0	0	0	622	961	358	0	1941
	Tot.	1049	1942	559	1061	1093	1538	699	1538	9479

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2023 Base PM
Junction: J1: M1 Junction 36 (Tankersley Roundabout)	
J1:1/1 (short)	419
J1:1/2 (with short)	837(In) 418(Out)
J1:1/3	525
J1:2/1	768
J1:2/2	770
J1:3/1 (with short)	821(In) 420(Out)
J1:3/2 (short)	401
J1:4/1	553
J1:4/2	337
J1:5/1	434
J1:5/2	671
J1:5/3	67
J1:6/1 (short)	410
J1:6/2 (with short)	592(In) 182(Out)
J1:7/1	619
J1:7/2	586
J1:7/3	366
J1:8/1	262
J1:8/2	668
J1:8/3	401
J1:9/1	473
J1:9/2	576
J1:10/1	559
J1:11/1	636
J1:11/2	1306
J1:12/1	678
J1:12/2	383
Junction: J2: Birdwell Roundabout	
J2:1/1	567
J2:1/2 (short)	522
J2:1/3 (with short)	736(In) 214(Out)
J2:2/1	526
J2:2/2	521
J2:3/1	280
J2:3/2	297
J2:4/1	622

Full Input Data And Results

J2:4/2 (with short)	1319(In) 643(Out)
J2:4/3 (short)	676
J2:5/1	684
J2:5/2	196
J2:5/3	214
J2:6/1	647
J2:6/2	682
J2:7/1	707
J2:7/2	735
J2:8/1	471
J2:8/2	10
J2:9/1	1093
J2:10/1	880
J2:10/2	658
J2:11/1	880
J2:11/2	658
J2:12/1	699
J2:13/1	847
J2:13/2	691

Lane Saturation Flows

Junction: J1: M1 Junction 36 (Tankersley Roundabout)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (M1 Southbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/2 (M1 Southbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/3 (M1 Southbound Off Slip Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/1 (A61- East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/2 (A61- East Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/1 (M1 Northbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/2 (M1 Northbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/1 (A61 - West Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/2 (A61 - West Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/1 (Northern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/2 (Northern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/3 (Northern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/1 (Western Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/2 (Western Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/3 (Western Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/3 (Eastern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:9/1 (M1 - Northbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/2 (M1 - Northbound On Slip Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (M1 Southbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

J1:11/1 (A61 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:11/2 (A61 - East (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J1:12/1 (A61 - West (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:12/2 (A61 - West (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Junction: J2: Birdwell Roundabout									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A61 Sheffield Road Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/2 (A61 Sheffield Road Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/3 (A61 Sheffield Road Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/1 (A6195 Dearne Valley Parkway Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/2 (A6195 Dearne Valley Parkway Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/1 (A6195 - East Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/2 (A6195 - East Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/1 (A61 Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/2 (A61 Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/3 (A61 Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/1 (North West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/2 (North West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/3 (North West Circulatory Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/1 (South West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/2 (South West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/1 (North East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/2 (North East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/1 (South East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/2 (South East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:9/1 (A61 Sheffield Road (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:11/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

J2:11/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J2:12/1 (A6195 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/1 (A61 (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/2 (A61 (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 3: '2023 Base AM_validated' (FG1: '2024 Base AM', Plan 1: 'v1')

Traffic Flows, Desired

Desired Flow :

	Destination									
	A	B	C	D	E	F	G	H	Tot.	
Origin	A	0	546	3	427	0	0	0	0	976
	B	725	0	732	577	0	0	0	0	2034
	C	0	479	0	85	0	0	0	0	564
	D	603	502	41	0	0	0	0	0	1146
	E	0	0	0	0	0	252	368	589	1209
	F	0	0	0	0	128	0	4	1064	1196
	G	0	0	0	0	258	10	0	381	649
	H	0	0	0	0	449	935	143	0	1527
	Tot.	1328	1527	776	1089	835	1197	515	2034	9301

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: 2023 Base AM_validated
Junction: J1: M1 Junction 36 (Tankersley Roundabout)	
J1:1/1 (short)	160
J1:1/2 (with short)	546(In) 386(Out)
J1:1/3	430
J1:2/1	1046
J1:2/2	988
J1:3/1 (with short)	564(In) 331(Out)
J1:3/2 (short)	233
J1:4/1	603
J1:4/2	543
J1:5/1	246
J1:5/2	735
J1:5/3	41
J1:6/1 (short)	231
J1:6/2 (with short)	471(In) 240(Out)
J1:7/1	501
J1:7/2	693
J1:7/3	535
J1:8/1	190
J1:8/2	781
J1:8/3	233
J1:9/1	492
J1:9/2	836
J1:10/1	776
J1:11/1	283
J1:11/2	1244
J1:12/1	543
J1:12/2	546
Junction: J2: Birdwell Roundabout	
J2:1/1	439
J2:1/2 (short)	452
J2:1/3 (with short)	770(In) 318(Out)
J2:2/1	610
J2:2/2	586
J2:3/1	381
J2:3/2	268
J2:4/1	449

Full Input Data And Results

J2:4/2 (with short)	1078(In) 535(Out)
J2:4/3 (short)	543
J2:5/1	511
J2:5/2	271
J2:5/3	318
J2:6/1	538
J2:6/2	550
J2:7/1	877
J2:7/2	904
J2:8/1	386
J2:8/2	10
J2:9/1	835
J2:10/1	617
J2:10/2	580
J2:11/1	617
J2:11/2	580
J2:12/1	515
J2:13/1	1068
J2:13/2	966

Lane Saturation Flows

Junction: J1: M1 Junction 36 (Tankersley Roundabout)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (M1 Southbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/2 (M1 Southbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/3 (M1 Southbound Off Slip Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/1 (A61- East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/2 (A61- East Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/1 (M1 Northbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/2 (M1 Northbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/1 (A61 - West Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/2 (A61 - West Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/1 (Northern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/2 (Northern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/3 (Northern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/1 (Western Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/2 (Western Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/3 (Western Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/3 (Eastern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:9/1 (M1 - Northbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/2 (M1 - Northbound On Slip Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (M1 Southbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

J1:11/1 (A61 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:11/2 (A61 - East (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J1:12/1 (A61 - West (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:12/2 (A61 - West (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Junction: J2: Birdwell Roundabout									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A61 Sheffield Road Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/2 (A61 Sheffield Road Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/3 (A61 Sheffield Road Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/1 (A6195 Dearne Valley Parkway Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/2 (A6195 Dearne Valley Parkway Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/1 (A6195 - East Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/2 (A6195 - East Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/1 (A61 Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/2 (A61 Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/3 (A61 Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/1 (North West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/2 (North West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/3 (North West Circulatory Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/1 (South West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/2 (South West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/1 (North East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/2 (North East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/1 (South East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/2 (South East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:9/1 (A61 Sheffield Road (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:11/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

J2:11/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J2:12/1 (A6195 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/1 (A61 (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/2 (A61 (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 4: '2023 Base PM_validated' (FG2: '2024 Base PM', Plan 1: 'v1')

Traffic Flows, Desired

Desired Flow :

	Destination									
	A	B	C	D	E	F	G	H	Tot.	
Origin	A	0	837	0	525	0	0	0	0	1362
	B	628	0	492	418	0	0	0	0	1538
	C	0	703	0	118	0	0	0	0	821
	D	421	402	67	0	0	0	0	0	890
	E	0	0	0	0	0	567	326	410	1303
	F	0	0	0	0	184	0	15	848	1047
	G	0	0	0	0	287	10	0	280	577
	H	0	0	0	0	622	961	358	0	1941
	Tot.	1049	1942	559	1061	1093	1538	699	1538	9479

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: 2023 Base PM_validated
Junction: J1: M1 Junction 36 (Tankersley Roundabout)	
J1:1/1 (short)	69
J1:1/2 (with short)	837(In) 768(Out)
J1:1/3	525
J1:2/1	770
J1:2/2	768
J1:3/1 (with short)	821(In) 434(Out)
J1:3/2 (short)	387
J1:4/1	517
J1:4/2	373
J1:5/1	412
J1:5/2	693
J1:5/3	67
J1:6/1 (short)	334
J1:6/2 (with short)	592(In) 258(Out)
J1:7/1	545
J1:7/2	562
J1:7/3	464
J1:8/1	164
J1:8/2	780
J1:8/3	387
J1:9/1	375
J1:9/2	674
J1:10/1	559
J1:11/1	275
J1:11/2	1667
J1:12/1	604
J1:12/2	457
Junction: J2: Birdwell Roundabout	
J2:1/1	567
J2:1/2 (short)	522
J2:1/3 (with short)	736(In) 214(Out)
J2:2/1	526
J2:2/2	521
J2:3/1	280
J2:3/2	297
J2:4/1	622

Full Input Data And Results

J2:4/2 (with short)	1319(In) 638(Out)
J2:4/3 (short)	681
J2:5/1	684
J2:5/2	196
J2:5/3	214
J2:6/1	645
J2:6/2	684
J2:7/1	707
J2:7/2	735
J2:8/1	471
J2:8/2	10
J2:9/1	1093
J2:10/1	881
J2:10/2	657
J2:11/1	881
J2:11/2	657
J2:12/1	699
J2:13/1	847
J2:13/2	691

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M1 Junction 36 (Tankersley Roundabout)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (M1 Southbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/2 (M1 Southbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/3 (M1 Southbound Off Slip Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/1 (A61- East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/2 (A61- East Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/1 (M1 Northbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/2 (M1 Northbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/1 (A61 - West Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/2 (A61 - West Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/1 (Northern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/2 (Northern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/3 (Northern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/1 (Western Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/2 (Western Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/3 (Western Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/3 (Eastern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:9/1 (M1 - Northbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/2 (M1 - Northbound On Slip Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (M1 Southbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

J1:11/1 (A61 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:11/2 (A61 - East (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J1:12/1 (A61 - West (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:12/2 (A61 - West (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Junction: J2: Birdwell Roundabout									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A61 Sheffield Road Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/2 (A61 Sheffield Road Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/3 (A61 Sheffield Road Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/1 (A6195 Dearne Valley Parkway Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/2 (A6195 Dearne Valley Parkway Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/1 (A6195 - East Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/2 (A6195 - East Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/1 (A61 Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/2 (A61 Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/3 (A61 Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/1 (North West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/2 (North West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/3 (North West Circulatory Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/1 (South West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/2 (South West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/1 (North East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/2 (North East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/1 (South East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/2 (South East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:9/1 (A61 Sheffield Road (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:11/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

J2:11/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J2:12/1 (A6195 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/1 (A61 (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/2 (A61 (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 5: '2028 Do Minimum AM' (FG3: '2028 Do Mnimum AM', Plan 1: 'v1')

Traffic Flows, Desired

Desired Flow :

	Destination									
	A	B	C	D	E	F	G	H	Tot.	
Origin	A	0	694	0	439	0	0	0	0	1133
	B	847	0	842	667	0	0	0	0	2356
	C	0	603	0	88	0	0	0	0	691
	D	620	605	42	0	0	0	0	0	1267
	E	0	0	0	0	0	288	414	622	1324
	F	0	0	0	0	150	0	4	1207	1361
	G	0	0	0	0	283	11	0	527	821
	H	0	0	0	0	467	1244	190	0	1901
	Tot.	1467	1902	884	1194	900	1543	608	2356	10854

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: 2028 Do Minimum AM
Junction: J1: M1 Junction 36 (Tankersley Roundabout)	
J1:1/1 (short)	160
J1:1/2 (with short)	694(In) 534(Out)
J1:1/3	439
J1:2/1	1189
J1:2/2	1167
J1:3/1 (with short)	691(In) 402(Out)
J1:3/2 (short)	289
J1:4/1	644
J1:4/2	623
J1:5/1	338
J1:5/2	870
J1:5/3	42
J1:6/1 (short)	354
J1:6/2 (with short)	481(In) 127(Out)
J1:7/1	659
J1:7/2	907
J1:7/3	387
J1:8/1	460
J1:8/2	701
J1:8/3	289
J1:9/1	770
J1:9/2	697
J1:10/1	884
J1:11/1	329
J1:11/2	1573
J1:12/1	703
J1:12/2	491
Junction: J2: Birdwell Roundabout	
J2:1/1	478
J2:1/2 (short)	486
J2:1/3 (with short)	846(In) 360(Out)
J2:2/1	704
J2:2/2	657
J2:3/1	527
J2:3/2	294
J2:4/1	467

Full Input Data And Results

J2:4/2 (with short)	1434(In) 704(Out)
J2:4/3 (short)	730
J2:5/1	604
J2:5/2	262
J2:5/3	360
J2:6/1	713
J2:6/2	732
J2:7/1	962
J2:7/2	1017
J2:8/1	433
J2:8/2	11
J2:9/1	900
J2:10/1	829
J2:10/2	714
J2:11/1	829
J2:11/2	714
J2:12/1	608
J2:13/1	1226
J2:13/2	1130

Lane Saturation Flows

Junction: J1: M1 Junction 36 (Tankersley Roundabout)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (M1 Southbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/2 (M1 Southbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/3 (M1 Southbound Off Slip Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/1 (A61- East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/2 (A61- East Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/1 (M1 Northbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/2 (M1 Northbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/1 (A61 - West Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/2 (A61 - West Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/1 (Northern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/2 (Northern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/3 (Northern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/1 (Western Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/2 (Western Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/3 (Western Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/3 (Eastern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:9/1 (M1 - Northbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/2 (M1 - Northbound On Slip Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (M1 Southbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

J1:11/1 (A61 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:11/2 (A61 - East (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J1:12/1 (A61 - West (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:12/2 (A61 - West (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Junction: J2: Birdwell Roundabout									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A61 Sheffield Road Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/2 (A61 Sheffield Road Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/3 (A61 Sheffield Road Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/1 (A6195 Dearne Valley Parkway Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/2 (A6195 Dearne Valley Parkway Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/1 (A6195 - East Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/2 (A6195 - East Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/1 (A61 Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/2 (A61 Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/3 (A61 Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/1 (North West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/2 (North West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/3 (North West Circulatory Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/1 (South West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/2 (South West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/1 (North East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/2 (North East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/1 (South East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/2 (South East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:9/1 (A61 Sheffield Road (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:11/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

J2:11/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J2:12/1 (A6195 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/1 (A61 (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/2 (A61 (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 6: '2028 Do Minimum PM' (FG4: '2028 Do Minimum PM', Plan 1: 'v1')

Traffic Flows, Desired

Desired Flow :

	Destination									
	A	B	C	D	E	F	G	H	Tot.	
Origin	A	0	953	0	540	0	0	0	0	1493
	B	757	0	604	506	0	0	0	0	1867
	C	0	795	0	121	0	0	0	0	916
	D	433	478	69	0	0	0	0	0	980
	E	0	0	0	0	0	600	352	428	1380
	F	0	0	0	0	217	0	15	1020	1252
	G	0	0	0	0	324	10	0	418	752
	H	0	0	0	0	655	1159	422	0	2236
	Tot.	1190	2226	673	1167	1196	1769	789	1866	10876

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 6: 2028 Do Minimum PM
Junction: J1: M1 Junction 36 (Tankersley Roundabout)	
J1:1/1 (short)	477
J1:1/2 (with short)	953(In) 476(Out)
J1:1/3	540
J1:2/1	937
J1:2/2	930
J1:3/1 (with short)	916(In) 515(Out)
J1:3/2 (short)	401
J1:4/1	519
J1:4/2	461
J1:5/1	480
J1:5/2	793
J1:5/3	69
J1:6/1 (short)	503
J1:6/2 (with short)	609(In) 106(Out)
J1:7/1	767
J1:7/2	712
J1:7/3	324
J1:8/1	433
J1:8/2	718
J1:8/3	401
J1:9/1	650
J1:9/2	540
J1:10/1	673
J1:11/1	717
J1:11/2	1509
J1:12/1	827
J1:12/2	340
Junction: J2: Birdwell Roundabout	
J2:1/1	600
J2:1/2 (short)	581
J2:1/3 (with short)	780(In) 199(Out)
J2:2/1	627
J2:2/2	625
J2:3/1	418
J2:3/2	334
J2:4/1	655

Full Input Data And Results

J2:4/2 (with short)	1581(In) 769(Out)
J2:4/3 (short)	812
J2:5/1	774
J2:5/2	229
J2:5/3	199
J2:6/1	779
J2:6/2	812
J2:7/1	841
J2:7/2	824
J2:8/1	541
J2:8/2	10
J2:9/1	1196
J2:10/1	1005
J2:10/2	764
J2:11/1	1005
J2:11/2	764
J2:12/1	789
J2:13/1	1050
J2:13/2	816

Lane Saturation Flows

Junction: J1: M1 Junction 36 (Tankersley Roundabout)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (M1 Southbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/2 (M1 Southbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/3 (M1 Southbound Off Slip Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/1 (A61- East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/2 (A61- East Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/1 (M1 Northbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/2 (M1 Northbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/1 (A61 - West Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/2 (A61 - West Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/1 (Northern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/2 (Northern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/3 (Northern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/1 (Western Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/2 (Western Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/3 (Western Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/3 (Eastern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:9/1 (M1 - Northbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/2 (M1 - Northbound On Slip Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (M1 Southbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

J1:11/1 (A61 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:11/2 (A61 - East (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J1:12/1 (A61 - West (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:12/2 (A61 - West (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Junction: J2: Birdwell Roundabout									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A61 Sheffield Road Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/2 (A61 Sheffield Road Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/3 (A61 Sheffield Road Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/1 (A6195 Dearne Valley Parkway Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/2 (A6195 Dearne Valley Parkway Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/1 (A6195 - East Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/2 (A6195 - East Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/1 (A61 Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/2 (A61 Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/3 (A61 Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/1 (North West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/2 (North West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/3 (North West Circulatory Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/1 (South West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/2 (South West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/1 (North East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/2 (North East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/1 (South East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/2 (South East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:9/1 (A61 Sheffield Road (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:11/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

J2:11/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J2:12/1 (A6195 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/1 (A61 (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/2 (A61 (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 7: '2028 With Development AM' (FG5: '2028 With Development AM', Plan 1: 'v1')

Traffic Flows, Desired

Desired Flow :

	Destination									
	A	B	C	D	E	F	G	H	Tot.	
Origin	A	0	709	0	439	0	0	0	0	1148
	B	856	0	867	676	0	0	0	0	2399
	C	0	630	0	88	0	0	0	0	718
	D	620	620	42	0	0	0	0	0	1282
	E	0	0	0	0	0	289	414	622	1325
	F	0	0	0	0	150	0	4	1249	1403
	G	0	0	0	0	283	11	0	527	821
	H	0	0	0	0	467	1302	190	0	1959
	Tot.	1476	1959	909	1203	900	1602	608	2398	11055

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 7: 2028 With Development AM
Junction: J1: M1 Junction 36 (Tankersley Roundabout)	
J1:1/1 (short)	160
J1:1/2 (with short)	709(In) 549(Out)
J1:1/3	439
J1:2/1	1209
J1:2/2	1190
J1:3/1 (with short)	718(In) 418(Out)
J1:3/2 (short)	300
J1:4/1	652
J1:4/2	630
J1:5/1	362
J1:5/2	888
J1:5/3	42
J1:6/1 (short)	356
J1:6/2 (with short)	481(In) 125(Out)
J1:7/1	656
J1:7/2	929
J1:7/3	386
J1:8/1	470
J1:8/2	716
J1:8/3	300
J1:9/1	780
J1:9/2	696
J1:10/1	909
J1:11/1	341
J1:11/2	1618
J1:12/1	700
J1:12/2	503
Junction: J2: Birdwell Roundabout	
J2:1/1	486
J2:1/2 (short)	491
J2:1/3 (with short)	839(In) 348(Out)
J2:2/1	719
J2:2/2	684
J2:3/1	527
J2:3/2	294
J2:4/1	467

Full Input Data And Results

J2:4/2 (with short)	1492(In) 732(Out)
J2:4/3 (short)	760
J2:5/1	604
J2:5/2	274
J2:5/3	348
J2:6/1	742
J2:6/2	761
J2:7/1	989
J2:7/2	1032
J2:8/1	433
J2:8/2	11
J2:9/1	900
J2:10/1	858
J2:10/2	744
J2:11/1	858
J2:11/2	744
J2:12/1	608
J2:13/1	1253
J2:13/2	1145

Full Input Data And Results

Lane Saturation Flows

Junction: J1: M1 Junction 36 (Tankersley Roundabout)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (M1 Southbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/2 (M1 Southbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/3 (M1 Southbound Off Slip Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/1 (A61- East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/2 (A61- East Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/1 (M1 Northbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/2 (M1 Northbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/1 (A61 - West Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/2 (A61 - West Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/1 (Northern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/2 (Northern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/3 (Northern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/1 (Western Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/2 (Western Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/3 (Western Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/3 (Eastern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:9/1 (M1 - Northbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/2 (M1 - Northbound On Slip Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (M1 Southbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

J1:11/1 (A61 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:11/2 (A61 - East (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J1:12/1 (A61 - West (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:12/2 (A61 - West (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Junction: J2: Birdwell Roundabout									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A61 Sheffield Road Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/2 (A61 Sheffield Road Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/3 (A61 Sheffield Road Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/1 (A6195 Dearne Valley Parkway Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/2 (A6195 Dearne Valley Parkway Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/1 (A6195 - East Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/2 (A6195 - East Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/1 (A61 Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/2 (A61 Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/3 (A61 Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/1 (North West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/2 (North West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/3 (North West Circulatory Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/1 (South West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/2 (South West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/1 (North East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/2 (North East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/1 (South East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/2 (South East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:9/1 (A61 Sheffield Road (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:11/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

J2:11/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J2:12/1 (A6195 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/1 (A61 (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/2 (A61 (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Scenario 8: '2028 With Development PM' (FG6: '2028 With Development PM', Plan 1: 'v1')

Traffic Flows, Desired

Desired Flow :

	Destination									
	A	B	C	D	E	F	G	H	Tot.	
Origin	A	0	963	0	540	0	0	0	0	1503
	B	773	0	630	521	0	0	0	0	1924
	C	0	821	0	121	0	0	0	0	942
	D	433	487	69	0	0	0	0	0	989
	E	0	0	0	0	0	600	352	428	1380
	F	0	0	0	0	216	0	15	1078	1309
	G	0	0	0	0	324	10	0	418	752
	H	0	0	0	0	655	1204	422	0	2281
	Tot.	1206	2271	699	1182	1195	1814	789	1924	11080

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 8: 2028 With Development PM
Junction: J1: M1 Junction 36 (Tankersley Roundabout)	
J1:1/1 (short)	482
J1:1/2 (with short)	963(In) 481(Out)
J1:1/3	540
J1:2/1	964
J1:2/2	960
J1:3/1 (with short)	942(In) 527(Out)
J1:3/2 (short)	415
J1:4/1	523
J1:4/2	466
J1:5/1	496
J1:5/2	812
J1:5/3	69
J1:6/1 (short)	516
J1:6/2 (with short)	609(In) 93(Out)
J1:7/1	781
J1:7/2	727
J1:7/3	326
J1:8/1	447
J1:8/2	732
J1:8/3	415
J1:9/1	664
J1:9/2	542
J1:10/1	699
J1:11/1	730
J1:11/2	1541
J1:12/1	841
J1:12/2	341
Junction: J2: Birdwell Roundabout	
J2:1/1	600
J2:1/2 (short)	579
J2:1/3 (with short)	780(In) 201(Out)
J2:2/1	654
J2:2/2	655
J2:3/1	418
J2:3/2	334
J2:4/1	655

Full Input Data And Results

J2:4/2 (with short)	1626(In) 792(Out)
J2:4/3 (short)	834
J2:5/1	774
J2:5/2	227
J2:5/3	201
J2:6/1	802
J2:6/2	834
J2:7/1	866
J2:7/2	856
J2:8/1	540
J2:8/2	10
J2:9/1	1195
J2:10/1	1023
J2:10/2	791
J2:11/1	1023
J2:11/2	791
J2:12/1	789
J2:13/1	1075
J2:13/2	849

Lane Saturation Flows

Junction: J1: M1 Junction 36 (Tankersley Roundabout)								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J1:1/1 (M1 Southbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/2 (M1 Southbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:1/3 (M1 Southbound Off Slip Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/1 (A61- East Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:2/2 (A61- East Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/1 (M1 Northbound Off Slip Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:3/2 (M1 Northbound Off Slip Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/1 (A61 - West Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:4/2 (A61 - West Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/1 (Northern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/2 (Northern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:5/3 (Northern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:6/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/1 (Western Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/2 (Western Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:7/3 (Western Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/1 (Eastern Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/2 (Eastern Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
J1:8/3 (Eastern Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
J1:9/1 (M1 - Northbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf
J1:9/2 (M1 - Northbound On Slip Lane 2)	Infinite Saturation Flow						Inf	Inf
J1:10/1 (M1 Southbound On Slip Lane 1)	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

J1:11/1 (A61 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:11/2 (A61 - East (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J1:12/1 (A61 - West (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J1:12/2 (A61 - West (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

Full Input Data And Results

Junction: J2: Birdwell Roundabout									
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)	
J2:1/1 (A61 Sheffield Road Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/2 (A61 Sheffield Road Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:1/3 (A61 Sheffield Road Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/1 (A6195 Dearne Valley Parkway Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:2/2 (A6195 Dearne Valley Parkway Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/1 (A6195 - East Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:3/2 (A6195 - East Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/1 (A61 Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/2 (A61 Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:4/3 (A61 Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/1 (North West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/2 (North West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:5/3 (North West Circulatory Lane 3)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/1 (South West Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:6/2 (South West Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/1 (North East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:7/2 (North East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/1 (South East Circulatory Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:8/2 (South East Circulatory Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:9/1 (A61 Sheffield Road (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							This lane uses a directly entered Saturation Flow	1900	1900
J2:10/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)							This lane uses a directly entered Saturation Flow	1900	1900
J2:11/1 (A6195 Dearne Valley Parkway (Exit) Lane 1)							Infinite Saturation Flow	Inf	Inf

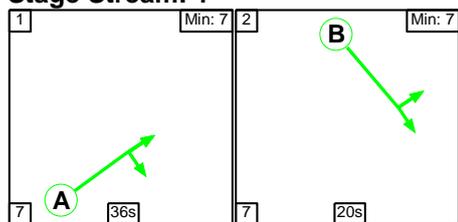
Full Input Data And Results

J2:11/2 (A6195 Dearne Valley Parkway (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf
J2:12/1 (A6195 - East (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/1 (A61 (Exit) Lane 1)	Infinite Saturation Flow	Inf	Inf
J2:13/2 (A61 (Exit) Lane 2)	Infinite Saturation Flow	Inf	Inf

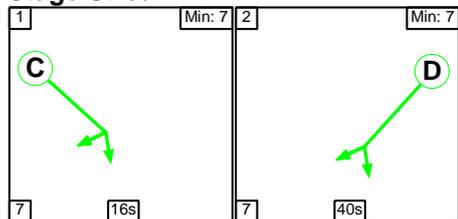
Scenario 1: '2023 Base AM' (FG1: '2024 Base AM', Plan 1: 'v1')

C1 - M1 Junction 36 - North
Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

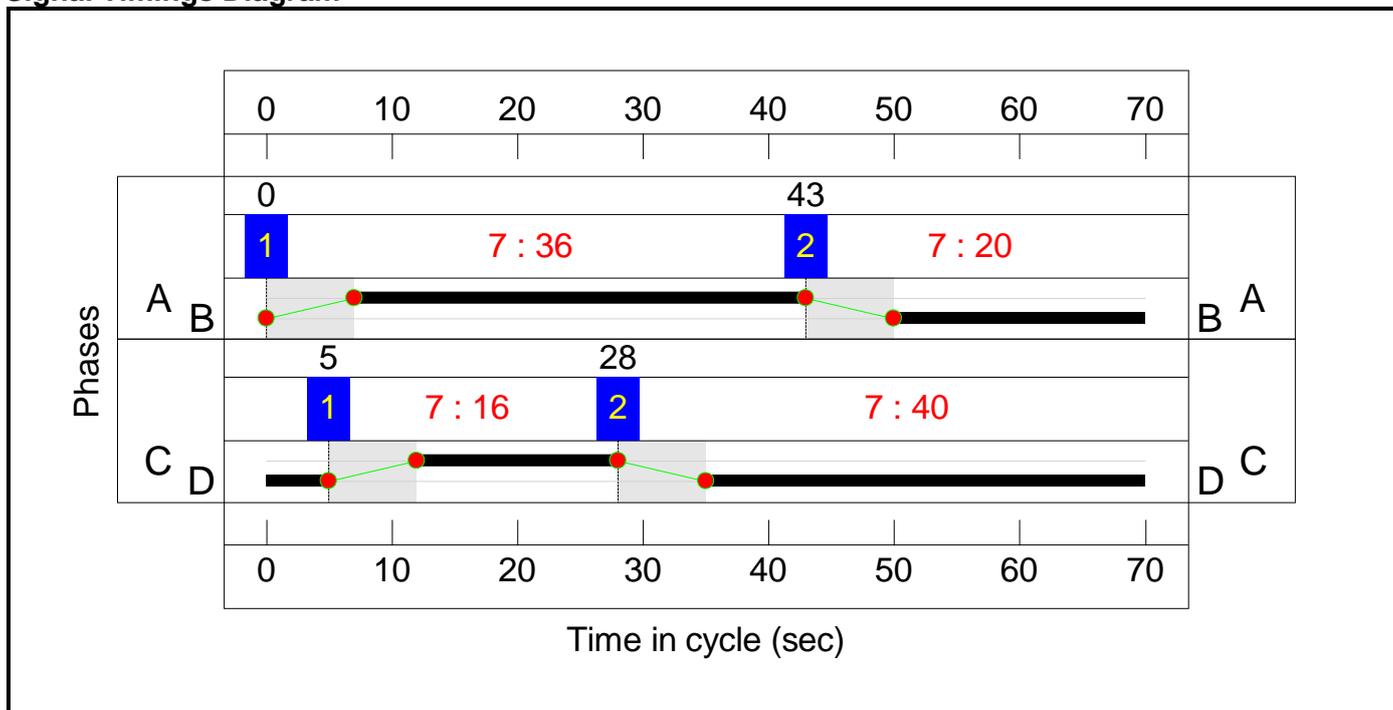
Stage Stream: 1

Stage	1	2
Duration	36	20
Change Point	0	43

Stage Stream: 2

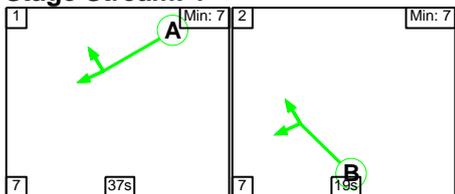
Stage	1	2
Duration	16	40
Change Point	5	28

Signal Timings Diagram

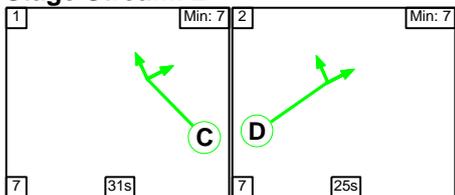


C2 - M1 Junction 36 - South Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

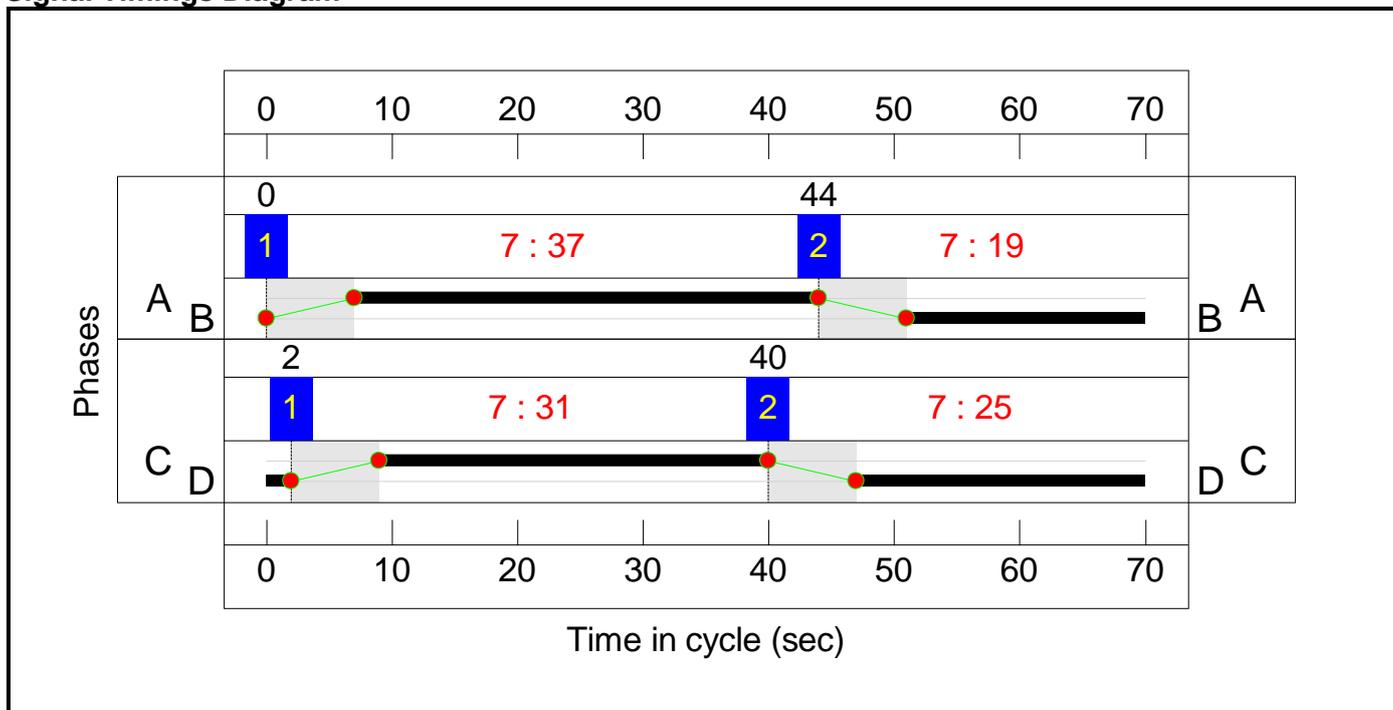
Stage Stream: 1

Stage	1	2
Duration	37	19
Change Point	0	44

Stage Stream: 2

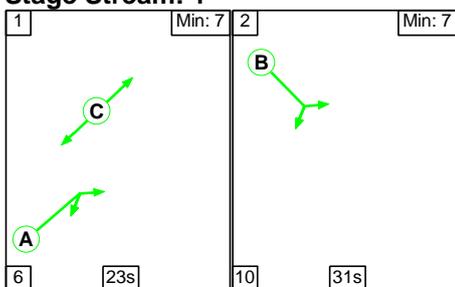
Stage	1	2
Duration	31	25
Change Point	2	40

Signal Timings Diagram

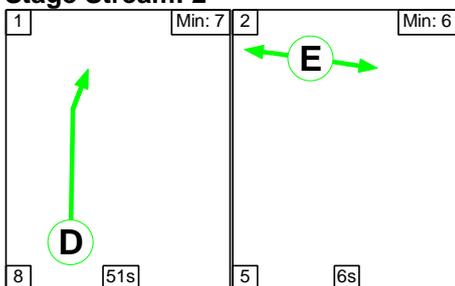


C3 - Birdwell Rbt - North Stage Sequence Diagram

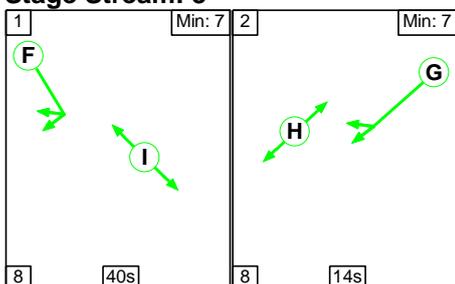
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Full Input Data And Results

Stage Timings

Stage Stream: 1

Stage	1	2
Duration	23	31
Change Point	65	24

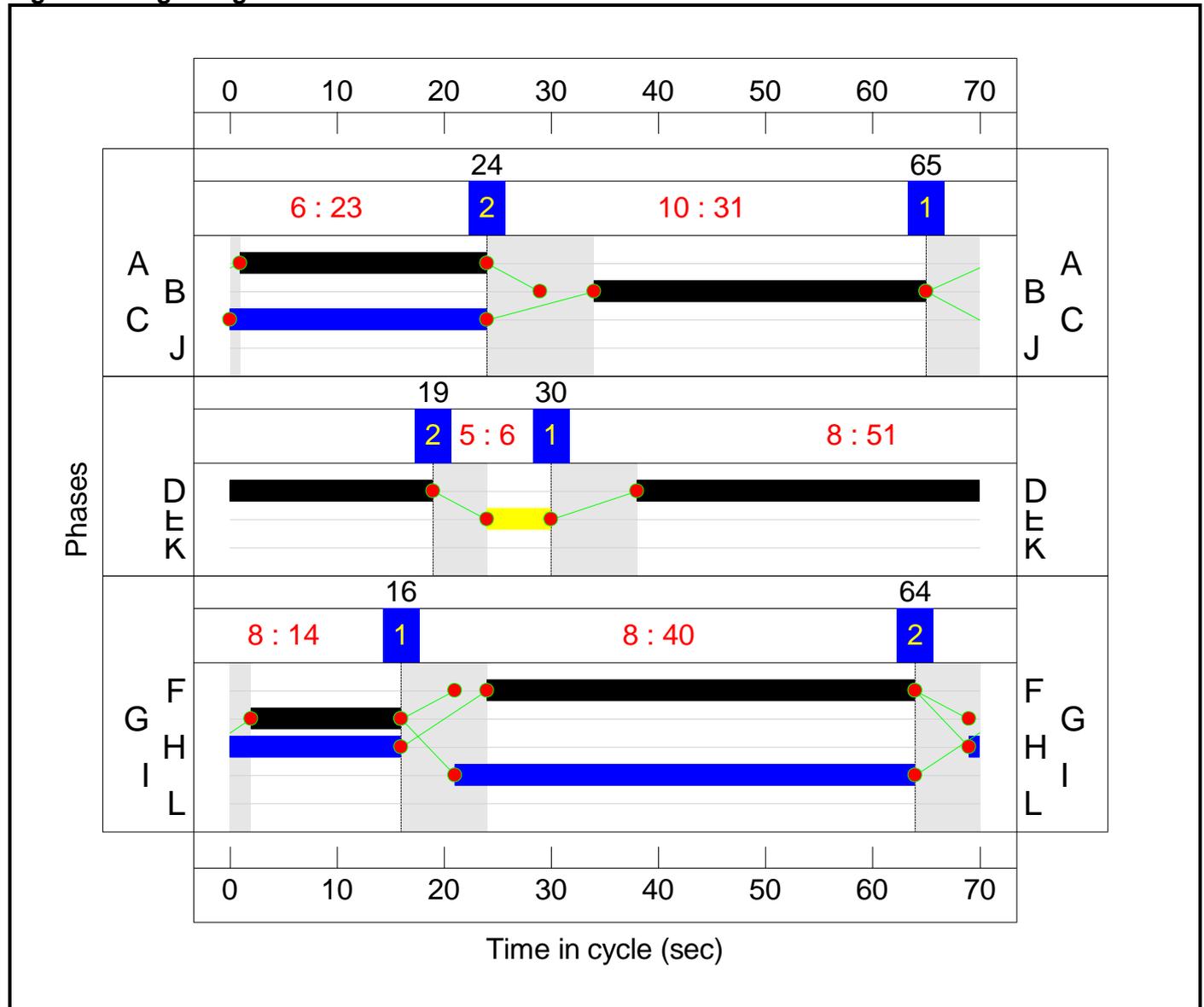
Stage Stream: 2

Stage	1	2
Duration	51	6
Change Point	30	19

Stage Stream: 3

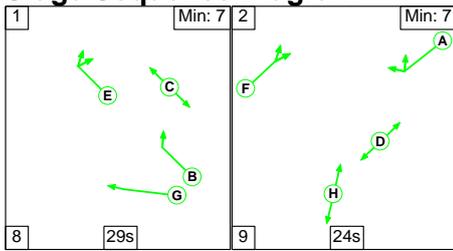
Stage	1	2
Duration	40	14
Change Point	16	64

Signal Timings Diagram



Full Input Data And Results

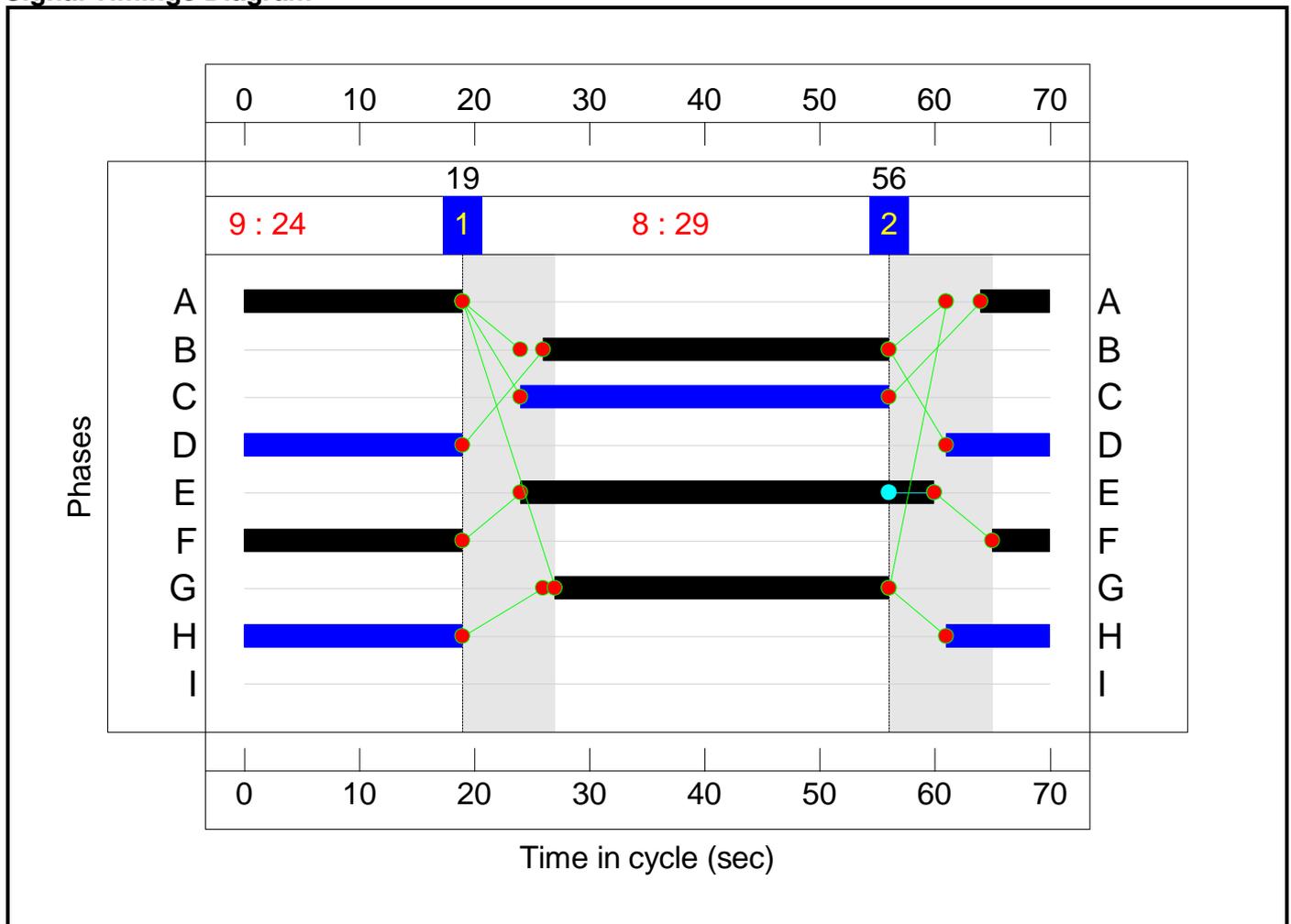
C4 - Birdwell Rbt - South
Stage Sequence Diagram



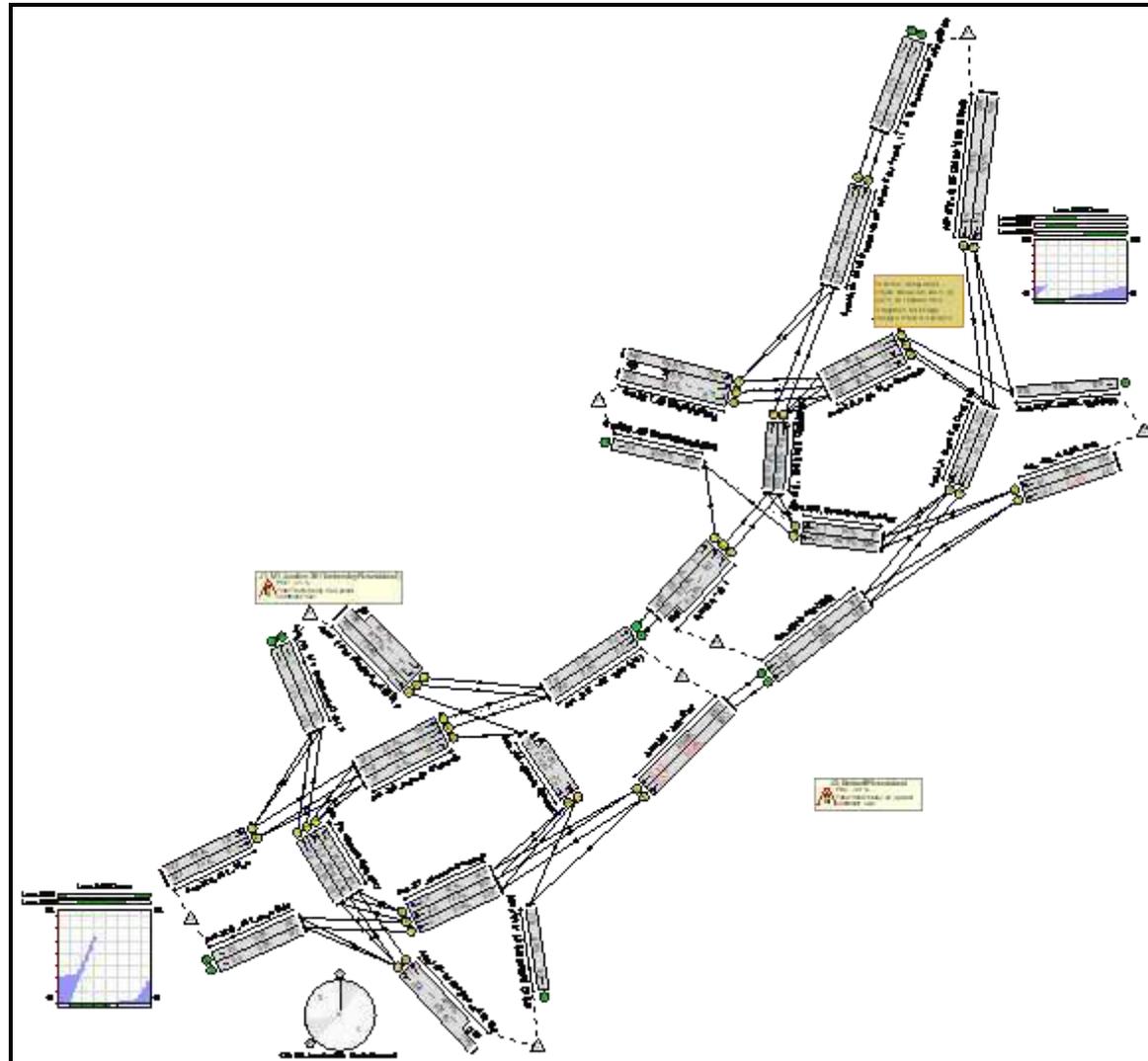
Stage Timings

Stage	1	2
Duration	29	24
Change Point	19	56

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	93.6%
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	N/A	-	-		-	-	-	-	-	-	92.8%
1/2+1/1	M1 Southbound Off Slip Left	U	1:1	N/A	C1:B		1	20	-	546	1900:1900	570+236	67.7 : 67.7%
1/3	M1 Southbound Off Slip Ahead	U	1:1	N/A	C1:B		1	20	-	430	1900	570	75.4%
2/1	A61- East Ahead Left	U	1:2	N/A	C1:D		1	40	-	1033	1900	1113	92.8%
2/2	A61- East Ahead	U	1:2	N/A	C1:D		1	40	-	1001	1900	1113	89.9%
3/1+3/2	M1 Northbound Off Slip Ahead Left	U	2:1	N/A	C2:B		1	19	-	564	1900:1900	543+543	55.1 : 48.8%
4/1	A61 - West Ahead Left	U	2:2	N/A	C2:D		1	25	-	623	1900	706	88.3%
4/2	A61 - West Ahead	U	2:2	N/A	C2:D		1	25	-	523	1900	706	74.1%
5/1	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	234	1900	1004	23.3%
5/2	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	747	1900	1004	74.4%
5/3	Northern Circulatory Right	U	1:1	N/A	C1:A		1	36	-	41	1900	1004	4.1%
6/2+6/1	Eastern Circulatory Right Ahead	U	1:2	N/A	C1:C		1	16	-	471	1900:1900	355+461	54.3 : 60.2%
7/1	Western Circulatory Ahead	U	2:1	N/A	C2:A		1	37	-	535	1900	1031	51.9%
7/2	Western Circulatory Right Ahead	U	2:1	N/A	C2:A		1	37	-	760	1900	1031	73.7%

Full Input Data And Results

7/3	Western Circulatory Right	U	2:1	N/A	C2:A		1	37	-	434	1900	1031	42.1%
8/1	Eastern Circulatory Ahead	U	2:2	N/A	C2:C		1	31	-	291	1900	869	33.5%
8/2	Eastern Circulatory Right Ahead	U	2:2	N/A	C2:C		1	31	-	648	1900	869	74.6%
8/3	Eastern Circulatory Right	U	2:2	N/A	C2:C		1	31	-	265	1900	869	30.5%
9/1	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	593	Inf	Inf	0.0%
9/2	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	735	Inf	Inf	0.0%
10/1	M1 Southbound On Slip	U	N/A	N/A	-		-	-	-	776	Inf	Inf	0.0%
11/1	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	277	Inf	Inf	0.0%
11/2	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	1250	Inf	Inf	0.0%
12/1	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	577	Inf	Inf	0.0%
12/2	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	512	Inf	Inf	0.0%
J2: Birdwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	93.6%
1/1	A61 Sheffield Road Ahead Left	U	N/A	N/A	C4:F		1	24	-	440	1900	679	64.8%
1/3+1/2	A61 Sheffield Road Ahead	U	N/A	N/A	C4:F		1	24	-	769	1900:1900	430+603	74.5 : 74.5%
2/1	A6195 Dearne Valley Parkway Ahead Left	U	3:1	N/A	C3:B		1	31	-	608	1900	869	70.0%
2/2	A6195 Dearne Valley Parkway Ahead	U	3:1	N/A	C3:B		1	31	-	588	1900	869	67.7%
3/1	A6195 - East Ahead	U	3:3	N/A	C3:G		1	14	-	381	1900	407	93.6%
3/2	A6195 - East Ahead	U	3:3	N/A	C3:G		1	14	-	268	1900	407	65.8%
4/1	A61 Left	U	N/A	N/A	C4:G		1	29	-	449	1900	814	55.1%

Full Input Data And Results

4/2+4/3	A61 Ahead	U	N/A	N/A	C4:B		1	30	-	1078	1900:1900	841+841	63.3 : 64.8%
5/1	North West Circulatory Ahead	U	3:1	N/A	C3:A		1	23	-	511	1900	651	78.4%
5/2	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	23	-	269	1900	651	41.3%
5/3	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	23	-	320	1900	651	49.1%
6/1	South West Circulatory Ahead	U	N/A	N/A	C4:E		1	36	-	536	1900	1004	53.4%
6/2	South West Circulatory Right Ahead	U	N/A	N/A	C4:E		1	36	-	552	1900	1004	55.0%
7/1	North East Circulatory Ahead	U	3:3	N/A	C3:F		1	40	-	873	1900	1113	78.4%
7/2	North East Circulatory Right Ahead	U	3:3	N/A	C3:F		1	40	-	908	1900	1113	81.6%
8/1	South East Circulatory Ahead	U	N/A	N/A	C4:A		1	25	-	386	1900	706	54.7%
8/2	South East Circulatory Right Ahead	U	N/A	N/A	C4:A		1	25	-	10	1900	706	1.4%
9/1	A61 Sheffield Road (Exit)	U	N/A	N/A	-		-	-	-	835	1900	1900	43.9%
10/1	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	613	1900	1411	43.4%
10/2	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	584	1900	1411	41.4%
11/1	A6195 Dearne Valley Parkway (Exit)	U	N/A	N/A	-		-	-	-	613	Inf	Inf	0.0%

Full Input Data And Results

11/2	A6195 Deame Valley Parkway (Exit)	U	N/A	N/A	-	-	-	-	584	Inf	Inf	0.0%
12/1	A6195 - East (Exit)	U	N/A	N/A	-	-	-	-	515	Inf	Inf	0.0%
13/1	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	1064	Inf	Inf	0.0%
13/2	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	970	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	63.3	46.0	0.0	109.2	-	-	-	-
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	0	0	0	32.7	24.3	0.0	56.9	-	-	-	-
1/2+1/1	546	546	-	-	-	3.1	1.0	-	4.2	27.6	6.5	1.0	7.6
1/3	430	430	-	-	-	2.6	1.5	-	4.2	34.8	7.5	1.5	9.0
2/1	1033	1033	-	-	-	3.8	5.7	-	9.4	32.9	18.1	5.7	23.7
2/2	1001	1001	-	-	-	3.5	4.2	-	7.7	27.7	17.0	4.2	21.1
3/1+3/2	564	564	-	-	-	3.3	0.5	-	3.8	24.4	4.9	0.5	5.4
4/1	623	623	-	-	-	3.6	3.5	-	7.0	40.7	11.2	3.5	14.7
4/2	523	523	-	-	-	2.8	1.4	-	4.2	28.8	8.7	1.4	10.1
5/1	234	234	-	-	-	0.1	0.2	-	0.3	3.9	0.4	0.2	0.5
5/2	747	747	-	-	-	1.5	1.4	-	3.0	14.3	9.7	1.4	11.1
5/3	41	41	-	-	-	0.0	0.0	-	0.1	6.1	0.5	0.0	0.5
6/2+6/1	471	471	-	-	-	1.3	0.7	-	2.0	15.2	4.8	0.7	5.5
7/1	535	535	-	-	-	1.2	0.5	-	1.8	11.9	5.5	0.5	6.1
7/2	760	760	-	-	-	1.9	1.4	-	3.3	15.6	11.1	1.4	12.5
7/3	434	434	-	-	-	0.7	0.4	-	1.1	8.7	5.6	0.4	5.9
8/1	291	291	-	-	-	0.2	0.3	-	0.4	5.1	0.3	0.3	0.6
8/2	648	648	-	-	-	1.6	1.4	-	3.0	16.8	11.1	1.4	12.6
8/3	265	265	-	-	-	1.4	0.2	-	1.6	22.0	5.2	0.2	5.4
9/1	593	593	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	735	735	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	776	776	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	277	277	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1250	1250	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	577	577	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

12/2	512	512	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Birdwell Roundabout	-	-	0	0	0	30.6	21.7	0.0	52.3	-	-	-	-
1/1	440	440	-	-	-	2.3	0.9	-	3.2	26.3	7.1	0.9	8.0
1/3+1/2	769	769	-	-	-	3.9	1.4	-	5.4	25.1	7.2	1.4	8.7
2/1	608	608	-	-	-	2.6	1.2	-	3.7	22.0	9.3	1.2	10.4
2/2	588	588	-	-	-	2.4	1.0	-	3.5	21.3	9.0	1.0	10.0
3/1	381	381	-	-	-	2.9	5.2	-	8.1	76.3	7.2	5.2	12.4
3/2	268	268	-	-	-	1.9	1.0	-	2.8	37.9	4.8	1.0	5.7
4/1	449	449	-	-	-	1.9	0.6	-	2.5	19.9	6.5	0.6	7.1
4/2+4/3	1078	1078	-	-	-	4.5	0.9	-	5.4	18.1	8.2	0.9	9.1
5/1	511	511	-	-	-	1.6	1.8	-	3.4	24.1	4.9	1.8	6.6
5/2	269	269	-	-	-	0.6	0.4	-	0.9	12.7	1.0	0.4	1.4
5/3	320	320	-	-	-	0.6	0.5	-	1.1	12.2	1.0	0.5	1.5
6/1	536	536	-	-	-	0.0	0.6	-	0.6	4.2	0.1	0.6	0.7
6/2	552	552	-	-	-	0.1	0.6	-	0.7	4.4	0.2	0.6	0.8
7/1	873	873	-	-	-	1.4	1.8	-	3.2	13.2	7.0	1.8	8.8
7/2	908	908	-	-	-	1.7	2.2	-	3.8	15.1	8.0	2.2	10.1
8/1	386	386	-	-	-	1.8	0.6	-	2.4	22.8	4.6	0.6	5.2
8/2	10	10	-	-	-	0.1	0.0	-	0.1	22.4	0.1	0.0	0.1
9/1	835	835	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
10/1	613	613	-	-	-	0.1	0.4	-	0.5	2.8	0.6	0.4	1.0
10/2	584	584	-	-	-	0.2	0.4	-	0.6	3.6	1.4	0.4	1.7
11/1	613	613	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	584	584	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1064	1064	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	970	970	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - M1 Junction 36 - North	Stream: 1 PRC for Signalled Lanes (%)	19.3	Total Delay for Signalled Lanes (pcuHr)	11.62	Cycle Time (s)	70
C1 - M1 Junction 36 - North	Stream: 2 PRC for Signalled Lanes (%)	-3.1	Total Delay for Signalled Lanes (pcuHr)	19.12	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 1 PRC for Signalled Lanes (%)	22.1	Total Delay for Signalled Lanes (pcuHr)	9.94	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 2 PRC for Signalled Lanes (%)	1.9	Total Delay for Signalled Lanes (pcuHr)	16.26	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 1 PRC for Signalled Lanes (%)	14.7	Total Delay for Signalled Lanes (pcuHr)	12.65	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 2 PRC for Signalled Lanes (%)	107.2	Total Delay for Signalled Lanes (pcuHr)	1.08	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 3 PRC for Signalled Lanes (%)	-4.0	Total Delay for Signalled Lanes (pcuHr)	17.91	Cycle Time (s)	70
C4 - Birdwell Rbt - South	PRC for Signalled Lanes (%)	20.8	Total Delay for Signalled Lanes (pcuHr)	20.28	Cycle Time (s)	70
	PRC Over All Lanes (%)	-4.0	Total Delay Over All Lanes(pcuHr)	109.25		

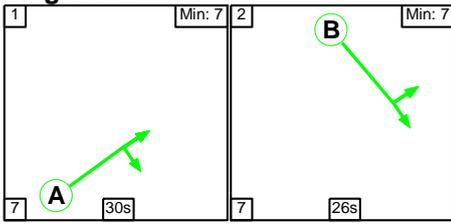
Full Input Data And Results

Scenario 2: '2023 Base PM' (FG2: '2024 Base PM', Plan 1: 'v1')

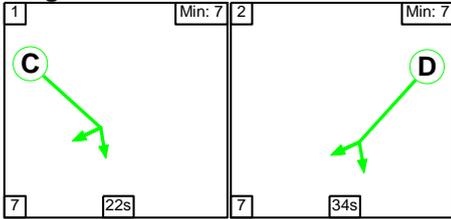
C1 - M1 Junction 36 - North

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

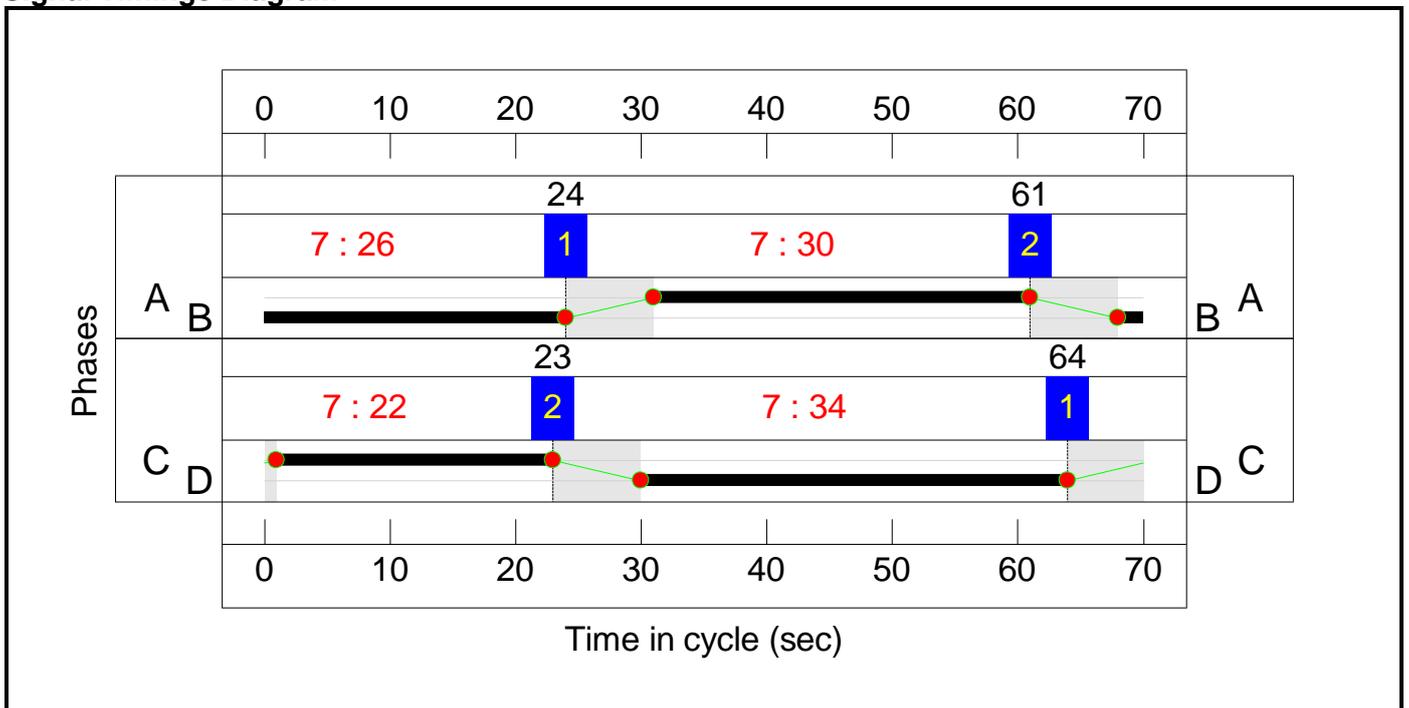
Stage Stream: 1

Stage	1	2
Duration	30	26
Change Point	24	61

Stage Stream: 2

Stage	1	2
Duration	22	34
Change Point	64	23

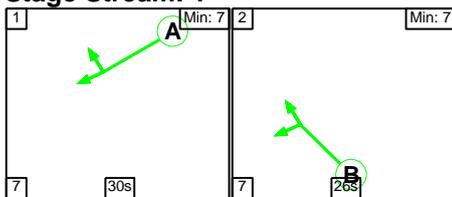
Signal Timings Diagram



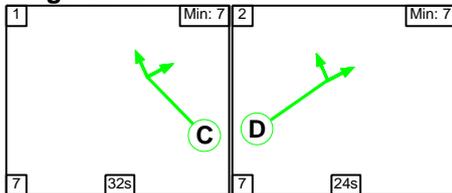
Full Input Data And Results

C2 - M1 Junction 36 - South
Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

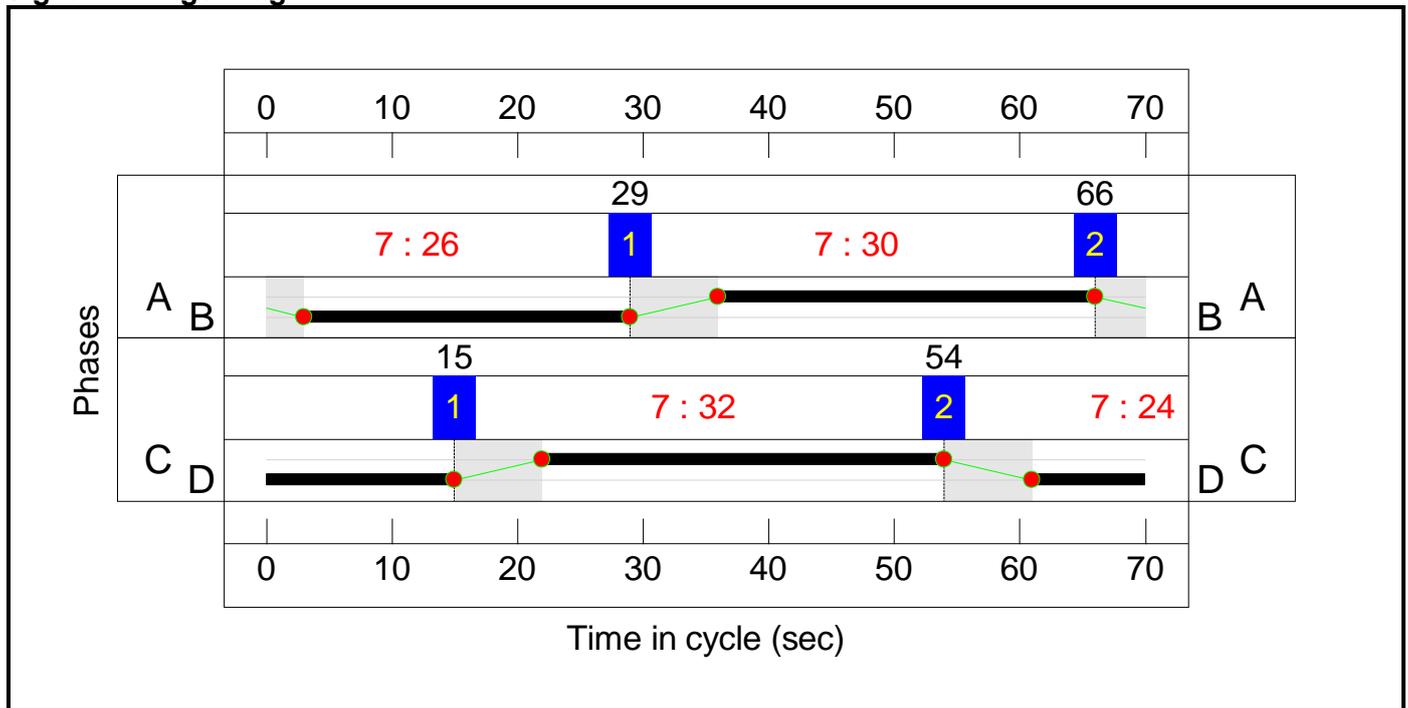
Stage Stream: 1

Stage	1	2
Duration	30	26
Change Point	29	66

Stage Stream: 2

Stage	1	2
Duration	32	24
Change Point	15	54

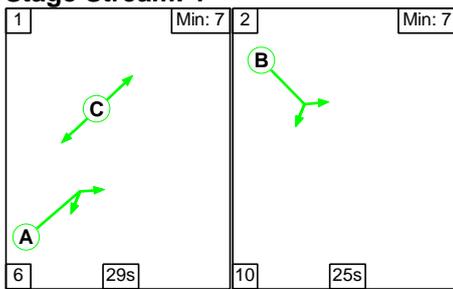
Signal Timings Diagram



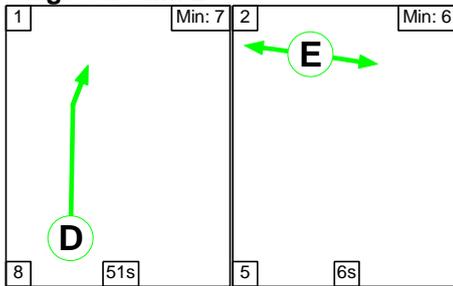
Full Input Data And Results

C3 - Birdwell Rbt - North
Stage Sequence Diagram

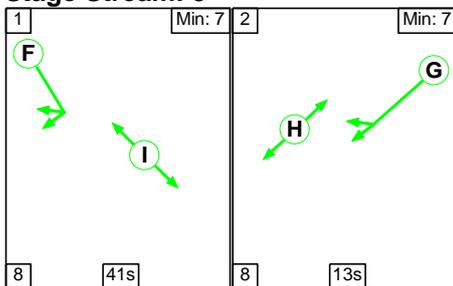
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	29	25
Change Point	63	28

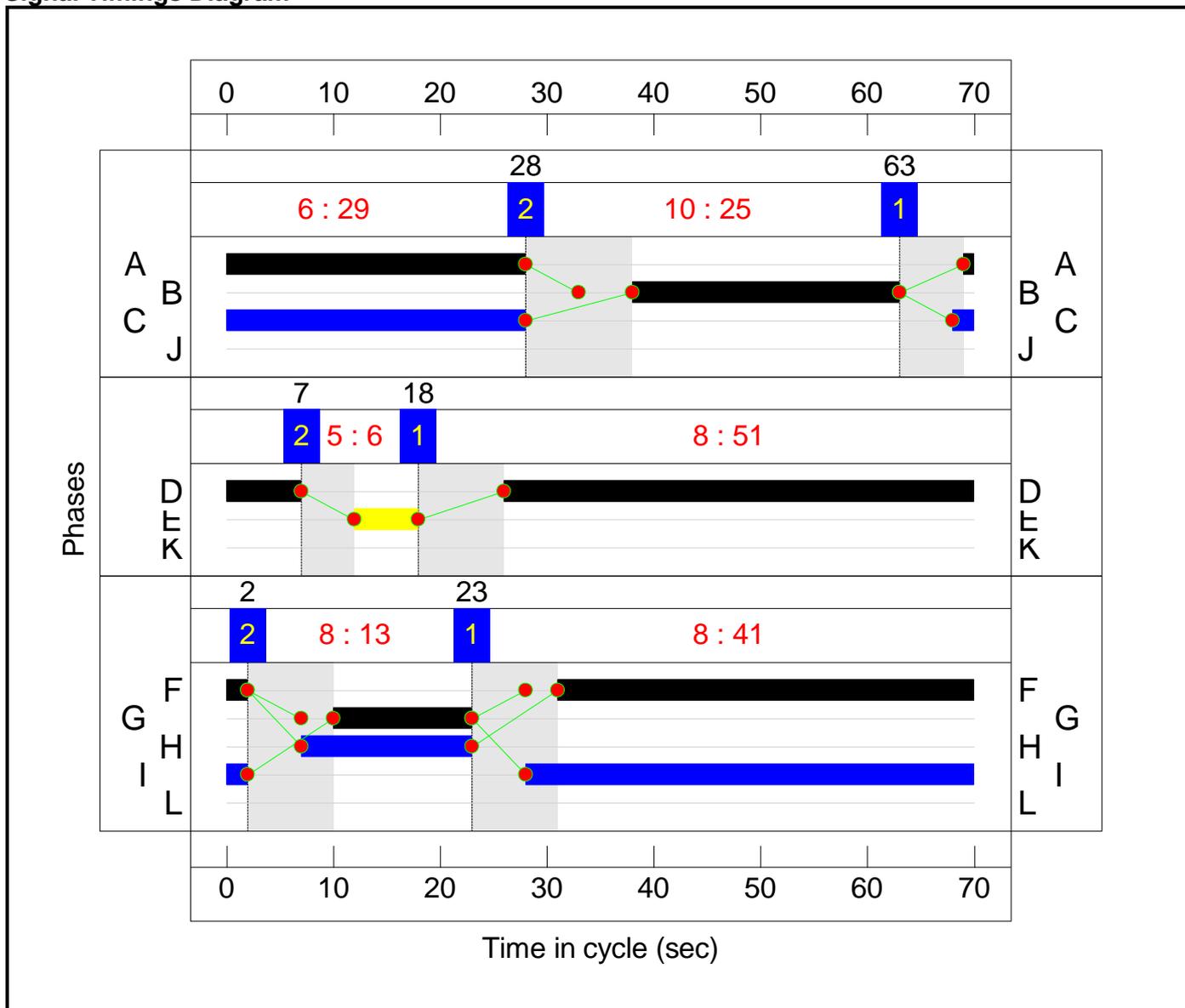
Stage Stream: 2

Stage	1	2
Duration	51	6
Change Point	18	7

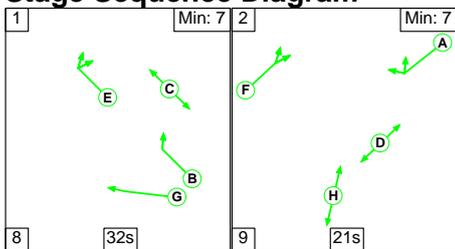
Stage Stream: 3

Stage	1	2
Duration	41	13
Change Point	23	2

Signal Timings Diagram



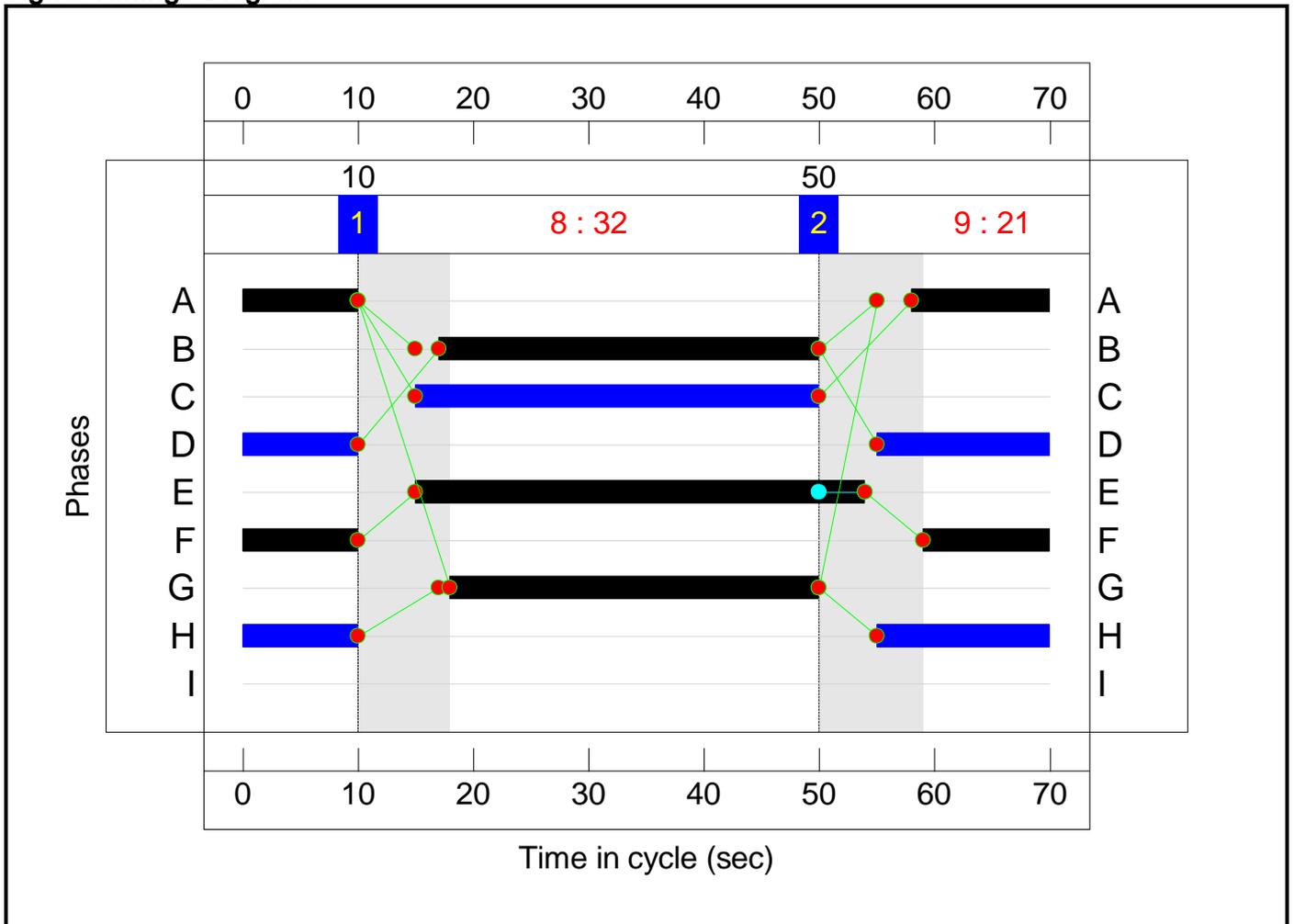
C4 - Birdwell Rbt - South Stage Sequence Diagram



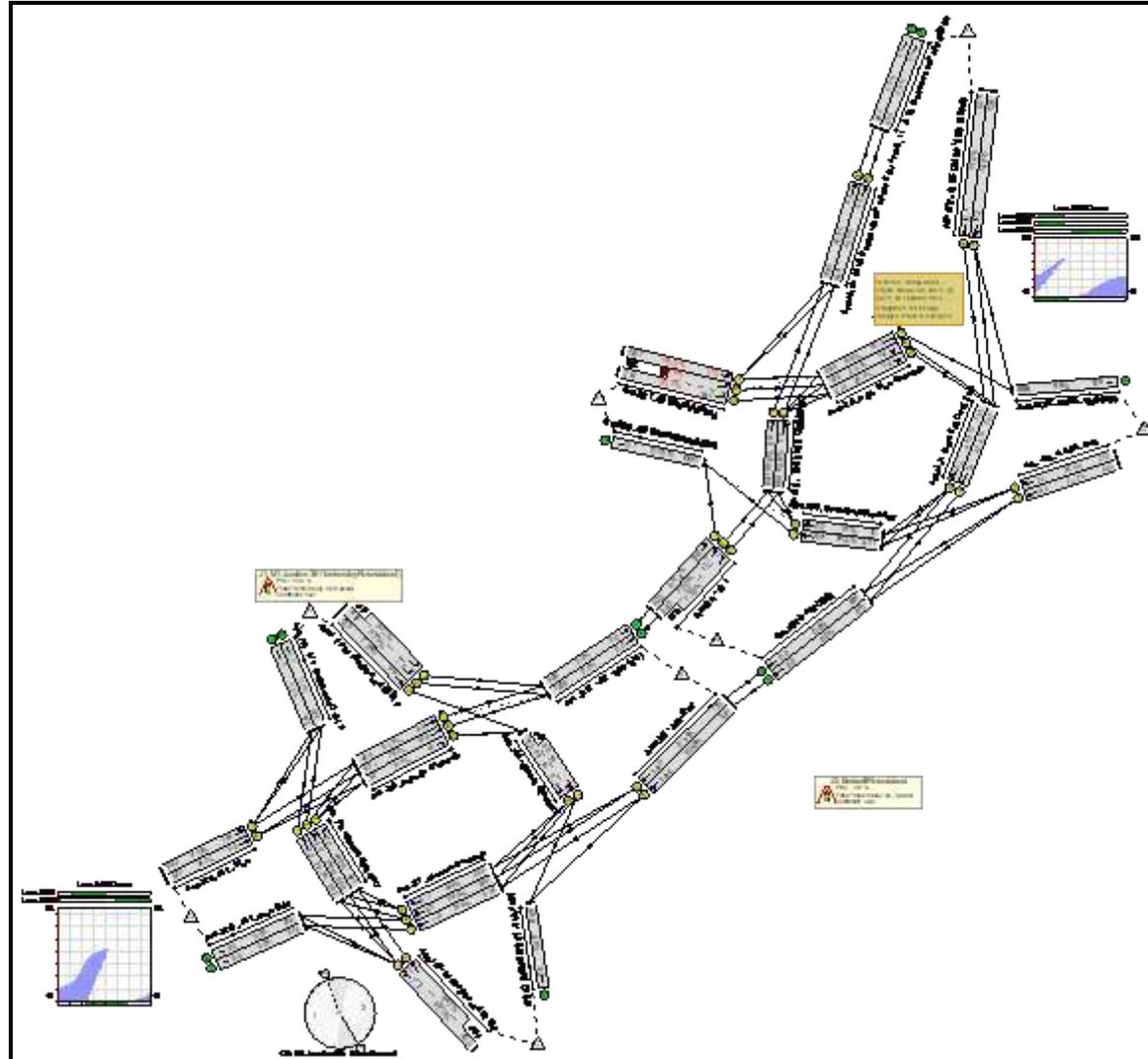
Stage Timings

Stage	1	2
Duration	32	21
Change Point	10	50

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	95.0%
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	N/A	-	-		-	-	-	-	-	-	81.5%
1/2+1/1	M1 Southbound Off Slip Left	U	1:1	N/A	C1:B		1	26	-	837	1900:1900	733+733	57.0 : 57.2%
1/3	M1 Southbound Off Slip Ahead	U	1:1	N/A	C1:B		1	26	-	525	1900	733	71.6%
2/1	A61- East Ahead Left	U	1:2	N/A	C1:D		1	34	-	768	1900	950	80.8%
2/2	A61- East Ahead	U	1:2	N/A	C1:D		1	34	-	770	1900	950	81.1%
3/1+3/2	M1 Northbound Off Slip Ahead Left	U	2:1	N/A	C2:B		1	26	-	821	1900:1900	733+733	57.3 : 54.7%
4/1	A61 - West Ahead Left	U	2:2	N/A	C2:D		1	24	-	553	1900	679	81.5%
4/2	A61 - West Ahead	U	2:2	N/A	C2:D		1	24	-	337	1900	679	49.7%
5/1	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	30	-	434	1900	841	51.6%
5/2	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	30	-	671	1900	841	79.7%
5/3	Northern Circulatory Right	U	1:1	N/A	C1:A		1	30	-	67	1900	841	8.0%
6/2+6/1	Eastern Circulatory Right Ahead	U	1:2	N/A	C1:C		1	22	-	592	1900:1900	277+624	65.7 : 65.7%
7/1	Western Circulatory Ahead	U	2:1	N/A	C2:A		1	30	-	619	1900	841	73.6%
7/2	Western Circulatory Right Ahead	U	2:1	N/A	C2:A		1	30	-	586	1900	841	69.6%

Full Input Data And Results

7/3	Western Circulatory Right	U	2:1	N/A	C2:A		1	30	-	366	1900	841	43.5%
8/1	Eastern Circulatory Ahead	U	2:2	N/A	C2:C		1	32	-	262	1900	896	29.3%
8/2	Eastern Circulatory Right Ahead	U	2:2	N/A	C2:C		1	32	-	668	1900	896	74.6%
8/3	Eastern Circulatory Right	U	2:2	N/A	C2:C		1	32	-	401	1900	896	44.8%
9/1	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	473	Inf	Inf	0.0%
9/2	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	576	Inf	Inf	0.0%
10/1	M1 Southbound On Slip	U	N/A	N/A	-		-	-	-	559	Inf	Inf	0.0%
11/1	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	636	Inf	Inf	0.0%
11/2	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	1306	Inf	Inf	0.0%
12/1	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	678	Inf	Inf	0.0%
12/2	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	383	Inf	Inf	0.0%
J2: Birdwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	95.0%
1/1	A61 Sheffield Road Ahead Left	U	N/A	N/A	C4:F		1	21	-	567	1900	597	95.0%
1/3+1/2	A61 Sheffield Road Ahead	U	N/A	N/A	C4:F		1	21	-	736	1900:1900	236+576	90.7 : 90.7%
2/1	A6195 Dearne Valley Parkway Ahead Left	U	3:1	N/A	C3:B		1	25	-	526	1900	706	74.5%
2/2	A6195 Dearne Valley Parkway Ahead	U	3:1	N/A	C3:B		1	25	-	521	1900	706	73.8%
3/1	A6195 - East Ahead	U	3:3	N/A	C3:G		1	13	-	280	1900	380	73.7%
3/2	A6195 - East Ahead	U	3:3	N/A	C3:G		1	13	-	297	1900	380	78.2%
4/1	A61 Left	U	N/A	N/A	C4:G		1	32	-	622	1900	896	69.4%

Full Input Data And Results

4/2+4/3	A61 Ahead	U	N/A	N/A	C4:B		1	33	-	1319	1900:1900	874+919	73.5 : 73.5%
5/1	North West Circulatory Ahead	U	3:1	N/A	C3:A		1	29	-	684	1900	814	84.0%
5/2	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	29	-	196	1900	814	24.1%
5/3	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	29	-	214	1900	814	26.3%
6/1	South West Circulatory Ahead	U	N/A	N/A	C4:E		1	39	-	647	1900	1086	59.6%
6/2	South West Circulatory Right Ahead	U	N/A	N/A	C4:E		1	39	-	682	1900	1086	62.8%
7/1	North East Circulatory Ahead	U	3:3	N/A	C3:F		1	41	-	707	1900	1140	62.0%
7/2	North East Circulatory Right Ahead	U	3:3	N/A	C3:F		1	41	-	735	1900	1140	64.5%
8/1	South East Circulatory Ahead	U	N/A	N/A	C4:A		1	22	-	471	1900	624	75.4%
8/2	South East Circulatory Right Ahead	U	N/A	N/A	C4:A		1	22	-	10	1900	624	1.6%
9/1	A61 Sheffield Road (Exit)	U	N/A	N/A	-		-	-	-	1093	1900	1900	57.5%
10/1	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	880	1900	1411	62.3%
10/2	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	658	1900	1411	46.6%
11/1	A6195 Dearne Valley Parkway (Exit)	U	N/A	N/A	-		-	-	-	880	Inf	Inf	0.0%

Full Input Data And Results

11/2	A6195 Deame Valley Parkway (Exit)	U	N/A	N/A	-	-	-	-	658	Inf	Inf	0.0%
12/1	A6195 - East (Exit)	U	N/A	N/A	-	-	-	-	699	Inf	Inf	0.0%
13/1	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	847	Inf	Inf	0.0%
13/2	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	691	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	76.1	46.7	0.0	122.7	-	-	-	-
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	0	0	0	40.3	17.7	0.0	58.0	-	-	-	-
1/2+1/1	837	837	-	-	-	3.9	0.7	-	4.6	19.8	6.4	0.7	7.1
1/3	525	525	-	-	-	2.7	1.2	-	3.9	26.8	8.6	1.2	9.9
2/1	768	768	-	-	-	3.1	2.1	-	5.2	24.4	12.4	2.1	14.4
2/2	770	770	-	-	-	3.1	2.1	-	5.2	24.5	12.4	2.1	14.5
3/1+3/2	821	821	-	-	-	3.8	0.6	-	4.5	19.6	6.4	0.6	7.1
4/1	553	553	-	-	-	3.1	2.1	-	5.3	34.3	9.7	2.1	11.8
4/2	337	337	-	-	-	1.6	0.5	-	2.1	22.8	5.1	0.5	5.5
5/1	434	434	-	-	-	0.7	0.5	-	1.2	10.2	2.8	0.5	3.4
5/2	671	671	-	-	-	1.7	1.9	-	3.7	19.7	11.7	1.9	13.6
5/3	67	67	-	-	-	0.3	0.0	-	0.3	17.4	1.2	0.0	1.3
6/2+6/1	592	592	-	-	-	4.5	1.0	-	5.4	32.9	5.5	1.0	6.4
7/1	619	619	-	-	-	2.6	1.4	-	4.0	23.2	9.9	1.4	11.2
7/2	586	586	-	-	-	3.0	1.1	-	4.1	25.4	8.3	1.1	9.5
7/3	366	366	-	-	-	2.1	0.4	-	2.5	24.4	4.7	0.4	5.1
8/1	262	262	-	-	-	0.8	0.2	-	1.0	13.5	2.0	0.2	2.2
8/2	668	668	-	-	-	2.1	1.4	-	3.5	18.9	8.4	1.4	9.8
8/3	401	401	-	-	-	1.1	0.4	-	1.5	13.2	7.6	0.4	8.0
9/1	473	473	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	576	576	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	559	559	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	636	636	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1306	1306	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	678	678	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

12/2	383	383	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Birdwell Roundabout	-	-	0	0	0	35.8	28.9	0.0	64.7	-	-	-	-
1/1	567	567	-	-	-	3.7	6.6	-	10.2	65.1	10.7	6.6	17.3
1/3+1/2	736	736	-	-	-	4.4	4.4	-	8.7	42.8	9.7	4.4	14.1
2/1	526	526	-	-	-	2.8	1.4	-	4.2	29.0	8.8	1.4	10.2
2/2	521	521	-	-	-	2.8	1.4	-	4.1	28.7	8.7	1.4	10.1
3/1	280	280	-	-	-	2.0	1.4	-	3.4	43.8	5.1	1.4	6.4
3/2	297	297	-	-	-	2.2	1.7	-	3.9	47.4	5.4	1.7	7.2
4/1	622	622	-	-	-	2.5	1.1	-	3.6	21.1	9.5	1.1	10.6
4/2+4/3	1319	1319	-	-	-	5.2	1.4	-	6.6	18.0	10.3	1.4	11.7
5/1	684	684	-	-	-	3.2	2.5	-	5.7	30.1	12.8	2.5	15.4
5/2	196	196	-	-	-	0.0	0.2	-	0.2	3.7	0.1	0.2	0.2
5/3	214	214	-	-	-	0.0	0.2	-	0.2	3.5	0.1	0.2	0.2
6/1	647	647	-	-	-	0.1	0.7	-	0.8	4.5	0.2	0.7	0.9
6/2	682	682	-	-	-	0.1	0.8	-	0.9	4.9	0.2	0.8	1.1
7/1	707	707	-	-	-	0.8	0.8	-	1.6	8.1	3.9	0.8	4.8
7/2	735	735	-	-	-	1.1	0.9	-	2.0	9.7	4.3	0.9	5.2
8/1	471	471	-	-	-	3.2	1.5	-	4.7	36.0	8.3	1.5	9.8
8/2	10	10	-	-	-	0.1	0.0	-	0.1	32.4	0.2	0.0	0.2
9/1	1093	1093	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
10/1	880	880	-	-	-	0.6	0.8	-	1.5	6.0	3.8	0.8	4.6
10/2	658	658	-	-	-	1.0	0.4	-	1.4	7.9	5.6	0.4	6.0
11/1	880	880	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	658	658	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	847	847	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - M1 Junction 36 - North	Stream: 1 PRC for Signalled Lanes (%):	12.9	Total Delay for Signalled Lanes (pcuHr):	13.73	Cycle Time (s):	70
C1 - M1 Junction 36 - North	Stream: 2 PRC for Signalled Lanes (%):	11.0	Total Delay for Signalled Lanes (pcuHr):	15.84	Cycle Time (s):	70
C2 - M1 Junction 36 - South	Stream: 1 PRC for Signalled Lanes (%):	22.3	Total Delay for Signalled Lanes (pcuHr):	15.08	Cycle Time (s):	70
C2 - M1 Junction 36 - South	Stream: 2 PRC for Signalled Lanes (%):	10.4	Total Delay for Signalled Lanes (pcuHr):	13.37	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 1 PRC for Signalled Lanes (%):	7.1	Total Delay for Signalled Lanes (pcuHr):	14.52	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 2 PRC for Signalled Lanes (%):	44.4	Total Delay for Signalled Lanes (pcuHr):	2.91	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 3 PRC for Signalled Lanes (%):	15.2	Total Delay for Signalled Lanes (pcuHr):	10.87	Cycle Time (s):	70
C4 - Birdwell Rbt - South	PRC for Signalled Lanes (%):	-5.5	Total Delay for Signalled Lanes (pcuHr):	35.73	Cycle Time (s):	70
	PRC Over All Lanes (%):	-5.5	Total Delay Over All Lanes(pcuHr):	122.74		

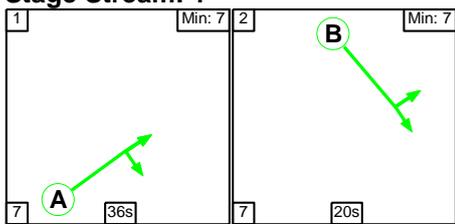
Full Input Data And Results

Scenario 3: '2023 Base AM_validated' (FG1: '2024 Base AM', Plan 1: 'v1')

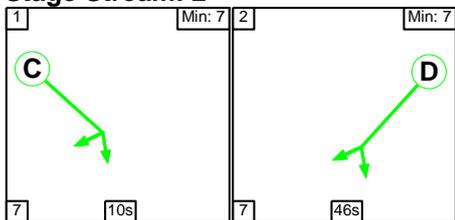
C1 - M1 Junction 36 - North

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

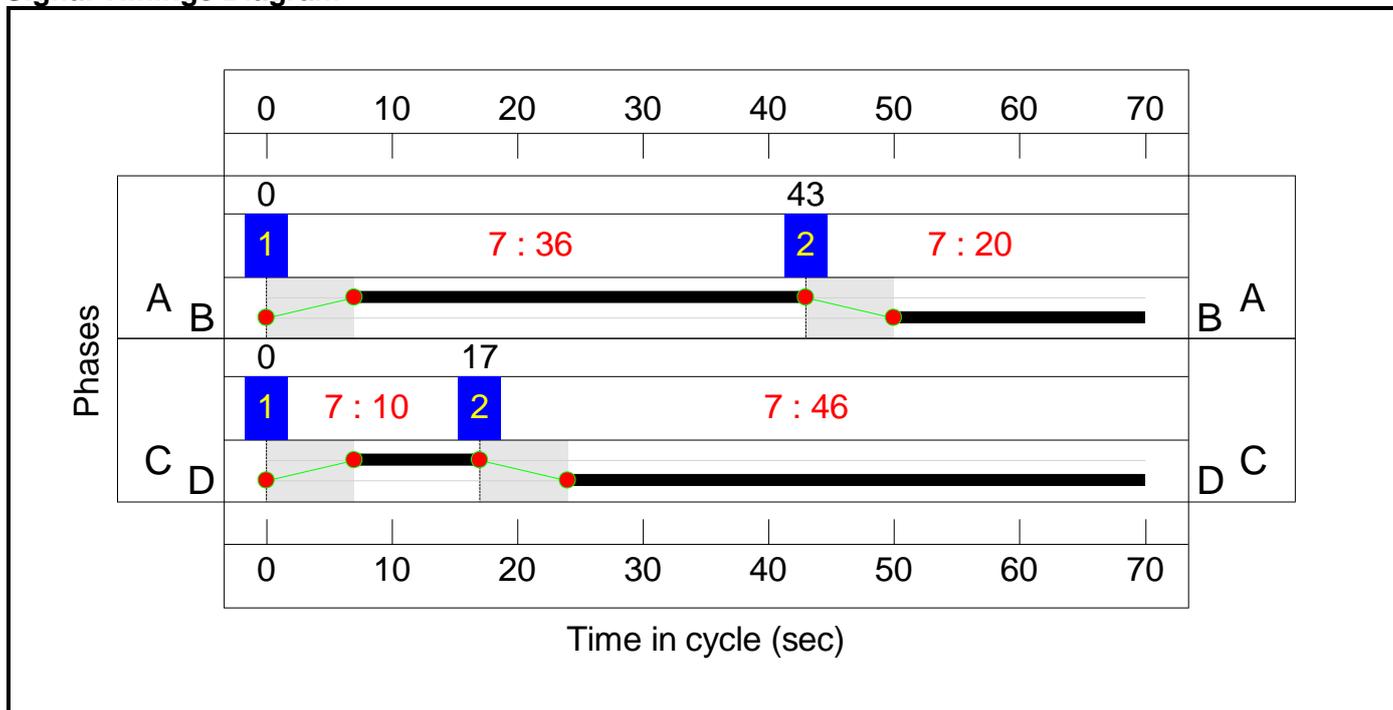
Stage Stream: 1

Stage	1	2
Duration	36	20
Change Point	0	43

Stage Stream: 2

Stage	1	2
Duration	10	46
Change Point	0	17

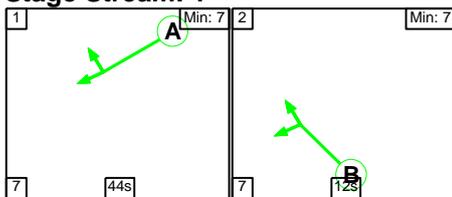
Signal Timings Diagram



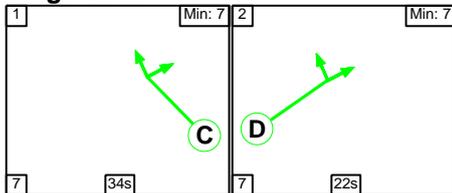
Full Input Data And Results

C2 - M1 Junction 36 - South
Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

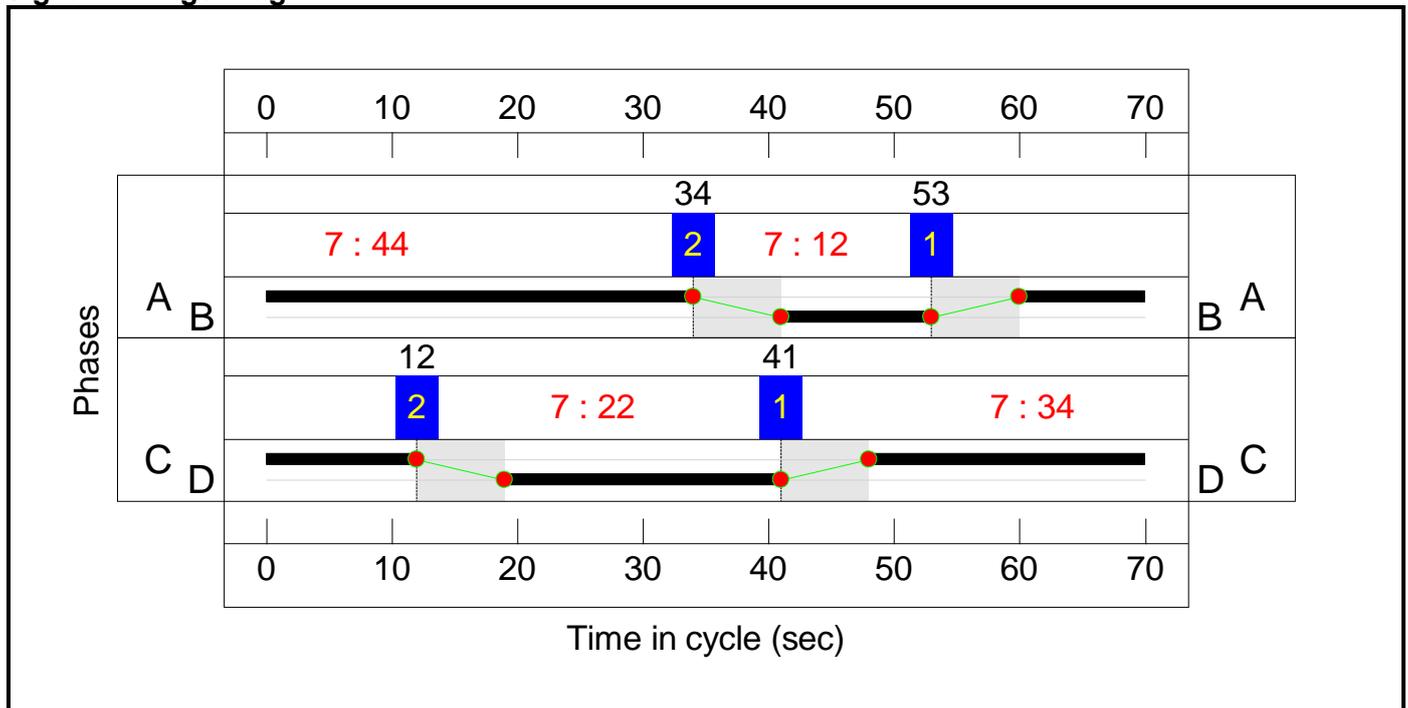
Stage Stream: 1

Stage	1	2
Duration	44	12
Change Point	53	34

Stage Stream: 2

Stage	1	2
Duration	34	22
Change Point	41	12

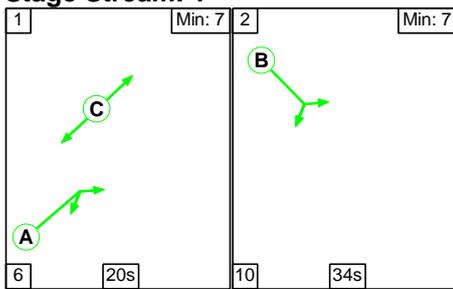
Signal Timings Diagram



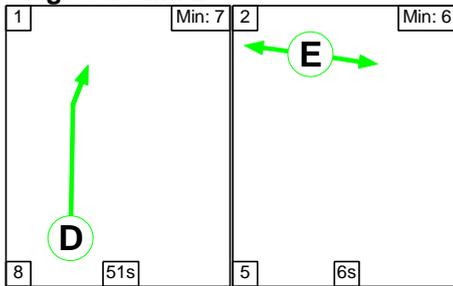
Full Input Data And Results

C3 - Birdwell Rbt - North
Stage Sequence Diagram

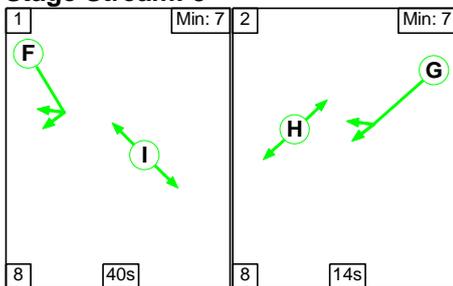
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	20	34
Change Point	65	21

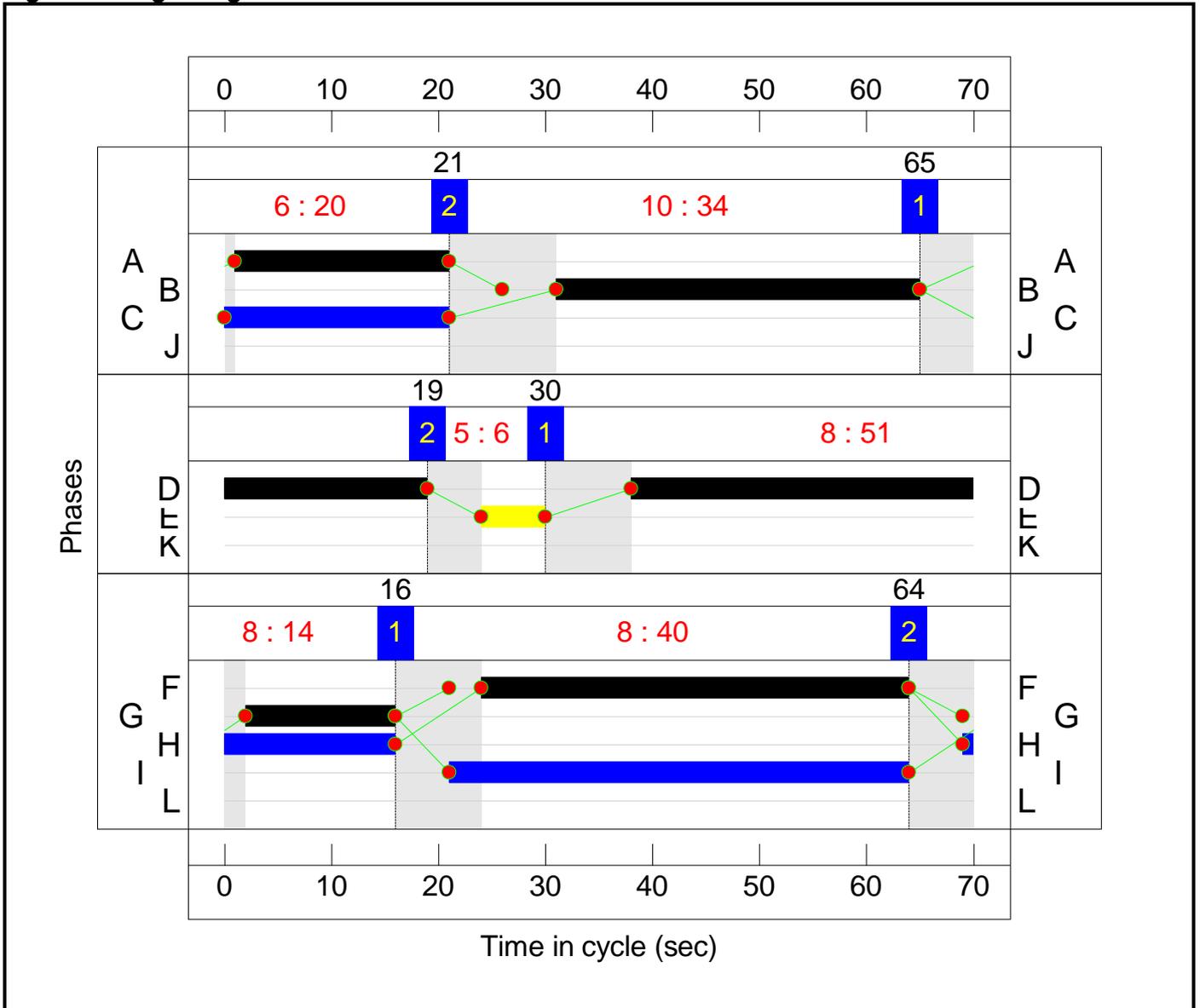
Stage Stream: 2

Stage	1	2
Duration	51	6
Change Point	30	19

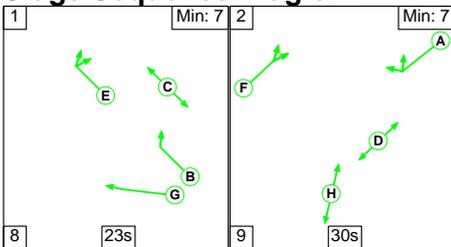
Stage Stream: 3

Stage	1	2
Duration	40	14
Change Point	16	64

Signal Timings Diagram



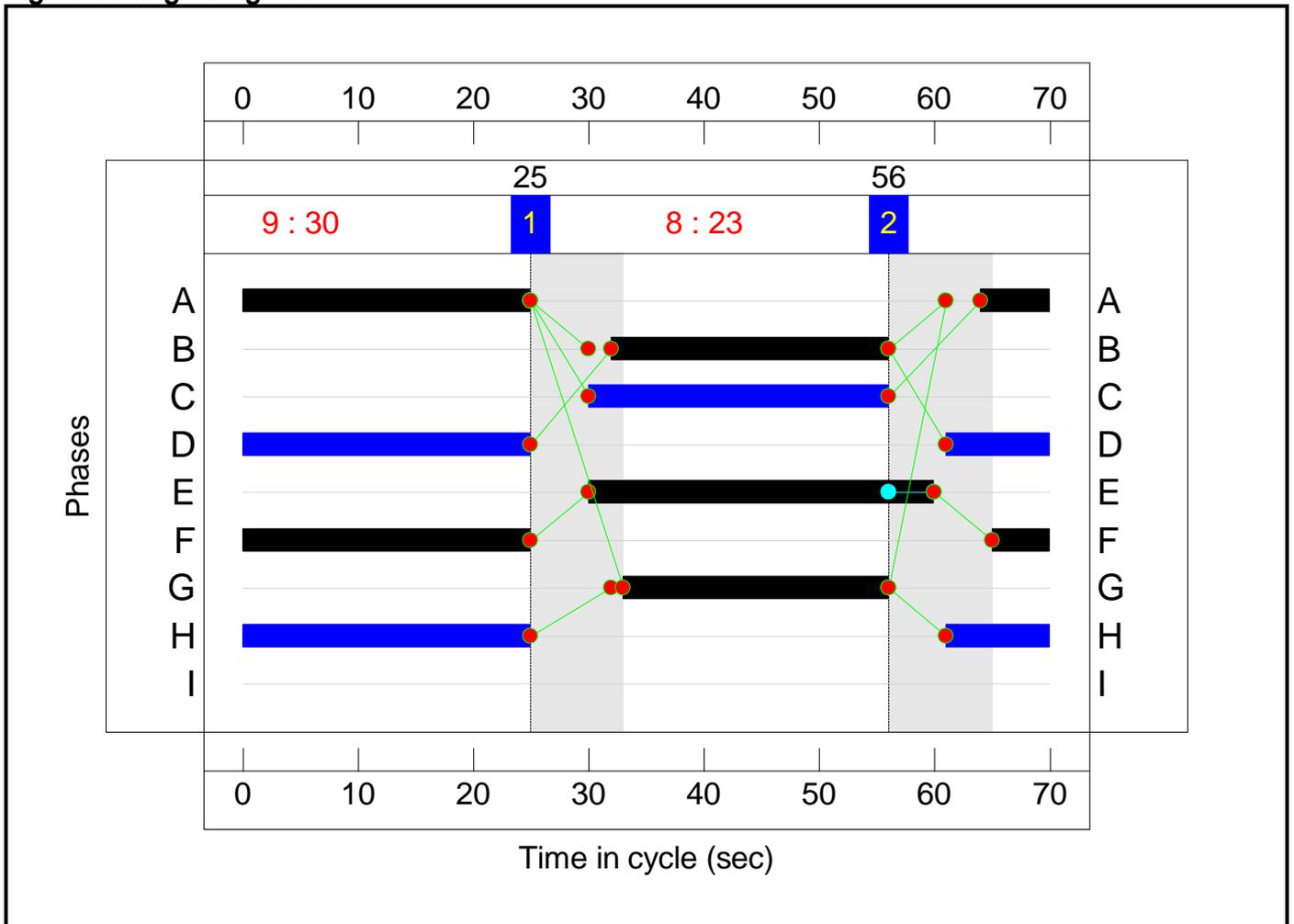
C4 - Birdwell Rbt - South Stage Sequence Diagram



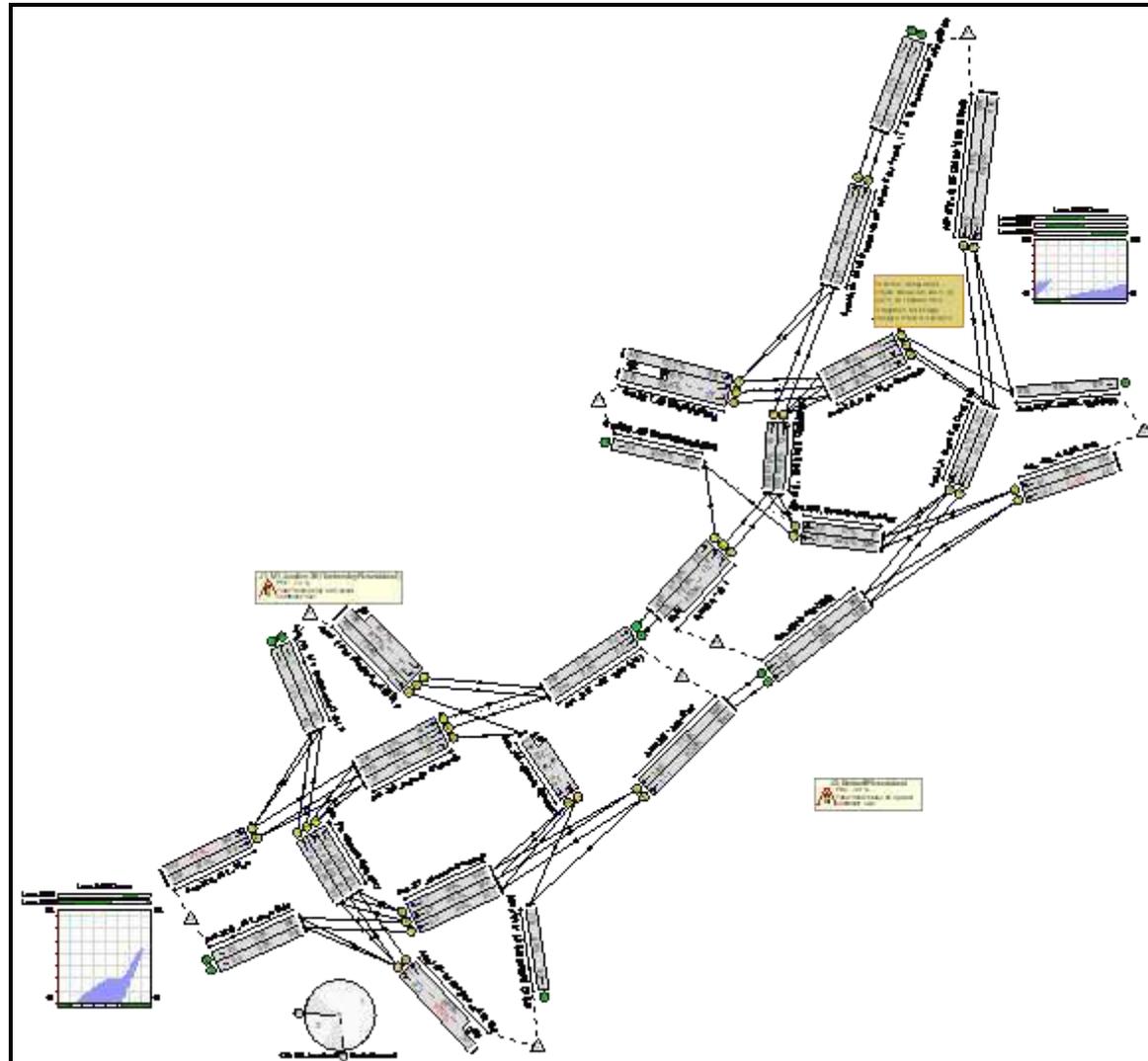
Stage Timings

Stage	1	2
Duration	23	30
Change Point	25	56

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	96.6%
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	N/A	-	-		-	-	-	-	-	-	96.6%
1/2+1/1	M1 Southbound Off Slip Left	U	1:1	N/A	C1:B		1	20	-	546	1900:1900	570+236	67.7 : 67.7%
1/3	M1 Southbound Off Slip Ahead	U	1:1	N/A	C1:B		1	20	-	430	1900	570	75.4%
2/1	A61- East Ahead Left	U	1:2	N/A	C1:D		1	46	-	1046	1900	1276	82.0%
2/2	A61- East Ahead	U	1:2	N/A	C1:D		1	46	-	988	1900	1276	77.4%
3/1+3/2	M1 Northbound Off Slip Ahead Left	U	2:1	N/A	C2:B		1	12	-	564	1900:1900	353+353	93.8 : 66.0%
4/1	A61 - West Ahead Left	U	2:2	N/A	C2:D		1	22	-	603	1900	624	96.6%
4/2	A61 - West Ahead	U	2:2	N/A	C2:D		1	22	-	543	1900	624	87.0%
5/1	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	246	1900	1004	24.5%
5/2	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	735	1900	1004	73.2%
5/3	Northern Circulatory Right	U	1:1	N/A	C1:A		1	36	-	41	1900	1004	4.1%
6/2+6/1	Eastern Circulatory Right Ahead	U	1:2	N/A	C1:C		1	10	-	471	1900:1900	299+299	80.4 : 77.4%
7/1	Western Circulatory Ahead	U	2:1	N/A	C2:A		1	44	-	501	1900	1221	41.0%
7/2	Western Circulatory Right Ahead	U	2:1	N/A	C2:A		1	44	-	693	1900	1221	56.7%

Full Input Data And Results

7/3	Western Circulatory Right	U	2:1	N/A	C2:A		1	44	-	535	1900	1221	43.8%
8/1	Eastern Circulatory Ahead	U	2:2	N/A	C2:C		1	34	-	190	1900	950	20.0%
8/2	Eastern Circulatory Right Ahead	U	2:2	N/A	C2:C		1	34	-	781	1900	950	82.2%
8/3	Eastern Circulatory Right	U	2:2	N/A	C2:C		1	34	-	233	1900	950	24.5%
9/1	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	492	Inf	Inf	0.0%
9/2	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	836	Inf	Inf	0.0%
10/1	M1 Southbound On Slip	U	N/A	N/A	-		-	-	-	776	Inf	Inf	0.0%
11/1	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	283	Inf	Inf	0.0%
11/2	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	1244	Inf	Inf	0.0%
12/1	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	543	Inf	Inf	0.0%
12/2	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	546	Inf	Inf	0.0%
J2: Birdwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	93.6%
1/1	A61 Sheffield Road Ahead Left	U	N/A	N/A	C4:F		1	30	-	439	1900	841	52.2%
1/3+1/2	A61 Sheffield Road Ahead	U	N/A	N/A	C4:F		1	30	-	770	1900:1900	492+699	64.6 : 64.6%
2/1	A6195 Dearne Valley Parkway Ahead Left	U	3:1	N/A	C3:B		1	34	-	610	1900	950	64.2%
2/2	A6195 Dearne Valley Parkway Ahead	U	3:1	N/A	C3:B		1	34	-	586	1900	950	61.7%
3/1	A6195 - East Ahead	U	3:3	N/A	C3:G		1	14	-	381	1900	407	93.6%
3/2	A6195 - East Ahead	U	3:3	N/A	C3:G		1	14	-	268	1900	407	65.8%
4/1	A61 Left	U	N/A	N/A	C4:G		1	23	-	449	1900	651	68.9%

Full Input Data And Results

4/2+4/3	A61 Ahead	U	N/A	N/A	C4:B		1	24	-	1078	1900:1900	679+679	78.8 : 80.0%
5/1	North West Circulatory Ahead	U	3:1	N/A	C3:A		1	20	-	511	1900	570	89.6%
5/2	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	20	-	271	1900	570	47.5%
5/3	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	20	-	318	1900	570	55.8%
6/1	South West Circulatory Ahead	U	N/A	N/A	C4:E		1	30	-	538	1900	841	63.9%
6/2	South West Circulatory Right Ahead	U	N/A	N/A	C4:E		1	30	-	550	1900	841	65.4%
7/1	North East Circulatory Ahead	U	3:3	N/A	C3:F		1	40	-	877	1900	1113	78.8%
7/2	North East Circulatory Right Ahead	U	3:3	N/A	C3:F		1	40	-	904	1900	1113	81.2%
8/1	South East Circulatory Ahead	U	N/A	N/A	C4:A		1	31	-	386	1900	869	44.4%
8/2	South East Circulatory Right Ahead	U	N/A	N/A	C4:A		1	31	-	10	1900	869	1.2%
9/1	A61 Sheffield Road (Exit)	U	N/A	N/A	-		-	-	-	835	1900	1900	43.9%
10/1	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	617	1900	1411	43.7%
10/2	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	580	1900	1411	41.1%
11/1	A6195 Dearne Valley Parkway (Exit)	U	N/A	N/A	-		-	-	-	617	Inf	Inf	0.0%

Full Input Data And Results

11/2	A6195 Deame Valley Parkway (Exit)	U	N/A	N/A	-	-	-	-	580	Inf	Inf	0.0%
12/1	A6195 - East (Exit)	U	N/A	N/A	-	-	-	-	515	Inf	Inf	0.0%
13/1	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	1068	Inf	Inf	0.0%
13/2	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	966	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	64.7	51.4	0.0	116.1	-	-	-	-
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	0	0	0	33.7	26.9	0.0	60.5	-	-	-	-
1/2+1/1	546	546	-	-	-	3.1	1.0	-	4.2	27.6	6.5	1.0	7.6
1/3	430	430	-	-	-	2.6	1.5	-	4.2	34.8	7.5	1.5	9.0
2/1	1046	1046	-	-	-	2.4	2.2	-	4.7	16.1	14.8	2.2	17.1
2/2	988	988	-	-	-	2.2	1.7	-	3.9	14.1	12.9	1.7	14.6
3/1+3/2	564	564	-	-	-	4.3	1.9	-	6.2	39.8	6.3	1.9	8.3
4/1	603	603	-	-	-	3.9	8.1	-	11.9	71.2	11.4	8.1	19.5
4/2	543	543	-	-	-	3.3	3.1	-	6.4	42.7	9.8	3.1	12.9
5/1	246	246	-	-	-	0.2	0.2	-	0.4	5.6	4.0	0.2	4.2
5/2	735	735	-	-	-	4.2	1.4	-	5.6	27.3	11.0	1.4	12.3
5/3	41	41	-	-	-	0.2	0.0	-	0.2	18.6	0.5	0.0	0.5
6/2+6/1	471	471	-	-	-	1.3	1.8	-	3.1	23.7	4.4	1.8	6.2
7/1	501	501	-	-	-	1.1	0.3	-	1.5	10.7	5.6	0.3	6.0
7/2	693	693	-	-	-	1.7	0.7	-	2.4	12.4	9.1	0.7	9.8
7/3	535	535	-	-	-	0.5	0.4	-	0.8	5.7	5.3	0.4	5.7
8/1	190	190	-	-	-	0.7	0.1	-	0.8	15.0	1.7	0.1	1.9
8/2	781	781	-	-	-	1.9	2.3	-	4.1	19.1	8.6	2.3	10.9
8/3	233	233	-	-	-	0.0	0.2	-	0.2	2.5	0.2	0.2	0.3
9/1	492	492	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	836	836	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	776	776	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	283	283	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1244	1244	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

12/2	546	546	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Birdwell Roundabout	-	-	0	0	0	31.0	24.5	0.0	55.5	-	-	-	-
1/1	439	439	-	-	-	1.7	0.5	-	2.3	18.6	6.1	0.5	6.6
1/3+1/2	770	770	-	-	-	2.9	0.9	-	3.9	18.0	6.4	0.9	7.3
2/1	610	610	-	-	-	2.2	0.9	-	3.1	18.2	8.6	0.9	9.5
2/2	586	586	-	-	-	2.1	0.8	-	2.9	17.6	8.1	0.8	8.9
3/1	381	381	-	-	-	2.9	5.2	-	8.1	76.3	7.2	5.2	12.4
3/2	268	268	-	-	-	1.9	1.0	-	2.8	37.9	4.8	1.0	5.7
4/1	449	449	-	-	-	2.5	1.1	-	3.6	28.6	7.5	1.1	8.6
4/2+4/3	1078	1078	-	-	-	6.0	1.9	-	8.0	26.6	9.5	1.9	11.4
5/1	511	511	-	-	-	2.2	3.8	-	6.0	42.5	8.0	3.8	11.8
5/2	271	271	-	-	-	1.1	0.5	-	1.5	20.1	1.8	0.5	2.2
5/3	318	318	-	-	-	1.1	0.6	-	1.7	19.7	1.9	0.6	2.5
6/1	538	538	-	-	-	0.1	0.9	-	0.9	6.3	0.1	0.9	1.0
6/2	550	550	-	-	-	0.1	0.9	-	1.0	6.6	0.2	0.9	1.2
7/1	877	877	-	-	-	1.6	1.8	-	3.4	13.9	7.0	1.8	8.8
7/2	904	904	-	-	-	1.8	2.1	-	3.9	15.6	8.0	2.1	10.2
8/1	386	386	-	-	-	0.7	0.4	-	1.1	9.9	2.7	0.4	3.1
8/2	10	10	-	-	-	0.0	0.0	-	0.0	7.0	0.0	0.0	0.0
9/1	835	835	-	-	-	0.0	0.4	-	0.4	1.7	0.0	0.4	0.4
10/1	617	617	-	-	-	0.1	0.4	-	0.5	2.8	0.6	0.4	1.0
10/2	580	580	-	-	-	0.2	0.3	-	0.5	3.4	1.2	0.3	1.6
11/1	617	617	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	580	580	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	515	515	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1068	1068	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	966	966	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - M1 Junction 36 - North	Stream: 1 PRC for Signalled Lanes (%)	19.3	Total Delay for Signalled Lanes (pcuHr)	14.50	Cycle Time (s)	70
C1 - M1 Junction 36 - North	Stream: 2 PRC for Signalled Lanes (%)	9.8	Total Delay for Signalled Lanes (pcuHr)	11.63	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 1 PRC for Signalled Lanes (%)	-4.2	Total Delay for Signalled Lanes (pcuHr)	10.95	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 2 PRC for Signalled Lanes (%)	-7.3	Total Delay for Signalled Lanes (pcuHr)	23.46	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 1 PRC for Signalled Lanes (%)	0.4	Total Delay for Signalled Lanes (pcuHr)	15.22	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 2 PRC for Signalled Lanes (%)	105.9	Total Delay for Signalled Lanes (pcuHr)	1.02	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 3 PRC for Signalled Lanes (%)	-4.0	Total Delay for Signalled Lanes (pcuHr)	18.21	Cycle Time (s)	70
C4 - Birdwell Rbt - South	PRC for Signalled Lanes (%)	12.5	Total Delay for Signalled Lanes (pcuHr)	20.66	Cycle Time (s)	70
	PRC Over All Lanes (%)	-7.3	Total Delay Over All Lanes(pcuHr)	116.06		

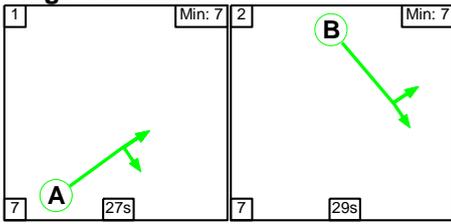
Full Input Data And Results

Scenario 4: '2023 Base PM_validated' (FG2: '2024 Base PM', Plan 1: 'v1')

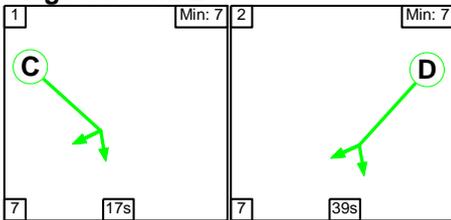
C1 - M1 Junction 36 - North

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

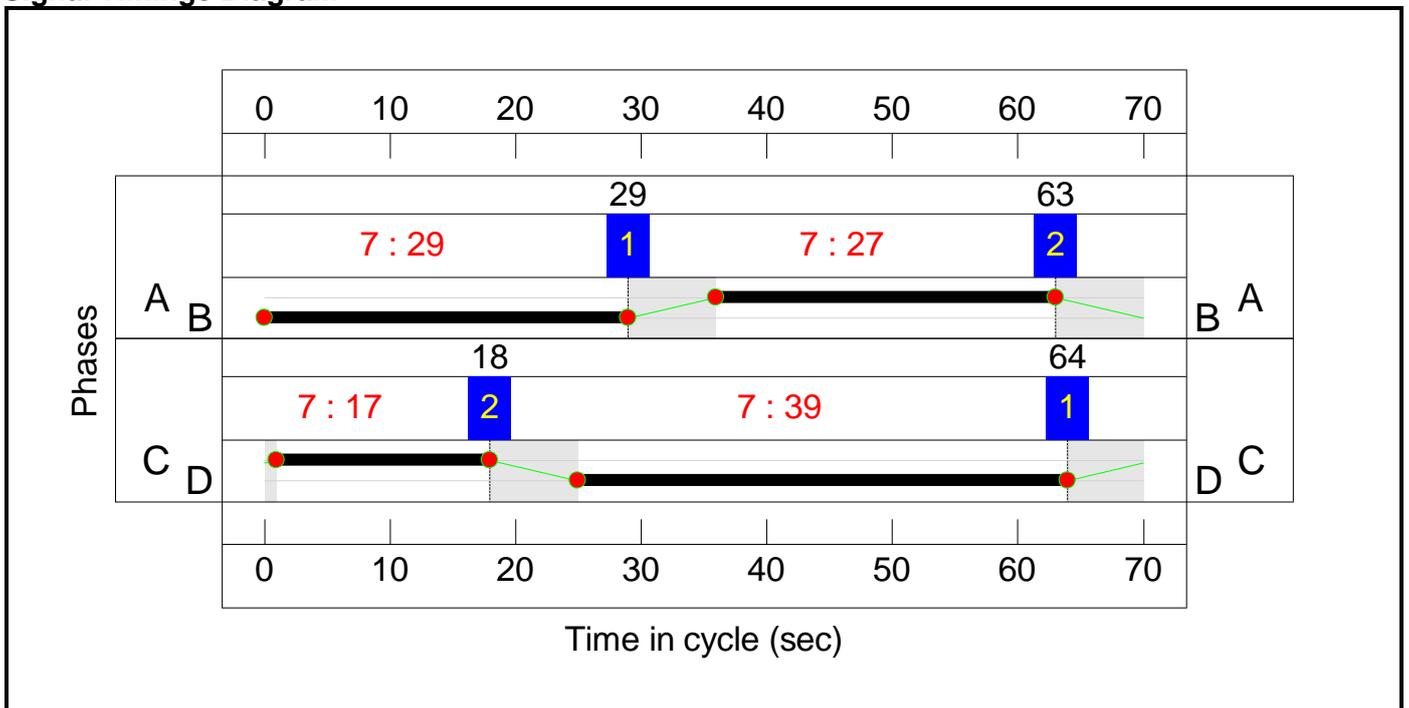
Stage Stream: 1

Stage	1	2
Duration	27	29
Change Point	29	63

Stage Stream: 2

Stage	1	2
Duration	17	39
Change Point	64	18

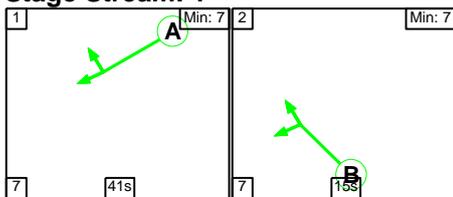
Signal Timings Diagram



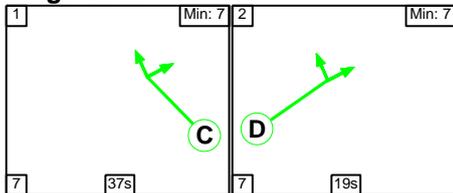
Full Input Data And Results

C2 - M1 Junction 36 - South
Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

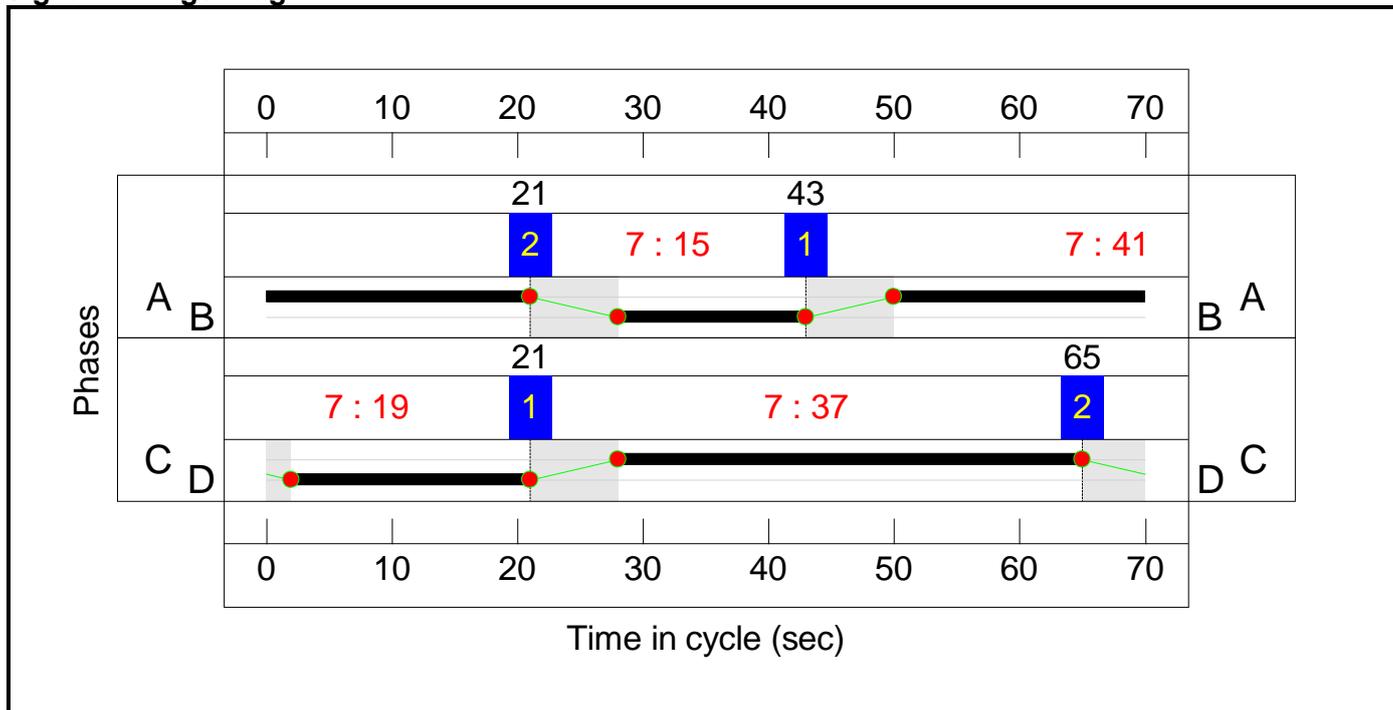
Stage Stream: 1

Stage	1	2
Duration	41	15
Change Point	43	21

Stage Stream: 2

Stage	1	2
Duration	37	19
Change Point	21	65

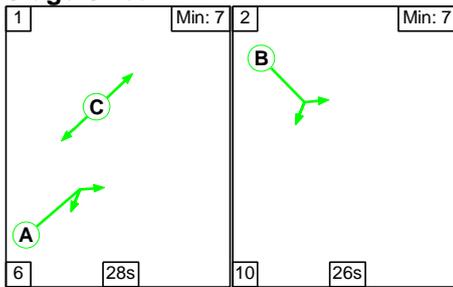
Signal Timings Diagram



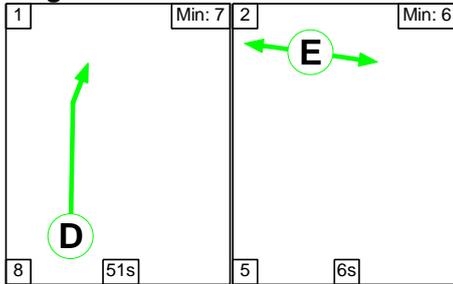
Full Input Data And Results

C3 - Birdwell Rbt - North
Stage Sequence Diagram

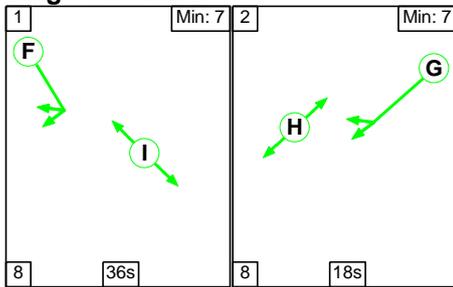
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	28	26
Change Point	63	27

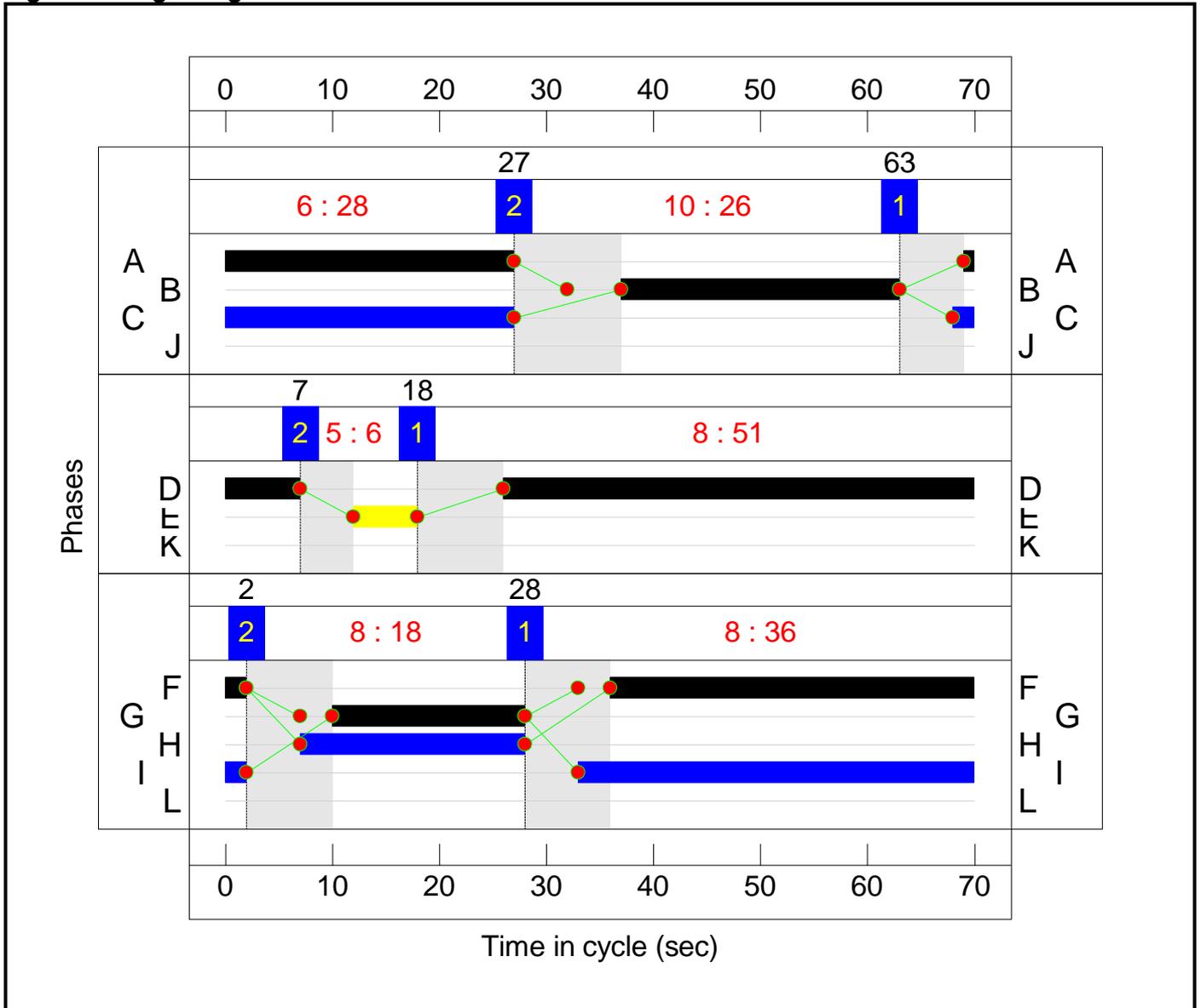
Stage Stream: 2

Stage	1	2
Duration	51	6
Change Point	18	7

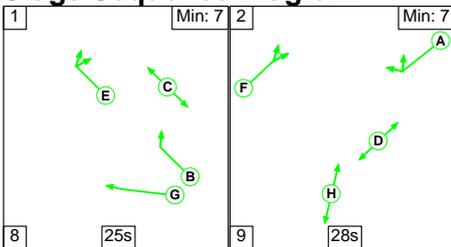
Stage Stream: 3

Stage	1	2
Duration	36	18
Change Point	28	2

Signal Timings Diagram



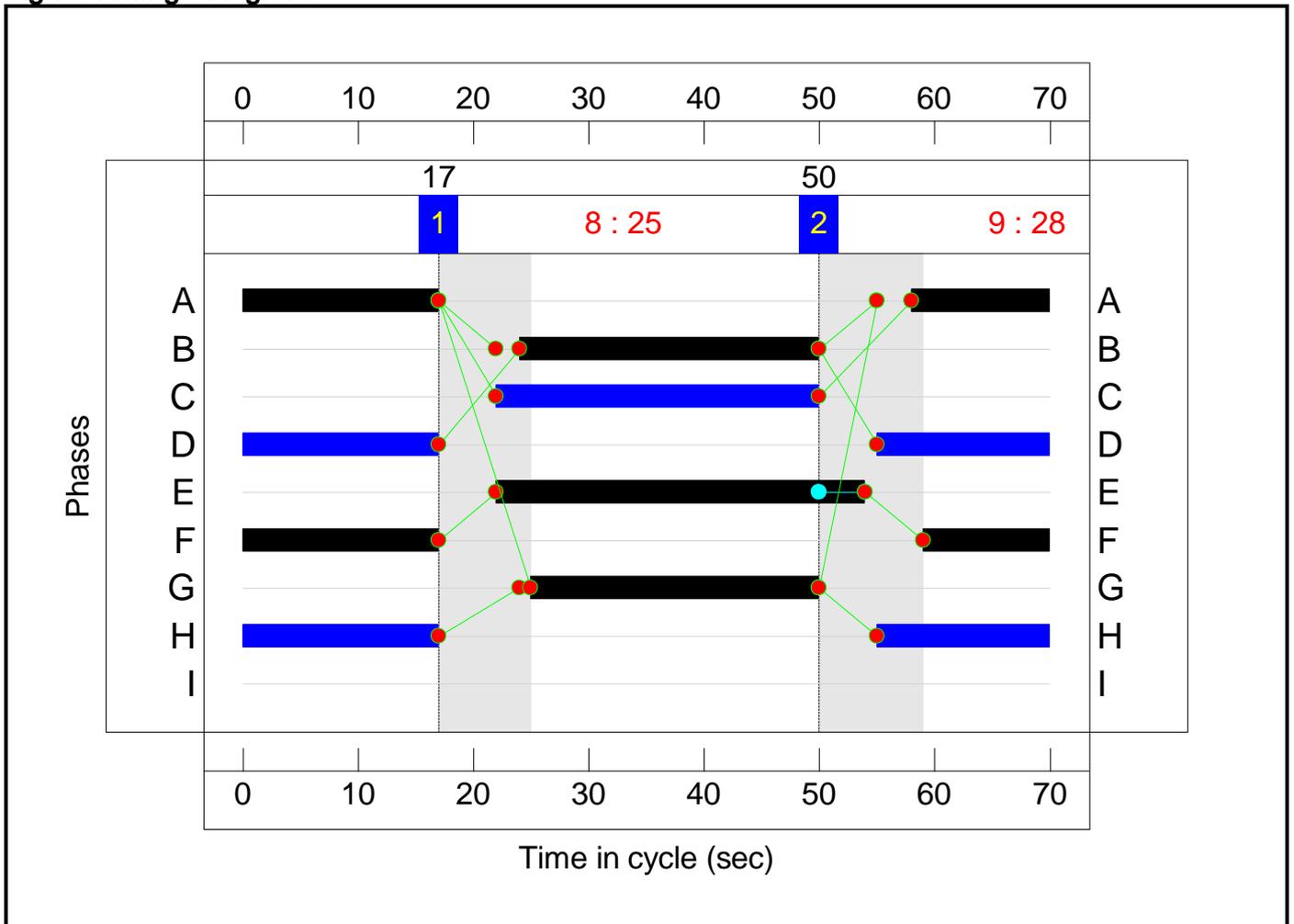
C4 - Birdwell Rbt - South Stage Sequence Diagram



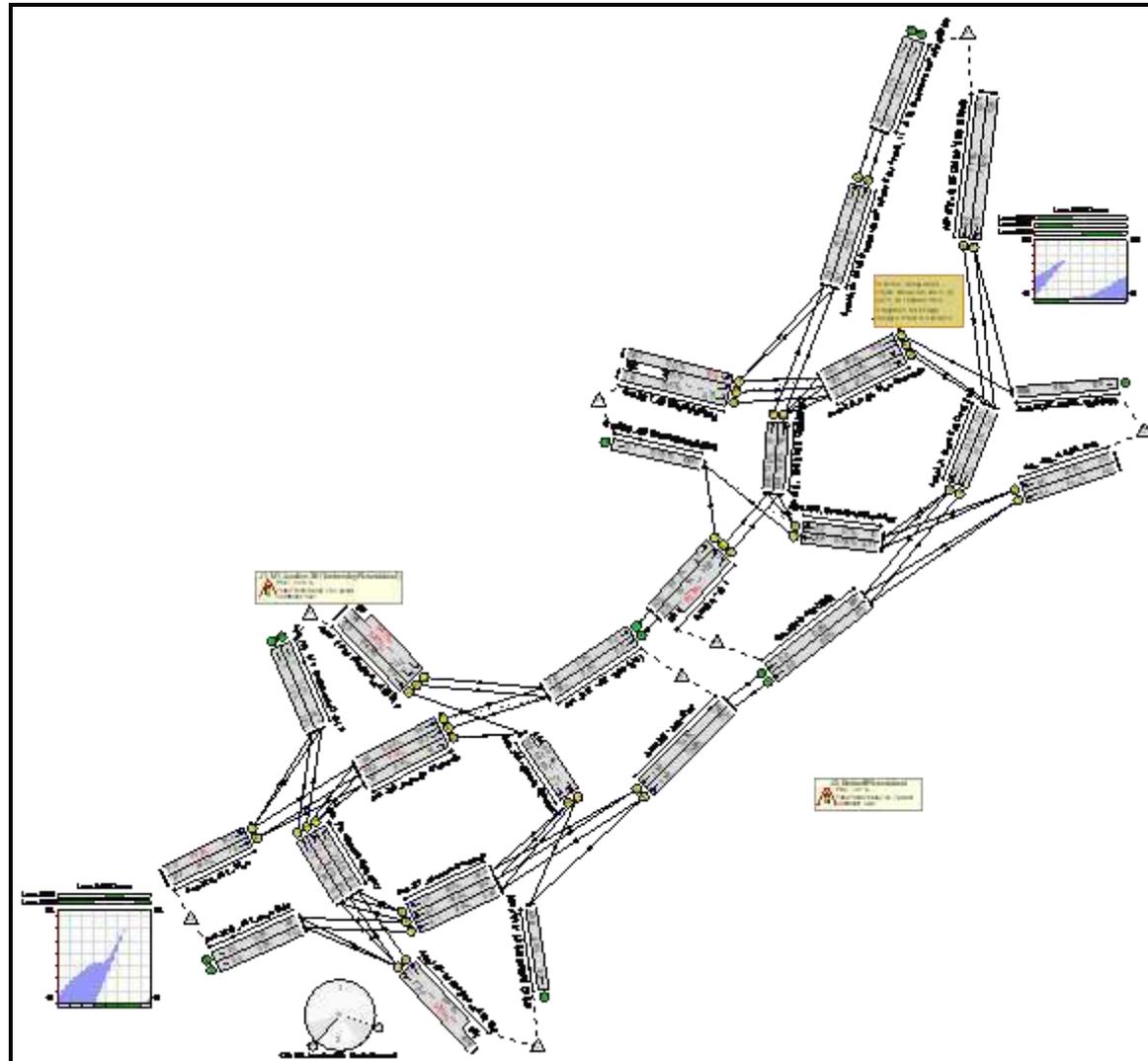
Stage Timings

Stage	1	2
Duration	25	28
Change Point	17	50

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	99.9%
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	N/A	-	-		-	-	-	-	-	-	99.9%
1/2+1/1	M1 Southbound Off Slip Left	U	1:1	N/A	C1:B		1	29	-	837	1900:1900	814+73	94.3 : 94.3%
1/3	M1 Southbound Off Slip Ahead	U	1:1	N/A	C1:B		1	29	-	525	1900	814	64.5%
2/1	A61- East Ahead Left	U	1:2	N/A	C1:D		1	39	-	770	1900	1086	70.9%
2/2	A61- East Ahead	U	1:2	N/A	C1:D		1	39	-	768	1900	1086	70.7%
3/1+3/2	M1 Northbound Off Slip Ahead Left	U	2:1	N/A	C2:B		1	15	-	821	1900:1900	434+434	99.9 : 89.1%
4/1	A61 - West Ahead Left	U	2:2	N/A	C2:D		1	19	-	517	1900	543	95.2%
4/2	A61 - West Ahead	U	2:2	N/A	C2:D		1	19	-	373	1900	543	68.7%
5/1	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	27	-	412	1900	760	54.2%
5/2	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	27	-	693	1900	760	91.2%
5/3	Northern Circulatory Right	U	1:1	N/A	C1:A		1	27	-	67	1900	760	8.8%
6/2+6/1	Eastern Circulatory Right Ahead	U	1:2	N/A	C1:C		1	17	-	592	1900:1900	441+489	58.5 : 68.4%
7/1	Western Circulatory Ahead	U	2:1	N/A	C2:A		1	41	-	545	1900	1140	47.8%
7/2	Western Circulatory Right Ahead	U	2:1	N/A	C2:A		1	41	-	562	1900	1140	49.3%

Full Input Data And Results

7/3	Western Circulatory Right	U	2:1	N/A	C2:A		1	41	-	464	1900	1140	40.7%
8/1	Eastern Circulatory Ahead	U	2:2	N/A	C2:C		1	37	-	164	1900	1031	15.9%
8/2	Eastern Circulatory Right Ahead	U	2:2	N/A	C2:C		1	37	-	780	1900	1031	75.6%
8/3	Eastern Circulatory Right	U	2:2	N/A	C2:C		1	37	-	387	1900	1031	37.5%
9/1	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	375	Inf	Inf	0.0%
9/2	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	674	Inf	Inf	0.0%
10/1	M1 Southbound On Slip	U	N/A	N/A	-		-	-	-	559	Inf	Inf	0.0%
11/1	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	275	Inf	Inf	0.0%
11/2	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	1667	Inf	Inf	0.0%
12/1	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
12/2	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	457	Inf	Inf	0.0%
J2: Birdwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	92.9%
1/1	A61 Sheffield Road Ahead Left	U	N/A	N/A	C4:F		1	28	-	567	1900	787	72.0%
1/3+1/2	A61 Sheffield Road Ahead	U	N/A	N/A	C4:F		1	28	-	736	1900:1900	291+711	73.5 : 73.5%
2/1	A6195 Dearne Valley Parkway Ahead Left	U	3:1	N/A	C3:B		1	26	-	526	1900	733	71.8%
2/2	A6195 Dearne Valley Parkway Ahead	U	3:1	N/A	C3:B		1	26	-	521	1900	733	71.1%
3/1	A6195 - East Ahead	U	3:3	N/A	C3:G		1	18	-	280	1900	516	54.3%
3/2	A6195 - East Ahead	U	3:3	N/A	C3:G		1	18	-	297	1900	516	57.6%
4/1	A61 Left	U	N/A	N/A	C4:G		1	25	-	622	1900	706	88.1%

Full Input Data And Results

4/2+4/3	A61 Ahead	U	N/A	N/A	C4:B		1	26	-	1319	1900:1900	733+733	87.1 : 92.9%
5/1	North West Circulatory Ahead	U	3:1	N/A	C3:A		1	28	-	684	1900	787	86.9%
5/2	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	28	-	196	1900	787	24.9%
5/3	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	28	-	214	1900	787	27.2%
6/1	South West Circulatory Ahead	U	N/A	N/A	C4:E		1	32	-	645	1900	896	72.0%
6/2	South West Circulatory Right Ahead	U	N/A	N/A	C4:E		1	32	-	684	1900	896	76.4%
7/1	North East Circulatory Ahead	U	3:3	N/A	C3:F		1	36	-	707	1900	1004	70.4%
7/2	North East Circulatory Right Ahead	U	3:3	N/A	C3:F		1	36	-	735	1900	1004	73.2%
8/1	South East Circulatory Ahead	U	N/A	N/A	C4:A		1	29	-	471	1900	814	57.8%
8/2	South East Circulatory Right Ahead	U	N/A	N/A	C4:A		1	29	-	10	1900	814	1.2%
9/1	A61 Sheffield Road (Exit)	U	N/A	N/A	-		-	-	-	1093	1900	1900	57.5%
10/1	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	881	1900	1411	62.4%
10/2	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	657	1900	1411	46.5%
11/1	A6195 Dearne Valley Parkway (Exit)	U	N/A	N/A	-		-	-	-	881	Inf	Inf	0.0%

Full Input Data And Results

11/2	A6195 Deame Valley Parkway (Exit)	U	N/A	N/A	-	-	-	-	657	Inf	Inf	0.0%
12/1	A6195 - East (Exit)	U	N/A	N/A	-	-	-	-	699	Inf	Inf	0.0%
13/1	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	847	Inf	Inf	0.0%
13/2	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	691	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	78.6	59.2	0.0	137.8	-	-	-	-
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	0	0	0	42.5	33.6	0.0	76.1	-	-	-	-
1/2+1/1	837	837	-	-	-	4.3	6.6	-	10.9	46.9	14.3	6.6	20.9
1/3	525	525	-	-	-	2.3	0.9	-	3.2	22.0	8.0	0.9	8.9
2/1	770	770	-	-	-	2.3	1.2	-	3.5	16.5	10.7	1.2	11.9
2/2	768	768	-	-	-	2.3	1.2	-	3.5	16.4	10.7	1.2	11.9
3/1+3/2	821	821	-	-	-	6.1	6.7	-	12.8	56.1	8.3	6.7	15.0
4/1	517	517	-	-	-	3.5	6.6	-	10.1	70.6	9.8	6.6	16.4
4/2	373	373	-	-	-	2.3	1.1	-	3.4	32.7	6.4	1.1	7.5
5/1	412	412	-	-	-	2.2	0.6	-	2.8	24.2	5.0	0.6	5.6
5/2	693	693	-	-	-	3.1	4.6	-	7.6	39.5	9.2	4.6	13.7
5/3	67	67	-	-	-	0.2	0.0	-	0.2	12.2	1.2	0.0	1.2
6/2+6/1	592	592	-	-	-	6.8	0.9	-	7.6	46.5	6.2	0.9	7.1
7/1	545	545	-	-	-	1.8	0.5	-	2.3	15.0	7.6	0.5	8.1
7/2	562	562	-	-	-	1.8	0.5	-	2.3	14.5	7.7	0.5	8.2
7/3	464	464	-	-	-	0.2	0.3	-	0.5	3.9	1.1	0.3	1.5
8/1	164	164	-	-	-	1.0	0.1	-	1.1	23.7	3.0	0.1	3.1
8/2	780	780	-	-	-	2.5	1.5	-	4.0	18.6	12.2	1.5	13.7
8/3	387	387	-	-	-	0.0	0.3	-	0.3	2.8	0.0	0.3	0.3
9/1	375	375	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	674	674	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	559	559	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	275	275	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1667	1667	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

12/2	457	457	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Birdwell Roundabout	-	-	0	0	0	36.1	25.6	0.0	61.7	-	-	-	-
1/1	567	567	-	-	-	2.7	1.3	-	4.0	25.2	9.1	1.3	10.4
1/3+1/2	736	736	-	-	-	3.2	1.4	-	4.6	22.4	8.1	1.4	9.5
2/1	526	526	-	-	-	2.7	1.3	-	3.9	26.9	8.6	1.3	9.9
2/2	521	521	-	-	-	2.6	1.2	-	3.8	26.6	8.5	1.2	9.8
3/1	280	280	-	-	-	1.7	0.6	-	2.3	29.4	4.6	0.6	5.2
3/2	297	297	-	-	-	1.8	0.7	-	2.5	30.2	5.0	0.7	5.6
4/1	622	622	-	-	-	3.6	3.4	-	7.0	40.4	11.2	3.4	14.7
4/2+4/3	1319	1319	-	-	-	7.4	4.2	-	11.7	31.8	12.7	4.2	16.9
5/1	684	684	-	-	-	2.9	3.1	-	6.0	31.6	12.7	3.1	15.9
5/2	196	196	-	-	-	0.2	0.2	-	0.3	5.9	0.3	0.2	0.5
5/3	214	214	-	-	-	0.2	0.2	-	0.3	5.8	0.3	0.2	0.5
6/1	645	645	-	-	-	0.1	1.3	-	1.4	7.7	0.2	1.3	1.5
6/2	684	684	-	-	-	0.1	1.6	-	1.7	8.8	0.2	1.6	1.8
7/1	707	707	-	-	-	1.1	1.2	-	2.3	11.6	4.0	1.2	5.2
7/2	735	735	-	-	-	1.4	1.4	-	2.7	13.4	4.3	1.4	5.7
8/1	471	471	-	-	-	2.9	0.7	-	3.6	27.7	8.1	0.7	8.8
8/2	10	10	-	-	-	0.1	0.0	-	0.1	31.2	0.2	0.0	0.2
9/1	1093	1093	-	-	-	0.0	0.7	-	0.7	2.2	0.0	0.7	0.7
10/1	881	881	-	-	-	0.6	0.8	-	1.4	5.9	3.5	0.8	4.3
10/2	657	657	-	-	-	0.9	0.4	-	1.4	7.5	5.0	0.4	5.4
11/1	881	881	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	657	657	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	847	847	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	691	691	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - M1 Junction 36 - North	Stream: 1 PRC for Signalled Lanes (%)	-4.8	Total Delay for Signalled Lanes (pcuHr)	24.71	Cycle Time (s)	70
C1 - M1 Junction 36 - North	Stream: 2 PRC for Signalled Lanes (%)	26.9	Total Delay for Signalled Lanes (pcuHr)	14.67	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 1 PRC for Signalled Lanes (%)	-11.0	Total Delay for Signalled Lanes (pcuHr)	17.84	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 2 PRC for Signalled Lanes (%)	-5.8	Total Delay for Signalled Lanes (pcuHr)	18.93	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 1 PRC for Signalled Lanes (%)	3.6	Total Delay for Signalled Lanes (pcuHr)	14.44	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 2 PRC for Signalled Lanes (%)	44.2	Total Delay for Signalled Lanes (pcuHr)	2.79	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 3 PRC for Signalled Lanes (%)	23.0	Total Delay for Signalled Lanes (pcuHr)	9.79	Cycle Time (s)	70
C4 - Birdwell Rbt - South	PRC for Signalled Lanes (%)	-3.2	Total Delay for Signalled Lanes (pcuHr)	33.97	Cycle Time (s)	70
	PRC Over All Lanes (%)	-11.0	Total Delay Over All Lanes(pcuHr)	137.81		

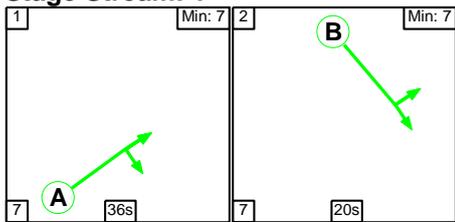
Full Input Data And Results

Scenario 5: '2028 Do Minimum AM' (FG3: '2028 Do Mnimum AM', Plan 1: 'v1')

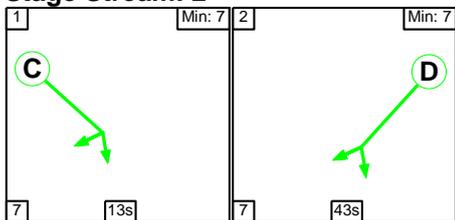
C1 - M1 Junction 36 - North

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

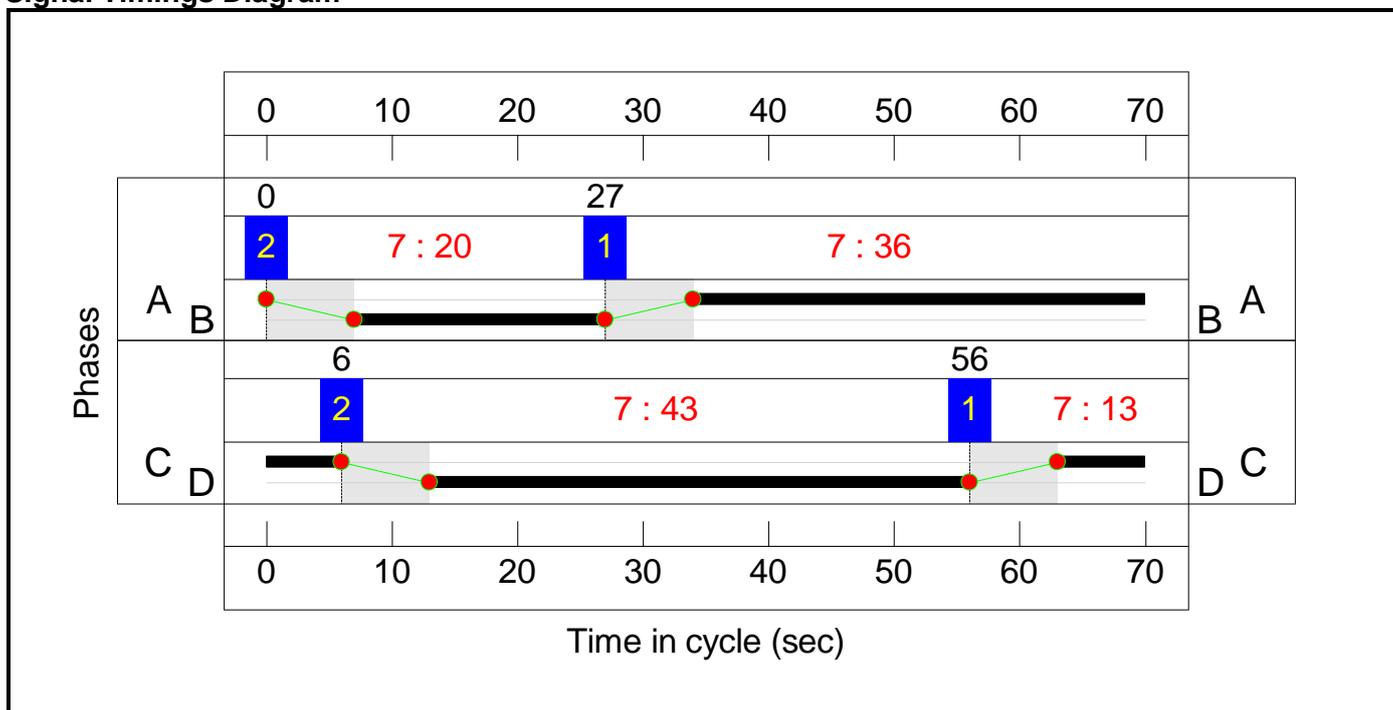
Stage Stream: 1

Stage	1	2
Duration	36	20
Change Point	27	0

Stage Stream: 2

Stage	1	2
Duration	13	43
Change Point	56	6

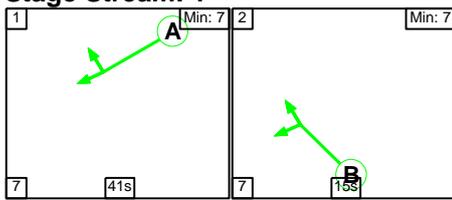
Signal Timings Diagram



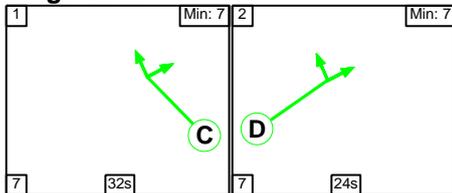
Full Input Data And Results

C2 - M1 Junction 36 - South
Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

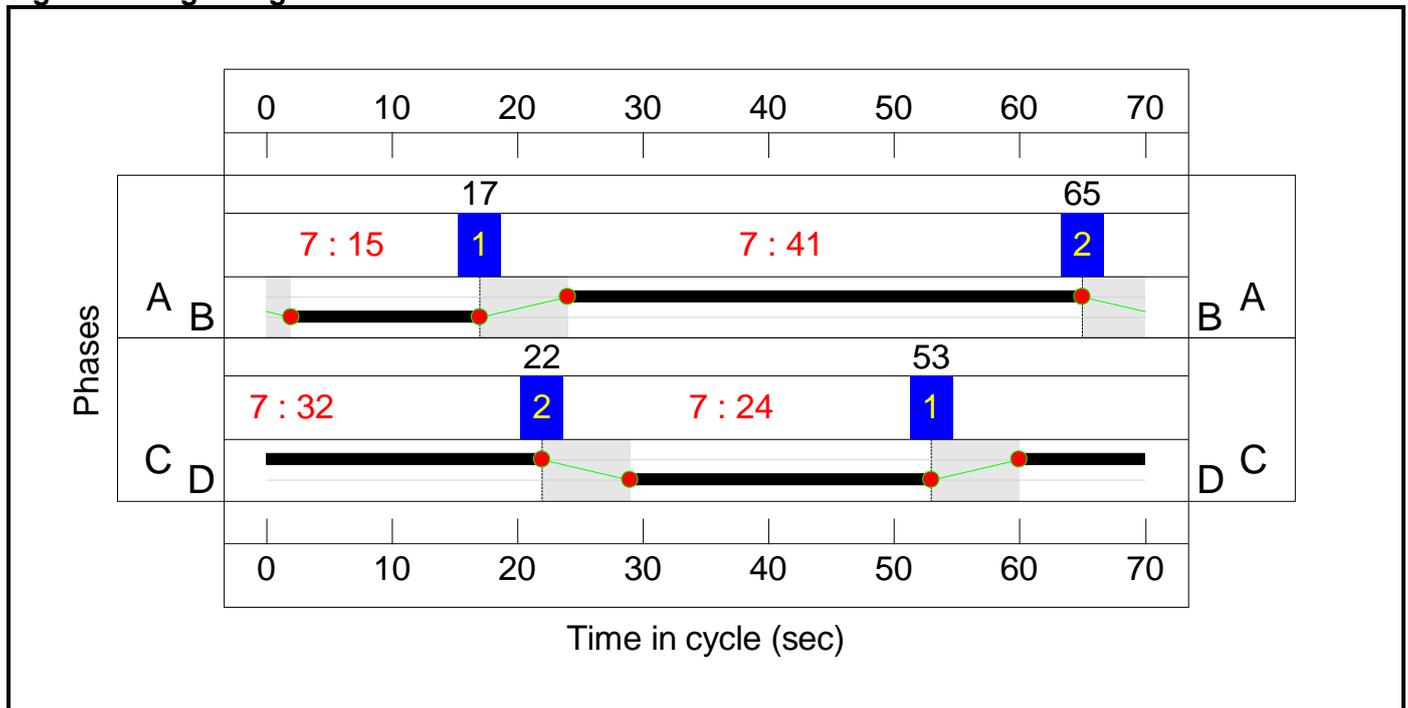
Stage Stream: 1

Stage	1	2
Duration	41	15
Change Point	17	65

Stage Stream: 2

Stage	1	2
Duration	32	24
Change Point	53	22

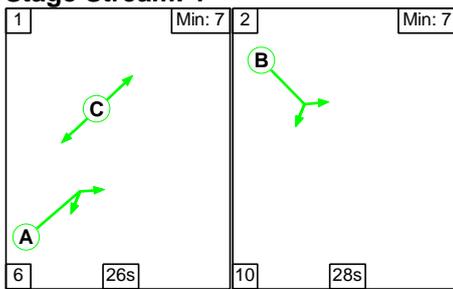
Signal Timings Diagram



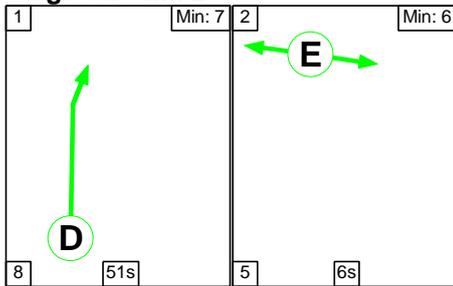
Full Input Data And Results

C3 - Birdwell Rbt - North
Stage Sequence Diagram

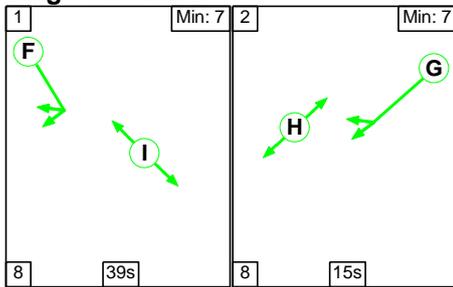
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	26	28
Change Point	62	24

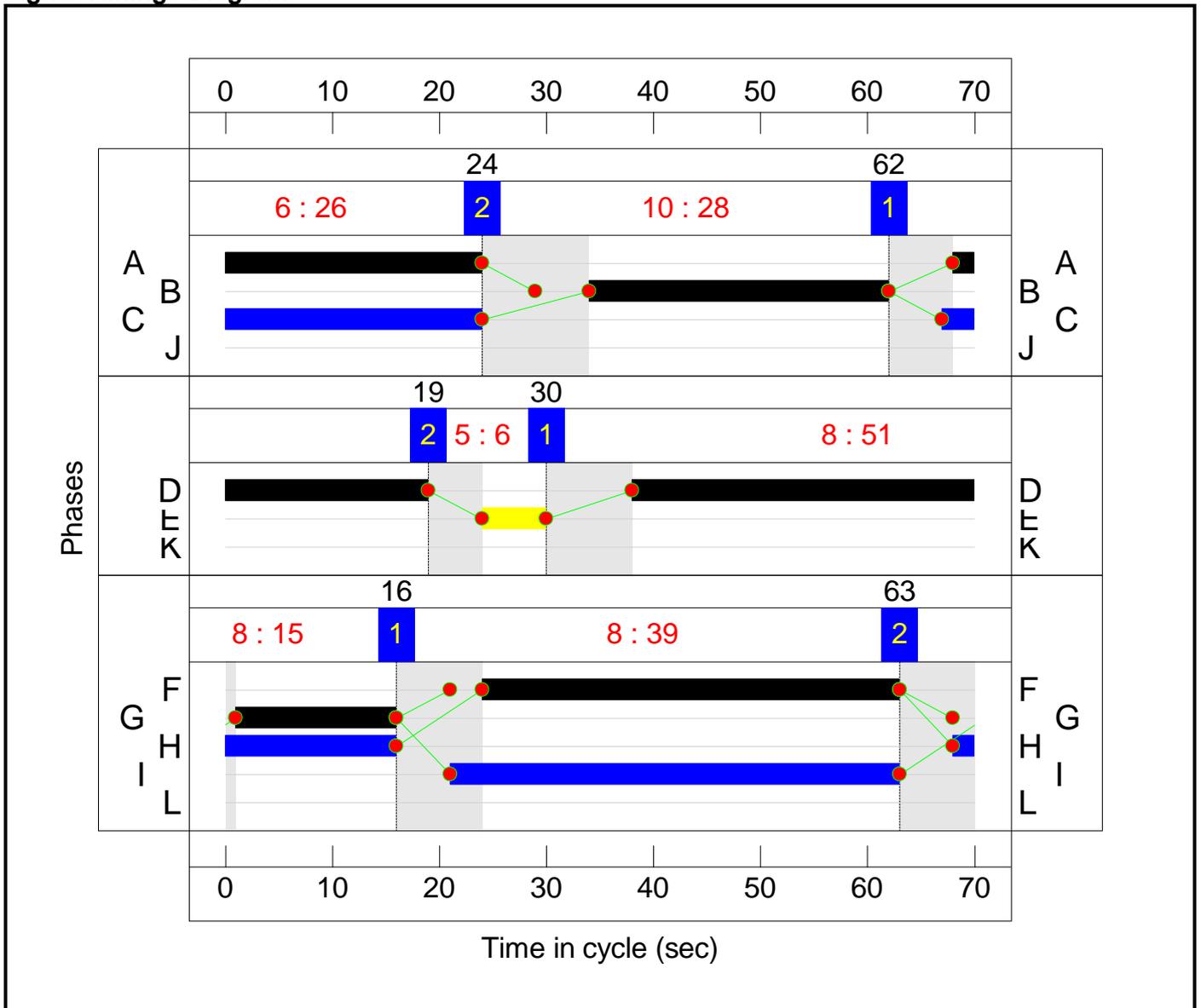
Stage Stream: 2

Stage	1	2
Duration	51	6
Change Point	30	19

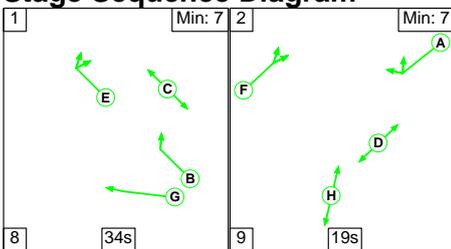
Stage Stream: 3

Stage	1	2
Duration	39	15
Change Point	16	63

Signal Timings Diagram



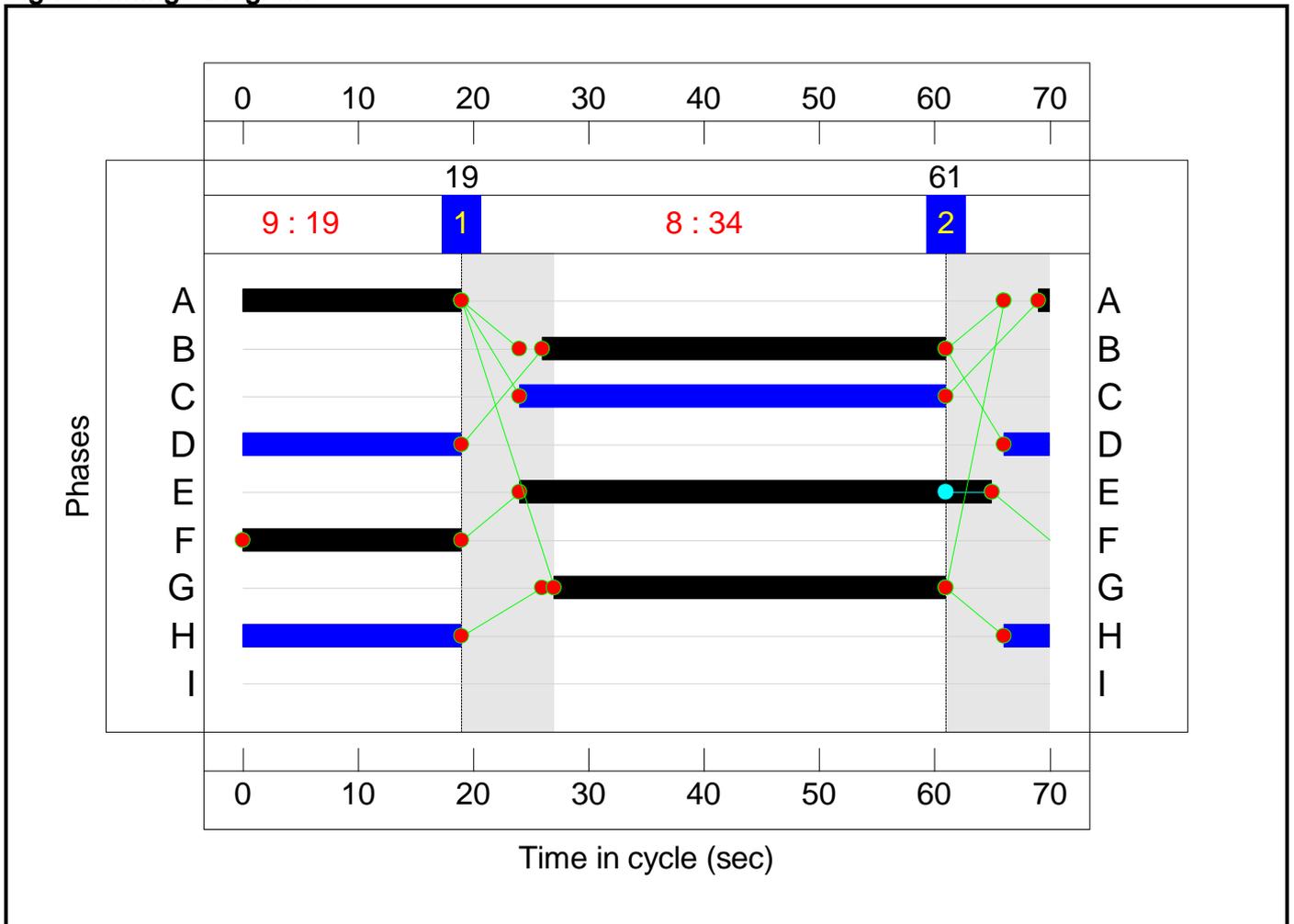
C4 - Birdwell Rbt - South Stage Sequence Diagram



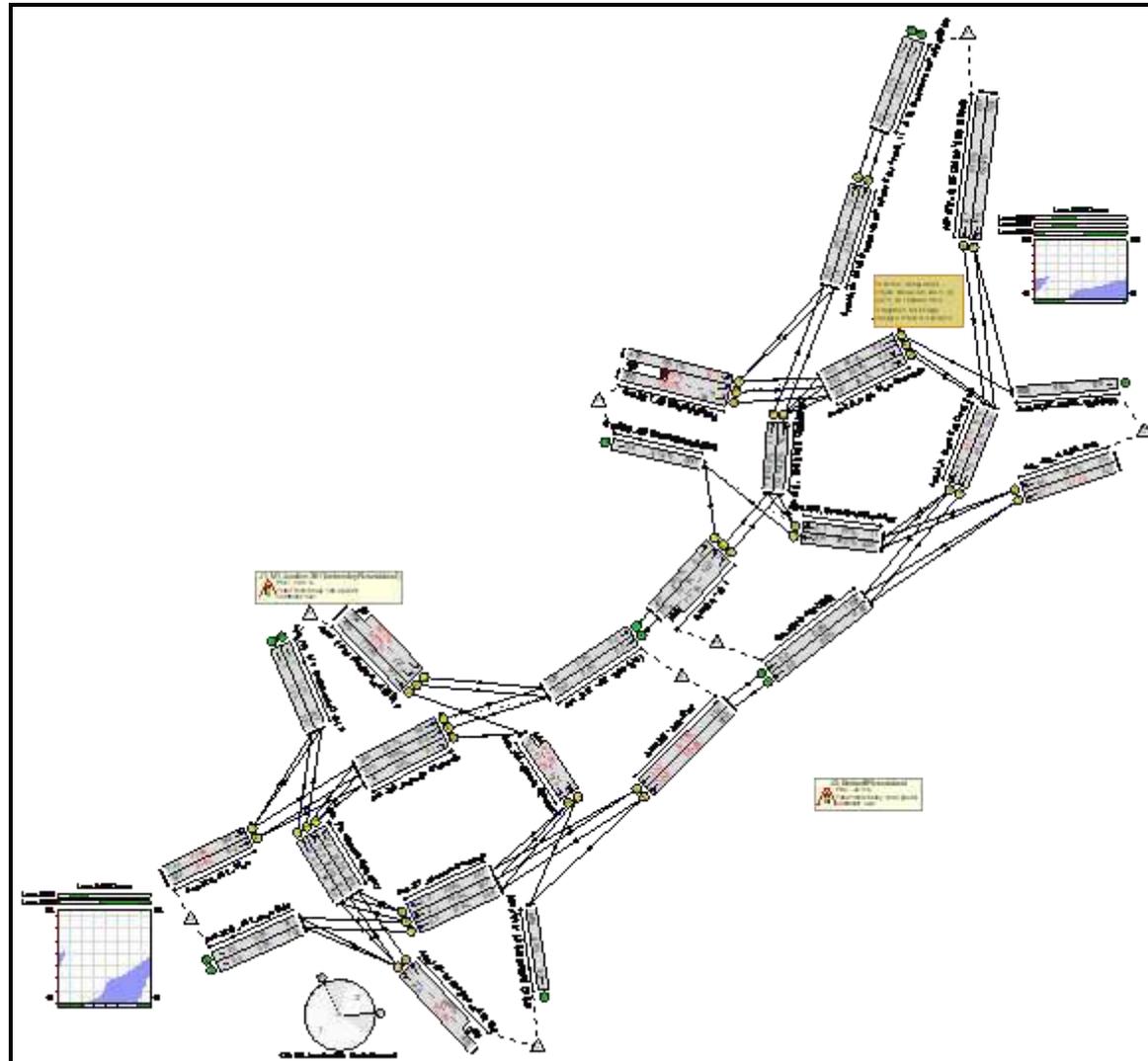
Stage Timings

Stage	1	2
Duration	34	19
Change Point	19	61

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	121.3%
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	N/A	-	-		-	-	-	-	-	-	99.6%
1/2+1/1	M1 Southbound Off Slip Left	U	1:1	N/A	C1:B		1	20	-	694	1900:1900	570+171	93.7 : 93.7%
1/3	M1 Southbound Off Slip Ahead	U	1:1	N/A	C1:B		1	20	-	439	1900	570	77.0%
2/1	A61- East Ahead Left	U	1:2	N/A	C1:D		1	43	-	1189	1900	1194	99.6%
2/2	A61- East Ahead	U	1:2	N/A	C1:D		1	43	-	1167	1900	1194	97.7%
3/1+3/2	M1 Northbound Off Slip Ahead Left	U	2:1	N/A	C2:B		1	15	-	691	1900:1900	434+434	92.6 : 66.5%
4/1	A61 - West Ahead Left	U	2:2	N/A	C2:D		1	24	-	644	1900	679	94.9%
4/2	A61 - West Ahead	U	2:2	N/A	C2:D		1	24	-	623	1900	679	91.8%
5/1	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	338	1900	1004	33.7%
5/2	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	870	1900	1004	86.6%
5/3	Northern Circulatory Right	U	1:1	N/A	C1:A		1	36	-	42	1900	1004	4.2%
6/2+6/1	Eastern Circulatory Right Ahead	U	1:2	N/A	C1:C		1	13	-	481	1900:1900	136+380	93.2 : 93.2%
7/1	Western Circulatory Ahead	U	2:1	N/A	C2:A		1	41	-	659	1900	1140	57.8%
7/2	Western Circulatory Right Ahead	U	2:1	N/A	C2:A		1	41	-	907	1900	1140	79.6%

Full Input Data And Results

7/3	Western Circulatory Right	U	2:1	N/A	C2:A		1	41	-	387	1900	1140	33.9%
8/1	Eastern Circulatory Ahead	U	2:2	N/A	C2:C		1	32	-	460	1900	896	51.4%
8/2	Eastern Circulatory Right Ahead	U	2:2	N/A	C2:C		1	32	-	701	1900	896	78.3%
8/3	Eastern Circulatory Right	U	2:2	N/A	C2:C		1	32	-	289	1900	896	32.3%
9/1	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	770	Inf	Inf	0.0%
9/2	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	697	Inf	Inf	0.0%
10/1	M1 Southbound On Slip	U	N/A	N/A	-		-	-	-	884	Inf	Inf	0.0%
11/1	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	329	Inf	Inf	0.0%
11/2	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	1573	Inf	Inf	0.0%
12/1	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	703	Inf	Inf	0.0%
12/2	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	491	Inf	Inf	0.0%
J2: Birdwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	121.3%
1/1	A61 Sheffield Road Ahead Left	U	N/A	N/A	C4:F		1	19	-	478	1900	543	88.1%
1/3+1/2	A61 Sheffield Road Ahead	U	N/A	N/A	C4:F		1	19	-	846	1900:1900	387+523	93.0 : 93.0%
2/1	A6195 Dearne Valley Parkway Ahead Left	U	3:1	N/A	C3:B		1	28	-	704	1900	787	89.4%
2/2	A6195 Dearne Valley Parkway Ahead	U	3:1	N/A	C3:B		1	28	-	657	1900	787	83.5%
3/1	A6195 - East Ahead	U	3:3	N/A	C3:G		1	15	-	527	1900	434	121.3%
3/2	A6195 - East Ahead	U	3:3	N/A	C3:G		1	15	-	294	1900	434	67.7%
4/1	A61 Left	U	N/A	N/A	C4:G		1	34	-	467	1900	950	49.2%

Full Input Data And Results

4/2+4/3	A61 Ahead	U	N/A	N/A	C4:B		1	35	-	1434	1900:1900	913+946	77.1 : 77.1%
5/1	North West Circulatory Ahead	U	3:1	N/A	C3:A		1	26	-	604	1900	733	82.4%
5/2	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	26	-	262	1900	733	35.8%
5/3	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	26	-	360	1900	733	49.1%
6/1	South West Circulatory Ahead	U	N/A	N/A	C4:E		1	41	-	713	1900	1140	62.5%
6/2	South West Circulatory Right Ahead	U	N/A	N/A	C4:E		1	41	-	732	1900	1140	64.2%
7/1	North East Circulatory Ahead	U	3:3	N/A	C3:F		1	39	-	962	1900	1086	88.6%
7/2	North East Circulatory Right Ahead	U	3:3	N/A	C3:F		1	39	-	1017	1900	1086	93.7%
8/1	South East Circulatory Ahead	U	N/A	N/A	C4:A		1	20	-	433	1900	570	76.0%
8/2	South East Circulatory Right Ahead	U	N/A	N/A	C4:A		1	20	-	11	1900	570	1.9%
9/1	A61 Sheffield Road (Exit)	U	N/A	N/A	-		-	-	-	900	1900	1900	47.4%
10/1	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	829	1900	1411	58.7%
10/2	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	714	1900	1411	50.6%
11/1	A6195 Dearne Valley Parkway (Exit)	U	N/A	N/A	-		-	-	-	829	Inf	Inf	0.0%

Full Input Data And Results

11/2	A6195 Deame Valley Parkway (Exit)	U	N/A	N/A	-	-	-	-	714	Inf	Inf	0.0%
12/1	A6195 - East (Exit)	U	N/A	N/A	-	-	-	-	608	Inf	Inf	0.0%
13/1	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	1226	Inf	Inf	0.0%
13/2	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	1130	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	88.8	147.9	0.0	236.7	-	-	-	-
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	0	0	0	44.4	62.5	0.0	106.9	-	-	-	-
1/2+1/1	694	694	-	-	-	4.4	5.9	-	10.3	53.4	10.1	5.9	16.0
1/3	439	439	-	-	-	2.7	1.6	-	4.4	35.7	7.7	1.6	9.3
2/1	1189	1189	-	-	-	4.3	16.0	-	20.2	61.3	22.8	16.0	38.8
2/2	1167	1167	-	-	-	4.1	11.6	-	15.6	48.2	21.7	11.6	33.3
3/1+3/2	691	691	-	-	-	4.9	1.9	-	6.8	35.6	7.6	1.9	9.5
4/1	644	644	-	-	-	3.9	6.7	-	10.6	59.4	12.2	6.7	18.9
4/2	623	623	-	-	-	3.7	4.8	-	8.5	49.2	11.4	4.8	16.2
5/1	338	338	-	-	-	0.8	0.3	-	1.0	10.8	5.7	0.3	5.9
5/2	870	870	-	-	-	1.1	3.1	-	4.2	17.5	7.4	3.1	10.5
5/3	42	42	-	-	-	0.0	0.0	-	0.0	4.3	0.1	0.0	0.1
6/2+6/1	481	481	-	-	-	4.5	5.2	-	9.7	72.9	6.8	5.2	12.1
7/1	659	659	-	-	-	1.5	0.7	-	2.2	12.2	8.8	0.7	9.5
7/2	907	907	-	-	-	2.7	1.9	-	4.6	18.4	10.2	1.9	12.1
7/3	387	387	-	-	-	0.9	0.3	-	1.2	11.0	3.1	0.3	3.4
8/1	460	460	-	-	-	2.2	0.5	-	2.7	21.1	8.9	0.5	9.4
8/2	701	701	-	-	-	2.4	1.8	-	4.2	21.7	8.3	1.8	10.0
8/3	289	289	-	-	-	0.2	0.2	-	0.4	5.2	0.4	0.2	0.6
9/1	770	770	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	697	697	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	884	884	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	329	329	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1573	1573	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	703	703	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

12/2	491	491	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Birdwell Roundabout	-	-	0	0	0	44.4	85.4	0.0	129.8	-	-	-	-
1/1	478	478	-	-	-	3.2	3.3	-	6.5	49.0	8.8	3.3	12.1
1/3+1/2	846	846	-	-	-	5.4	5.6	-	11.1	47.2	9.0	5.6	14.7
2/1	704	704	-	-	-	3.7	3.9	-	7.6	38.9	12.7	3.9	16.6
2/2	657	657	-	-	-	3.4	2.4	-	5.8	31.7	11.3	2.4	13.7
3/1	527	434	-	-	-	7.3	49.0	-	56.3	384.8	12.1	49.0	61.1
3/2	294	294	-	-	-	2.0	1.0	-	3.0	37.3	5.1	1.0	6.2
4/1	467	467	-	-	-	1.5	0.5	-	2.0	15.3	6.0	0.5	6.4
4/2+4/3	1434	1434	-	-	-	5.3	1.7	-	7.0	17.5	11.2	1.7	12.8
5/1	604	604	-	-	-	3.0	2.3	-	5.3	31.3	7.0	2.3	9.3
5/2	262	262	-	-	-	1.2	0.3	-	1.5	20.7	2.2	0.3	2.4
5/3	360	360	-	-	-	1.1	0.5	-	1.5	15.4	1.9	0.5	2.4
6/1	713	713	-	-	-	0.1	0.8	-	0.9	4.6	0.3	0.8	1.1
6/2	732	732	-	-	-	0.0	0.9	-	0.9	4.6	0.1	0.9	1.0
7/1	962	962	-	-	-	2.2	3.7	-	5.8	21.8	7.8	3.7	11.5
7/2	1017	1017	-	-	-	2.0	6.3	-	8.2	29.1	9.0	6.3	15.3
8/1	433	433	-	-	-	2.3	1.5	-	3.8	31.8	5.3	1.5	6.9
8/2	11	11	-	-	-	0.1	0.0	-	0.1	23.8	0.1	0.0	0.1
9/1	900	900	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
10/1	829	829	-	-	-	0.3	0.7	-	1.0	4.4	1.8	0.7	2.5
10/2	714	714	-	-	-	0.4	0.5	-	1.0	4.8	2.6	0.5	3.2
11/1	829	829	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	714	714	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	608	608	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1180	1180	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	1084	1084	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - M1 Junction 36 - North	Stream: 1 PRC for Signalled Lanes (%):	-4.1	Total Delay for Signalled Lanes (pcuHr):	19.95	Cycle Time (s):	70
C1 - M1 Junction 36 - North	Stream: 2 PRC for Signalled Lanes (%):	-10.6	Total Delay for Signalled Lanes (pcuHr):	45.60	Cycle Time (s):	70
C2 - M1 Junction 36 - South	Stream: 1 PRC for Signalled Lanes (%):	-2.9	Total Delay for Signalled Lanes (pcuHr):	14.88	Cycle Time (s):	70
C2 - M1 Junction 36 - South	Stream: 2 PRC for Signalled Lanes (%):	-5.5	Total Delay for Signalled Lanes (pcuHr):	26.47	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 1 PRC for Signalled Lanes (%):	0.6	Total Delay for Signalled Lanes (pcuHr):	21.69	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 2 PRC for Signalled Lanes (%):	53.2	Total Delay for Signalled Lanes (pcuHr):	1.95	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 3 PRC for Signalled Lanes (%):	-34.8	Total Delay for Signalled Lanes (pcuHr):	73.43	Cycle Time (s):	70
C4 - Birdwell Rbt - South	PRC for Signalled Lanes (%):	-3.3	Total Delay for Signalled Lanes (pcuHr):	32.28	Cycle Time (s):	70
	PRC Over All Lanes (%):	-34.8	Total Delay Over All Lanes(pcuHr):	236.70		

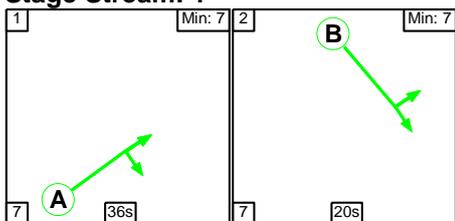
Full Input Data And Results

Scenario 6: '2028 Do Minimum PM' (FG4: '2028 Do Minimum PM', Plan 1: 'v1')

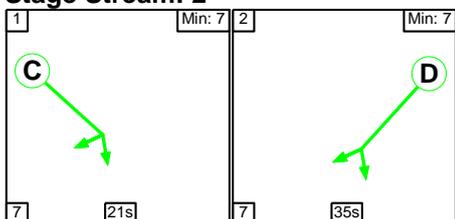
C1 - M1 Junction 36 - North

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

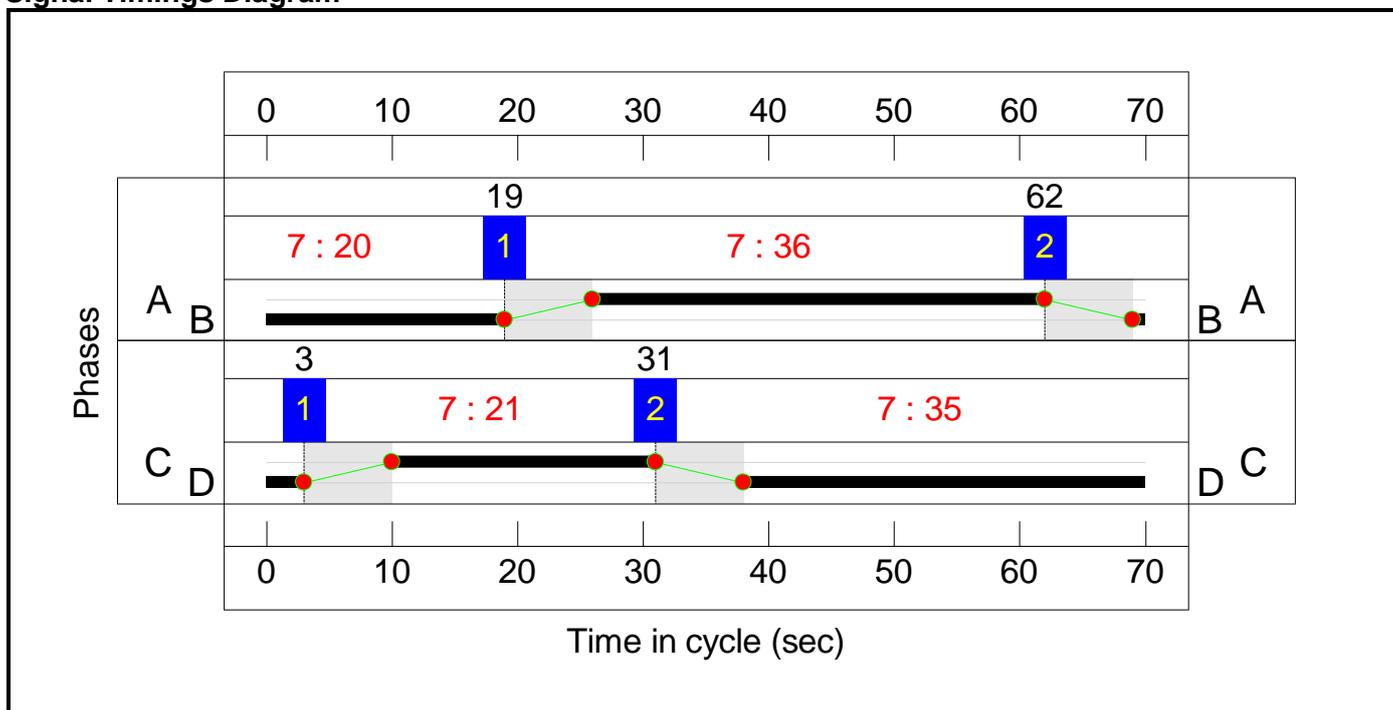
Stage Stream: 1

Stage	1	2
Duration	36	20
Change Point	19	62

Stage Stream: 2

Stage	1	2
Duration	21	35
Change Point	3	31

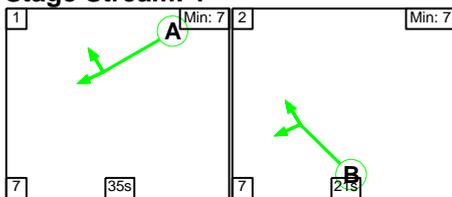
Signal Timings Diagram



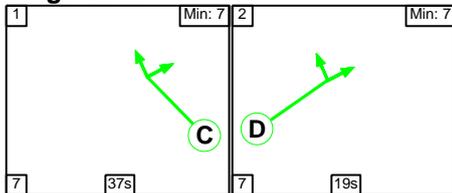
Full Input Data And Results

C2 - M1 Junction 36 - South
Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

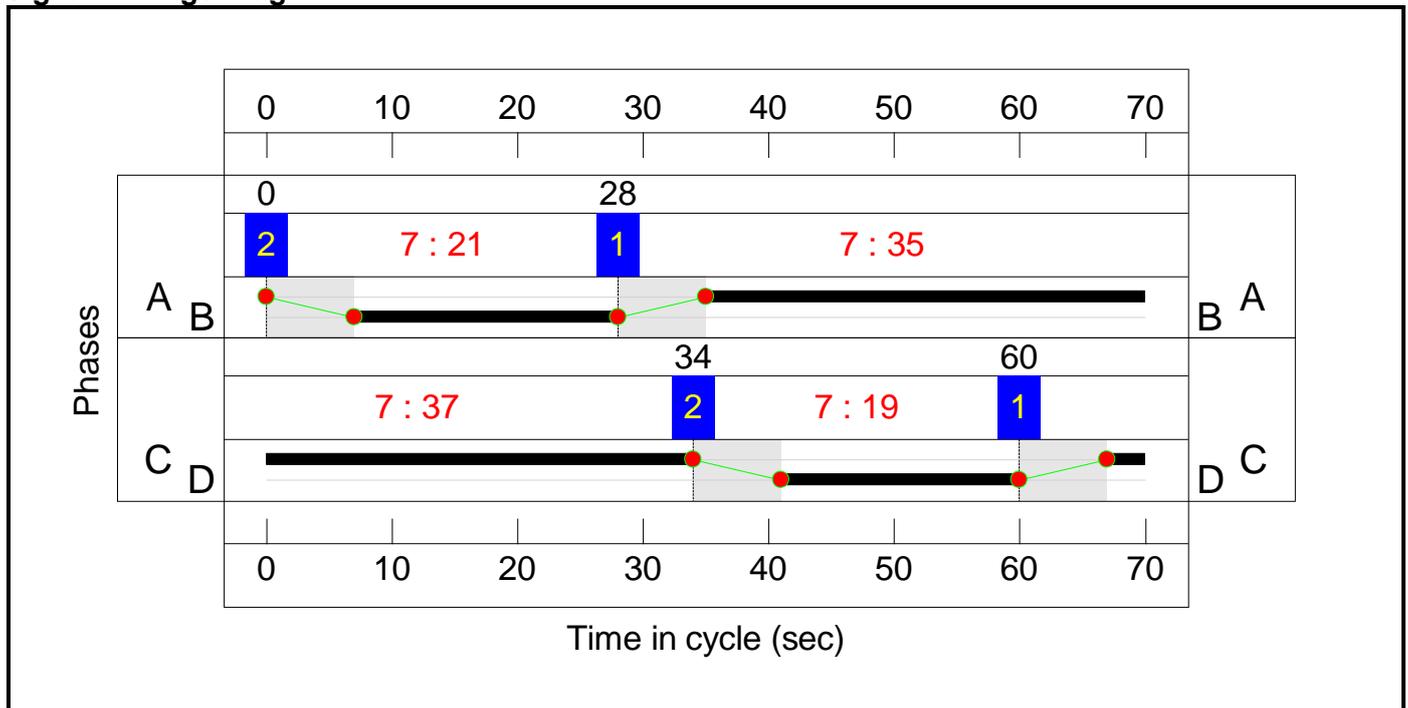
Stage Stream: 1

Stage	1	2
Duration	35	21
Change Point	28	0

Stage Stream: 2

Stage	1	2
Duration	37	19
Change Point	60	34

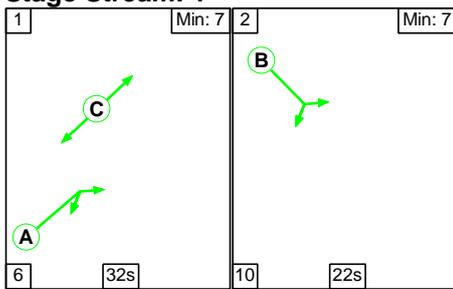
Signal Timings Diagram



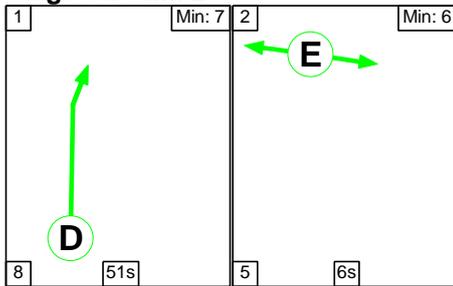
Full Input Data And Results

C3 - Birdwell Rbt - North
Stage Sequence Diagram

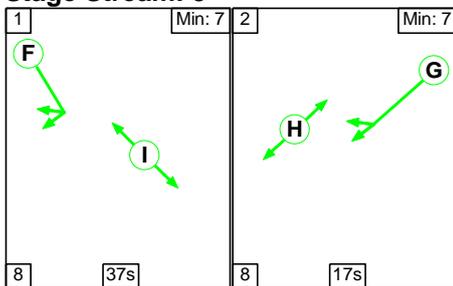
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	32	22
Change Point	0	38

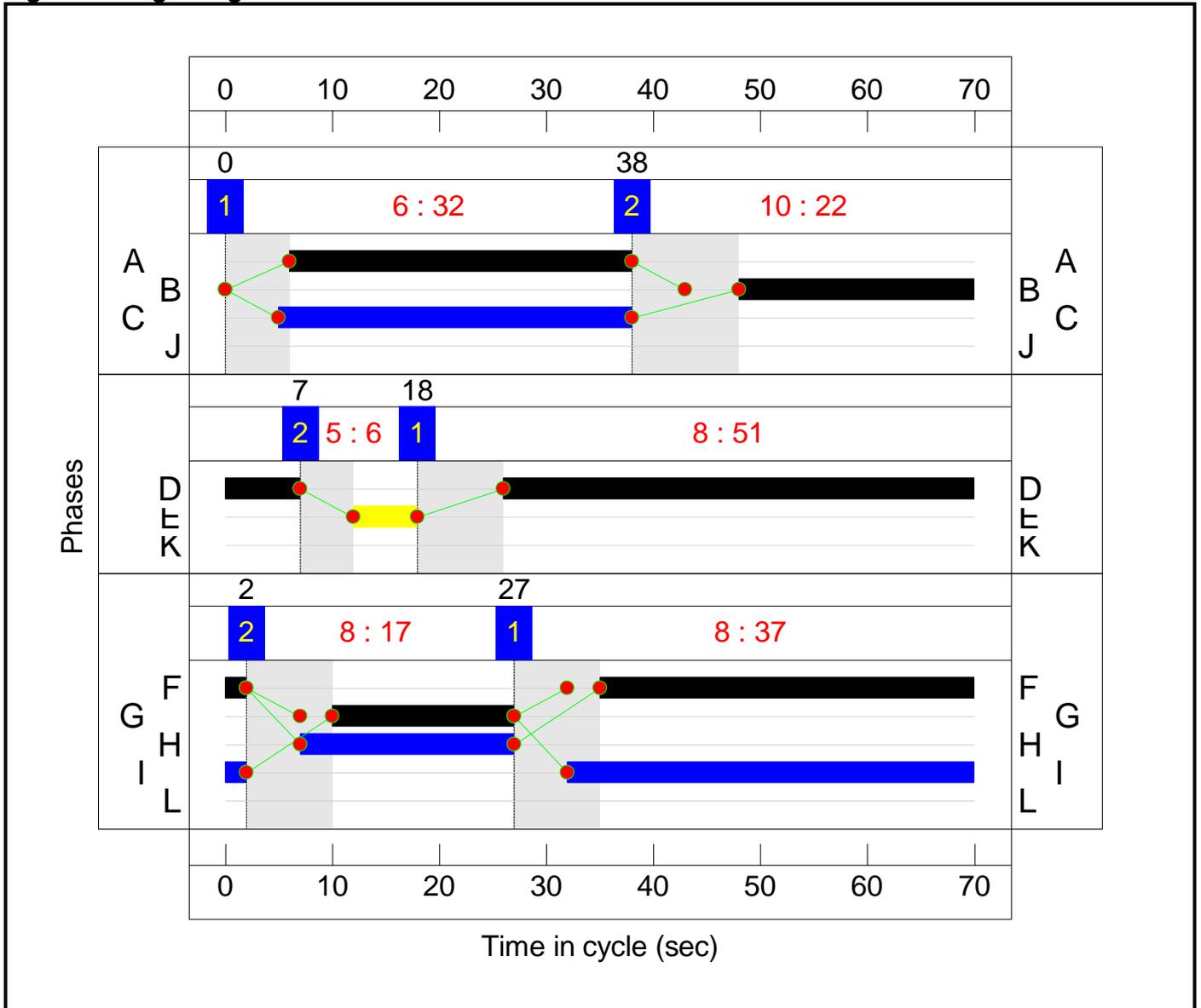
Stage Stream: 2

Stage	1	2
Duration	51	6
Change Point	18	7

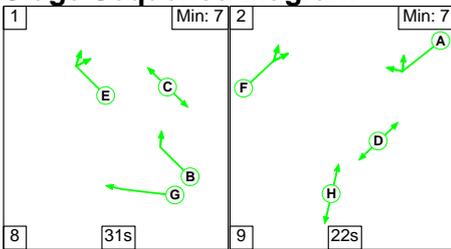
Stage Stream: 3

Stage	1	2
Duration	37	17
Change Point	27	2

Signal Timings Diagram



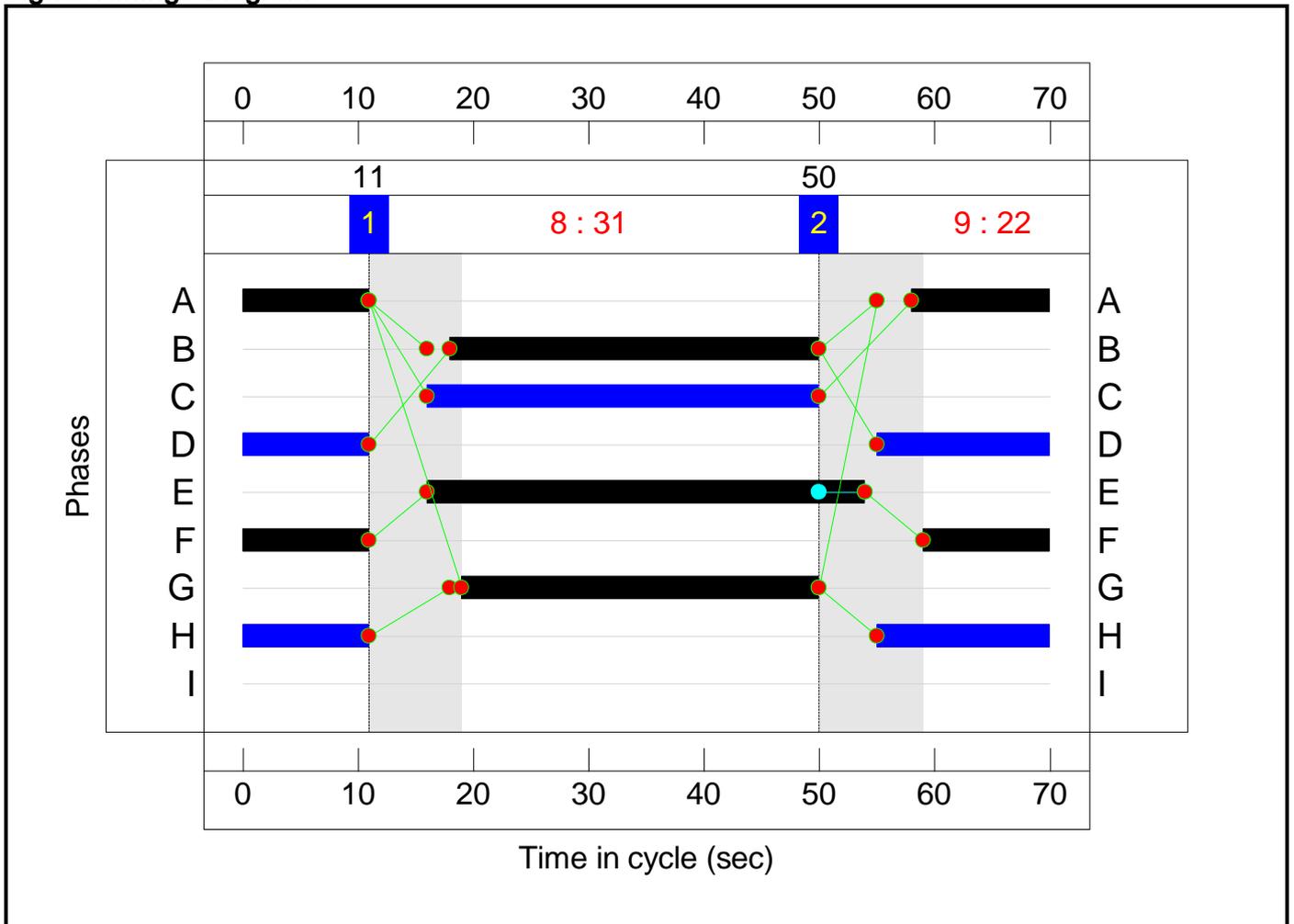
C4 - Birdwell Rbt - South Stage Sequence Diagram



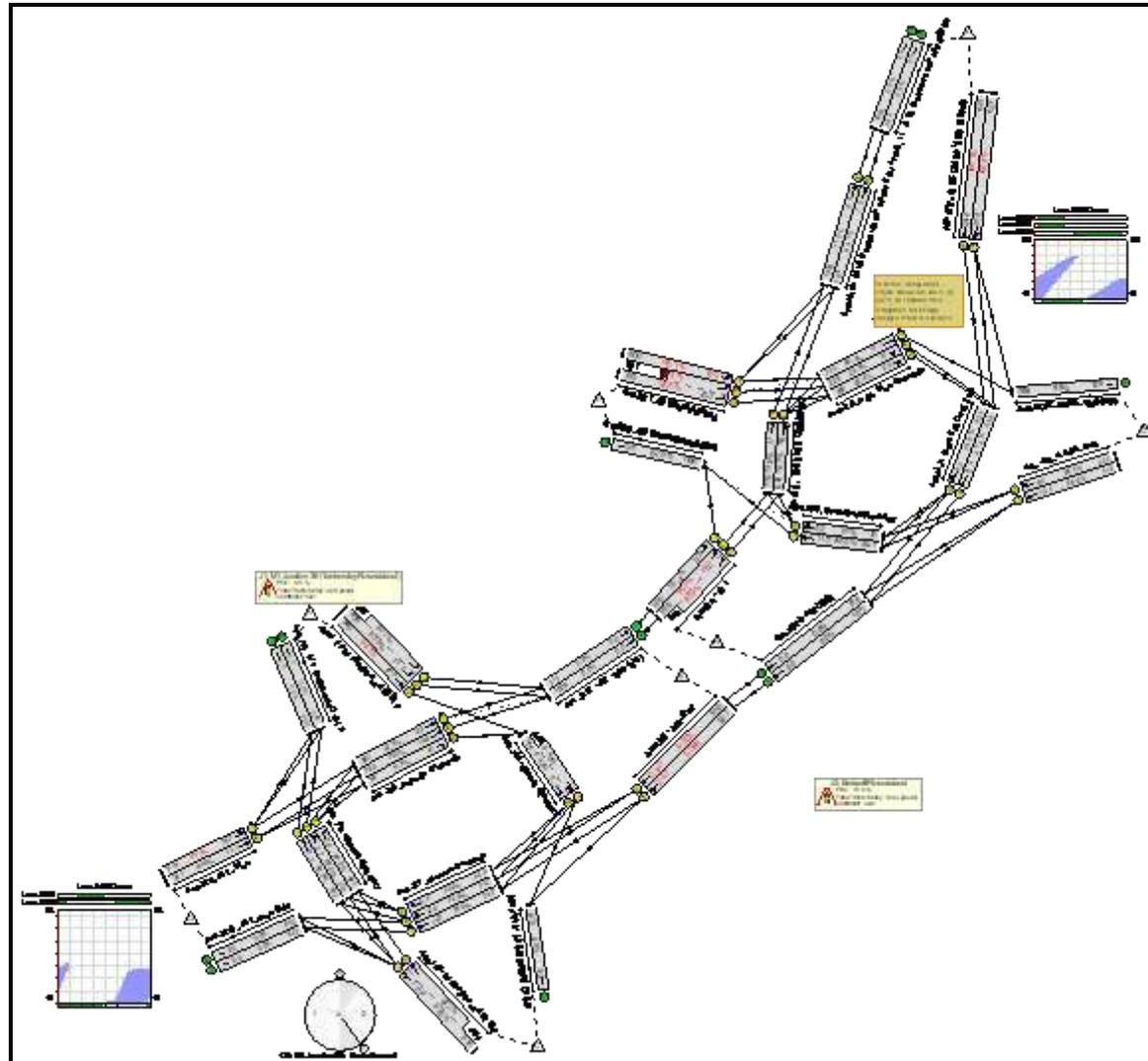
Stage Timings

Stage	1	2
Duration	31	22
Change Point	11	50

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	100.4%
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	N/A	-	-		-	-	-	-	-	-	95.9%
1/2+1/1	M1 Southbound Off Slip Left	U	1:1	N/A	C1:B		1	20	-	953	1900:1900	570+570	83.5 : 83.7%
1/3	M1 Southbound Off Slip Ahead	U	1:1	N/A	C1:B		1	20	-	540	1900	570	94.7%
2/1	A61- East Ahead Left	U	1:2	N/A	C1:D		1	35	-	937	1900	977	95.9%
2/2	A61- East Ahead	U	1:2	N/A	C1:D		1	35	-	930	1900	977	95.2%
3/1+3/2	M1 Northbound Off Slip Ahead Left	U	2:1	N/A	C2:B		1	21	-	916	1900:1900	597+597	86.2 : 67.2%
4/1	A61 - West Ahead Left	U	2:2	N/A	C2:D		1	19	-	519	1900	543	95.6%
4/2	A61 - West Ahead	U	2:2	N/A	C2:D		1	19	-	461	1900	543	84.9%
5/1	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	480	1900	1004	47.8%
5/2	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	793	1900	1004	79.0%
5/3	Northern Circulatory Right	U	1:1	N/A	C1:A		1	36	-	69	1900	1004	6.9%
6/2+6/1	Eastern Circulatory Right Ahead	U	1:2	N/A	C1:C		1	21	-	609	1900:1900	126+597	84.2 : 84.2%
7/1	Western Circulatory Ahead	U	2:1	N/A	C2:A		1	35	-	767	1900	977	78.5%
7/2	Western Circulatory Right Ahead	U	2:1	N/A	C2:A		1	35	-	712	1900	977	72.9%

Full Input Data And Results

7/3	Western Circulatory Right	U	2:1	N/A	C2:A		1	35	-	324	1900	977	33.2%
8/1	Eastern Circulatory Ahead	U	2:2	N/A	C2:C		1	37	-	433	1900	1031	42.0%
8/2	Eastern Circulatory Right Ahead	U	2:2	N/A	C2:C		1	37	-	718	1900	1031	69.6%
8/3	Eastern Circulatory Right	U	2:2	N/A	C2:C		1	37	-	401	1900	1031	38.9%
9/1	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	650	Inf	Inf	0.0%
9/2	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	540	Inf	Inf	0.0%
10/1	M1 Southbound On Slip	U	N/A	N/A	-		-	-	-	673	Inf	Inf	0.0%
11/1	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	717	Inf	Inf	0.0%
11/2	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	1509	Inf	Inf	0.0%
12/1	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	827	Inf	Inf	0.0%
12/2	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	340	Inf	Inf	0.0%
J2: Birdwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	100.4%
1/1	A61 Sheffield Road Ahead Left	U	N/A	N/A	C4:F		1	22	-	600	1900	624	96.1%
1/3+1/2	A61 Sheffield Road Ahead	U	N/A	N/A	C4:F		1	22	-	780	1900:1900	206+602	96.5 : 96.5%
2/1	A6195 Dearne Valley Parkway Ahead Left	U	3:1	N/A	C3:B		1	22	-	627	1900	624	100.4%
2/2	A6195 Dearne Valley Parkway Ahead	U	3:1	N/A	C3:B		1	22	-	625	1900	624	100.1%
3/1	A6195 - East Ahead	U	3:3	N/A	C3:G		1	17	-	418	1900	489	85.6%
3/2	A6195 - East Ahead	U	3:3	N/A	C3:G		1	17	-	334	1900	489	68.4%
4/1	A61 Left	U	N/A	N/A	C4:G		1	31	-	655	1900	869	75.4%

Full Input Data And Results

4/2+4/3	A61 Ahead	U	N/A	N/A	C4:B		1	32	-	1581	1900:1900	848+896	90.7 : 90.7%
5/1	North West Circulatory Ahead	U	3:1	N/A	C3:A		1	32	-	774	1900	896	86.4%
5/2	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	32	-	229	1900	896	25.6%
5/3	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	32	-	199	1900	896	22.2%
6/1	South West Circulatory Ahead	U	N/A	N/A	C4:E		1	38	-	779	1900	1059	73.6%
6/2	South West Circulatory Right Ahead	U	N/A	N/A	C4:E		1	38	-	812	1900	1059	76.7%
7/1	North East Circulatory Ahead	U	3:3	N/A	C3:F		1	37	-	841	1900	1031	81.3%
7/2	North East Circulatory Right Ahead	U	3:3	N/A	C3:F		1	37	-	824	1900	1031	79.8%
8/1	South East Circulatory Ahead	U	N/A	N/A	C4:A		1	23	-	541	1900	651	83.0%
8/2	South East Circulatory Right Ahead	U	N/A	N/A	C4:A		1	23	-	10	1900	651	1.5%
9/1	A61 Sheffield Road (Exit)	U	N/A	N/A	-		-	-	-	1196	1900	1900	62.9%
10/1	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	1005	1900	1411	71.2%
10/2	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	764	1900	1411	54.1%
11/1	A6195 Dearne Valley Parkway (Exit)	U	N/A	N/A	-		-	-	-	1005	Inf	Inf	0.0%

Full Input Data And Results

11/2	A6195 Deame Valley Parkway (Exit)	U	N/A	N/A	-	-	-	-	764	Inf	Inf	0.0%
12/1	A6195 - East (Exit)	U	N/A	N/A	-	-	-	-	789	Inf	Inf	0.0%
13/1	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	1050	Inf	Inf	0.0%
13/2	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	816	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	98.1	113.3	0.0	211.3	-	-	-	-
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	0	0	0	49.2	45.8	0.0	95.0	-	-	-	-
1/2+1/1	953	953	-	-	-	6.1	2.5	-	8.5	32.3	8.6	2.5	11.1
1/3	540	540	-	-	-	3.6	6.3	-	9.9	66.2	10.2	6.3	16.5
2/1	937	937	-	-	-	4.2	8.3	-	12.5	48.1	17.4	8.3	25.7
2/2	930	930	-	-	-	4.2	7.5	-	11.7	45.2	17.0	7.5	24.5
3/1+3/2	916	916	-	-	-	5.6	1.6	-	7.2	28.2	9.3	1.6	10.9
4/1	519	519	-	-	-	3.5	6.9	-	10.4	72.4	9.8	6.9	16.7
4/2	461	461	-	-	-	3.0	2.6	-	5.7	44.2	8.5	2.6	11.1
5/1	480	480	-	-	-	0.6	0.5	-	1.0	7.8	1.8	0.5	2.3
5/2	793	793	-	-	-	3.0	1.8	-	4.8	22.0	12.7	1.8	14.6
5/3	69	69	-	-	-	0.4	0.0	-	0.4	21.2	1.0	0.0	1.0
6/2+6/1	609	609	-	-	-	2.6	2.6	-	5.2	30.5	3.9	2.6	6.4
7/1	767	767	-	-	-	2.5	1.8	-	4.3	20.0	12.7	1.8	14.5
7/2	712	712	-	-	-	4.0	1.3	-	5.3	26.8	11.3	1.3	12.6
7/3	324	324	-	-	-	1.7	0.2	-	1.9	21.3	5.1	0.2	5.3
8/1	433	433	-	-	-	2.2	0.4	-	2.6	21.6	8.4	0.4	8.7
8/2	718	718	-	-	-	2.0	1.1	-	3.2	15.8	6.5	1.1	7.7
8/3	401	401	-	-	-	0.1	0.3	-	0.4	3.8	0.3	0.3	0.6
9/1	650	650	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	540	540	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	673	673	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	717	717	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1509	1509	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	827	827	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

12/2	340	340	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Birdwell Roundabout	-	-	0	0	0	48.9	67.5	0.0	116.3	-	-	-	-
1/1	600	600	-	-	-	3.8	7.6	-	11.4	68.7	11.3	7.6	18.9
1/3+1/2	780	780	-	-	-	4.7	8.6	-	13.3	61.4	11.7	8.6	20.3
2/1	627	624	-	-	-	4.2	13.2	-	17.4	100.0	12.2	13.2	25.5
2/2	625	624	-	-	-	4.1	12.7	-	16.8	96.7	12.2	12.7	24.8
3/1	418	418	-	-	-	2.9	2.7	-	5.6	48.4	7.7	2.7	10.4
3/2	334	334	-	-	-	2.2	1.1	-	3.2	34.9	5.8	1.1	6.9
4/1	655	655	-	-	-	2.9	1.5	-	4.4	24.1	10.4	1.5	11.9
4/2+4/3	1581	1581	-	-	-	7.4	4.6	-	12.0	27.2	14.4	4.6	19.0
5/1	774	774	-	-	-	4.2	3.0	-	7.2	33.7	14.1	3.0	17.1
5/2	229	229	-	-	-	0.0	0.2	-	0.2	3.3	0.8	0.2	1.0
5/3	199	199	-	-	-	0.1	0.1	-	0.3	4.8	2.5	0.1	2.6
6/1	779	779	-	-	-	0.1	1.4	-	1.5	6.9	0.3	1.4	1.7
6/2	812	812	-	-	-	0.1	1.6	-	1.7	7.4	0.1	1.6	1.8
7/1	838	838	-	-	-	3.1	2.1	-	5.2	22.5	8.3	2.1	10.4
7/2	823	823	-	-	-	3.1	1.9	-	5.1	22.1	7.8	1.9	9.7
8/1	541	541	-	-	-	4.1	2.3	-	6.5	43.1	9.3	2.3	11.7
8/2	10	10	-	-	-	0.1	0.0	-	0.1	31.4	0.2	0.0	0.2
9/1	1196	1196	-	-	-	0.0	0.8	-	0.8	2.5	0.0	0.8	0.8
10/1	1005	1005	-	-	-	0.6	1.2	-	1.8	6.6	3.7	1.2	5.0
10/2	764	764	-	-	-	1.2	0.6	-	1.7	8.2	6.4	0.6	7.0
11/1	1005	1005	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	764	764	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	789	789	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1047	1047	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	816	816	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - M1 Junction 36 - North	Stream: 1 PRC for Signalled Lanes (%)	-5.3	Total Delay for Signalled Lanes (pcuHr)	24.75	Cycle Time (s)	70
C1 - M1 Junction 36 - North	Stream: 2 PRC for Signalled Lanes (%)	-6.5	Total Delay for Signalled Lanes (pcuHr)	29.33	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 1 PRC for Signalled Lanes (%)	4.4	Total Delay for Signalled Lanes (pcuHr)	18.66	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 2 PRC for Signalled Lanes (%)	-6.2	Total Delay for Signalled Lanes (pcuHr)	22.28	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 1 PRC for Signalled Lanes (%)	-11.6	Total Delay for Signalled Lanes (pcuHr)	41.93	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 2 PRC for Signalled Lanes (%)	26.4	Total Delay for Signalled Lanes (pcuHr)	3.57	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 3 PRC for Signalled Lanes (%)	5.2	Total Delay for Signalled Lanes (pcuHr)	19.17	Cycle Time (s)	70
C4 - Birdwell Rbt - South	PRC for Signalled Lanes (%)	-7.3	Total Delay for Signalled Lanes (pcuHr)	50.81	Cycle Time (s)	70
	PRC Over All Lanes (%)	-11.6	Total Delay Over All Lanes(pcuHr)	211.34		

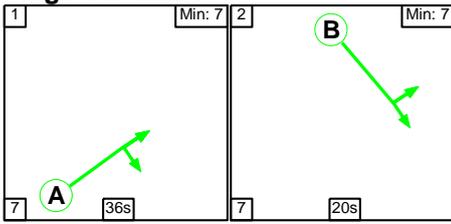
Full Input Data And Results

Scenario 7: '2028 With Development AM' (FG5: '2028 With Development AM', Plan 1: 'v1')

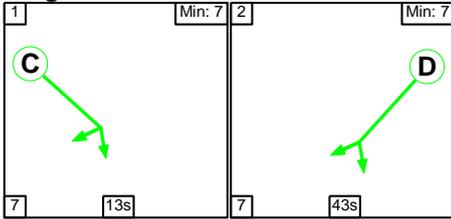
C1 - M1 Junction 36 - North

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

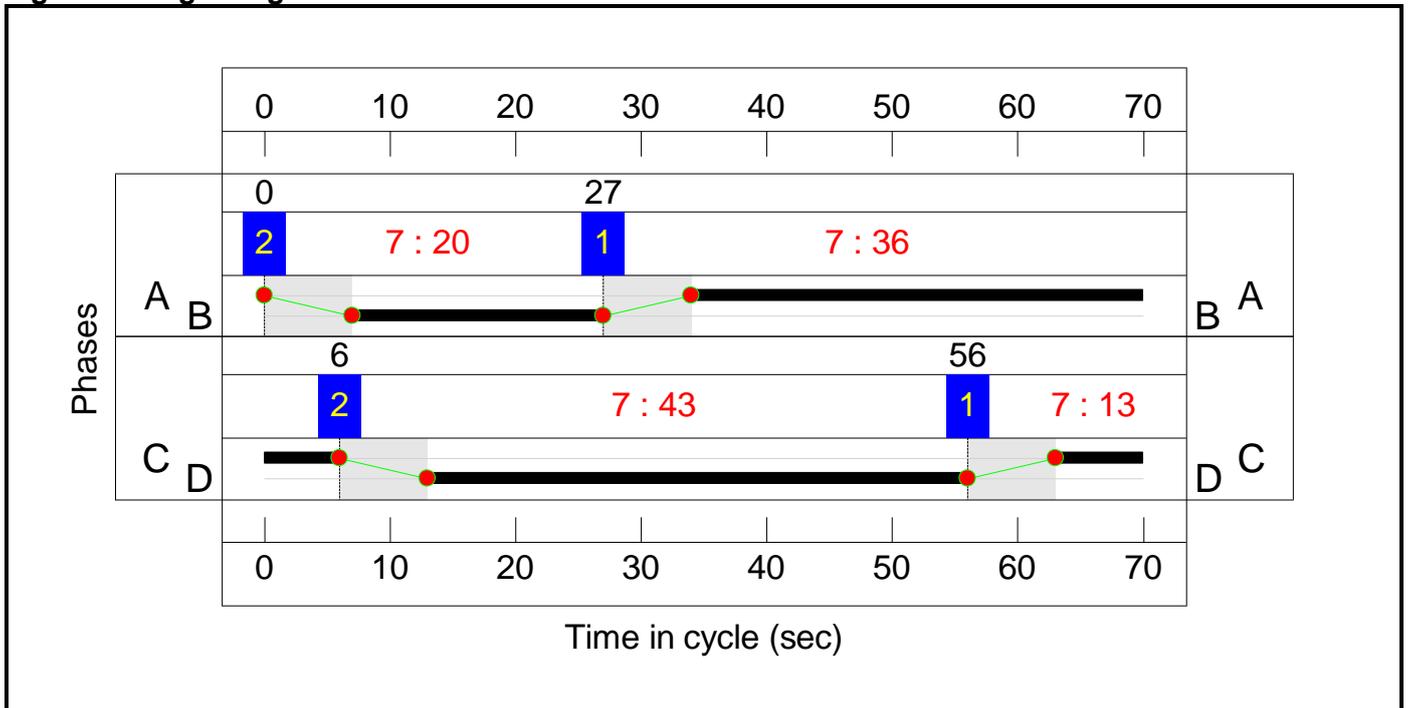
Stage Stream: 1

Stage	1	2
Duration	36	20
Change Point	27	0

Stage Stream: 2

Stage	1	2
Duration	13	43
Change Point	56	6

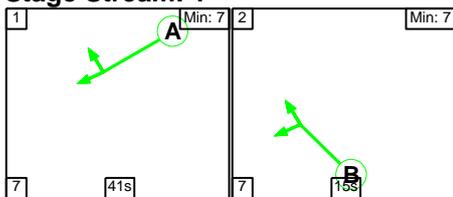
Signal Timings Diagram



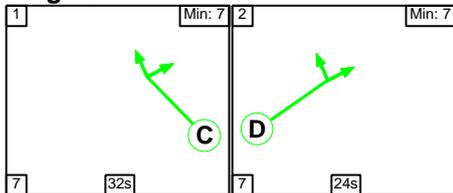
Full Input Data And Results

C2 - M1 Junction 36 - South
Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

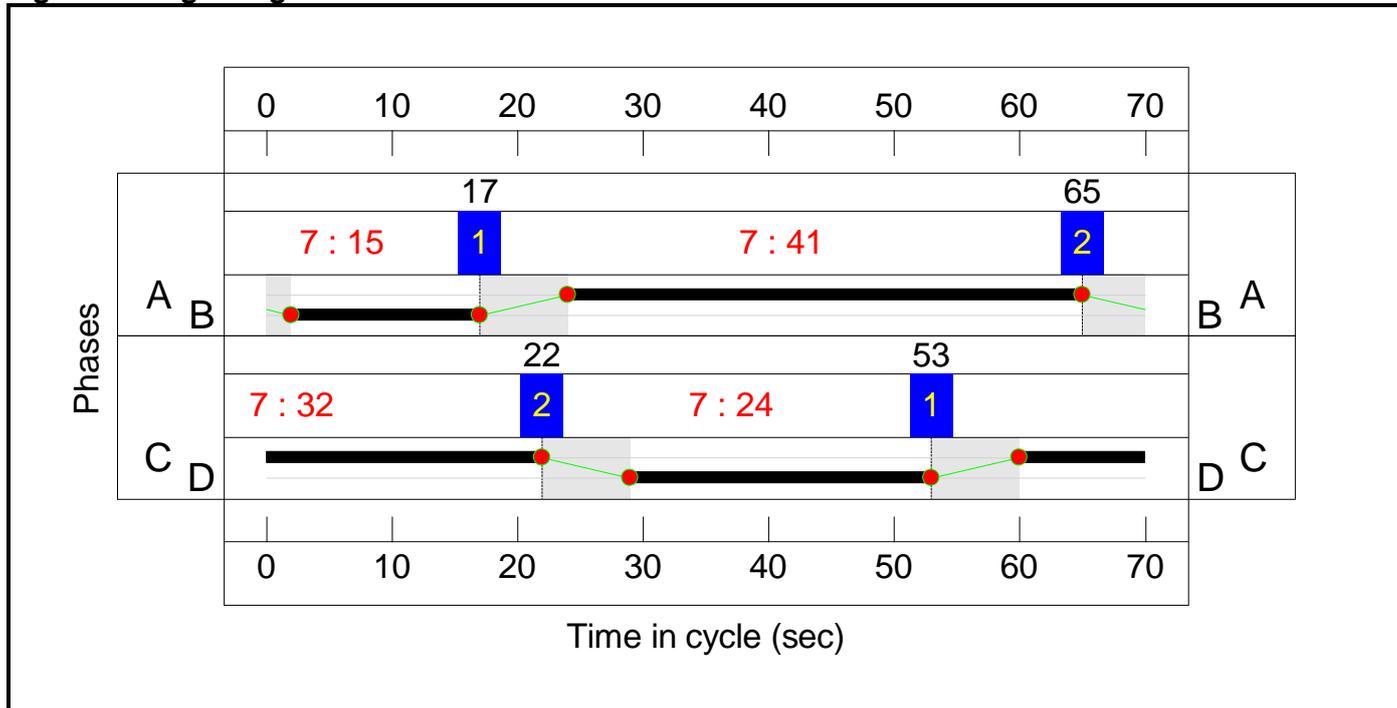
Stage Stream: 1

Stage	1	2
Duration	41	15
Change Point	17	65

Stage Stream: 2

Stage	1	2
Duration	32	24
Change Point	53	22

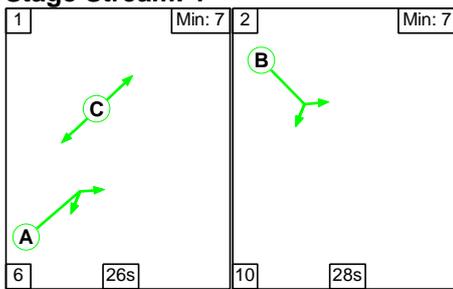
Signal Timings Diagram



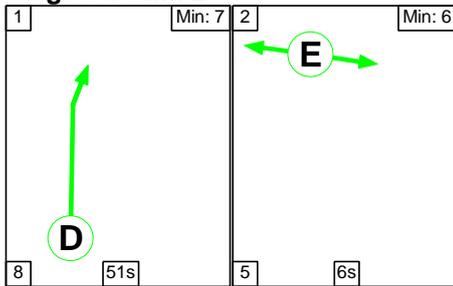
Full Input Data And Results

C3 - Birdwell Rbt - North
Stage Sequence Diagram

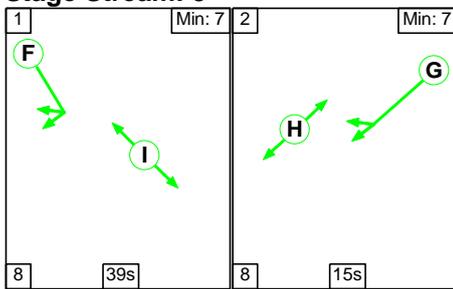
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	26	28
Change Point	62	24

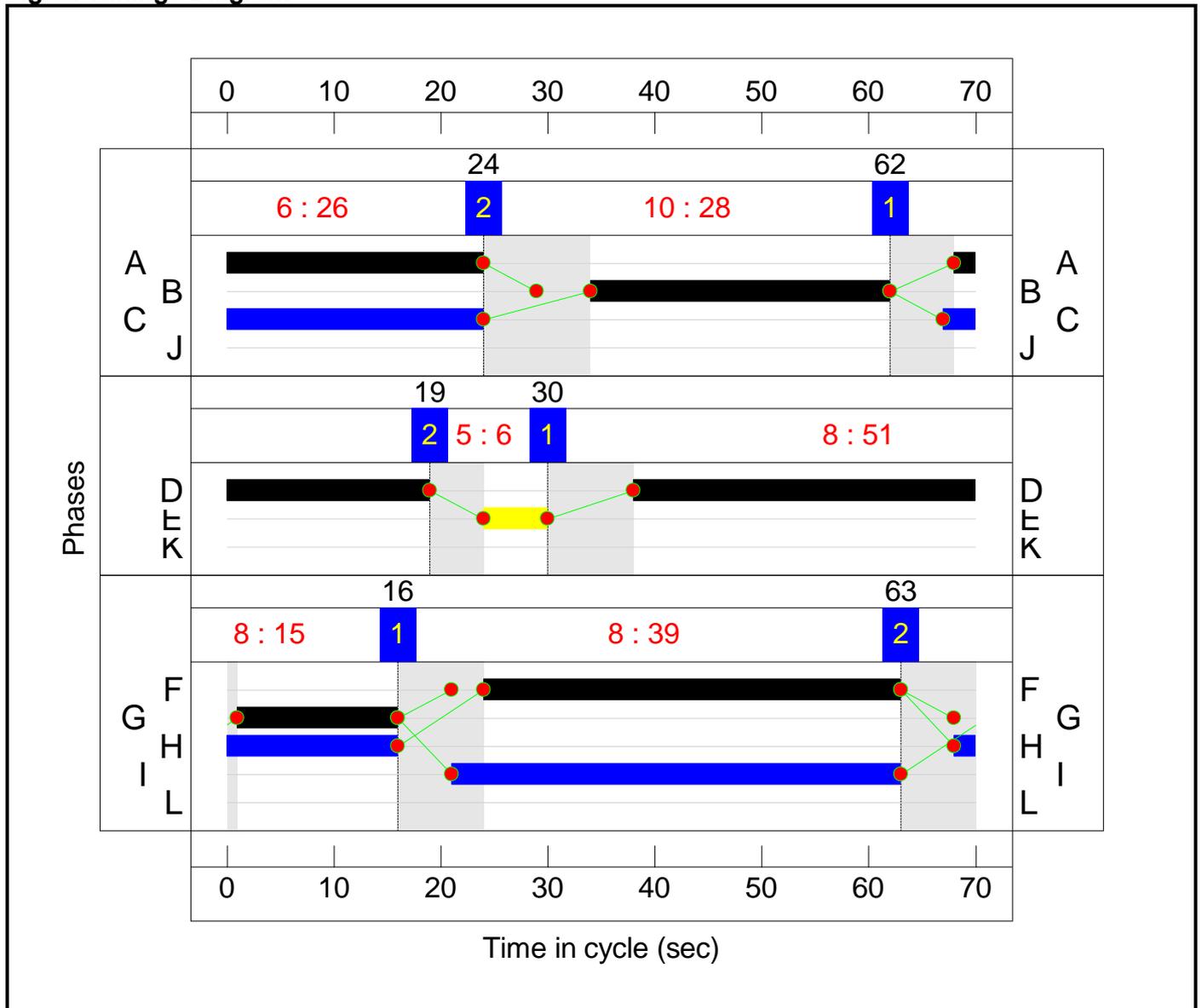
Stage Stream: 2

Stage	1	2
Duration	51	6
Change Point	30	19

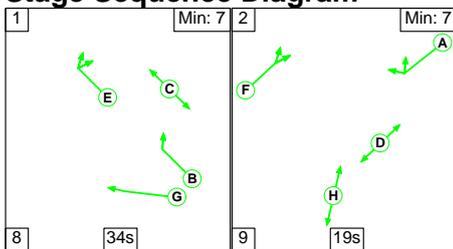
Stage Stream: 3

Stage	1	2
Duration	39	15
Change Point	16	63

Signal Timings Diagram



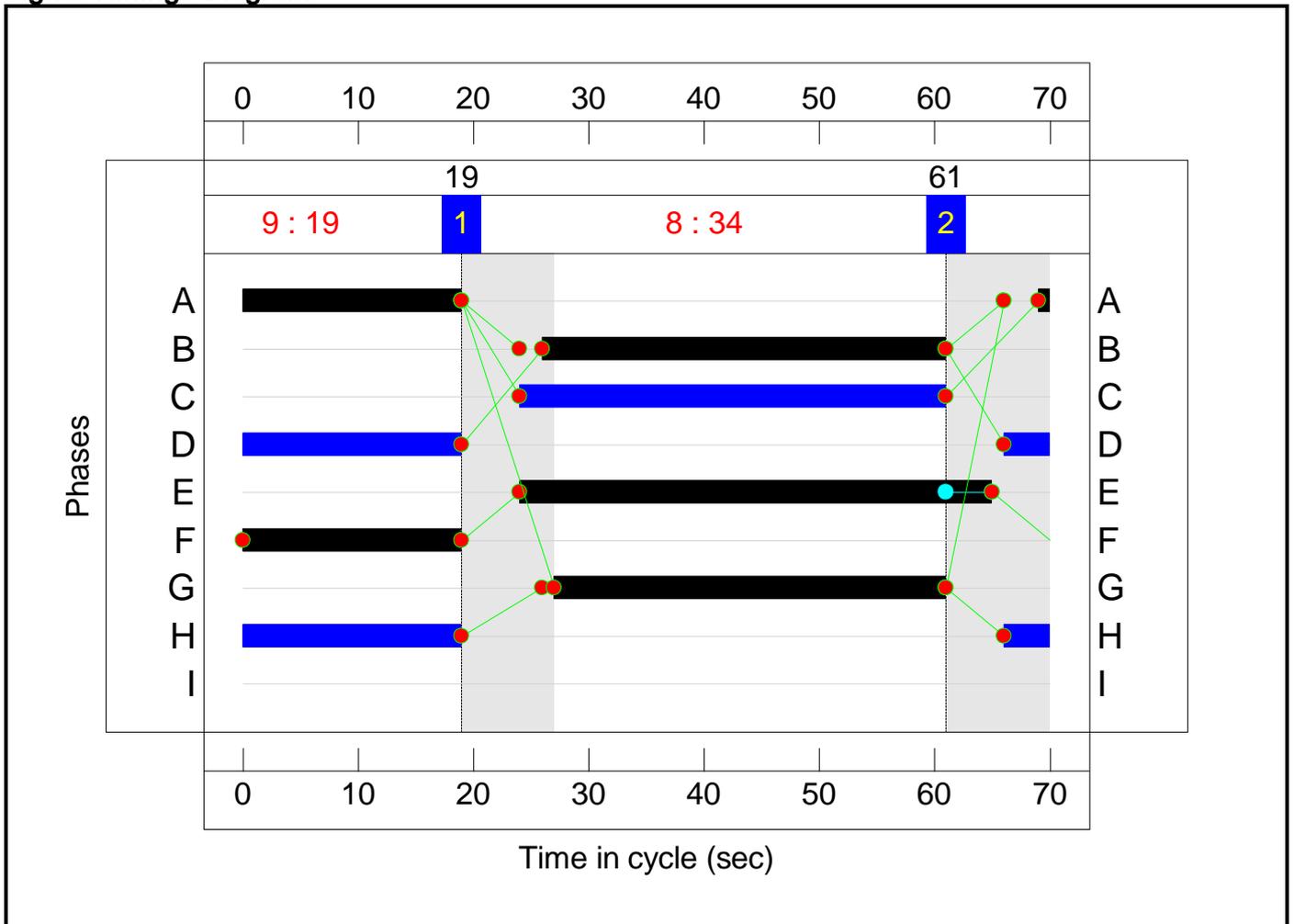
C4 - Birdwell Rbt - South Stage Sequence Diagram



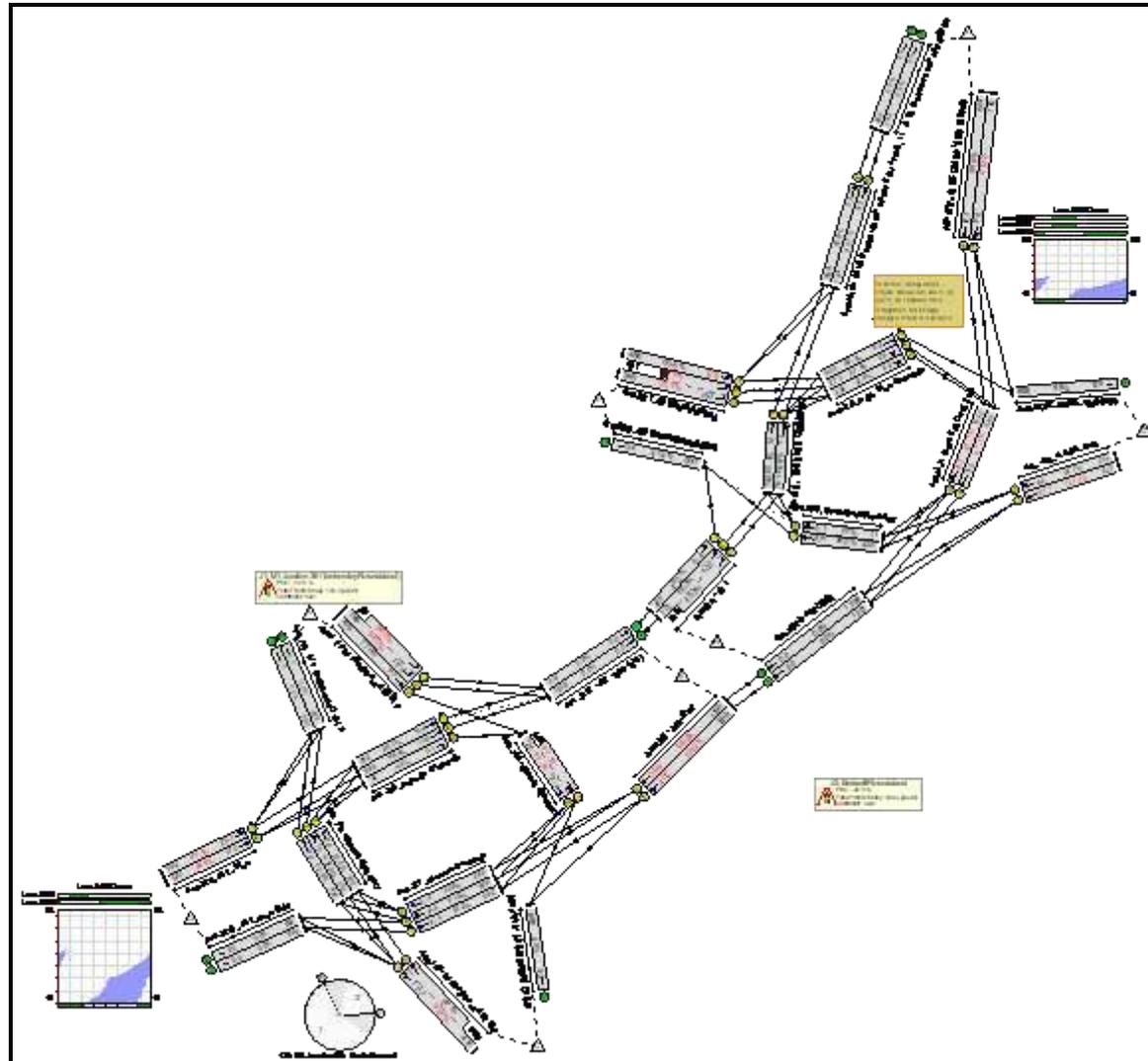
Stage Timings

Stage	1	2
Duration	34	19
Change Point	19	61

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	121.3%
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	N/A	-	-		-	-	-	-	-	-	101.2%
1/2+1/1	M1 Southbound Off Slip Left	U	1:1	N/A	C1:B		1	20	-	709	1900:1900	570+166	96.3 : 96.3%
1/3	M1 Southbound Off Slip Ahead	U	1:1	N/A	C1:B		1	20	-	439	1900	570	77.0%
2/1	A61- East Ahead Left	U	1:2	N/A	C1:D		1	43	-	1209	1900	1194	101.2%
2/2	A61- East Ahead	U	1:2	N/A	C1:D		1	43	-	1190	1900	1194	99.6%
3/1+3/2	M1 Northbound Off Slip Ahead Left	U	2:1	N/A	C2:B		1	15	-	718	1900:1900	434+434	96.3 : 69.1%
4/1	A61 - West Ahead Left	U	2:2	N/A	C2:D		1	24	-	652	1900	679	96.1%
4/2	A61 - West Ahead	U	2:2	N/A	C2:D		1	24	-	630	1900	679	92.8%
5/1	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	362	1900	1004	36.0%
5/2	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	888	1900	1004	88.4%
5/3	Northern Circulatory Right	U	1:1	N/A	C1:A		1	36	-	42	1900	1004	4.2%
6/2+6/1	Eastern Circulatory Right Ahead	U	1:2	N/A	C1:C		1	13	-	481	1900:1900	133+380	93.7 : 93.7%
7/1	Western Circulatory Ahead	U	2:1	N/A	C2:A		1	41	-	656	1900	1140	57.2%
7/2	Western Circulatory Right Ahead	U	2:1	N/A	C2:A		1	41	-	929	1900	1140	81.5%

Full Input Data And Results

7/3	Western Circulatory Right	U	2:1	N/A	C2:A		1	41	-	386	1900	1140	33.9%
8/1	Eastern Circulatory Ahead	U	2:2	N/A	C2:C		1	32	-	470	1900	896	52.5%
8/2	Eastern Circulatory Right Ahead	U	2:2	N/A	C2:C		1	32	-	716	1900	896	79.9%
8/3	Eastern Circulatory Right	U	2:2	N/A	C2:C		1	32	-	300	1900	896	33.5%
9/1	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	780	Inf	Inf	0.0%
9/2	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	696	Inf	Inf	0.0%
10/1	M1 Southbound On Slip	U	N/A	N/A	-		-	-	-	909	Inf	Inf	0.0%
11/1	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	341	Inf	Inf	0.0%
11/2	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	1618	Inf	Inf	0.0%
12/1	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	700	Inf	Inf	0.0%
12/2	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	503	Inf	Inf	0.0%
J2: Birdwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	121.3%
1/1	A61 Sheffield Road Ahead Left	U	N/A	N/A	C4:F		1	19	-	486	1900	543	89.5%
1/3+1/2	A61 Sheffield Road Ahead	U	N/A	N/A	C4:F		1	19	-	839	1900:1900	371+524	93.7 : 93.7%
2/1	A6195 Dearne Valley Parkway Ahead Left	U	3:1	N/A	C3:B		1	28	-	719	1900	787	91.3%
2/2	A6195 Dearne Valley Parkway Ahead	U	3:1	N/A	C3:B		1	28	-	684	1900	787	86.9%
3/1	A6195 - East Ahead	U	3:3	N/A	C3:G		1	15	-	527	1900	434	121.3%
3/2	A6195 - East Ahead	U	3:3	N/A	C3:G		1	15	-	294	1900	434	67.7%
4/1	A61 Left	U	N/A	N/A	C4:G		1	34	-	467	1900	950	49.2%

Full Input Data And Results

4/2+4/3	A61 Ahead	U	N/A	N/A	C4:B		1	35	-	1492	1900:1900	912+947	80.3 : 80.3%
5/1	North West Circulatory Ahead	U	3:1	N/A	C3:A		1	26	-	604	1900	733	82.4%
5/2	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	26	-	274	1900	733	37.4%
5/3	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	26	-	348	1900	733	47.5%
6/1	South West Circulatory Ahead	U	N/A	N/A	C4:E		1	41	-	742	1900	1140	65.1%
6/2	South West Circulatory Right Ahead	U	N/A	N/A	C4:E		1	41	-	761	1900	1140	66.8%
7/1	North East Circulatory Ahead	U	3:3	N/A	C3:F		1	39	-	989	1900	1086	91.1%
7/2	North East Circulatory Right Ahead	U	3:3	N/A	C3:F		1	39	-	1032	1900	1086	95.1%
8/1	South East Circulatory Ahead	U	N/A	N/A	C4:A		1	20	-	433	1900	570	76.0%
8/2	South East Circulatory Right Ahead	U	N/A	N/A	C4:A		1	20	-	11	1900	570	1.9%
9/1	A61 Sheffield Road (Exit)	U	N/A	N/A	-		-	-	-	900	1900	1900	47.4%
10/1	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	858	1900	1411	60.8%
10/2	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	744	1900	1411	52.7%
11/1	A6195 Dearne Valley Parkway (Exit)	U	N/A	N/A	-		-	-	-	858	Inf	Inf	0.0%

Full Input Data And Results

11/2	A6195 Deame Valley Parkway (Exit)	U	N/A	N/A	-	-	-	-	744	Inf	Inf	0.0%
12/1	A6195 - East (Exit)	U	N/A	N/A	-	-	-	-	608	Inf	Inf	0.0%
13/1	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	1253	Inf	Inf	0.0%
13/2	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	1145	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	91.8	168.8	0.0	260.6	-	-	-	-
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	0	0	0	46.2	78.1	0.0	124.3	-	-	-	-
1/2+1/1	709	709	-	-	-	4.5	8.2	-	12.7	64.3	10.4	8.2	18.5
1/3	439	439	-	-	-	2.7	1.6	-	4.4	35.7	7.7	1.6	9.3
2/1	1209	1194	-	-	-	4.8	21.4	-	26.2	78.1	23.8	21.4	45.2
2/2	1190	1190	-	-	-	4.3	16.2	-	20.5	62.0	22.8	16.2	39.0
3/1+3/2	718	718	-	-	-	5.2	2.3	-	7.5	37.5	8.0	2.3	10.3
4/1	652	652	-	-	-	4.0	7.7	-	11.7	64.8	12.3	7.7	20.1
4/2	630	630	-	-	-	3.8	5.3	-	9.1	52.0	11.7	5.3	17.0
5/1	362	362	-	-	-	0.9	0.3	-	1.2	11.6	6.1	0.3	6.4
5/2	888	888	-	-	-	1.2	3.6	-	4.8	19.5	8.0	3.6	11.6
5/3	42	42	-	-	-	0.0	0.0	-	0.1	4.4	0.1	0.0	0.1
6/2+6/1	481	481	-	-	-	4.5	5.5	-	10.0	75.0	6.9	5.5	12.4
7/1	652	652	-	-	-	1.5	0.7	-	2.2	12.1	8.8	0.7	9.4
7/2	929	929	-	-	-	2.9	2.2	-	5.0	19.5	11.1	2.2	13.3
7/3	386	386	-	-	-	0.9	0.3	-	1.2	11.1	3.2	0.3	3.4
8/1	470	470	-	-	-	2.2	0.6	-	2.8	21.4	9.1	0.6	9.6
8/2	716	716	-	-	-	2.6	1.9	-	4.6	22.9	8.5	1.9	10.4
8/3	300	300	-	-	-	0.2	0.3	-	0.4	5.4	0.4	0.3	0.6
9/1	780	780	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	696	696	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	898	898	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	341	341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1618	1618	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	696	696	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

12/2	503	503	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Birdwell Roundabout	-	-	0	0	0	45.6	90.7	0.0	136.3	-	-	-	-
1/1	486	486	-	-	-	3.2	3.8	-	7.0	51.9	9.0	3.8	12.8
1/3+1/2	839	839	-	-	-	5.4	6.1	-	11.5	49.5	9.1	6.1	15.3
2/1	719	719	-	-	-	3.9	4.6	-	8.5	42.6	13.0	4.6	17.6
2/2	684	684	-	-	-	3.6	3.1	-	6.7	35.2	12.2	3.1	15.3
3/1	527	434	-	-	-	7.3	49.0	-	56.3	384.8	12.1	49.0	61.1
3/2	294	294	-	-	-	2.0	1.0	-	3.0	37.3	5.1	1.0	6.2
4/1	467	467	-	-	-	1.5	0.5	-	2.0	15.3	6.0	0.5	6.4
4/2+4/3	1492	1492	-	-	-	5.6	2.0	-	7.7	18.5	11.8	2.0	13.8
5/1	604	604	-	-	-	3.0	2.3	-	5.3	31.4	7.1	2.3	9.3
5/2	274	274	-	-	-	1.3	0.3	-	1.6	21.1	2.3	0.3	2.6
5/3	348	348	-	-	-	1.0	0.5	-	1.4	14.9	1.7	0.5	2.2
6/1	742	742	-	-	-	0.1	0.9	-	1.0	4.9	0.3	0.9	1.2
6/2	761	761	-	-	-	0.0	1.0	-	1.0	4.9	0.1	1.0	1.1
7/1	989	989	-	-	-	2.4	4.7	-	7.1	25.7	8.4	4.7	13.0
7/2	1032	1032	-	-	-	2.1	7.5	-	9.6	33.6	9.2	7.5	16.7
8/1	433	433	-	-	-	2.3	1.5	-	3.8	32.0	5.3	1.5	6.9
8/2	11	11	-	-	-	0.1	0.0	-	0.1	23.8	0.1	0.0	0.1
9/1	900	900	-	-	-	0.0	0.4	-	0.4	1.8	0.0	0.4	0.4
10/1	858	858	-	-	-	0.3	0.8	-	1.1	4.5	1.8	0.8	2.6
10/2	744	744	-	-	-	0.4	0.6	-	1.0	4.8	2.7	0.6	3.2
11/1	858	858	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	744	744	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	608	608	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1207	1207	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	1099	1099	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - M1 Junction 36 - North	Stream: 1 PRC for Signalled Lanes (%):	-7.0	Total Delay for Signalled Lanes (pcuHr):	23.05	Cycle Time (s):	70
C1 - M1 Junction 36 - North	Stream: 2 PRC for Signalled Lanes (%):	-12.5	Total Delay for Signalled Lanes (pcuHr):	56.74	Cycle Time (s):	70
C2 - M1 Junction 36 - South	Stream: 1 PRC for Signalled Lanes (%):	-6.9	Total Delay for Signalled Lanes (pcuHr):	15.89	Cycle Time (s):	70
C2 - M1 Junction 36 - South	Stream: 2 PRC for Signalled Lanes (%):	-6.8	Total Delay for Signalled Lanes (pcuHr):	28.65	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 1 PRC for Signalled Lanes (%):	-1.5	Total Delay for Signalled Lanes (pcuHr):	23.51	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 2 PRC for Signalled Lanes (%):	48.1	Total Delay for Signalled Lanes (pcuHr):	2.07	Cycle Time (s):	70
C3 - Birdwell Rbt - North	Stream: 3 PRC for Signalled Lanes (%):	-34.8	Total Delay for Signalled Lanes (pcuHr):	76.07	Cycle Time (s):	70
C4 - Birdwell Rbt - South	PRC for Signalled Lanes (%):	-4.2	Total Delay for Signalled Lanes (pcuHr):	34.16	Cycle Time (s):	70
	PRC Over All Lanes (%):	-34.8	Total Delay Over All Lanes(pcuHr):	260.60		

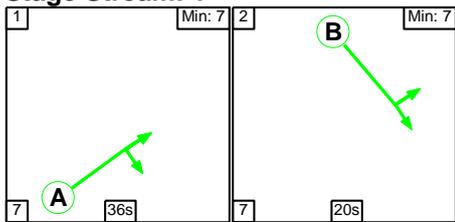
Full Input Data And Results

Scenario 8: '2028 With Development PM' (FG6: '2028 With Development PM', Plan 1: 'v1')

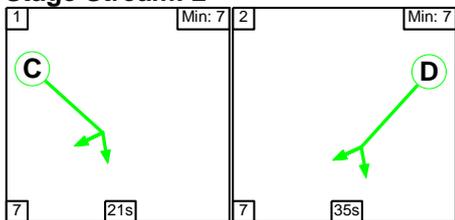
C1 - M1 Junction 36 - North

Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

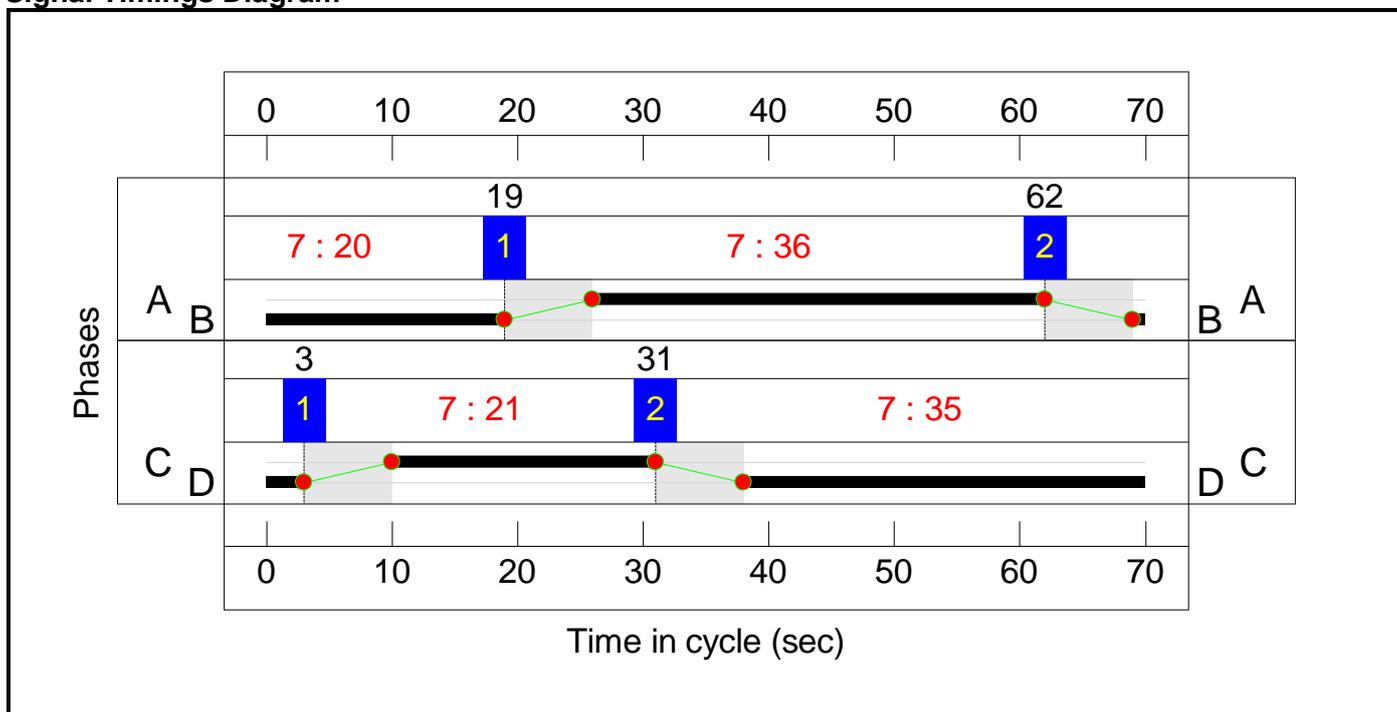
Stage Stream: 1

Stage	1	2
Duration	36	20
Change Point	19	62

Stage Stream: 2

Stage	1	2
Duration	21	35
Change Point	3	31

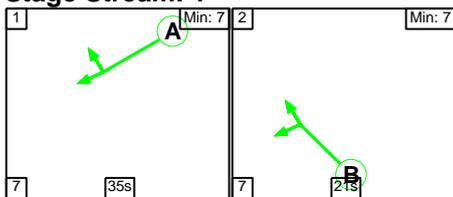
Signal Timings Diagram



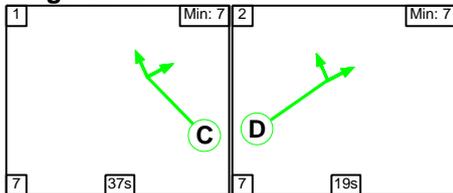
Full Input Data And Results

C2 - M1 Junction 36 - South
Stage Sequence Diagram

Stage Stream: 1



Stage Stream: 2



Stage Timings

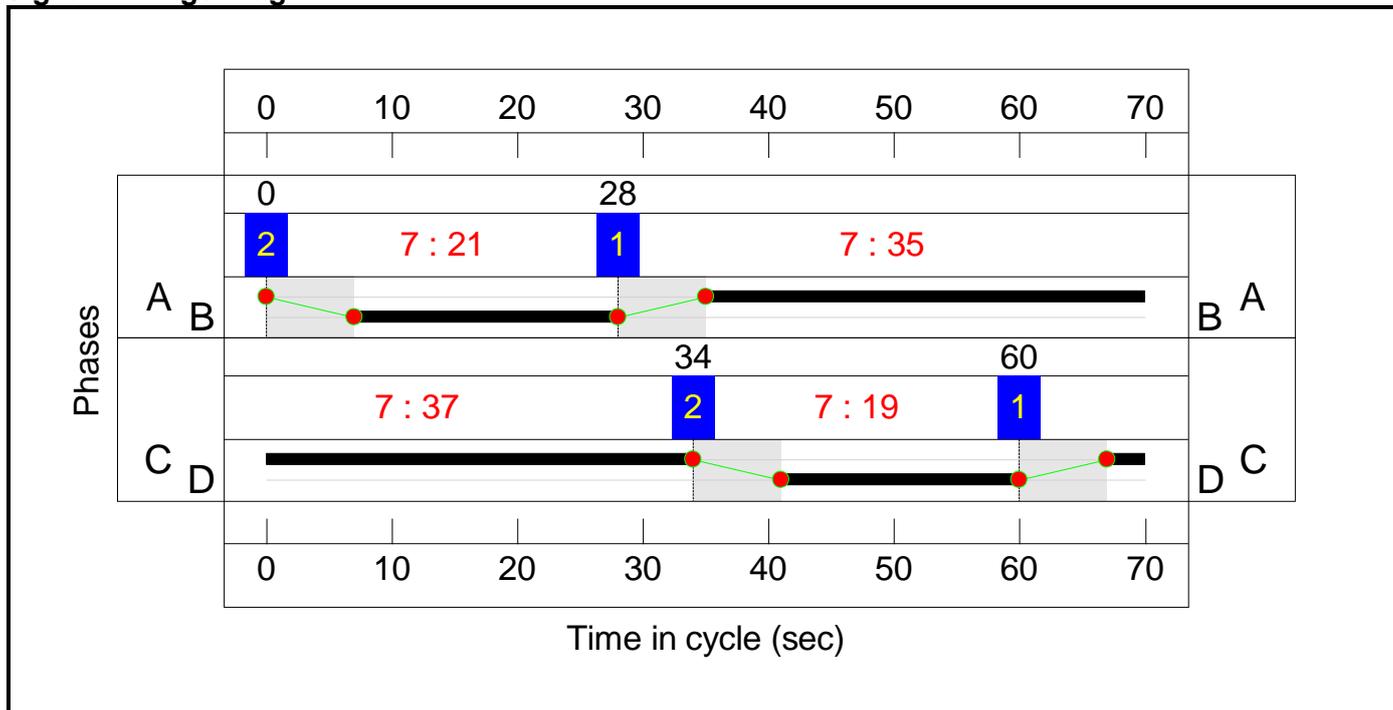
Stage Stream: 1

Stage	1	2
Duration	35	21
Change Point	28	0

Stage Stream: 2

Stage	1	2
Duration	37	19
Change Point	60	34

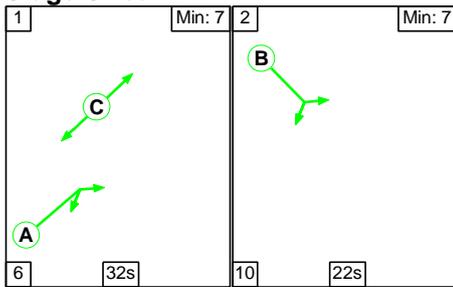
Signal Timings Diagram



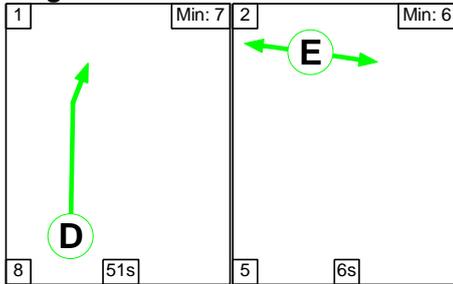
Full Input Data And Results

C3 - Birdwell Rbt - North
Stage Sequence Diagram

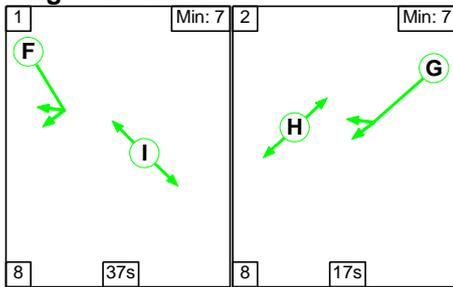
Stage Stream: 1



Stage Stream: 2



Stage Stream: 3



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	32	22
Change Point	0	38

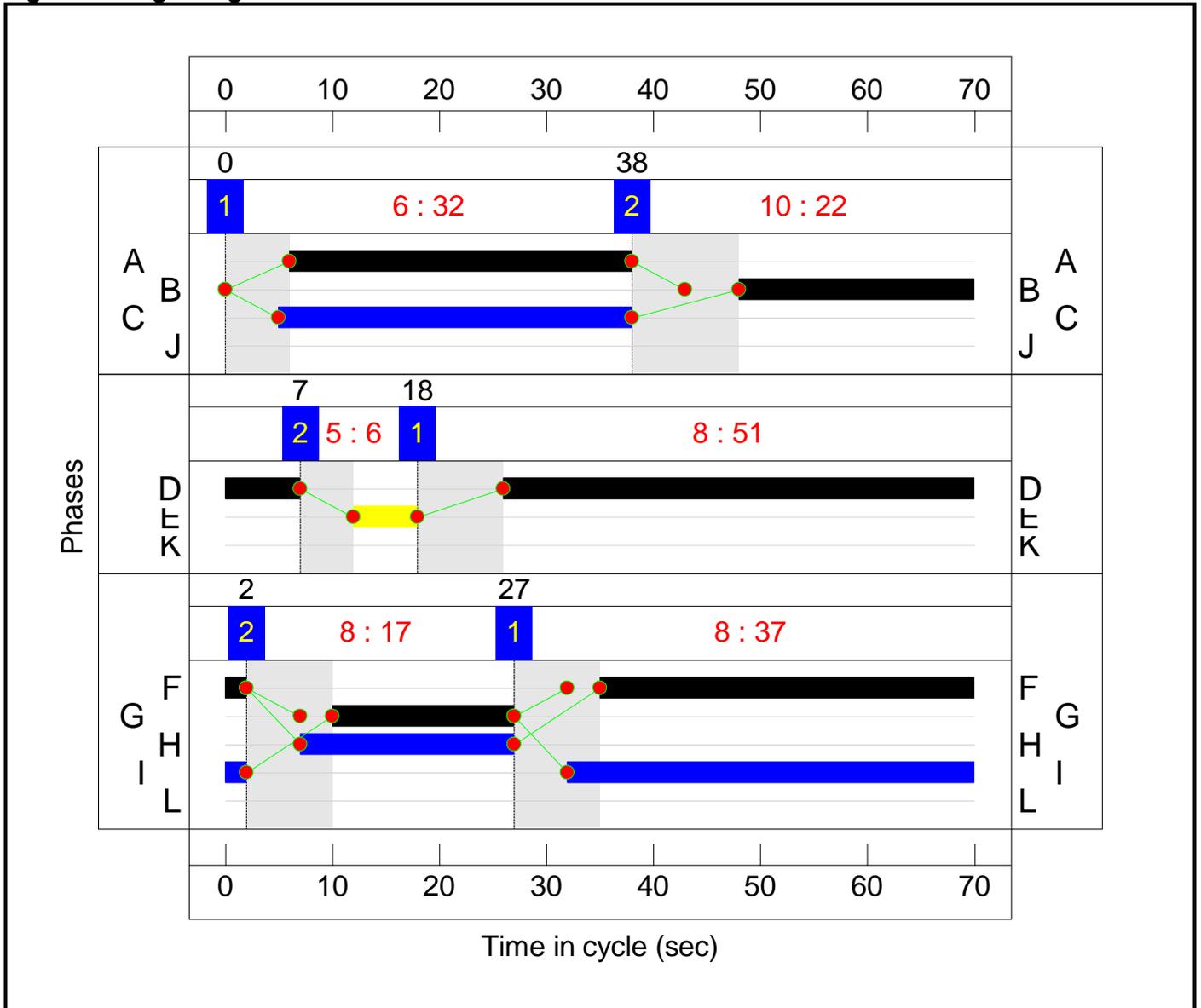
Stage Stream: 2

Stage	1	2
Duration	51	6
Change Point	18	7

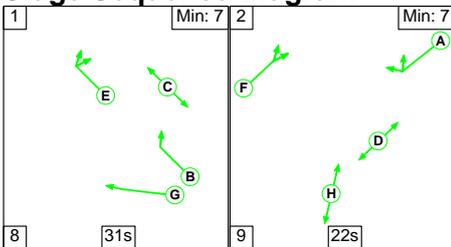
Stage Stream: 3

Stage	1	2
Duration	37	17
Change Point	27	2

Signal Timings Diagram



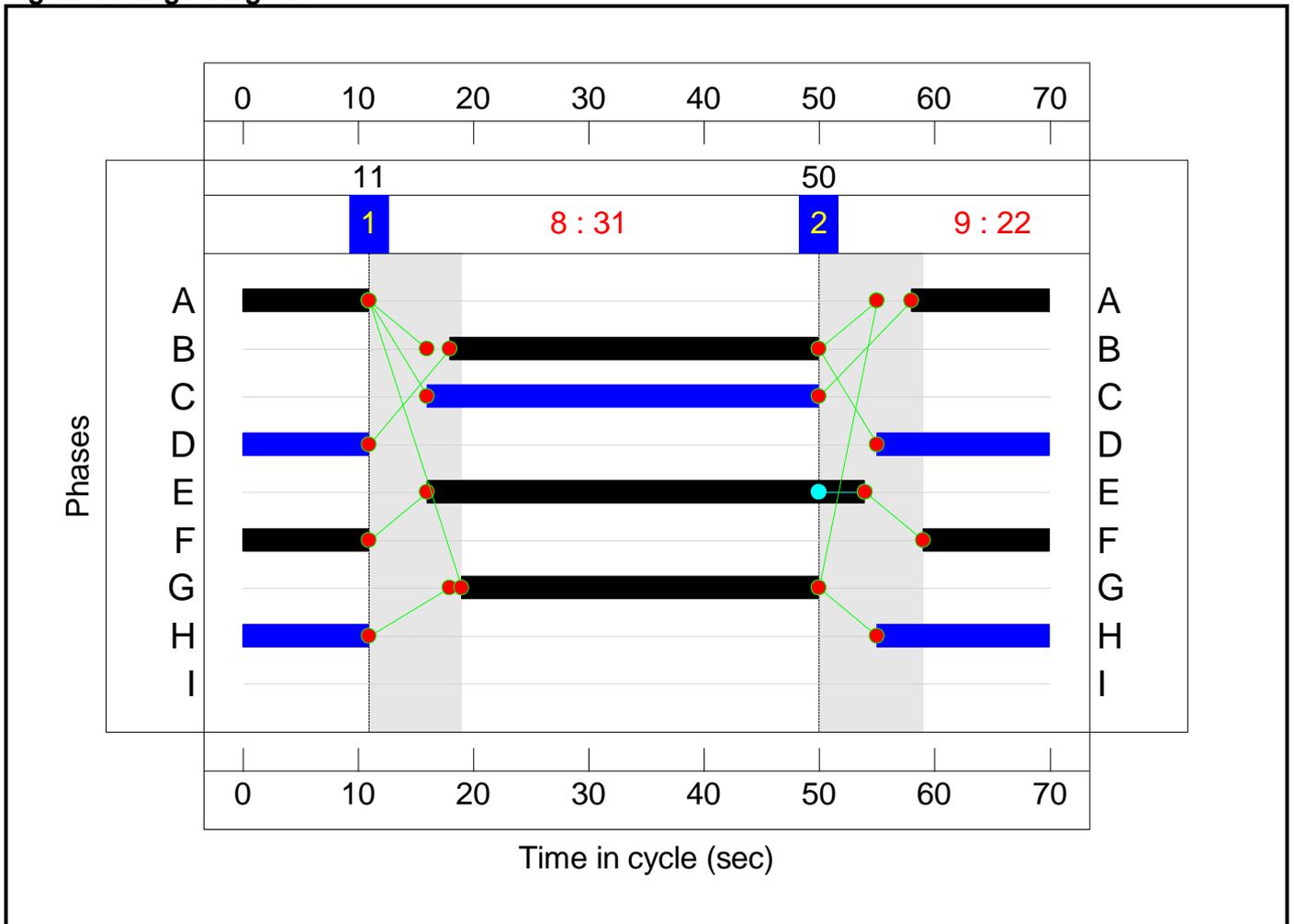
C4 - Birdwell Rbt - South Stage Sequence Diagram



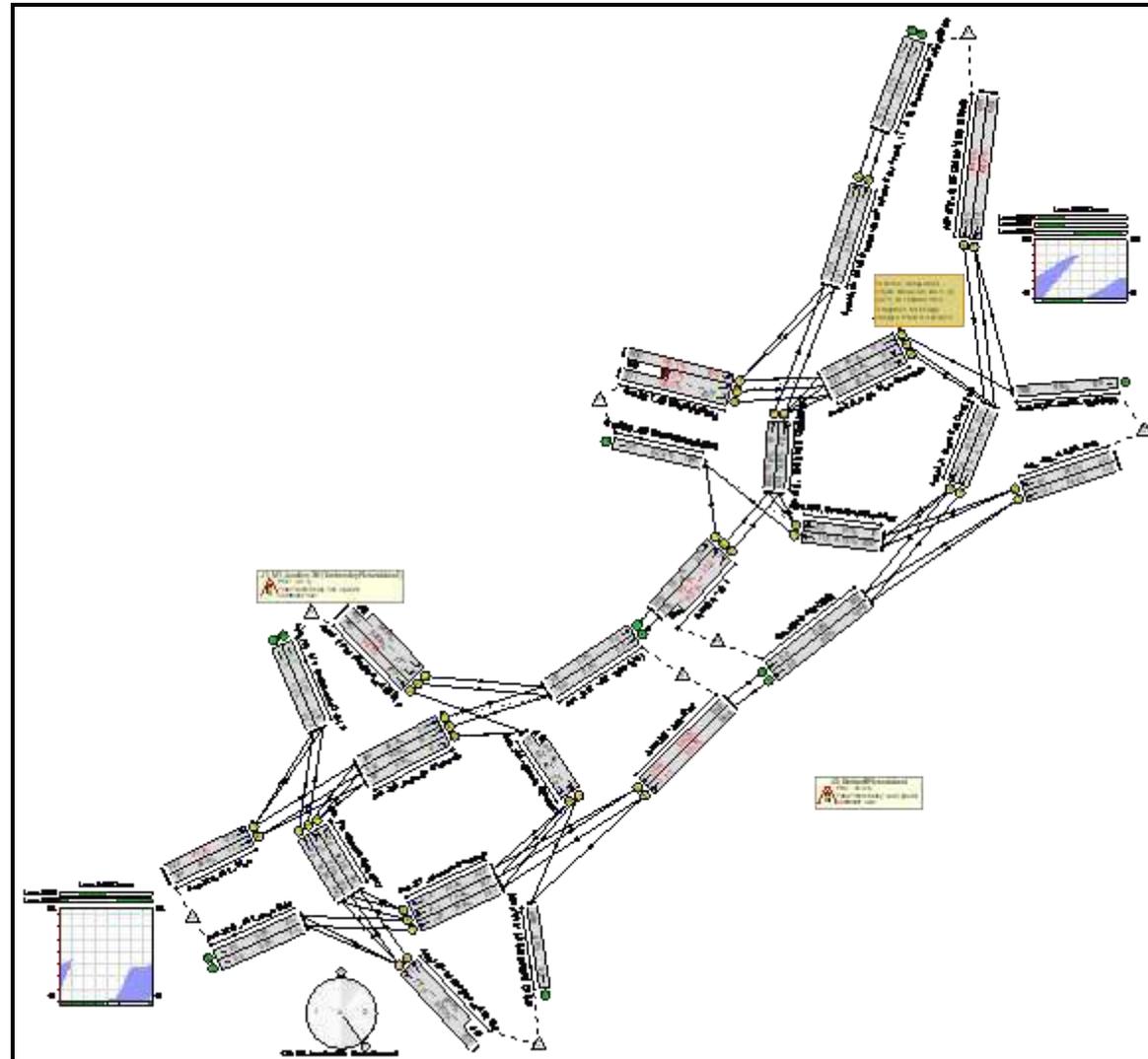
Stage Timings

Stage	1	2
Duration	31	22
Change Point	11	50

Signal Timings Diagram



Full Input Data And Results
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network	-	-	N/A	-	-		-	-	-	-	-	-	104.9%
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	N/A	-	-		-	-	-	-	-	-	98.7%
1/2+1/1	M1 Southbound Off Slip Left	U	1:1	N/A	C1:B		1	20	-	963	1900:1900	570+570	84.4 : 84.6%
1/3	M1 Southbound Off Slip Ahead	U	1:1	N/A	C1:B		1	20	-	540	1900	570	94.7%
2/1	A61- East Ahead Left	U	1:2	N/A	C1:D		1	35	-	964	1900	977	98.7%
2/2	A61- East Ahead	U	1:2	N/A	C1:D		1	35	-	960	1900	977	98.2%
3/1+3/2	M1 Northbound Off Slip Ahead Left	U	2:1	N/A	C2:B		1	21	-	942	1900:1900	597+597	88.3 : 69.5%
4/1	A61 - West Ahead Left	U	2:2	N/A	C2:D		1	19	-	523	1900	543	96.3%
4/2	A61 - West Ahead	U	2:2	N/A	C2:D		1	19	-	466	1900	543	85.8%
5/1	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	496	1900	1004	49.4%
5/2	Northern Circulatory Ahead	U	1:1	N/A	C1:A		1	36	-	812	1900	1004	80.9%
5/3	Northern Circulatory Right	U	1:1	N/A	C1:A		1	36	-	69	1900	1004	6.9%
6/2+6/1	Eastern Circulatory Right Ahead	U	1:2	N/A	C1:C		1	21	-	609	1900:1900	108+597	86.4 : 86.4%
7/1	Western Circulatory Ahead	U	2:1	N/A	C2:A		1	35	-	781	1900	977	79.9%
7/2	Western Circulatory Right Ahead	U	2:1	N/A	C2:A		1	35	-	727	1900	977	74.4%

Full Input Data And Results

7/3	Western Circulatory Right	U	2:1	N/A	C2:A		1	35	-	326	1900	977	33.4%
8/1	Eastern Circulatory Ahead	U	2:2	N/A	C2:C		1	37	-	447	1900	1031	43.3%
8/2	Eastern Circulatory Right Ahead	U	2:2	N/A	C2:C		1	37	-	732	1900	1031	71.0%
8/3	Eastern Circulatory Right	U	2:2	N/A	C2:C		1	37	-	415	1900	1031	40.2%
9/1	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	664	Inf	Inf	0.0%
9/2	M1 - Northbound On Slip	U	N/A	N/A	-		-	-	-	542	Inf	Inf	0.0%
10/1	M1 Southbound On Slip	U	N/A	N/A	-		-	-	-	699	Inf	Inf	0.0%
11/1	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	730	Inf	Inf	0.0%
11/2	A61 - East (Exit) Ahead	U	N/A	N/A	-		-	-	-	1541	Inf	Inf	0.0%
12/1	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	841	Inf	Inf	0.0%
12/2	A61 - West (Exit)	U	N/A	N/A	-		-	-	-	341	Inf	Inf	0.0%
J2: Birdwell Roundabout	-	-	N/A	-	-		-	-	-	-	-	-	104.9%
1/1	A61 Sheffield Road Ahead Left	U	N/A	N/A	C4:F		1	22	-	600	1900	624	96.1%
1/3+1/2	A61 Sheffield Road Ahead	U	N/A	N/A	C4:F		1	22	-	780	1900:1900	209+601	96.3 : 96.3%
2/1	A6195 Dearne Valley Parkway Ahead Left	U	3:1	N/A	C3:B		1	22	-	654	1900	624	104.8%
2/2	A6195 Dearne Valley Parkway Ahead	U	3:1	N/A	C3:B		1	22	-	655	1900	624	104.9%
3/1	A6195 - East Ahead	U	3:3	N/A	C3:G		1	17	-	418	1900	489	85.6%
3/2	A6195 - East Ahead	U	3:3	N/A	C3:G		1	17	-	334	1900	489	68.4%
4/1	A61 Left	U	N/A	N/A	C4:G		1	31	-	655	1900	869	75.4%

Full Input Data And Results

4/2+4/3	A61 Ahead	U	N/A	N/A	C4:B		1	32	-	1626	1900:1900	851+896	93.1 : 93.1%
5/1	North West Circulatory Ahead	U	3:1	N/A	C3:A		1	32	-	774	1900	896	86.4%
5/2	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	32	-	227	1900	896	25.3%
5/3	North West Circulatory U-Turn	U	3:1	N/A	C3:A		1	32	-	201	1900	896	22.4%
6/1	South West Circulatory Ahead	U	N/A	N/A	C4:E		1	38	-	802	1900	1059	75.8%
6/2	South West Circulatory Right Ahead	U	N/A	N/A	C4:E		1	38	-	834	1900	1059	78.8%
7/1	North East Circulatory Ahead	U	3:3	N/A	C3:F		1	37	-	866	1900	1031	81.1%
7/2	North East Circulatory Right Ahead	U	3:3	N/A	C3:F		1	37	-	856	1900	1031	80.0%
8/1	South East Circulatory Ahead	U	N/A	N/A	C4:A		1	23	-	540	1900	651	81.3%
8/2	South East Circulatory Right Ahead	U	N/A	N/A	C4:A		1	23	-	10	1900	651	1.5%
9/1	A61 Sheffield Road (Exit)	U	N/A	N/A	-		-	-	-	1195	1900	1900	62.4%
10/1	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	1023	1900	1411	72.5%
10/2	A6195 Dearne Valley Parkway (Exit) Ahead	U	3:2	N/A	C3:D		1	51	-	791	1900	1411	56.0%
11/1	A6195 Dearne Valley Parkway (Exit)	U	N/A	N/A	-		-	-	-	1023	Inf	Inf	0.0%

Full Input Data And Results

11/2	A6195 Deame Valley Parkway (Exit)	U	N/A	N/A	-	-	-	-	791	Inf	Inf	0.0%
12/1	A6195 - East (Exit)	U	N/A	N/A	-	-	-	-	789	Inf	Inf	0.0%
13/1	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	1075	Inf	Inf	0.0%
13/2	A61 (Exit) Ahead	U	N/A	N/A	-	-	-	-	849	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	0	0	0	102.5	144.5	0.0	247.0	-	-	-	-
J1: M1 Junction 36 (Tankersley Roundabout)	-	-	0	0	0	50.6	56.7	0.0	107.2	-	-	-	-
1/2+1/1	963	963	-	-	-	6.1	2.6	-	8.8	32.9	8.7	2.6	11.3
1/3	540	540	-	-	-	3.6	6.3	-	9.9	66.2	10.2	6.3	16.5
2/1	964	964	-	-	-	4.5	12.6	-	17.1	63.7	18.5	12.6	31.1
2/2	960	960	-	-	-	4.5	11.8	-	16.2	60.9	18.1	11.8	29.9
3/1+3/2	942	942	-	-	-	5.8	1.8	-	7.6	29.1	9.7	1.8	11.5
4/1	523	523	-	-	-	3.6	7.5	-	11.1	76.3	9.9	7.5	17.4
4/2	466	466	-	-	-	3.1	2.8	-	5.9	45.5	8.5	2.8	11.4
5/1	496	496	-	-	-	0.6	0.5	-	1.1	8.0	1.9	0.5	2.4
5/2	812	812	-	-	-	3.1	2.1	-	5.2	22.8	13.0	2.1	15.1
5/3	69	69	-	-	-	0.4	0.0	-	0.4	21.3	1.0	0.0	1.0
6/2+6/1	609	609	-	-	-	2.6	3.0	-	5.6	33.1	4.2	3.0	7.2
7/1	781	781	-	-	-	2.5	2.0	-	4.5	20.5	13.0	2.0	14.9
7/2	727	727	-	-	-	4.2	1.4	-	5.6	27.7	11.6	1.4	13.1
7/3	326	326	-	-	-	1.7	0.3	-	1.9	21.1	5.1	0.3	5.4
8/1	447	447	-	-	-	2.3	0.4	-	2.7	21.6	8.7	0.4	9.0
8/2	732	732	-	-	-	2.1	1.2	-	3.3	16.1	6.6	1.2	7.8
8/3	415	415	-	-	-	0.1	0.3	-	0.5	3.9	0.3	0.3	0.6
9/1	664	664	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	542	542	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	699	699	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	730	730	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	1541	1541	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	841	841	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

12/2	341	341	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Birdwell Roundabout	-	-	0	0	0	51.9	87.9	0.0	139.8	-	-	-	-
1/1	600	600	-	-	-	3.8	7.6	-	11.4	68.7	11.3	7.6	18.9
1/3+1/2	780	780	-	-	-	4.7	8.3	-	13.0	60.0	11.7	8.3	20.0
2/1	654	624	-	-	-	5.5	22.2	-	27.7	152.6	13.3	22.2	35.5
2/2	655	624	-	-	-	5.5	22.6	-	28.1	154.7	13.4	22.6	36.0
3/1	418	418	-	-	-	2.9	2.7	-	5.6	48.4	7.7	2.7	10.4
3/2	334	334	-	-	-	2.2	1.1	-	3.2	34.9	5.8	1.1	6.9
4/1	655	655	-	-	-	2.9	1.5	-	4.4	24.1	10.4	1.5	11.9
4/2+4/3	1626	1626	-	-	-	7.7	6.1	-	13.9	30.7	15.1	6.1	21.2
5/1	774	774	-	-	-	4.2	3.0	-	7.2	33.6	14.1	3.0	17.1
5/2	227	227	-	-	-	0.0	0.2	-	0.2	3.3	0.8	0.2	1.0
5/3	201	201	-	-	-	0.1	0.1	-	0.3	4.8	2.5	0.1	2.6
6/1	802	802	-	-	-	0.1	1.5	-	1.7	7.5	0.3	1.5	1.9
6/2	834	834	-	-	-	0.1	1.8	-	1.9	8.1	0.1	1.8	2.0
7/1	837	837	-	-	-	3.1	2.1	-	5.2	22.4	8.2	2.1	10.4
7/2	825	825	-	-	-	3.1	2.0	-	5.1	22.2	7.8	2.0	9.8
8/1	530	530	-	-	-	4.1	2.1	-	6.2	42.0	9.2	2.1	11.3
8/2	10	10	-	-	-	0.1	0.0	-	0.1	31.4	0.2	0.0	0.2
9/1	1185	1185	-	-	-	0.0	0.8	-	0.8	2.5	0.0	0.8	0.8
10/1	1023	1023	-	-	-	0.6	1.3	-	1.9	6.7	3.6	1.3	4.9
10/2	791	791	-	-	-	1.2	0.6	-	1.8	8.3	6.5	0.6	7.1
11/1	1023	1023	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/2	791	791	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
12/1	788	788	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/1	1046	1046	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	828	828	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - M1 Junction 36 - North	Stream: 1 PRC for Signalled Lanes (%)	-5.3	Total Delay for Signalled Lanes (pcuHr)	25.37	Cycle Time (s)	70
C1 - M1 Junction 36 - North	Stream: 2 PRC for Signalled Lanes (%)	-9.6	Total Delay for Signalled Lanes (pcuHr)	38.91	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 1 PRC for Signalled Lanes (%)	2.0	Total Delay for Signalled Lanes (pcuHr)	19.56	Cycle Time (s)	70
C2 - M1 Junction 36 - South	Stream: 2 PRC for Signalled Lanes (%)	-7.0	Total Delay for Signalled Lanes (pcuHr)	23.39	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 1 PRC for Signalled Lanes (%)	-16.6	Total Delay for Signalled Lanes (pcuHr)	63.56	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 2 PRC for Signalled Lanes (%)	24.2	Total Delay for Signalled Lanes (pcuHr)	3.71	Cycle Time (s)	70
C3 - Birdwell Rbt - North	Stream: 3 PRC for Signalled Lanes (%)	5.2	Total Delay for Signalled Lanes (pcuHr)	19.18	Cycle Time (s)	70
C4 - Birdwell Rbt - South	PRC for Signalled Lanes (%)	-7.0	Total Delay for Signalled Lanes (pcuHr)	52.50	Cycle Time (s)	70
	PRC Over All Lanes (%)	-16.6	Total Delay Over All Lanes(pcuHr)	247.00		

Appendix E

M1 Junction 36 Merge / Diverge Assessment

Merge Diagram

M1 J36 | Northbound | 2028 Do Minimum AM

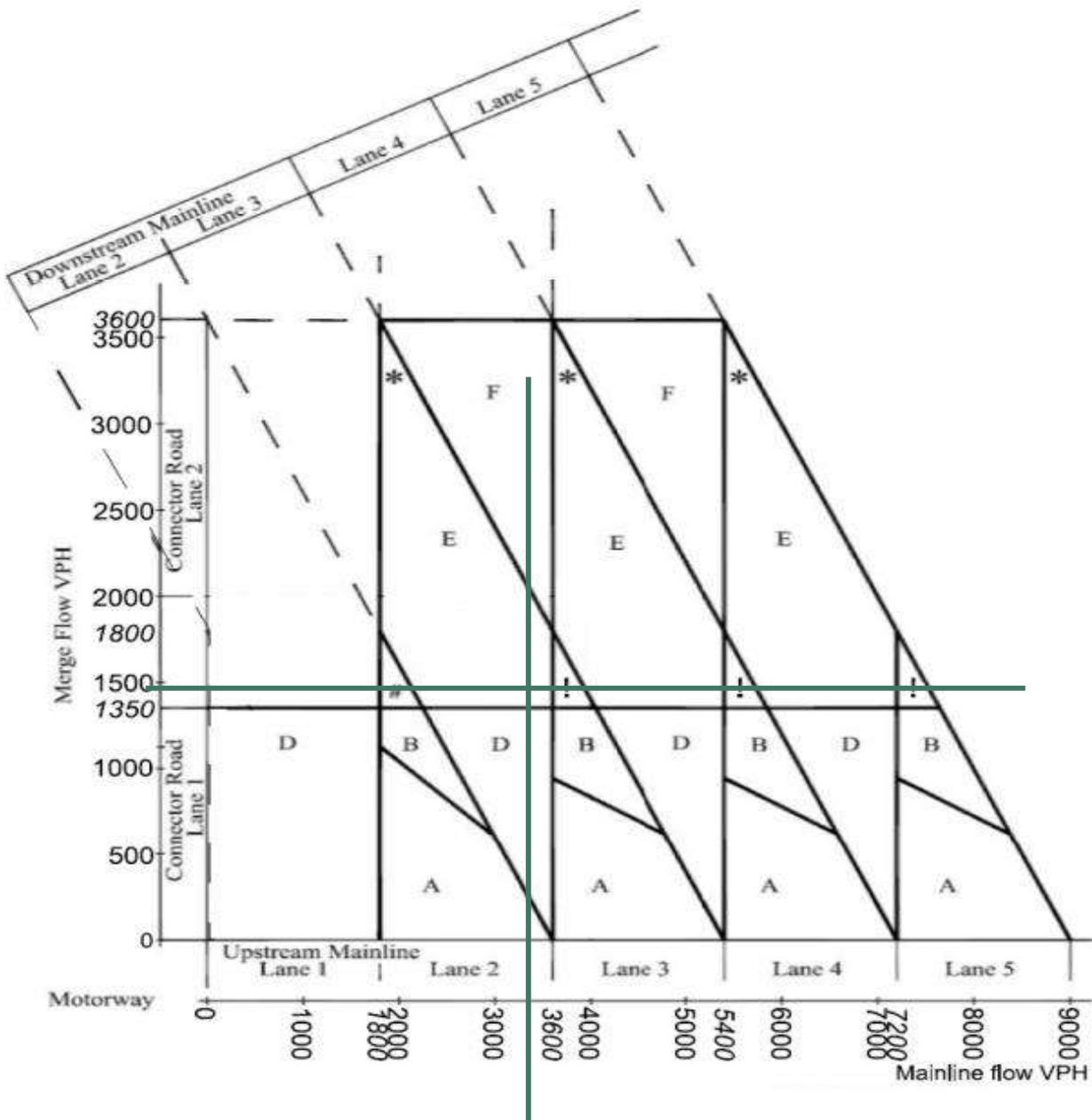
Input Flows

Upstream mainline flow:	3312	vph
Merge flow:	1467	vph

Recommended Layout

Connector Lanes:	2
Upstream mainline lanes:	2
Downstream Mainline Lanes:	3
Diverge Type:	E

Figure 3.12b Motorway merging diagram



Merge Diagram

M1 J36 | Northbound | 2028 With Development AM

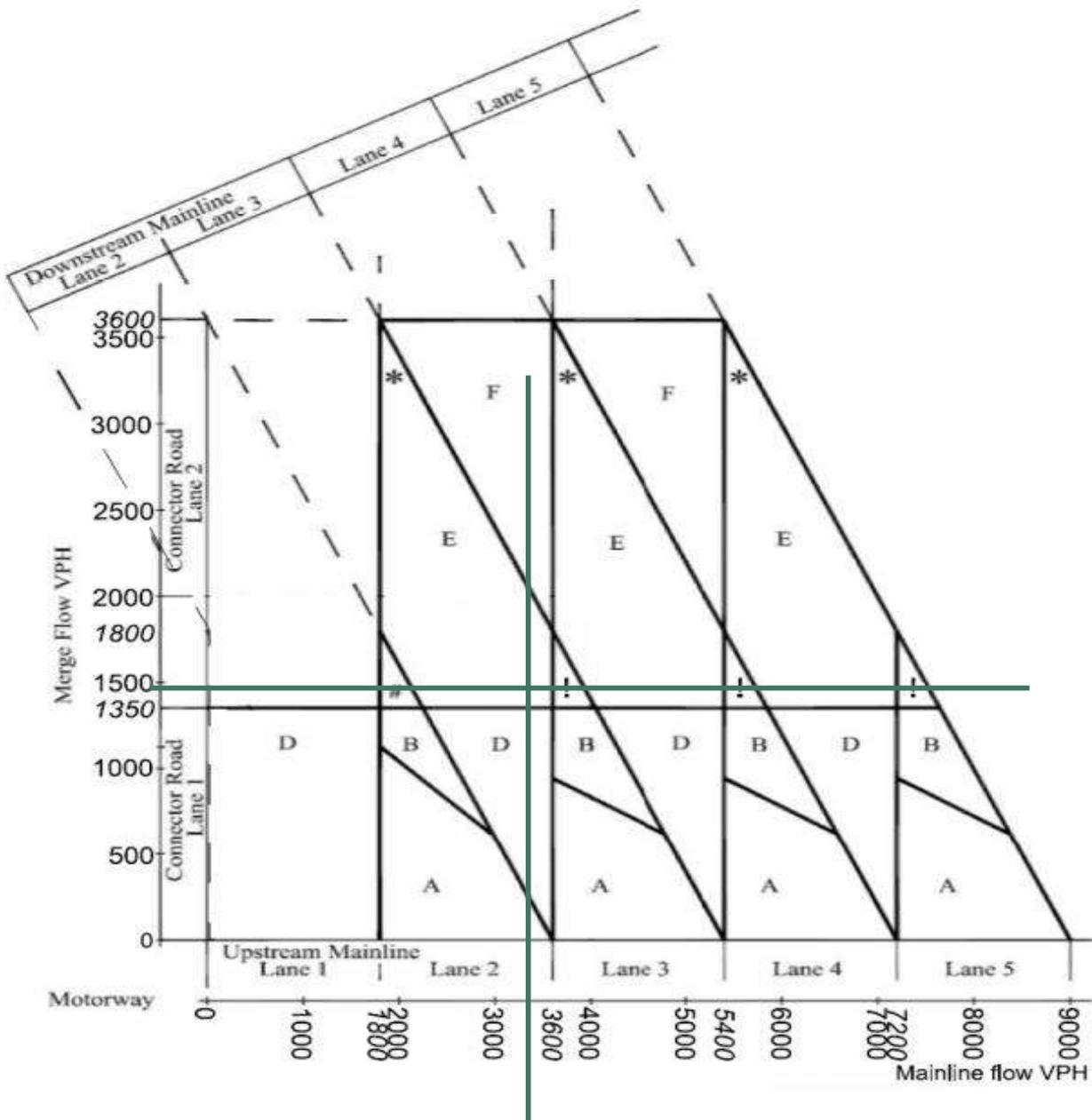
Input Flows

Upstream mainline flow:	3312	vph
Merge flow:	1476	vph

Recommended Layout

Connector Lanes:	2
Upstream mainline lanes:	2
Downstream Mainline Lanes:	3
Diverge Type:	E

Figure 3.12b Motorway merging diagram



Merge Diagram

M1 J36 | Northbound | 2022 Base PM

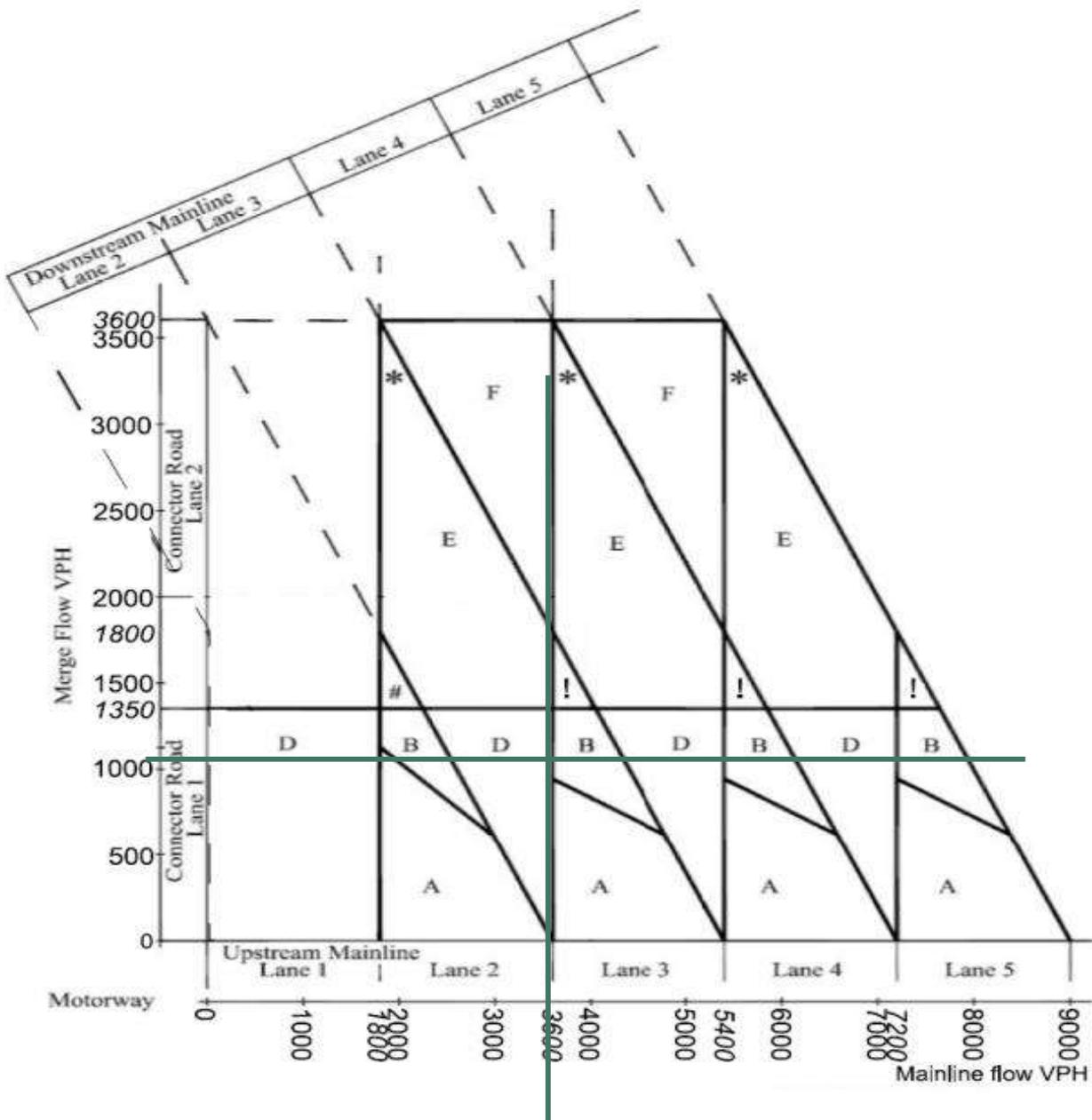
Input Flows

Upstream mainline flow:	3587	vph
Merge flow:	1048	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	3
Diverge Type:	D

Figure 3.12b Motorway merging diagram



Merge Diagram

M1 J36 | Northbound | 2028 Do Minimum PM

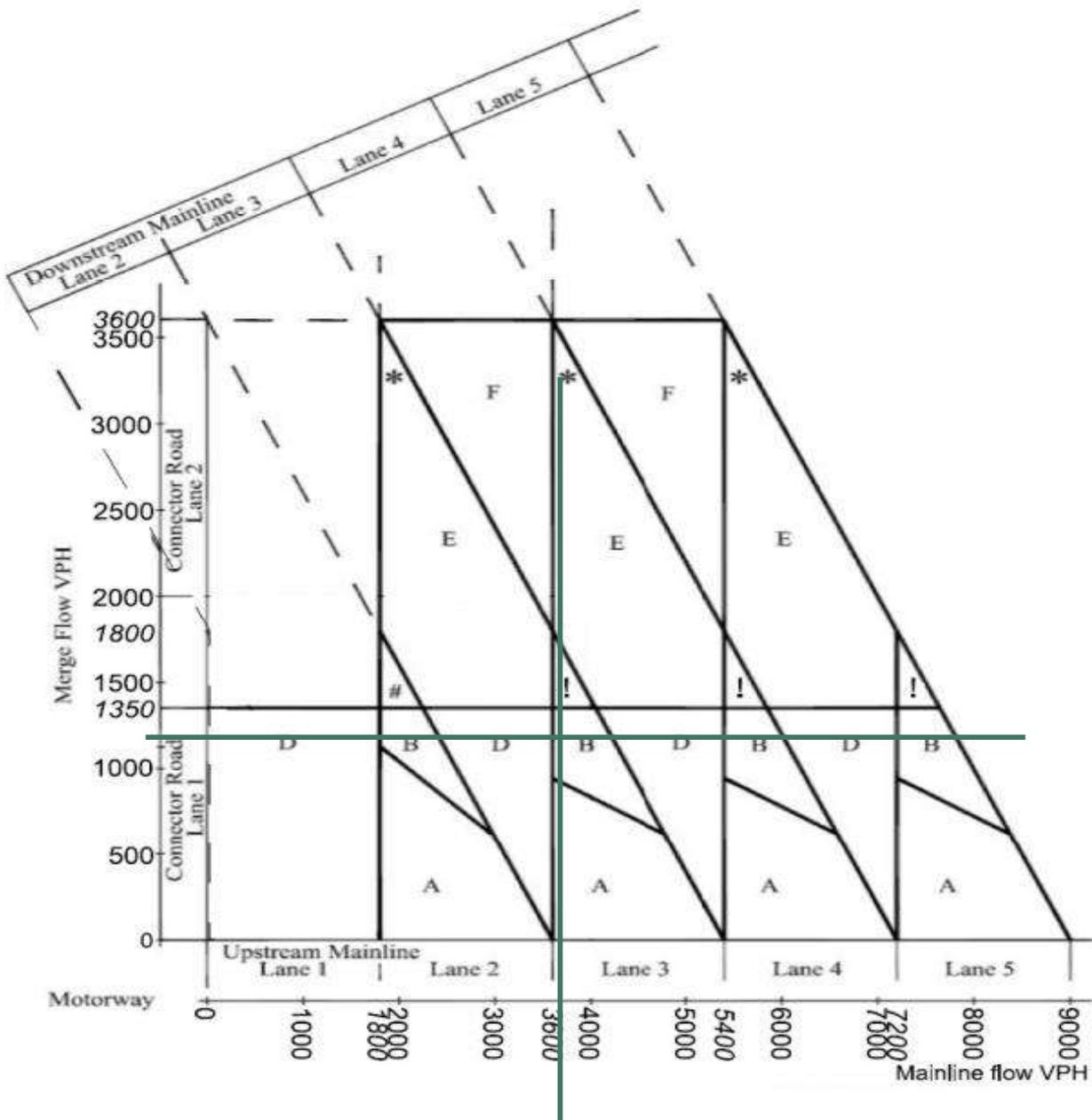
Input Flows

Upstream mainline flow:	3689	vph
Merge flow:	1190	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	3
Diverge Type:	B

Figure 3.12b Motorway merging diagram



Merge Diagram

M1 J36 | Northbound | 2028 With Development PM

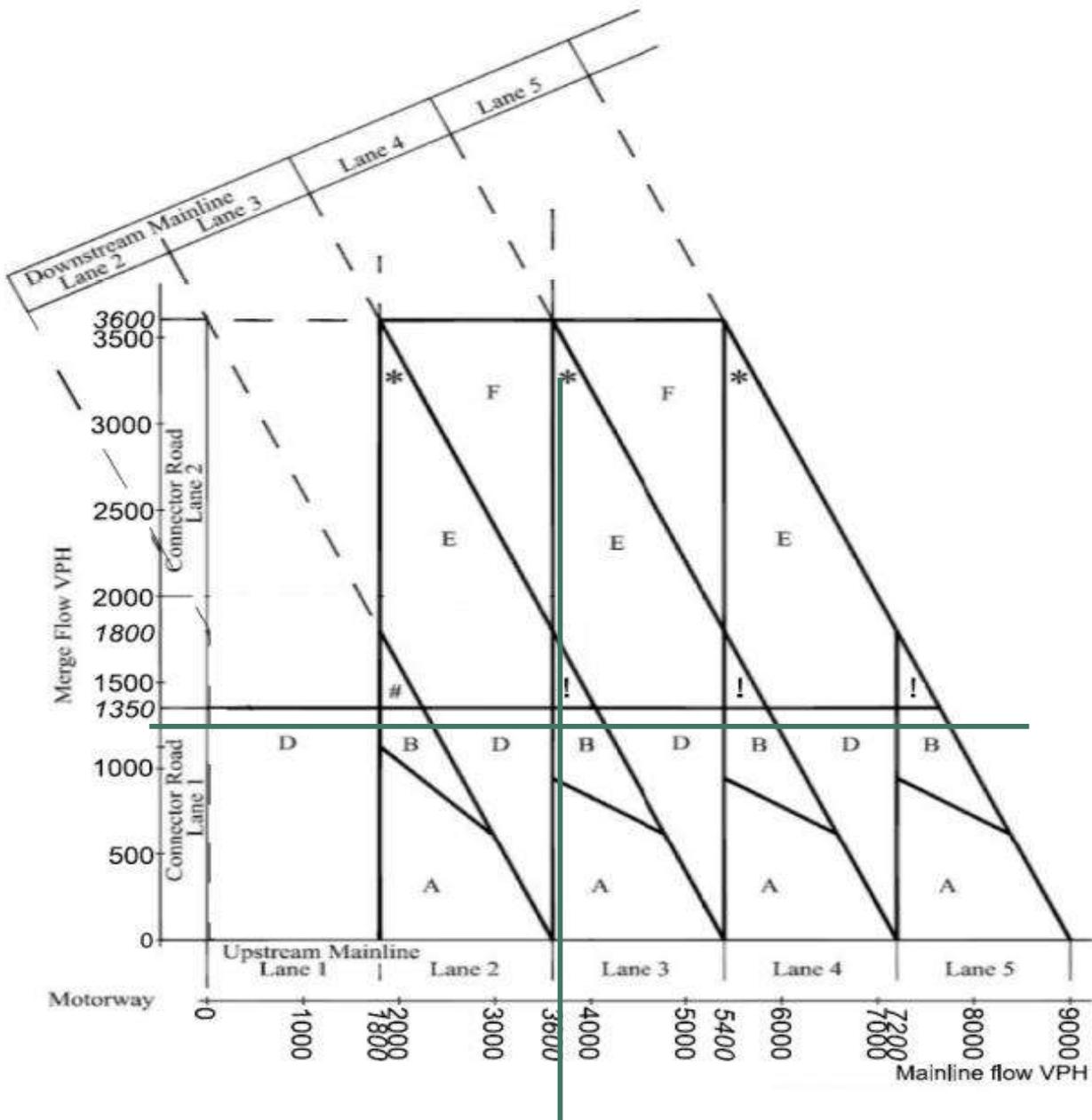
Input Flows

Upstream mainline flow:	3689	vph
Merge flow:	1205	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	3
Diverge Type:	B

Figure 3.12b Motorway merging diagram



Diverge Diagram

M1 J36 | Northbound | 2022 Base AM

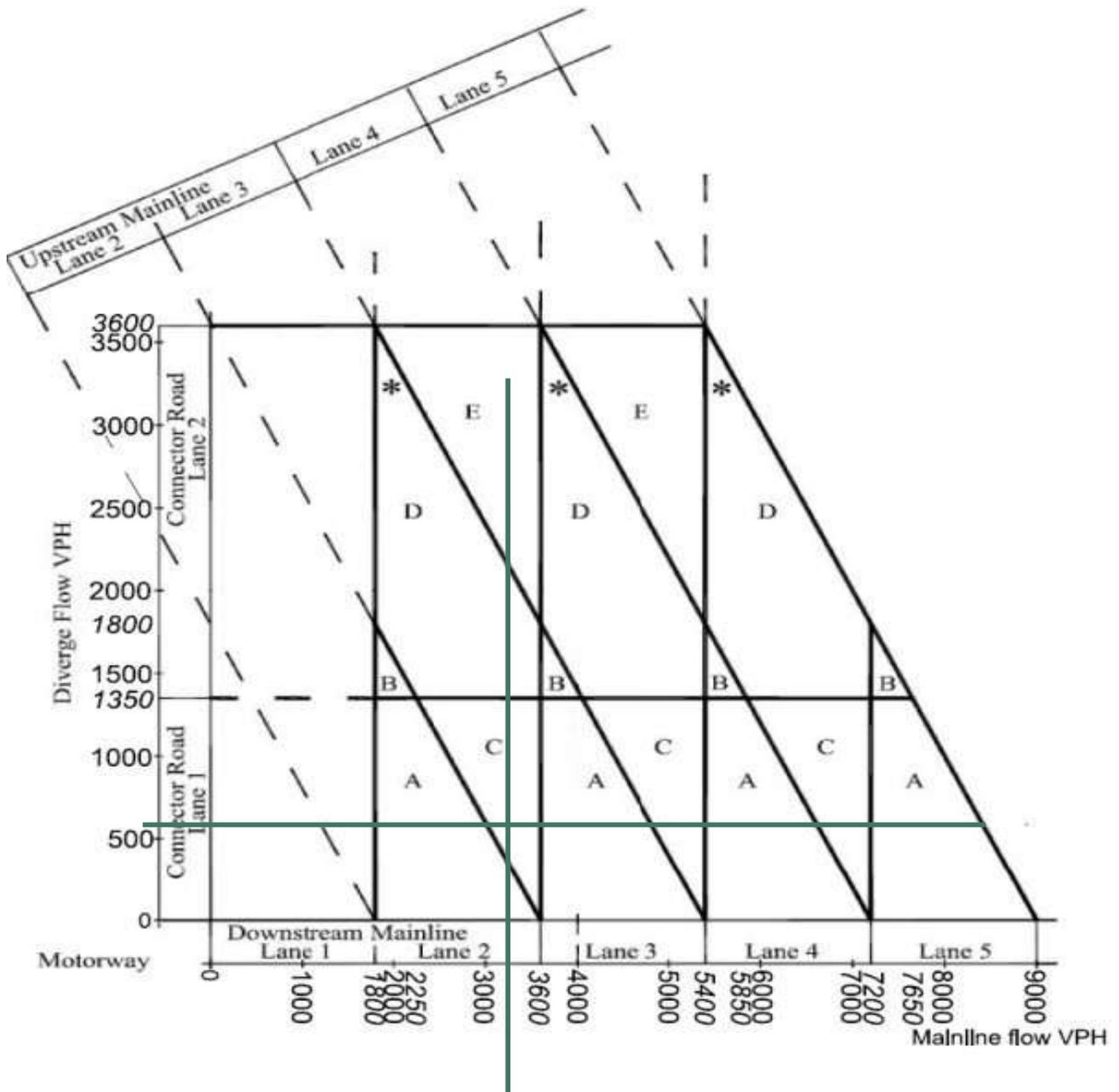
Input Flows

Upstream mainline flow:	3224	vph
Merge flow:	564	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	2
Diverge Type:	C

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2028 Do Minimum AM

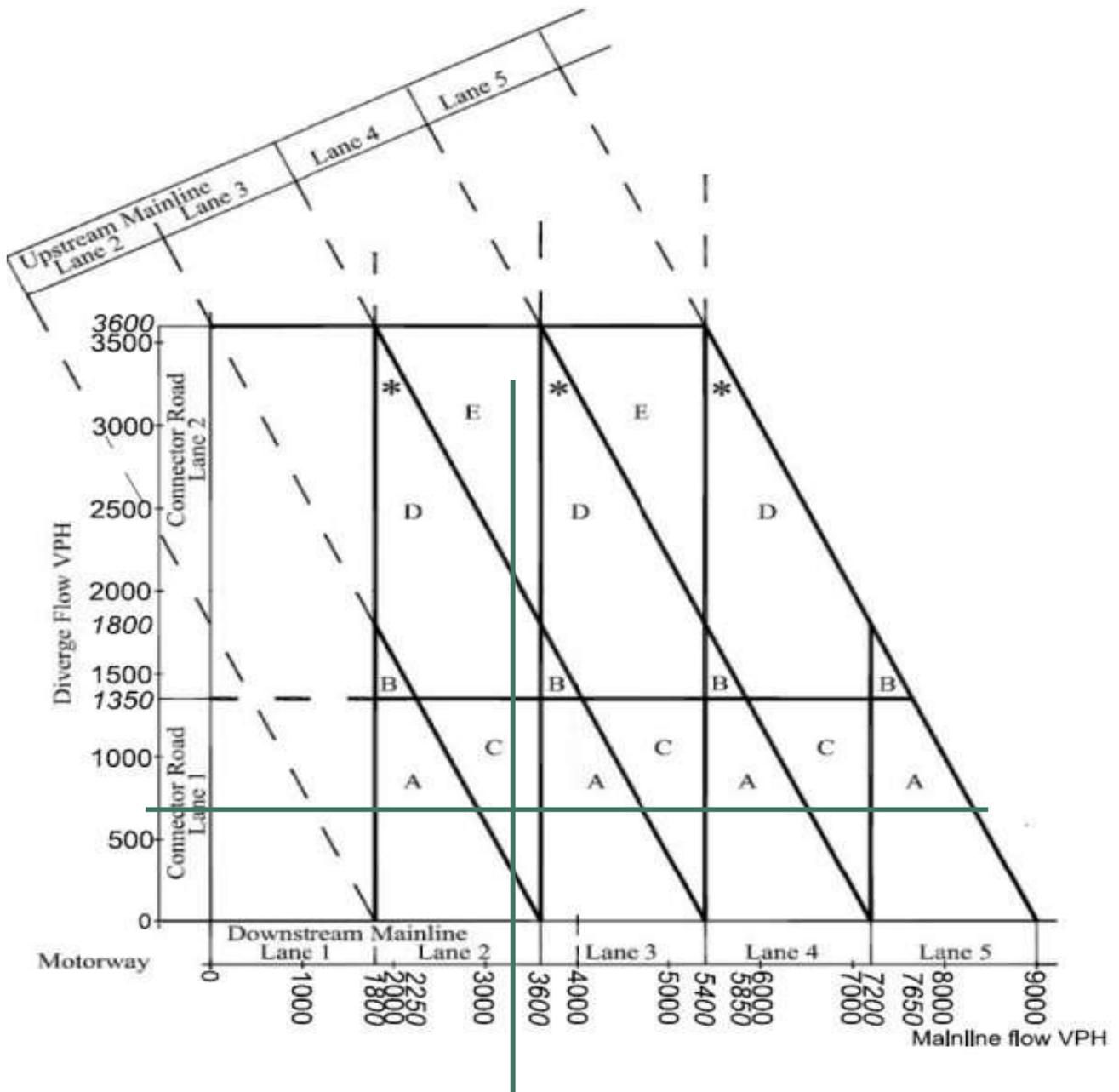
Input Flows

Upstream mainline flow:	3312	vph
Merge flow:	691	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	2
Diverge Type:	C

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2028 With Development AM

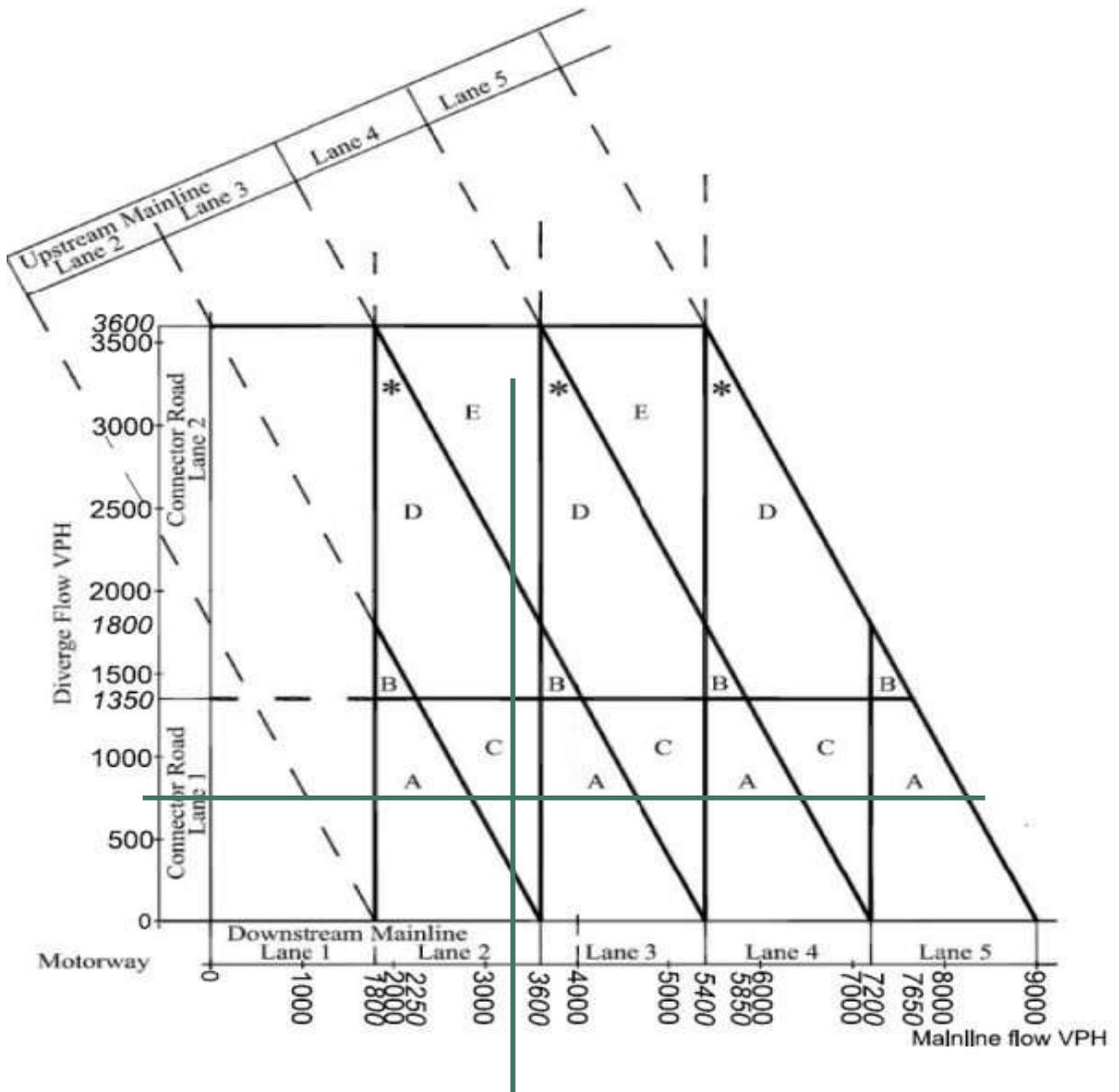
Input Flows

Upstream mainline flow:	3312	vph
Merge flow:	718	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	2
Diverge Type:	C

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2022 Base PM

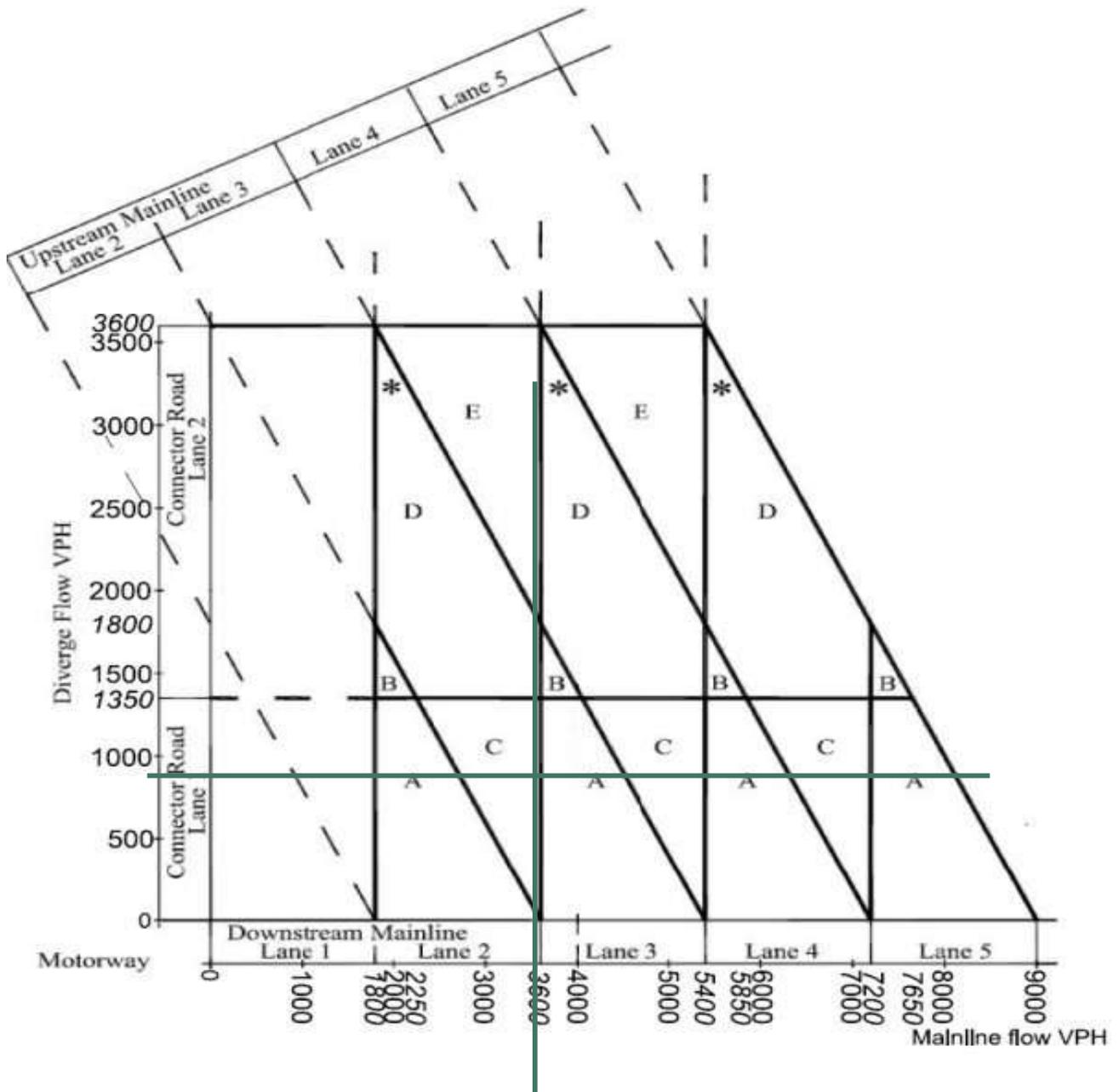
Input Flows

Upstream mainline flow:	3587	vph
Merge flow:	821	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	2
Diverge Type:	C

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2028 Do Minimum PM

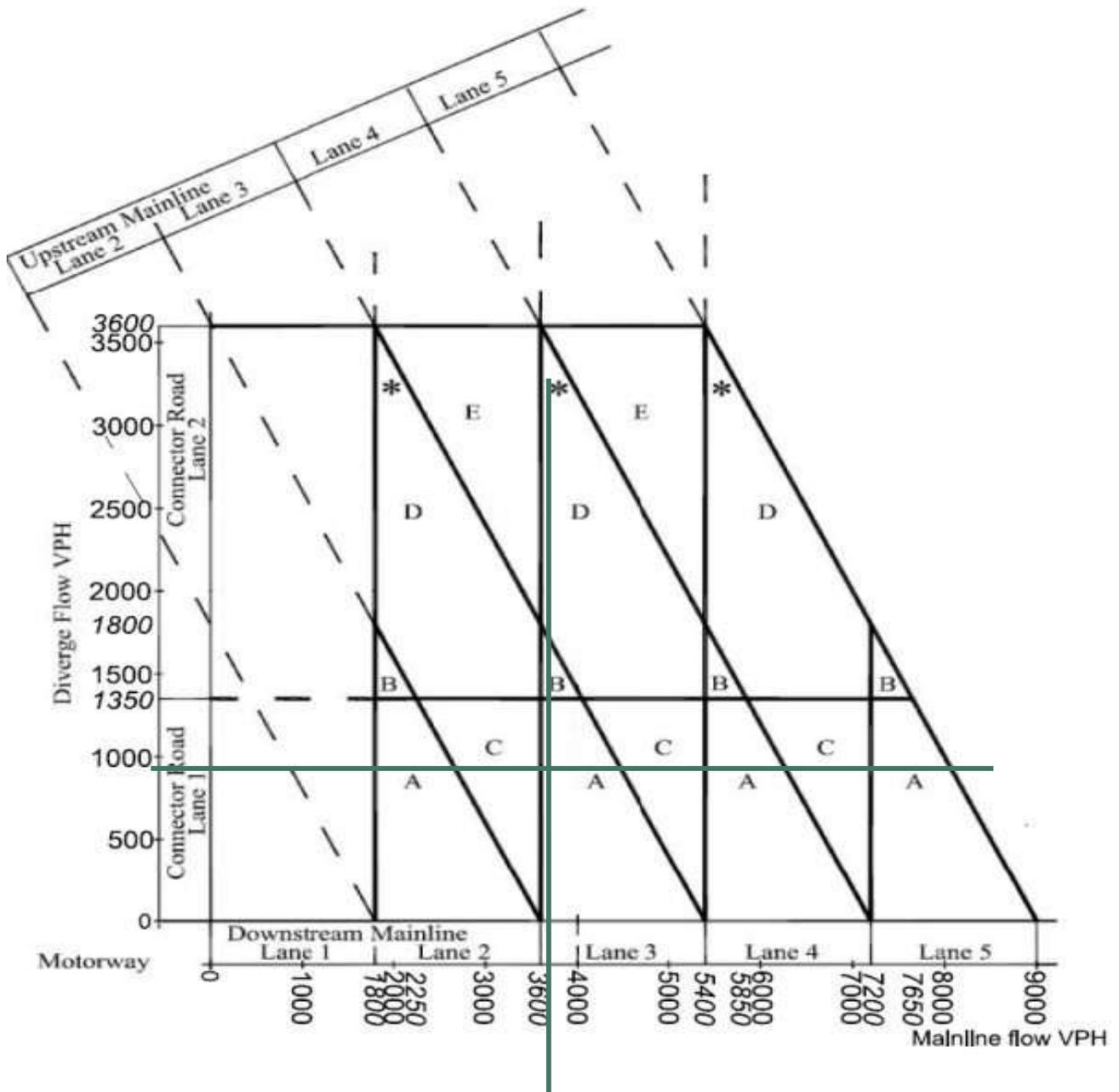
Input Flows

Upstream mainline flow:	3689	vph
Merge flow:	917	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	3
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2028 With Development PM

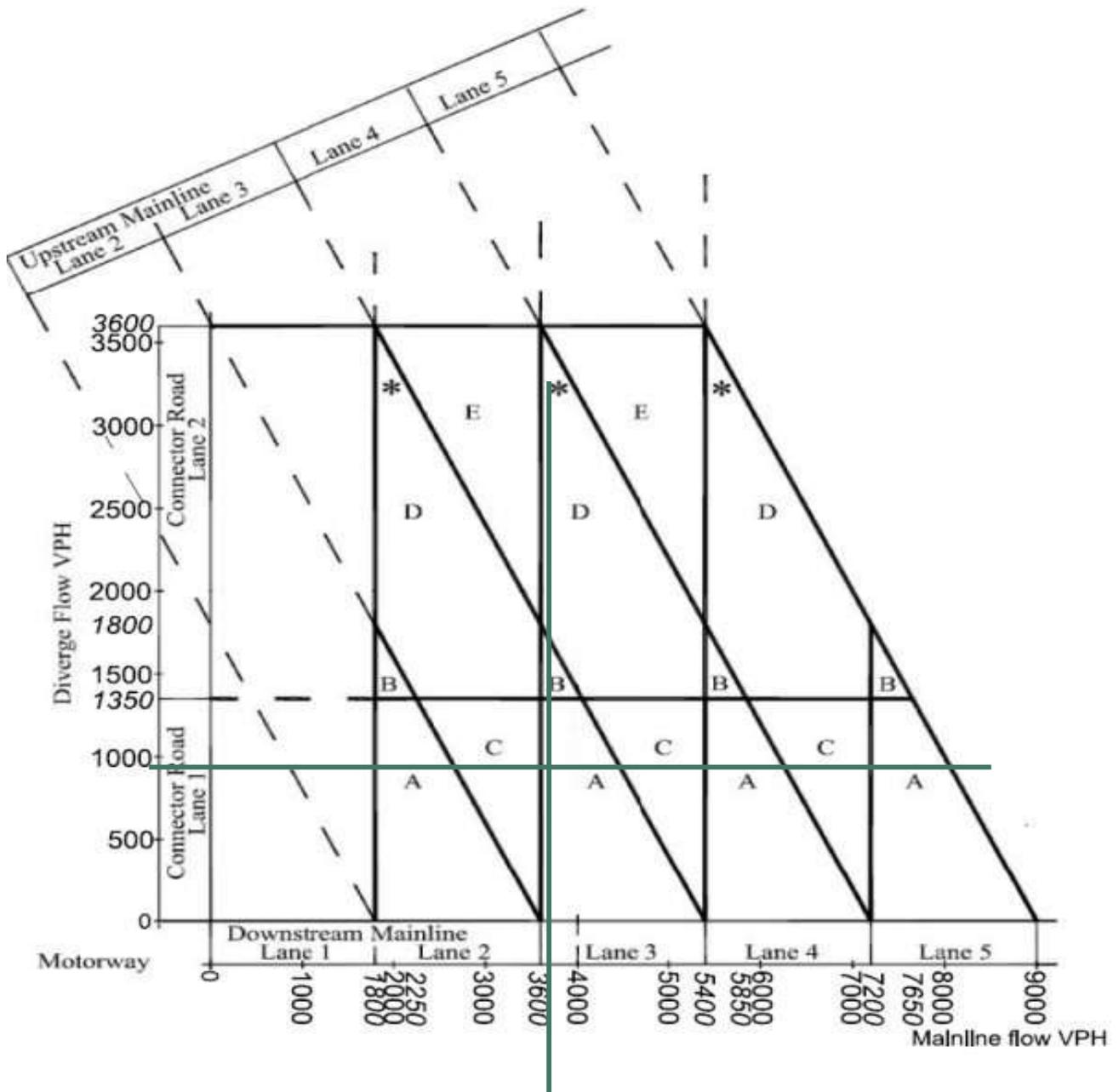
Input Flows

Upstream mainline flow:	3689	vph
Merge flow:	942	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	3
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Merge Diagram

M1 J36 | Northbound | 2022 Base AM

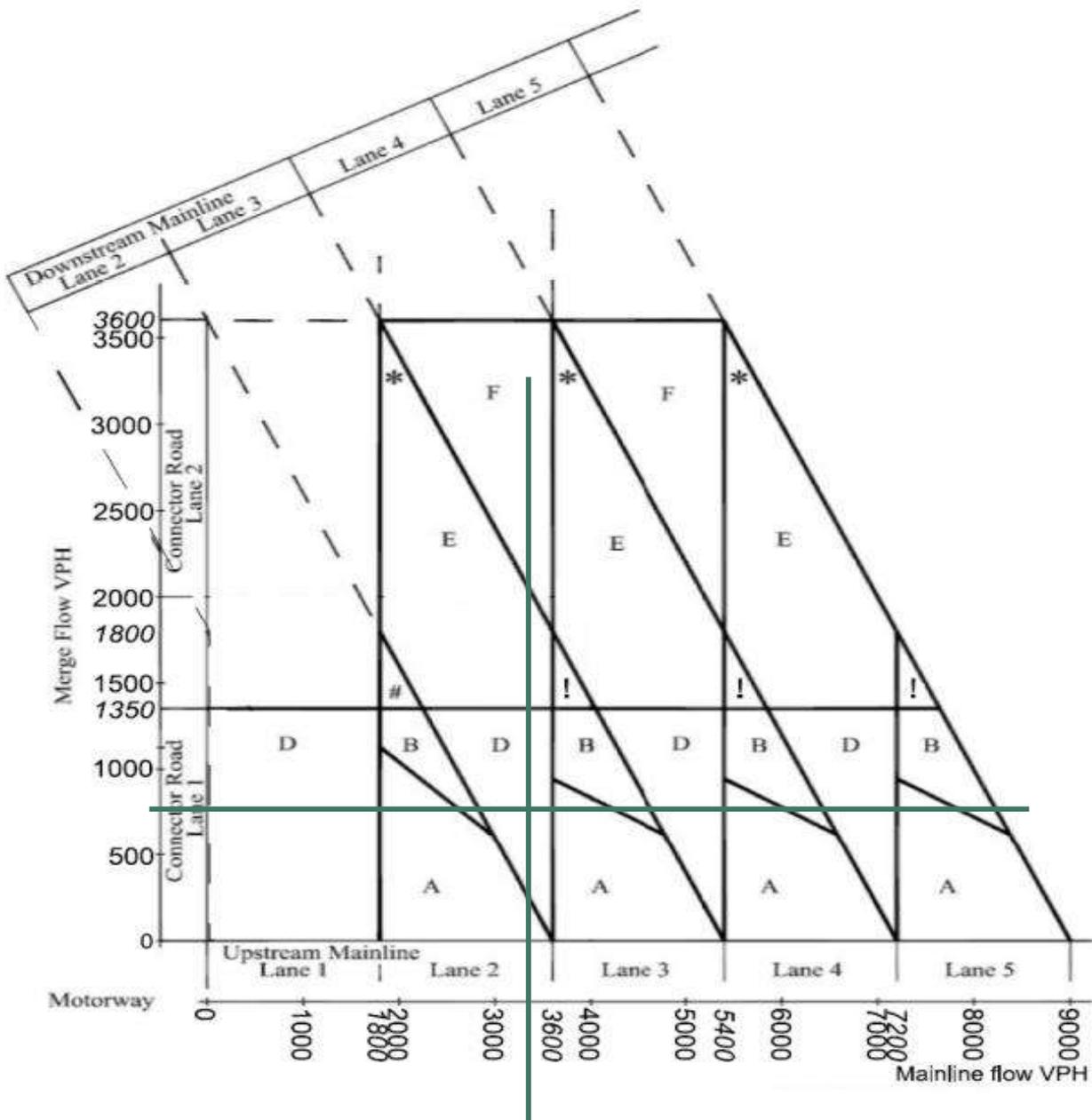
Input Flows

Upstream mainline flow:	3405	vph
Merge flow:	773	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	3
Diverge Type:	D

Figure 3.12b Motorway merging diagram



Merge Diagram

M1 J36 | Northbound | 2028 Do Minimum AM

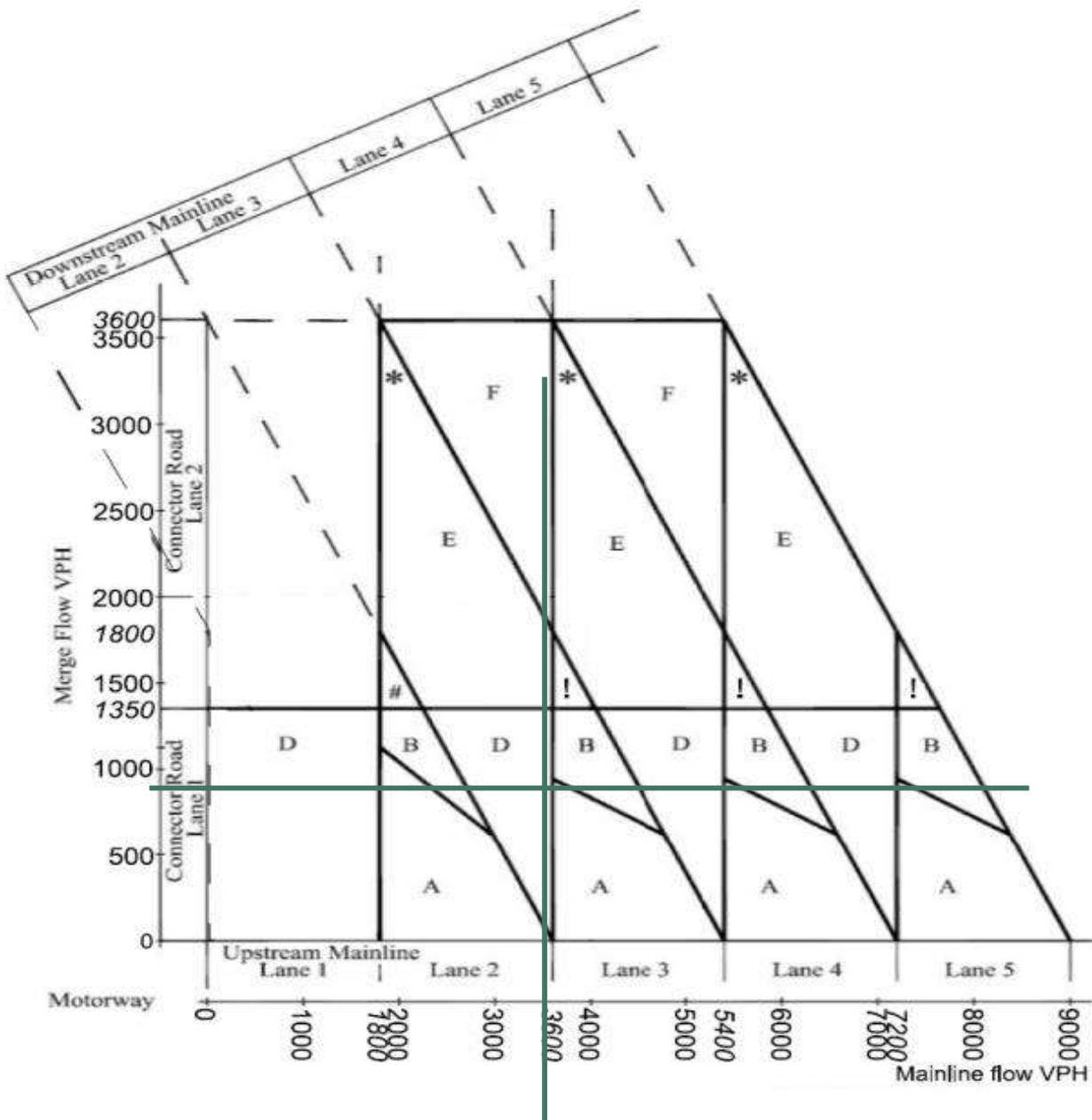
Input Flows

Upstream mainline flow:	3498	vph
Merge flow:	884	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	3
Diverge Type:	D

Figure 3.12b Motorway merging diagram



Merge Diagram

M1 J36 | Northbound | 2022 Base PM

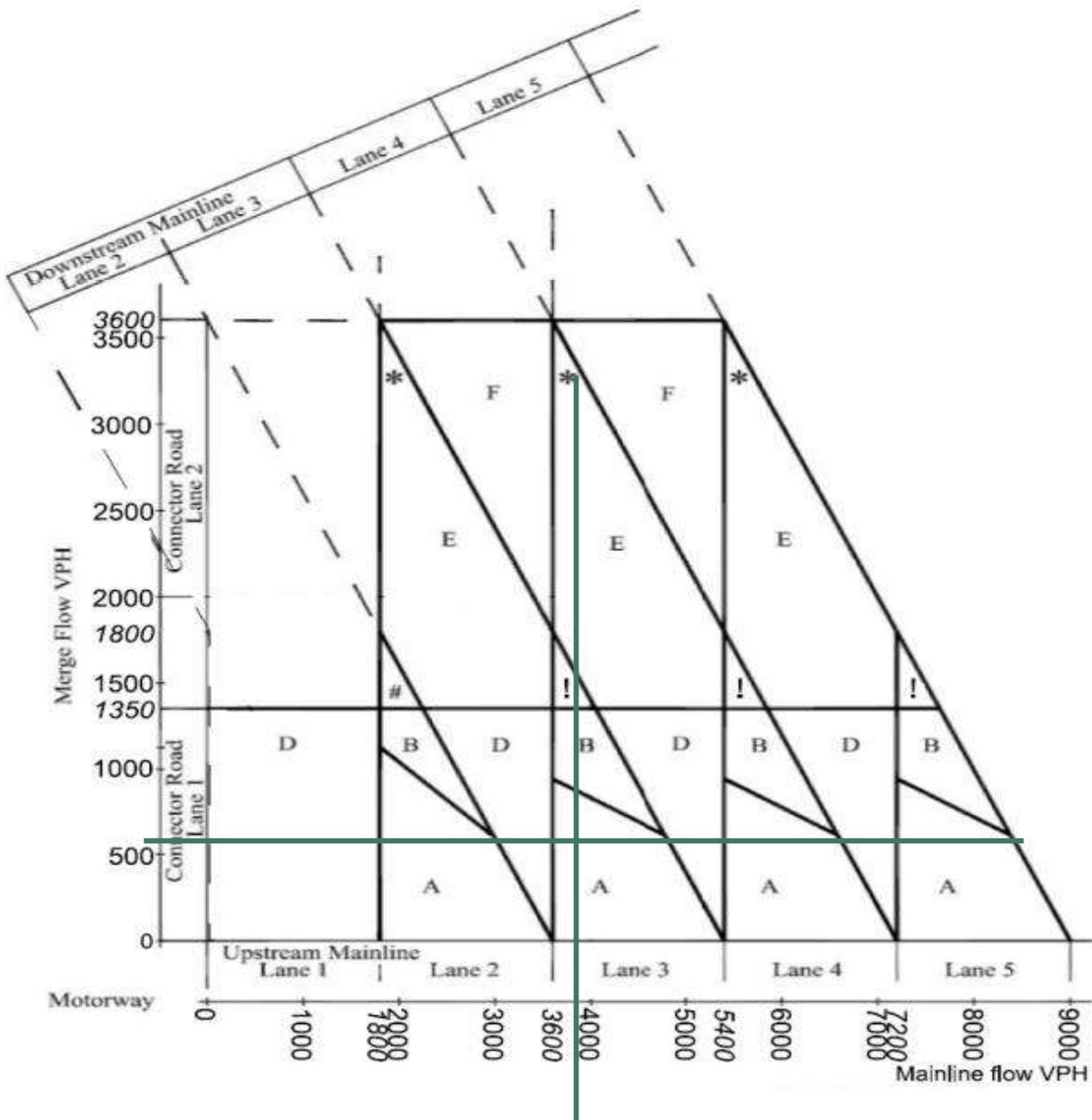
Input Flows

Upstream mainline flow:	3843	vph
Merge flow:	559	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	3
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

M1 J36 | Northbound | 2028 Do Minimum PM

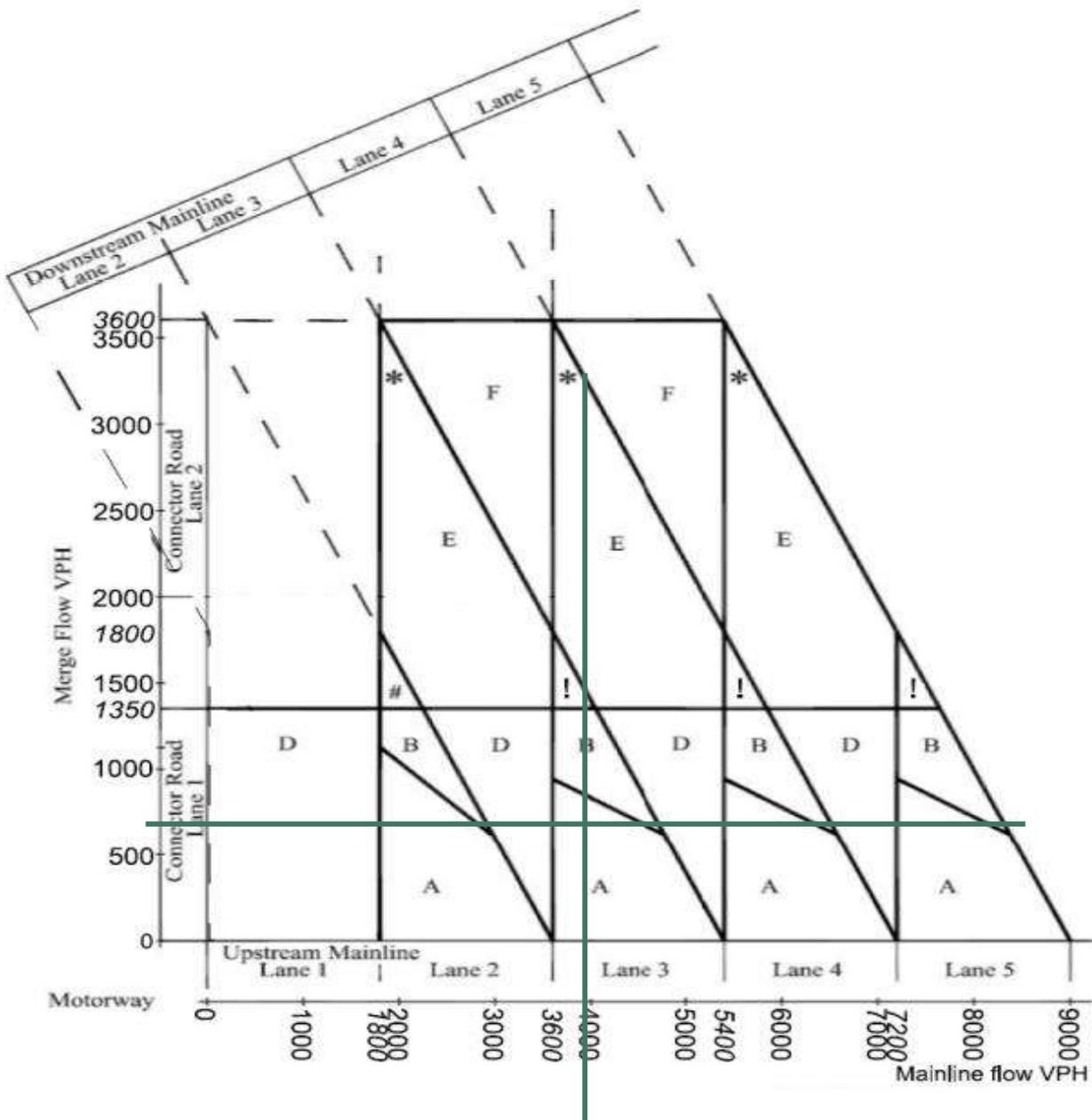
Input Flows

Upstream mainline flow:	3952	vph
Merge flow:	673	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	3
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

M1 J36 | Northbound | 2028 With Development PM

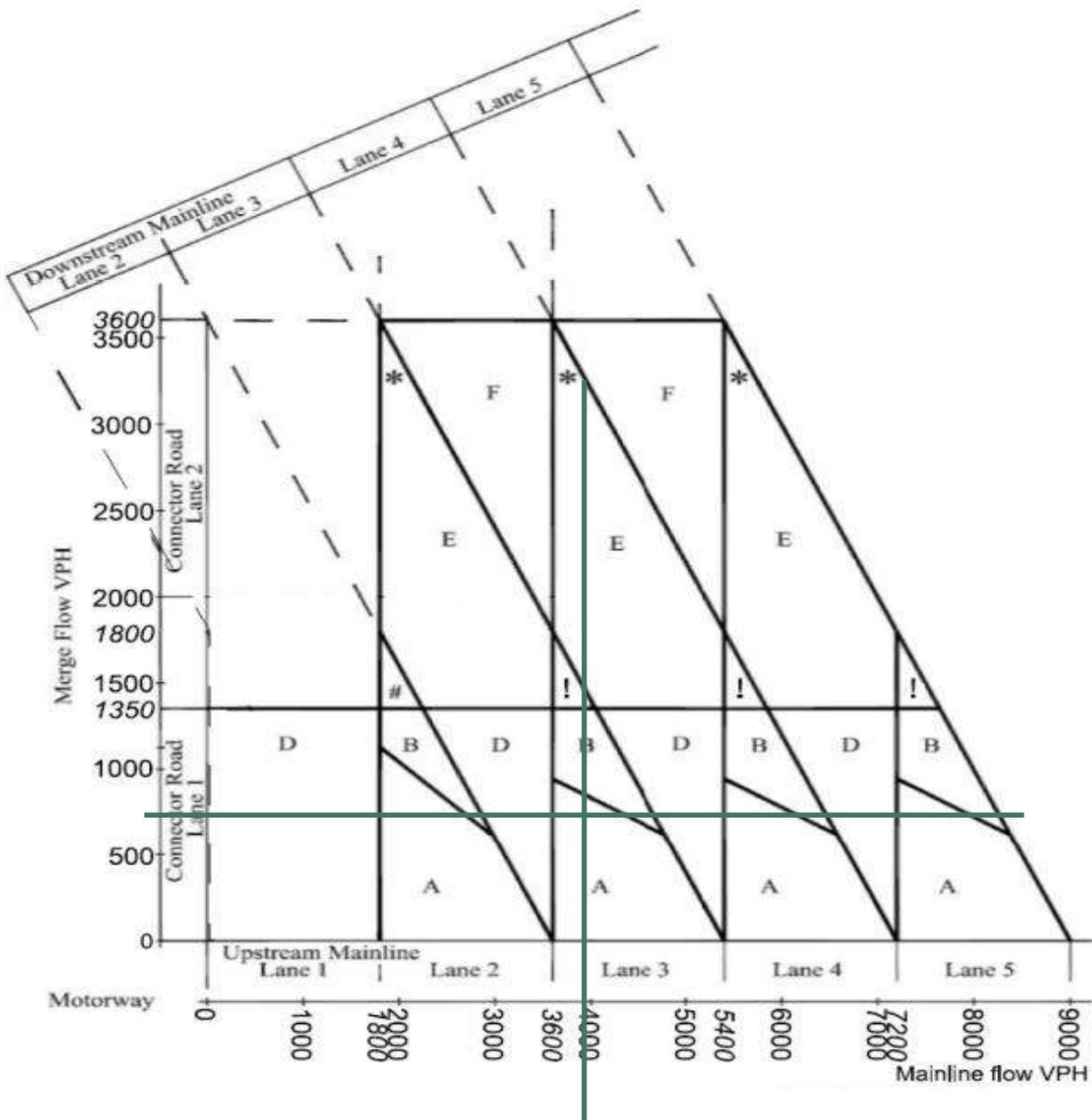
Input Flows

Upstream mainline flow:	3952	vph
Merge flow:	699	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	3
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Diverge Diagram

M1 J36 | Northbound | 2022 Base AM

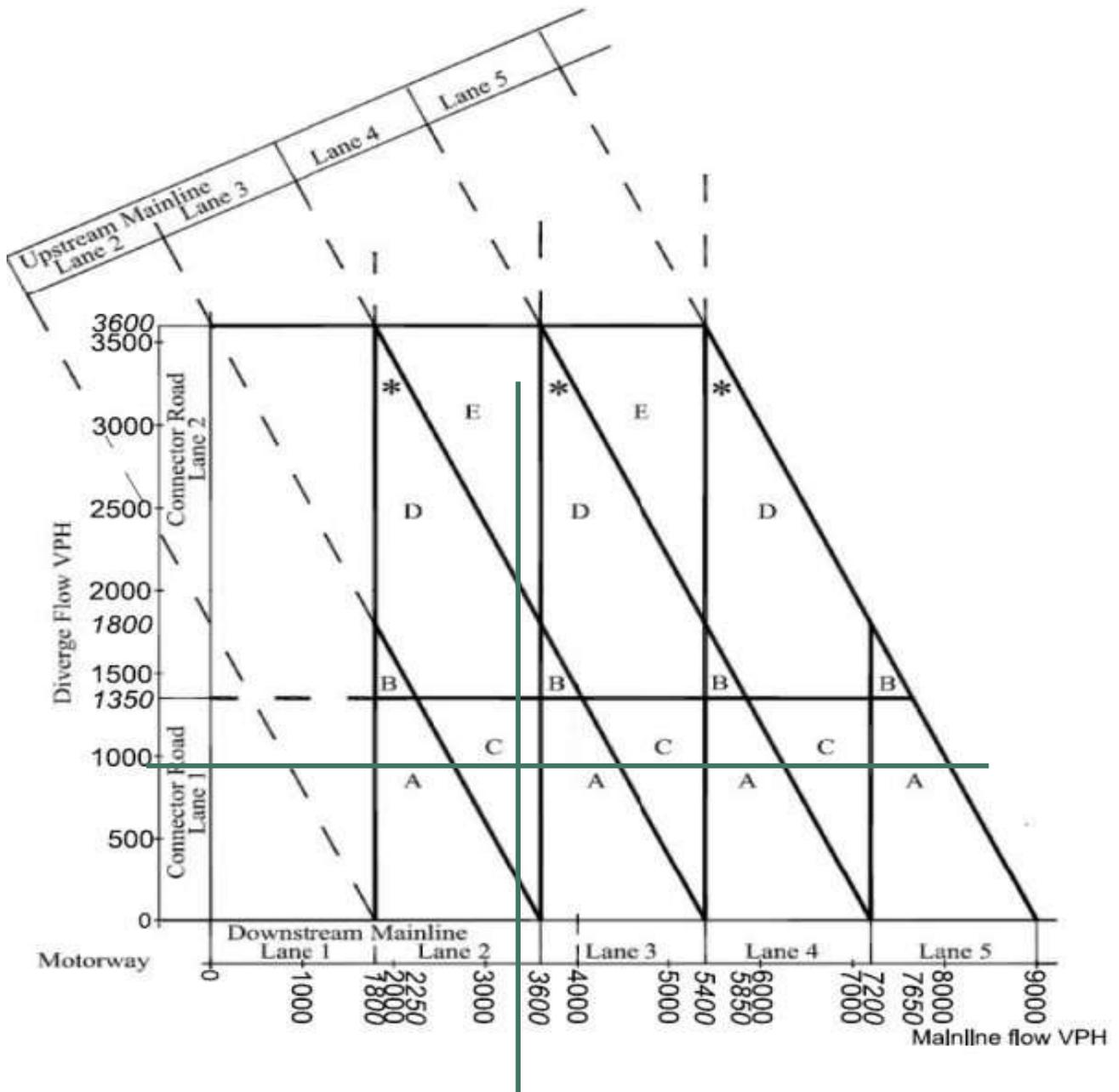
Input Flows

Upstream mainline flow:	3405	vph
Merge flow:	973	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	2
Diverge Type:	C

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2028 Do Minimum AM

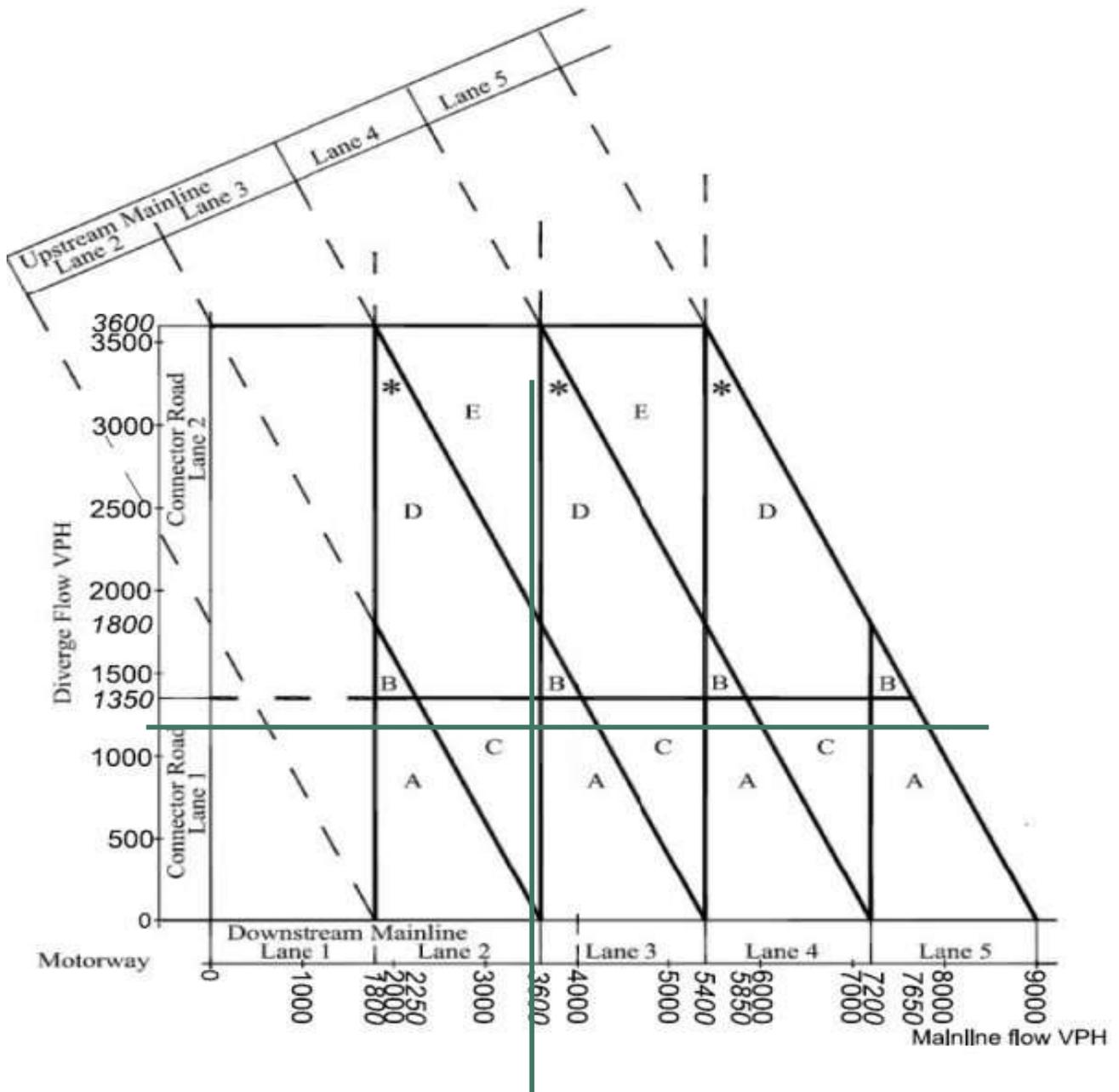
Input Flows

Upstream mainline flow:	3498	vph
Merge flow:	1132	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	2
Diverge Type:	C

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2028 With Development AM

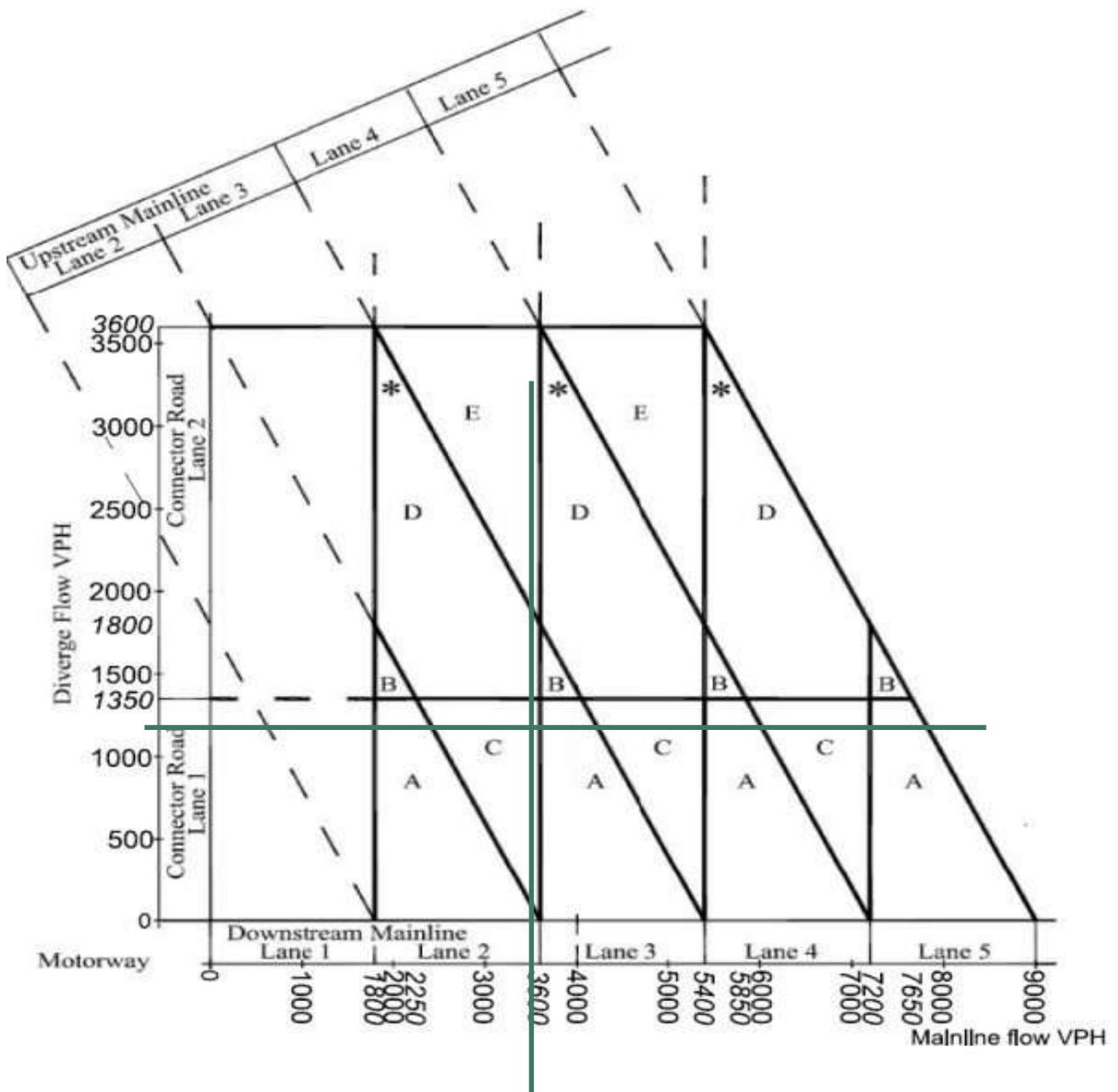
Input Flows

Upstream mainline flow:	3498	vph
Merge flow:	1148	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	3
Downstream Mainline Lanes:	2
Diverge Type:	C

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2022 Base PM

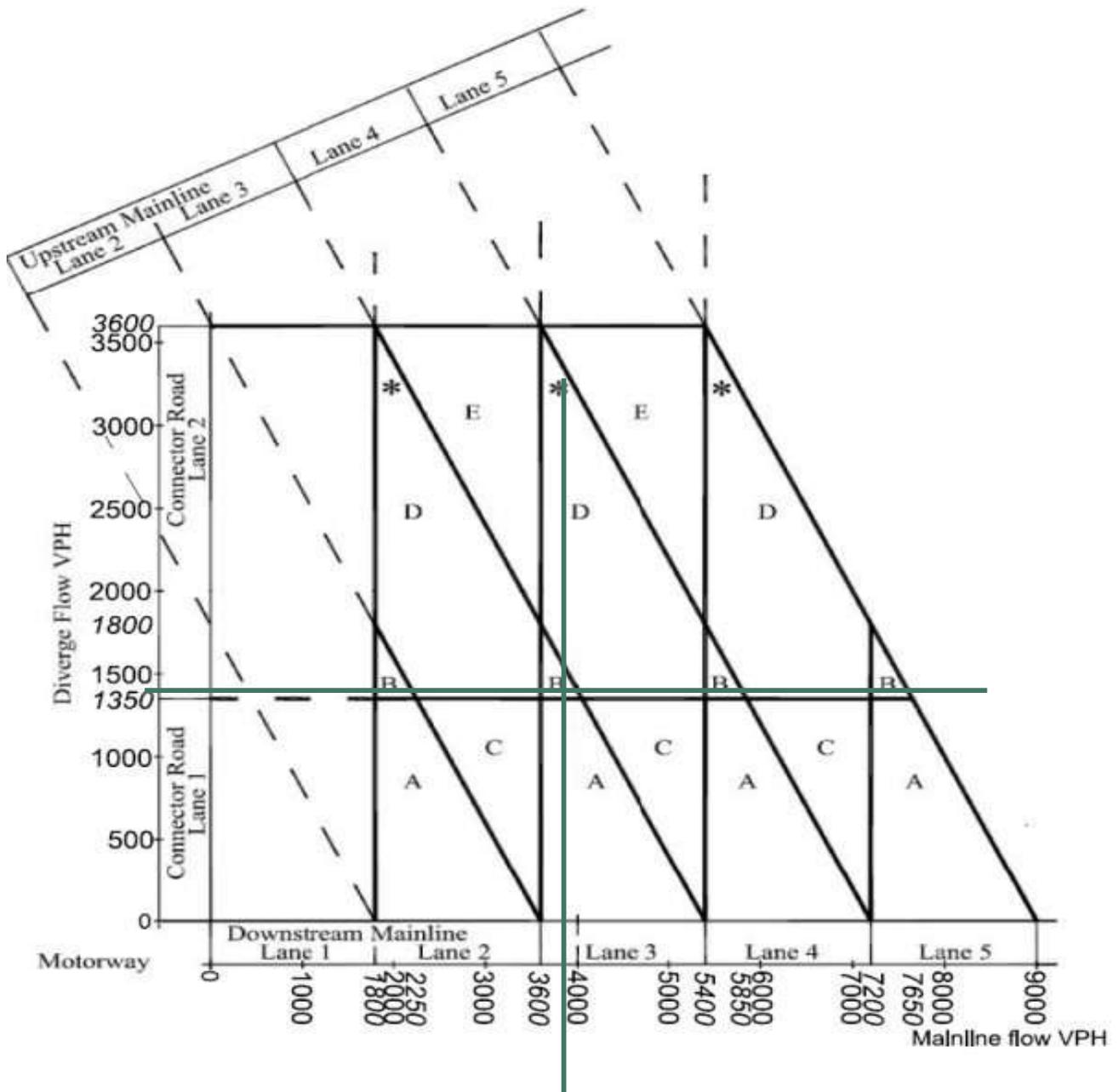
Input Flows

Upstream mainline flow:	3843	vph
Merge flow:	1362	vph

Recommended Layout

Connector Lanes:	2
Upstream mainline lanes:	3
Downstream Mainline Lanes:	3
Diverge Type:	B

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2028 Do Minimum PM

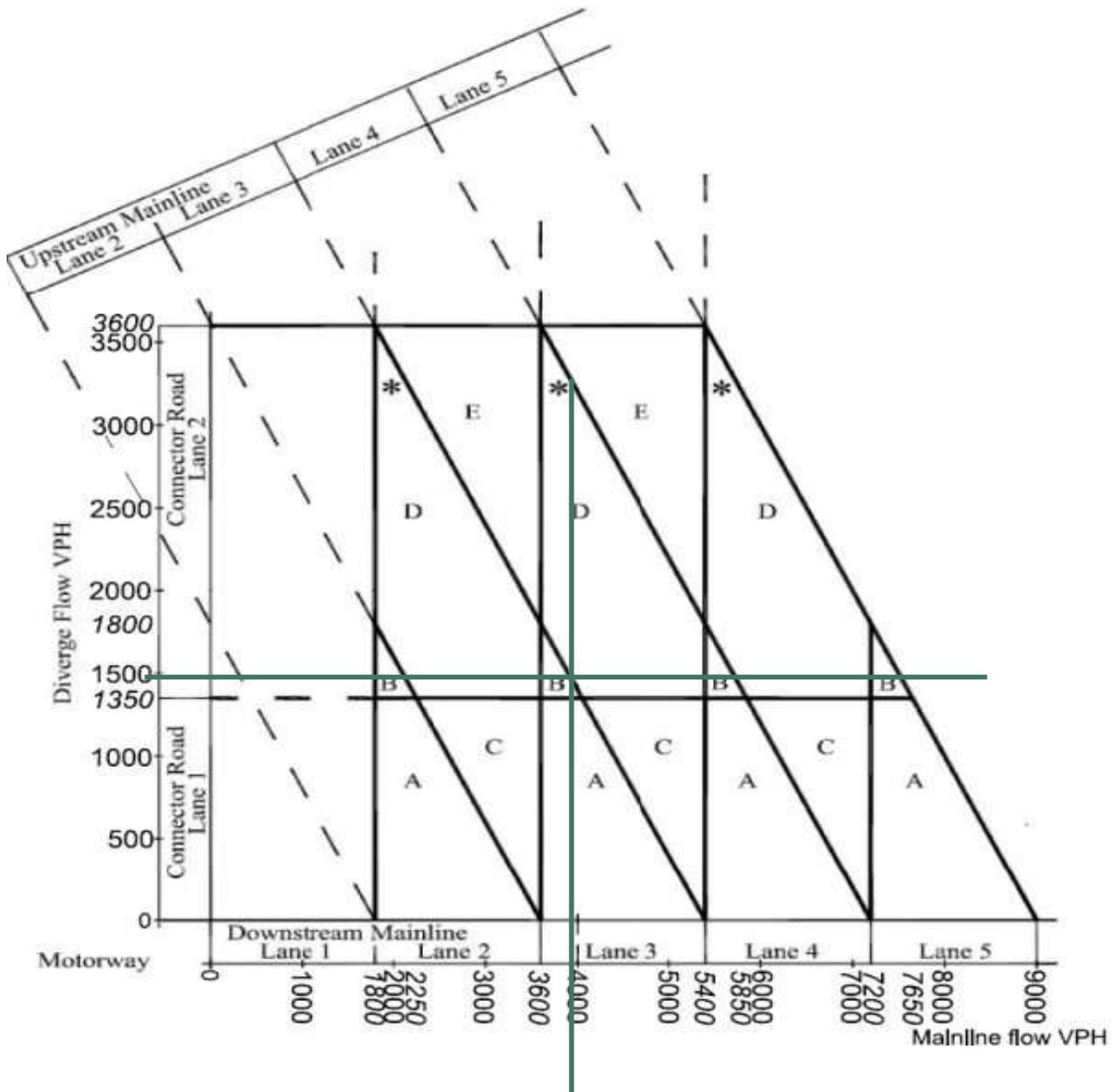
Input Flows

Upstream mainline flow:	3952	vph
Merge flow:	1493	vph

Recommended Layout

Connector Lanes:	2
Upstream mainline lanes:	4
Downstream Mainline Lanes:	3
Diverge Type:	D

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J36 | Northbound | 2028 With Development PM

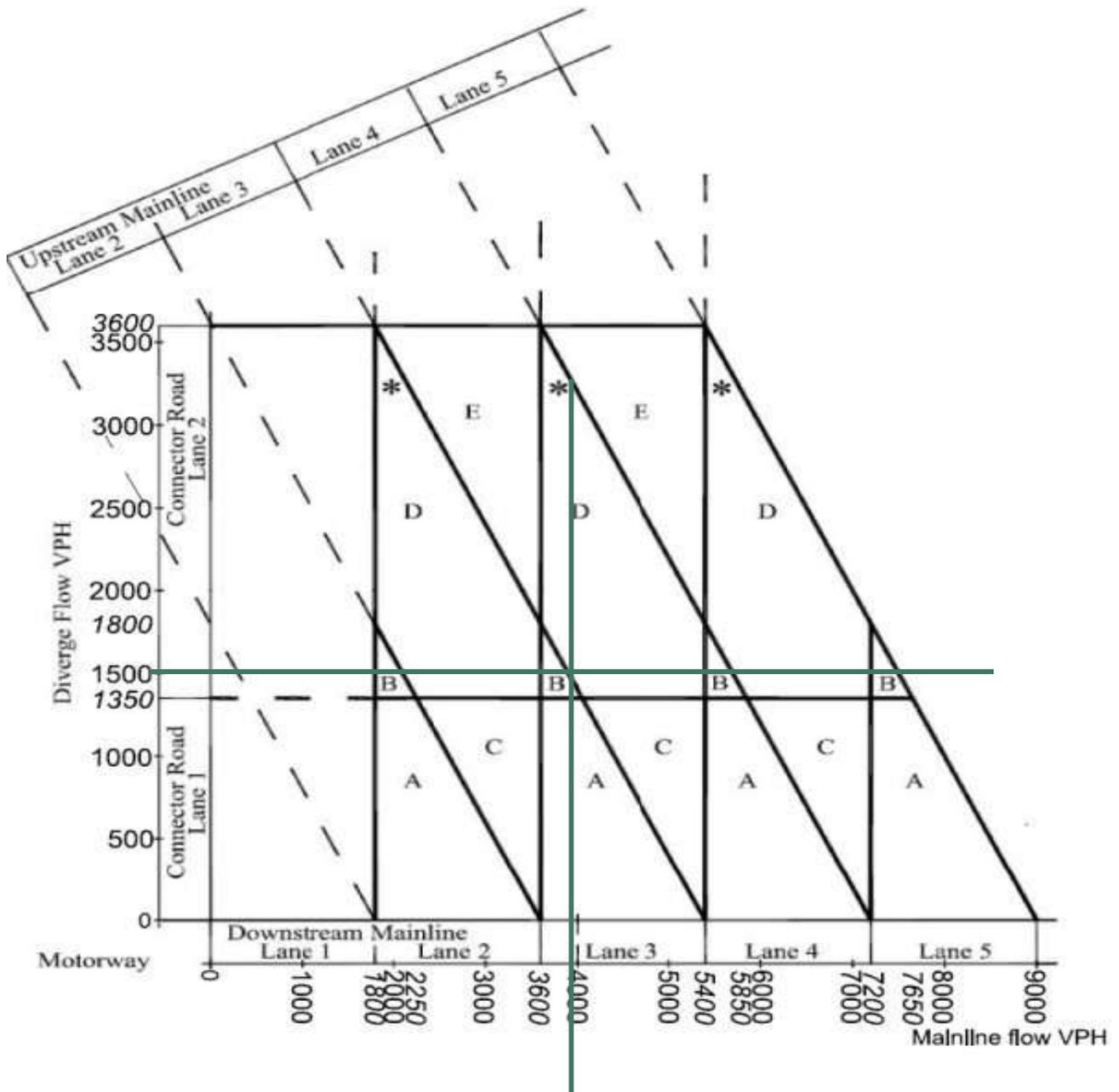
Input Flows

Upstream mainline flow:	3952	vph
Merge flow:	1503	vph

Recommended Layout

Connector Lanes:	2
Upstream mainline lanes:	4
Downstream Mainline Lanes:	3
Diverge Type:	D

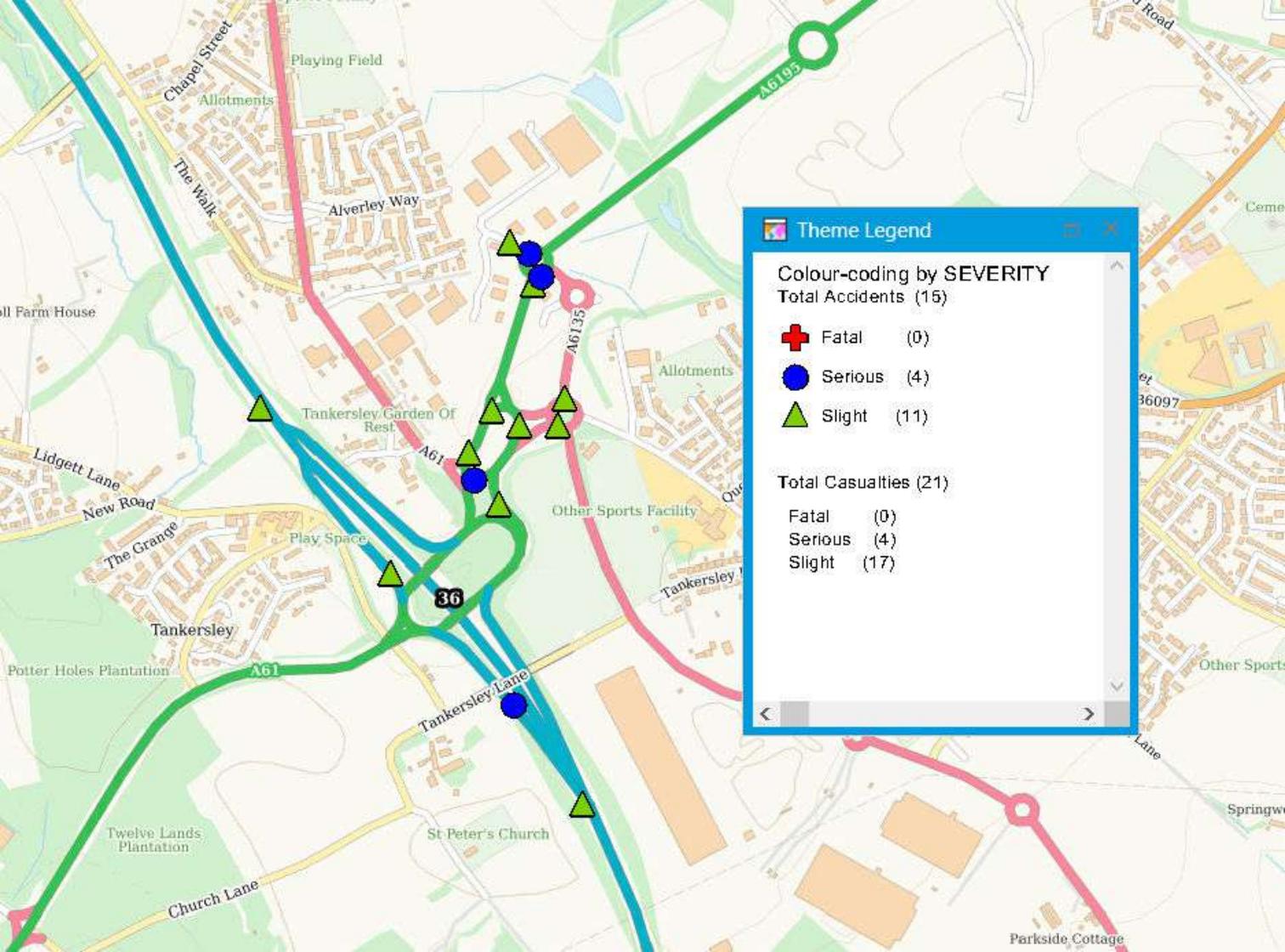
Figure 3.26b Motorway diverging diagram



Appendix F

*M1 Junction 36 / Birdwell Roundabout / Rockingham Roundabout
Accident Data*

2017-2019



Theme Legend

Colour-coding by SEVERITY
Total Accidents (15)

- Fatal (0)
- Serious (4)
- Slight (11)

Total Casualties (21)

- Fatal (0)
- Serious (4)
- Slight (17)

Details of Personal Injury Accidents for Period - **01/01/2017** to **31/12/2019** (36) months

Selection: **Notes:**

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles					Casualties				
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sev		
Road No.	Date											
2nd Road No.	Time											
Grid Ref.	D/L											
	R.S.C											
	Weather											
	Speed											
	Account of Accident											

Causation Factor:

17181437 Friday ROCKINGHAM ROUNDABOUT Veh 1 Goods > 7.5t Going ahead RH bend S to NE Dri M 33 Serious
 12/05/2017 (A6195) BARNSELY AT OR NR JN WITH KESTREL WAY
R1: A 6195 1517hrs
R2: U Daylight:street lights present
E 435,064 Dry
N 400,745 Fine without high winds
 60 mph

Causation Factor:

1st: Overloaded or poorly loaded vehicle or trailer
2nd: Road layout (eg bend, hill etc.)

Participant:

Vehicle 1
 Vehicle 1

Confidence:

Possible
 Possible

V1 HAS BEEN TRAVELLING ALONG THE DEARNE VALLEY PARKWAY WHEN IT HAS BEEN TRAVELLING AROUND ROCKINGHAM ROUNDABOUT. AS IT WAS DOING SO IT HAS OVERTURNED ON TO ITS NEAR SIDE AND COLLIDED WITH A LAMP POST.

17190689 Sunday CROSS KEYS ROUNDABOUT (A6135) Veh 1 Car Stopping E to W FSP F 13 Slight
 04/06/2017 BARNSELY AT OR NR JN WITH SHEFFIELD ROAD (A6135) Veh 1 Car Stopping E to W Dri F 27 Slight
R1: A 6135 1130hrs Veh 2 Car Going ahead E to W
R2: A 6135 Daylight:street lights present
E 435,118 Dry
N 400,410 Fine without high winds
 30 mph

Causation Factor:

1st: Failed to look properly

Participant:

Vehicle 2

Confidence:

Very Likely

V1 IN L/H LANE INTENDING TO ENTER MOTORWAY. V1 SLOWED AFTER HEARING BEEP AND V2 COLL WITH REAR OF V1. DETAILS EXCHANGED

17200109 Saturday DEARNE VALLEY PARKWAY (A6195) Veh 1 Car Going ahead NE to SW
 08/07/2017 BARNSELY Veh 2 Car Going ahead NE to SW Dri M 19 Slight
R1: A 6195 1155hrs Veh 3 Car Going ahead NE to SW
 Daylight:street lights present Veh 4 Car Going ahead NE to SW Dri F 53 Slight
E 434,993 Dry
N 400,437 Fine without high winds
 70 mph

Causation Factor:

1st: Careless/Reckless/In a hurry
2nd: Failed to look properly

Participant:

Vehicle 1
 Vehicle 1

Confidence:

Very Likely
 Very Likely

VEHICLE ONE HAS COLLIDE WITH REAR OF SLOW MOVING TRAFFIC, HITTING REAR OF VEHICLE TWO

Details of Personal Injury Accidents for Period - **01/01/2017** to **31/12/2019** (36) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age
Road No.	Date								
2nd Road No.	Time								
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								

Causation Factor:

17216358 Monday CROSS KEYS ROUNDABOUT (A6135) Veh 1 Car Going ahead W to E
 14/08/2017 BARNSELY AT OR NR JN WITH Veh 2 Car O/take m/veh o/side W to E Dri F 35 Slight
R1: A 6135 0820hrs SHEFFIELD ROAD (A6135)
R2: A 6135 Daylight:street lights present
E 435,132 Dry
N 400,461 Unknown
 30 mph

Causation Factor:

Participant:

Confidence:

Ist: Poor turn or manoeuvre Vehicle 2 Possible
 V2 TRAVELLING FROM M1 AND WAS ON THE INSIDE LANE OF ROUNDABOUT NEAR ROCKINGHAM CENTRE WHEN V1 APPROACHED FROM BEHIND IN OFFSIDE LANE AND COLLIDED WITH V2. V2 SPUN OUT OF CONTROL. V1 FTS AND WAS SEEN TO TRAVEL DOWN MOOR LANE. V2 FOLLOWED V1 AND STOPPED.
 DRIVER OF V1 STATED 'I WASN'T DRIVING AWAY, I'M LATE GETTING TO A PATIENT'. DETAILS WERE EXCHANGED BUT DRIVER OF V2 HAS NECK/SHOULDER TORN MUSCLES AND ATTENDED HOSPITAL.

17250434 Tuesday M1 NORTHBOUND BARNSELY AT Veh 1 Car Change lane to left SE to NW Dri F 44 Slight
 28/11/2017 OR NR JN WITH M1 J36 Veh 2 Car O/take m/veh o/side SE to NW
R1: M 1 1745hrs NORTHBOUND EXIT
R2: M 1 Darkness: street lighting unkno
E 435,164 Wet/Damp
N 399,678 Raining without high winds
 70 mph

Causation Factor:

Participant:

Confidence:

Ist: Failed to judge other persons path or speed Vehicle 2 Possible
 V1 WAS TRAVELLING ON THE M1 AND JUST ABOUT TO GET OFF AT JUNCTION 36 NORTHBOUND, WHILST JUST ABOUT TO GET ONTO THE SLIP ROAD V1 WAS BUMPED FROM THE REAR BY V2, BOTH VEHICLES STOPPED CARS WERE CHECKED WHILST THE DRIVER OF V1 WENT TO GET A PEN AND PAPER THE DRIVER OF V2 DROVE OFF

17256804 Monday DEARNE VALLEY PARKWAY (A6195) Veh 1 Car Going ahead N to S FSP F 46 Slight
 18/12/2017 BARNSELY AT OR NR JN WITH Veh 2 Car Going ahead N to S
R1: A 6195 1445hrs ROCKINGHAM ROUNDABOUT
R2: A 6195 Daylight:street lights present
E 435,071 Dry
N 400,681 Fine without high winds
 70 mph

Causation Factor:

Participant:

Confidence:

Ist: Careless/Reckless/In a hurry Vehicle 2 Very Likely
 VEH 1 HAD JUST EXITED ROUNDABOUT WHEN VEH 2 SWERVED TO AVOID ANOTHER CAR THEN BY DOING THAT IT HAS SWERVED AGAIN AND HIT VEH 1

Details of Personal Injury Accidents for Period - **01/01/2017 to 31/12/2019** (36) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age
Road No.	Date								
2nd Road No.	Time								
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								

Causation Factor:

18260902	Friday	M1 J36 NORTHBOUND EXIT	Veh 1	Car	Going ahead	SE to NW			
	05/01/2018	BARNSELEY	Veh 2	Car	Going ahead	SE to NW			
R1: M 1	1727hrs		Veh 3	Car	Going ahead	SE to NW			
	Darkness: no street lighting		Veh 4	Car	Going ahead	SE to NW	Dri	F	38 Serious
E 435,034	Dry		Veh 5	Goods > 7.5t	Going ahead	SE to NW			
N 399,872	Fine without high winds								
	70 mph								

Causation Factor:

Participant:

Confidence:

1st: Failed to judge other persons path or speed Vehicle 5 Possible
 VEHICLE IN HEAVY TRAFFIC SHUNTS INTO VEHICLE 4, 4 INTO 3 ETC. ALL VEHICLES TRAVELLING NORTHBOUND ON EXIT SLIP ROAD

18301351	Friday	BIRDWELL ROUNDABOUT (A61)	Veh 1	M/C > 500 cc	Going ahead	S to N		F	56 Slight
	08/06/2018	BARNSELEY AT JN WITH SHEFFIELD	Veh 1	M/C > 500 cc	Going ahead	S to N	Dri	M	61 Serious
R1: A 61	1631hrs	ROAD (A61)	Veh 2	Car	Turning right	E to N			
R2: A 61	Daylight:street lights present								
E 434,957	Dry								
N 400,308	Fine without high winds								
	60 mph								

Causation Factor:

Participant:

Confidence:

1st: Failed to judge other persons path or speed Vehicle 1 Possible
2nd: Failed to judge other persons path or speed Vehicle 2 Possible
 MOTORCYCLE, WHICH IS NEGOTIATING RECENTLY ALTERED ROUNDABOUT JUNCTION NEAR JUNCTION 36 OF M1, WENT THROUGH LIGHTS AND A COLLISION OCCURRED WITH A MOTOR CAR TRAVELLING IN LANE 2 INTENDING TO TRAVEL TOWARDS DONCASTER.

18322680	Saturday	BIRDWELL ROUNDABOUT (A6195)	Veh 1	Car	Wait go ahead held	N to S	FSP	M	27 Slight
	18/08/2018	BARNSELEY AT JN WITH SHEFFIELD	Veh 1	Car	Wait go ahead held	N to S	Dri	F	19 Slight
R1: A 6195	1530hrs	ROAD (A6135)	Veh 2	Car	Going ahead	N to S			
R2: A 6135	Daylight:street lights present								
E 435,044	Dry								
N 400,409	Fine without high winds								
	40 mph								

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly Vehicle 2 Very Likely
2nd: Following too close Vehicle 2 Possible
 V1 WAS STATIONARY AT TRAFFIC LIGHTS ON THE A6195 SHEFFIELD ROAD (BIRDWELL ROUNDABOUT) WHEN V2 HAS RAN INTO THE BACK OF IT. V2 HAS DRIVEN OFF WITHOUT STOPPING TO EXCHANGE DETAILS. V1 DRIVER AND PASSENGER HAVE BOTH SUSTAINED INJURIES.

Details of Personal Injury Accidents for Period - **01/01/2017** to **31/12/2019** (36) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age
Road No.	Date								
2nd Road No.	Time								
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								

Causation Factor:

18345556 Monday M1 NORTHBOUND BARNSLEY Veh 1 Car Going ahead SE to NW FSP F 22 Slight
 12/11/2018 Veh 2 Car Going ahead SE to NW
R1: M 1 1407hrs
 Daylight:street lights present
E 434,550 Dry
N 400,444 Fine without high winds
 70 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to look properly Vehicle 2 Possible
 V1 TRAVELLING NORTH IN LANE 3. V2 TRAVELLING NORTH IN LANE 2 APPEARS V2 MOVES INTO LANE 3 COLLIDING WITH V1 CAUSING IT TO SPIN. PASSENGER IN V1 SUFFERS WHIPLASH INJURIES

19812379 Friday M1 J36 NORTHBOUND ENTRY Veh 1 Car Going ahead SE to NW Dri F 22 Slight
 01/02/2019 BARNSLEY Veh 2 Car Going ahead SE to NW Dri M 28 Slight
R1: M 1 1350hrs
 Daylight:street lights present
E 434,799 Wet/Damp
N 400,123 Fine without high winds
 70 mph

Causation Factor:

Participant:

Confidence:

1st: Loss of control Vehicle 1 Possible
 V1 HAS SWERVED DUE TO A WHITE VAN, LOST CONTROL AND SPUN INTO V2 THAT WAS TRAVELLING DOWN ENTRY SLIP TO JOIN M1 JNC 36

19814411 Thursday SHEFFIELD ROAD (A61) BARNSLEY Veh 1 Car Going ahead N to S FSP F 26 Slight
 07/02/2019 Veh 2 Car Going ahead N to S
R1: A 61 1622hrs
 Daylight:street lights present
E 435,006 Wet/Damp
N 400,258 Fine without high winds
 40 mph

VEH 1 HAS COLLIDED INTO THE BACK OF VEH 2 ON THE APPROACH TO THE ROUNDABOUT (BIG MOTORWAY ROUNDABOUT AT BIRDWELL). DETAILS HAVE BEEN EXCHANGED AT THE SCENE, HOWEVER DRIVERS PARTNER HAS SUFFERED AN INJURY.

Details of Personal Injury Accidents for Period - **01/01/2017** to **31/12/2019** (36) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties					
			Veh No	Type	Manv	Dir	Class	Sex	Age	Sev		
Road No.	Date											
2nd Road No.	Time											
Grid Ref.	D/L											
	R.S.C											
	Weather											
	Speed											
	Account of Accident											

Causation Factor:

19860365 Monday ROCKINGHAM ROUNDABOUT Veh 1 M/C > 500 cc Going ahead NE to S Dri M 45 Serious
 22/07/2019 (A6195) BARNSELY AT OR NR JN Veh 2 M/C > 500 cc Change lane to right NE to S
R1: A 6195 1500hrs WITH DEARNE VALLEY PARKWAY
R2: A 6195 Daylight:street lights present
E 435,086 Dry
N 400,700 Fine without high winds
 40 mph

Causation Factor:

1st: Careless/Reckless/In a hurry
2nd: Failed to look properly
3rd: Failed to look properly

Participant:

Vehicle 2
 Vehicle 2
 Vehicle 1

Confidence:

Possible
 Possible

V1 TRAVELLING ALONG DEARNE VALLEY PARKWAY TOWARDS IRDWELL. V2 APPEARS TO BE ON THE SAME ROAD FROM WITNESSES TRAVELLING TOWARDS KESTREL WAY. ON THIS ROUNDABOUT THE RTC HAS OCCURED, HOWEVER, IT DOES NOT APPEAR THAT THERE HAS BEEN ANY CONTACT BETWEEN TH E TWO BIKES. FROM STATEMENTS IT WOULD APPEAR BOTH VEHICLES TRAVELLING IN SAME DIRECITON, V1 HAS SENSE THAT V2 WAS GOIGN TO CUT ACROSS HIM ON ROUNDABOUT TO TURN RIGHT SO HAS PUT THE BINKE DOWN.

19862534 Sunday BIRDWELL ROUNDABOUT (A61) Veh 1 Car Change lane to right S to NE Dri M 82 Slight
 28/07/2019 BARNSELY AT OR NR JN WITH Veh 2 Car Going ahead W to NE Dri F 33 Slight
R1: A 61 1339hrs SHEFFIELD ROAD (A61)
R2: A 61 Daylight:street lights present
E 434,947 Dry
N 400,356 Fine without high winds
 40 mph

Causation Factor:

1st: Disobeyed Give Way or Stop sign or markings

Participant:

Vehicle 1

Confidence:

Possible

V1 HAS COLLIDED WITH FRONT OFFSIDE OF V2. FROM WITNESSES AT SCENE DRIVER OF V1 HAS GONE THROUGH A RED LIGHT.

19910750 Tuesday KESTREL WAY BARNSELY Veh 1 Car Stopping NWto SE Dri M 34 Slight
 17/12/2019 Veh 2 Car Stopping NWto SE
R1: U 1817hrs
 Darkness: street lights present a
E 435,025 Wet/Damp
N 400,764 Fine without high winds
 30 mph

Causation Factor:

1st: Distraction in vehicle

Participant:

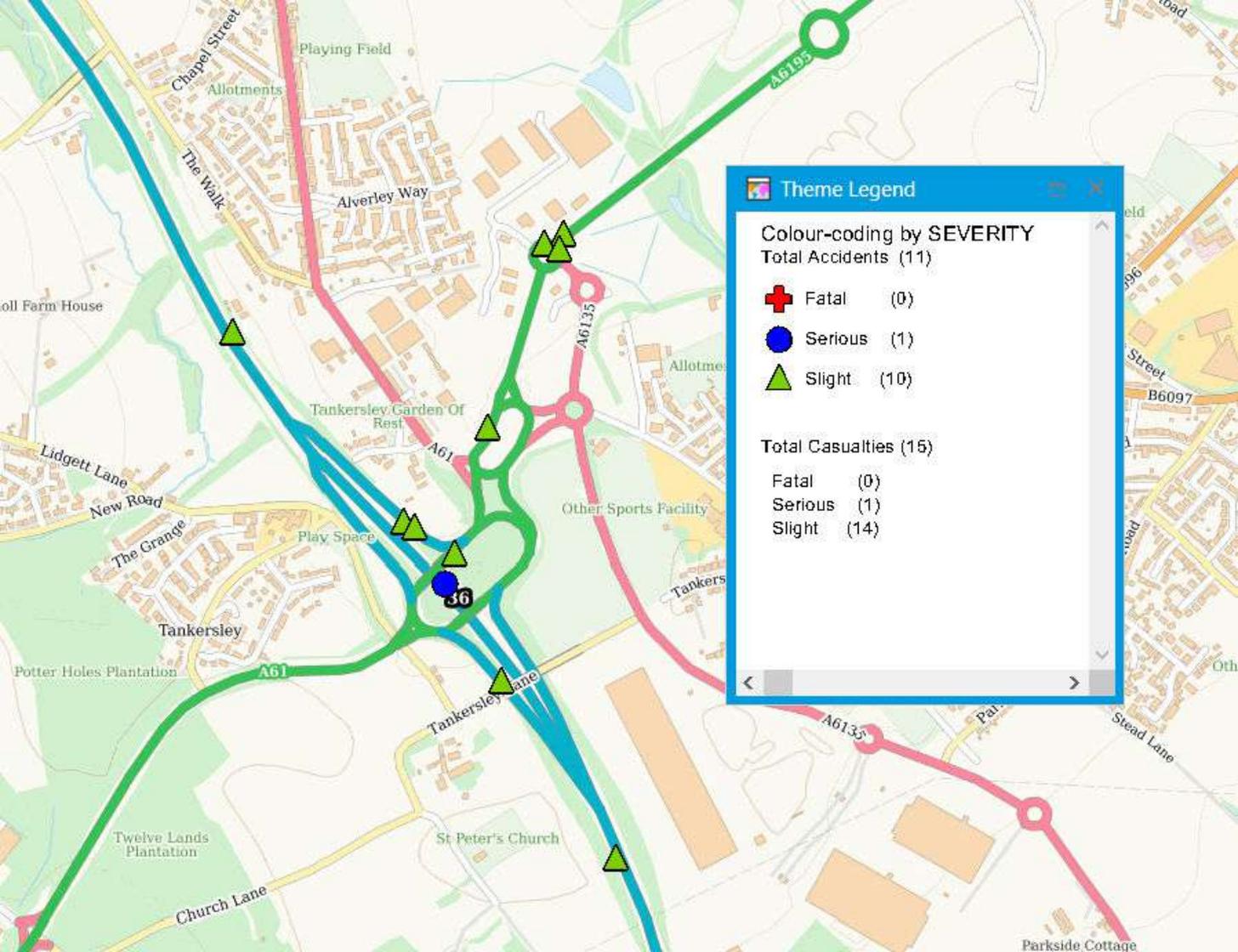
Vehicle 2

Confidence:

Very Likely

VEHICLE 1 SLOWING FOR THE ROUNDABOUT ON KESTREL WAY, BIRDWELL AND VEHICLE 2 SHUNTED THE REAR END OF VEHICLE 1 CAUSING DAMAGE TO BOTH AND CAUSING INJURY TO THE DRIVER OF VEHICLE 1.

2022-2023



Theme Legend

Colour-coding by SEVERITY

Total Accidents (11)

- Fatal (0)
- Serious (1)
- Slight (10)

Total Casualties (15)

- Fatal (0)
- Serious (1)
- Slight (14)

Details of Personal Injury Accidents for Period - **01/01/2022** to **20/02/2024** (26) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age
Road No.	Date								
2nd Road No.	Time								
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								

Causation Factor:

221127667	Saturday	JCT 36 EXIT SLIP M1 - 31 METRES FROM JUNCTION WITH A61	Veh 1	Car	Turning right	W to SW Dri	M	22	Slight
R1: A(61	01/01/2022		Veh 1	Car	Turning right	W to SW FSP	M	26	Slight
R2: M 1	0313hrs		Veh 2	Car	Turning right	W to SW FSP	M	41	Slight
E 434,903	Darkness: street lights present a		Veh 2	Car	Turning right	W to SW Dri	M	39	Slight
N 400,161	Wet/Damp		Veh 3	Car	Going ahead RH bend	SW to NE			
	Fine without high winds								
	40 mph								

Causation Factor:

Participant:

Confidence:

1st: Stolen vehicle

Vehicle 1

Very Likely

ALL VEHICLES ARE CARS WITH VEHICLE 1 BEING AN OUTSTANDING STOLEN, VEHICLE 2 A POLICE VEHICLE AND VEHICLE 3 A MEMBER OF THE PUBLIC. AT TIME STATED V1 HAS FAILED TO STOP FOR V2 IN THE WEST YORKSHIRE POLICE AREA AND HAS BEEN PURSUED AT SPEED ALONG THE M1 SOUTH INTO SOUTH YORKSHIRE POLICE AREA. V1 HAS EXITED THE MOTORWAY AT JUNCTION 36 AND APPROACHED THE AUTOMATIC TRAFFIC LIGHTS AT THE TOP OF THE SLIP ROAD. V1 HAS THEN TURNED RIGHT INTO ONCOMING TRAFFIC, BUT HAS COLLIDED WITH CENTRE OF ROUNDABOUT TO THE NEAR SIDE OF VEHICLE. V2 HAS THEN FOLLOWED V1 AND GONE TO PREVENT V1 FROM GOING AGAINST FLOW OF TRAFFIC, V1 HAS THEN SET OFF AGAIN AND COLLIDED WITH V2, CAUSING DAMAGE TO NEARSIDE FRONT OF V2 AND DAMAGE TO OFFSIDE OF V1. V1 HAS THEN MANAGED TO CONTINUE AGAINST FLOW OF TRAFFIC AND TRAVELLED WRONG WAY AROUND ROUNDABOUT IN LANE 2 OF 3. AT THE TIME V3 HAS BEEN TRAVELLING AROUND ROUNDABOUT IN LANE 2 OF 3 WHEN V1 HAS COME HEAD ON TOWARDS THEM. V1 HAS THEN CHANGED FROM LANE 2 TO 3 AND AS CHANGING LANES THEY HAV

221145582	Friday	M1 - 123 METRES FROM JUNCTION WITH A61	Veh 1	Car	Going ahead	NW to NE Dri	M	28	Slight
R1: M 1	18/02/2022		Veh 2		Change lane to left	NW to E			
	2017hrs								
E 434,806	Darkness: street lights present a								
N 400,221	Wet/Damp								
	Raining with high winds								
	70 mph								

Causation Factor:

Participant:

Confidence:

1st: Careless/Reckless/In a hurry

Vehicle 2

Possible

V1 IN MIDDLE LANE OF SB EXIT FROM M1, V2 IN LANE 3, V2 CAME ACROSS INTO V1 AND COLLIDED WITH THE OFFSIDE CAUSING DAMAGE TO OFFSIDE DOORS AND WING MIRROR. V2 FAILED TO STOP

Details of Personal Injury Accidents for Period - **01/01/2022 to 20/02/2024** (26) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age
Road No.	Date								
2nd Road No.	Time								
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								

Causation Factor:

221235802	Friday	M1 SOUTH BOUND AROUND J36, BARNSELY	Veh 1 Car	Parked	0 to 0			
R1: M 1	18/02/2022		Veh 2 Car	Going ahead	NW ^{to} SE FSP	M	20	Serious
E 434,885	1852hrs		Veh 2 Car	Going ahead	NW ^{to} SE Dri	M	20	Slight
N 400,107	Darkness: no street lighting							
	Dry							
	Fine without high winds							
	70 mph							

VEHICLE 1 HAS BEEN DRIVING ON THE M1 S/B BETWEEN JUNCTION 37 AND 36. VEHICLE 1 HAS BEEN BETWEEN THE SLIP ROADS AT JUNCTION 36 WHERE THE VEHICLE HAS BROKEN DOWN AND STOPED IN LIVE LANE 3. THE VEHICLE HAS BEEN UNLIT AND THE OCCUPANTS OF VEHICLE 1 HAVE GOT OUT OF THE VEHICLE AND GOT TO THE HARD SHOULDER. VEHICLE 2 HAS THEN COLLIDED WITH THE STATIONARY VEHICLE. OFFICERS HAD ASKED HIGHWAYS ENGLAND TO SET MESSAGE BOARDS TO MAKE ON COMING VEHICLE AWARE THAT THERE WAS A BROKEN DOWN VEHICLE BUT THIS WAS REFUSE D AS THEY STATED THEY DID NOT KNOW THE CORRECT LOCATION ALTHOUGH NUMEROUS REPORTS HAD BEEN MADE TO THE FORCE CONTROL ROOM.

221192123	Sunday	DEARNE VALLEY PARKWAY EASTBOUND (A6195), HOYLAND COMMON, BARNSELY	Veh 1 M/C Unknown	Going ahead LH bend	NE to SW	F	13	Slight
R1: A 6195	26/06/2022							
E 435,111	1441hrs							
N 400,766	Daylight:street lights present							
	Dry							
	Fine without high winds							
	60 mph							

Causation Factor:

1st:	Poor or defective road surface	Participant:	Vehicle 1	Confidence:	Very Likely
	VEHICLE 1 HAS BEEN DRIVING ALONG THE DEARNE VALLEY PARKWAY AND WHEN HE HAS LEFT THE ROUNDABOUT AND HE HAS SLID ON THE ROAD CAUSING HIM AND HIS PASSENGER TO FALL FROM THE VEHICLE.				

221197760	Saturday	M1, BARNSELY	Veh 1 Car	Going ahead	NW ^{to} SE Dri	M	28	Slight
R1: M 1	09/07/2022							
E 434,481	2251hrs							
N 400,580	Darkness: no street lighting							
	Dry							
	Fine without high winds							
	70 mph							

Causation Factor:

1st:	Fatigue	Participant:	Vehicle 1	Confidence:	Very Likely
	IT WOULD APPEAR THAT THE DRIVER OF V1 HAS FALLEN ASLEEP AT THE WHEEL COLLIDING WITH THE CENTRAL RESERVATION CAUSING DAMAGE TO THE ARMCO BARRIER. THE DRIVER WAS INTERVIEWED AT THE ROADSIDE AND FULLY ADMITTED FALLING ASLEEP AT THE WHEEL KNOWING HE WAS TIRE D. DRIVER REPORTED FOR DUE CARE AND ATTENTION				

Details of Personal Injury Accidents for Period - **01/01/2022** to **20/02/2024** (26) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age
Road No.	Date								
2nd Road No.	Time								
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								

Causation Factor:

221200574 Tuesday M1 SB, JCT 36 SLIP ROAD - 99 Veh 1 Car Stopping NW^{to} SE Dri F 50 Slight
 19/07/2022 METRES FROM JUNCTION WITH A61,
R1: M 1 1150hrs BARNSELEY
 Daylight:street lights present
E 434,828 Dry
N 400,211 Fine without high winds
 70 mph

Causation Factor:

1st: Nervous/Uncertain/Panic

Participant:

Vehicle 1

Confidence:

Very Likely

VEHICLE 1 HAS BEEN TRAVELLING UP THE SLIP ROAD FROM THE SOUTHBOUND CARRIAGEWAY OF THE M1, AT JUNCTION 36. THE DRIVER STATES SHE MISJUDGED HER SPEED AS SHE APPROACHED STANDING TRAFFIC AT THE TOP OF THE SLIP, AND SWERVED TO ENSURE SHE DIDN'T CLIP THE REAR OF THE STATIONARY VEHICLE IN FRONT (UNKNOWN VEH DETAILS). SHE HAS SWERVED TOWARD HER OFFSIDE, AND HAS COLLIDED WITH THE BARRIER AT THE TOP OF THE SLIP ROAD, DAMAGING HER FRONT END, DISLODGING THE FRONT O/S WHEEL COMPLETELY, AND DAMAGING THE BARRIER IN ITSELF. BOTH AIRBAGS DEPLOYED, AND SHE HAD CUTS AND SCRAPES.

221221309 Wednesday J36 NORTH BOUND EXIT SLIP M1 - Veh 1 Car Going ahead SE to NW
 14/09/2022 145 METRES FROM JUNCTION WITH Veh 2 Car Stopping SE to NW Dri M 47 Slight
R1: M 1 1735hrs A61, BARNSELEY Veh 3 Car Stopping SE to NW
 Daylight:street lights present
E 434,991 Dry
N 399,919 Fine without high winds
 70 mph

Causation Factor:

1st: Aggressive driving

Participant:

Vehicle 1

Confidence:

Very Likely

VEHICLE 1 HAD BEEN STOLEN PRIOR TO THE COLLISION. THE UNKNOWN OFFENDER HAS THEN DRIVEN THE VEHICLE ONTO THE M1. VEHICLE 1 HAS THEN LEFT THE MOTORWAY AT JUNCTION 36 NORTHBOUND AND IN DOING SO, COLLIDED WITH TWO VEHICLES 2 & 3 ON THE EXIT SLIP, CAUSING DAMAGE. THE UNKNOWN OFFENDER HAS THEN FLED THE SCENE ON FOOT WITHOUT EXCHANGING DETAILS. INJURY REPORTED AT THE SCENE BEING SLIGHT.

221242055 Monday Veh 1 Car Going ahead NE to SW Dri F 50 Slight
 14/11/2022 Veh 2 Goods Unknown Going ahead NW^{to} SE
R1: A 61 1344hrs
R2: A 6195 Daylight:street lights present
E 434,965 Wet/Damp
N 400,399 Raining without high winds
 40 mph

Causation Factor:

1st: Failed to judge other persons path or speed

Participant:

Vehicle 2

Confidence:

Very Likely

2nd: Failed to look properly

Vehicle 2

Very Likely

VEH1 TRAVELLING ON BIRDWELL ROUNDABOUT INTENDING TO TRAVEL TO HOYLAND COMMON. VEH 2 WAS IN THE LANE TO THE NEAR SIDE OF VEH1 INTENDED SO AS TO TRAVEL ON THE A6195 WHEN VEH 2 HAS MOVED ACROSS INTO VEH1'S LANE WITHOUT WARNING, PUSHING VEH1 INTO THE LANE TO THEIR OFFSIDE. DAMAGE CAUSED TO NEAR SIDE OF VEH1. BOTH VEHICLES REMAINED AT THE SCENE UNTIL POLICE ARRIVAL.

Details of Personal Injury Accidents for Period - 01/01/2022 to 20/02/2024 (26) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Day	Location Description	Vehicles				Casualties		
			Veh No	Type	Manv	Dir	Class	Sex	Age
Road No.	Date								
2nd Road No.	Time								
Grid Ref.	D/L								
	R.S.C								
	Weather								
	Speed								
	Account of Accident								

Causation Factor:

231265003 Wednesday M1, NORTHBOUND, BET 35A AND 36, VEH 1 Car Going ahead S to N Dri F 20 Slight
 18/01/2023 BARNSELEY VEH 2 Car Going ahead S to N
R1: M 1 1120hrs
 Daylight:street lights present
E 435,210 Dry
N 399,584 Fine without high winds
 70 mph

Causation Factor:

Participant:

Confidence:

1st: Loss of control Vehicle 1 Very Likely
 V1 MOVES FROM LANE 2 TO LANE 1, THEN CROSSES ENTIRE 3 LANES INTO CENTRAL RESERVATION. V1 THEN COLLIDES WITH V2 (WHICH IS IN LANE 2). NBC M1 J35A -J36. MINOR INJURY. SUITABLE FOR FILING.

231331337 Sunday ROCKINGHAM ROUNDABOUT VEH 1 Car Going ahead RH bend NE to NE
 16/07/2023 (A6195) NEAR JUNCTION WITH VEH 2 Car Going ahead RH bend NE to NE Dri M 32 Slight
R1: A 6195 1640hrs DEARNE VALLEY PARKWAY
R2: A 6195 Daylight:street lights present
E 435,072 Wet/Damp
N 400,746 Raining without high winds
 40 mph

Causation Factor:

Participant:

Confidence:

1st: Failed to judge other persons path or speed Vehicle 1 Possible
2nd: Failed to look properly Vehicle 1 Very Likely
 BOTH VEHICLES WERE DRIVING AROUND A ROUNDABOUT. V1 IN LANE ONE AND V2 IN LANE TWO. V1 COLLIDED IN TO THE FRONT PASSENGER CORNER OF V2 FORCING V2 OFF THE ROAD AND COLLIDING IN TO A LAMP POST. V1 THEN COLLIDED WITH A CENTRAL BARRIER. BOTH VEHICLES RE QUIRED

231391158 Thursday DEARNE VALLEY PARKWAY VEH 1 Car Change lane to right NE to SW
 14/12/2023 WESTBOUND (A6195) AT JUNCTION VEH 2 Car Going ahead NE to SW Dri F 59 Slight
R1: A 6195 1415hrs WITH ROCKINGHAM ROUNDABOUT VEH 3 Car Going ahead SW to NE
R2: A 6195 Daylight:street lights present
E 435,102 Dry
N 400,737 Fine without high winds
 70 mph

V1 HAS BEEN TRAVELLING ON THE DEARNE VALLEY PARKWAY, GENERALLY TOWARDS J36 OF M1, IN THE NEARSIDE LANE OF THE DUAL CARRIAGEWAY. V2 HAS BEEN TRAVELLING IN THE SAME DIRECTION IN LANE 2 OF THE DUAL CARRIAGEWAY. AT THE ROUNDABOUT WHERE MCDONALDS/BP IS, V1 CUTS ACROSS THE PATH OF V2 AS IF TO HEAD TOWARDS THE BP GARAGE. V2 IS STRUCK AND GOES ONTO THE OPPOSITE CARRIAGEWAY BEFORE HITTING V3, THEN SPINNING.

Appendix G

Rockingham Roundabout Junctions10 Model

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.4.1693 © 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
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Filename: 2024-06-24 Rockingham Roundabout.j10
Path: G:\Shared drives\Jobs3000\3465 Employment Site at Goldthorpe\Junction Models\M1 Junction 36
Report generation date: 25/06/2024 17:08:21

- »2024 Base Year, AM
- »2024 Base Year, PM
- »2028 Do Minimum, AM
- »2028 Do Minimum, PM
- »2028 With Development, AM
- »2028 With Development, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
2024 Base Year										
Arm 1	D1	0.3	4.08	0.21	A	D2	0.5	5.75	0.35	A
Arm 2		1.7	4.88	0.62	A		1.5	4.51	0.60	A
Arm 3		0.4	6.93	0.28	A		0.4	6.79	0.29	A
Arm 4		1.7	4.62	0.61	A		3.2	7.14	0.76	A
2028 Do Minimum										
Arm 1	D3	0.4	5.67	0.29	A	D4	1.1	10.18	0.53	B
Arm 2		4.5	10.00	0.81	A		3.4	8.05	0.77	A
Arm 3		0.9	12.17	0.47	B		0.9	11.45	0.46	B
Arm 4		4.5	9.76	0.81	A		10.0	19.76	0.92	C
2028 With Development										
Arm 1	D5	0.5	6.02	0.31	A	D6	1.2	11.03	0.55	B
Arm 2		5.3	11.36	0.84	B		4.1	9.35	0.80	A
Arm 3		1.0	13.16	0.49	B		0.9	12.72	0.48	B
Arm 4		5.5	11.61	0.84	B		13.1	25.40	0.94	D

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	
Location	
Site number	
Date	22/05/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	DESKTOP-4MHMJIMModelling
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

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 Base Year	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024 Base Year	PM	ONE HOUR	16:00	17:30	15	✓
D3	2028 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D4	2028 Do Minimum	PM	ONE HOUR	16:00	17:30	15	✓
D5	2028 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D6	2028 With Development	PM	ONE HOUR	16:00	17:30	15	✓

Analysis Set Details

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

2024 Base Year, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	4.85	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.85	A

Arms

Arms

Arm	Name	Description	No give-way line
1	Kestrel Way		
2	A6195 DVP		
3	Sheffield Road		
4	A6195 DVP		

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	3.65	7.70	25.0	20.0	60.0	26.0		
2	7.30	7.30	0.0	20.0	60.0	30.0		
3	3.00	6.75	8.0	22.0	60.0	33.0		
4	7.50	7.50	0.0	26.0	60.0	24.0		

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.602	1941
2	0.646	2212
3	0.496	1355
4	0.677	2345

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 Base Year	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	230	100.000
2		ONE HOUR	✓	1163	100.000
3		ONE HOUR	✓	193	100.000
4		ONE HOUR	✓	1182	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
	1	2	3	4
1	0	75	35	120
2	99	0	188	876
3	63	100	0	30
4	144	1000	38	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
	1	2	3	4
1	0	5	6	6
2	4	0	4	9
3	0	9	0	3
4	6	10	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.21	4.08	0.3	A	211	317
2	0.62	4.88	1.7	A	1067	1601
3	0.28	6.93	0.4	A	177	266
4	0.61	4.62	1.7	A	1085	1627

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	173	43	854	1426	0.121	173	230	0.0	0.1	3.031	A
2	876	219	145	2118	0.413	873	882	0.0	0.8	3.105	A
3	145	36	822	948	0.153	145	196	0.0	0.2	4.701	A
4	890	222	196	2212	0.402	887	770	0.0	0.7	2.952	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	207	52	1022	1325	0.156	207	275	0.1	0.2	3.399	A
2	1046	261	173	2100	0.498	1044	1055	0.8	1.1	3.671	A
3	174	43	983	868	0.200	173	234	0.2	0.3	5.439	A
4	1063	266	235	2186	0.486	1061	921	0.7	1.0	3.483	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	253	63	1250	1187	0.213	253	336	0.2	0.3	4.069	A
2	1280	320	212	2075	0.617	1278	1291	1.1	1.7	4.851	A
3	212	53	1203	759	0.280	212	287	0.3	0.4	6.905	A
4	1301	325	288	2151	0.605	1299	1127	1.0	1.6	4.590	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	253	63	1253	1186	0.214	253	337	0.3	0.3	4.076	A
2	1280	320	212	2075	0.617	1280	1294	1.7	1.7	4.883	A
3	212	53	1206	758	0.280	212	287	0.4	0.4	6.933	A
4	1301	325	288	2150	0.605	1301	1130	1.6	1.7	4.620	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	207	52	1026	1323	0.156	207	276	0.3	0.2	3.410	A
2	1046	261	174	2100	0.498	1048	1059	1.7	1.1	3.696	A
3	174	43	987	866	0.200	174	235	0.4	0.3	5.466	A
4	1063	266	236	2185	0.486	1065	925	1.7	1.0	3.509	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	173	43	858	1424	0.122	173	231	0.2	0.1	3.040	A
2	876	219	145	2118	0.413	877	886	1.1	0.8	3.127	A
3	145	36	826	946	0.154	146	197	0.3	0.2	4.725	A
4	890	222	198	2212	0.402	891	774	1.0	0.7	2.971	A

2024 Base Year, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	6.03	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.03	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 Base Year	PM	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	312	100.000
2		ONE HOUR	✓	1116	100.000
3		ONE HOUR	✓	196	100.000
4		ONE HOUR	✓	1476	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	126	49	137
	2	102	0	157	857
	3	53	109	0	34
	4	144	1299	33	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	0	4
	2	2	0	1	4
	3	2	3	0	0
	4	1	4	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.35	5.75	0.5	A	286	429
2	0.60	4.51	1.5	A	1024	1536
3	0.29	6.79	0.4	A	180	270
4	0.76	7.14	3.2	A	1354	2032

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	235	59	1081	1290	0.182	234	224	0.0	0.2	3.493	A
2	840	210	164	2106	0.399	837	1150	0.0	0.7	2.938	A
3	148	37	822	948	0.156	147	179	0.0	0.2	4.584	A
4	1111	278	198	2211	0.502	1107	771	0.0	1.0	3.377	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	280	70	1293	1162	0.241	280	268	0.2	0.3	4.185	A
2	1003	251	197	2085	0.481	1002	1377	0.7	1.0	3.446	A
3	176	44	984	867	0.203	176	215	0.2	0.3	5.310	A
4	1327	332	237	2185	0.607	1325	923	1.0	1.6	4.340	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	344	86	1581	988	0.348	343	328	0.3	0.5	5.709	A
2	1229	307	240	2057	0.597	1226	1683	1.0	1.5	4.485	A
3	216	54	1204	758	0.285	215	263	0.3	0.4	6.759	A
4	1625	406	290	2149	0.756	1619	1130	1.6	3.1	6.981	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	344	86	1586	985	0.349	343	329	0.5	0.5	5.753	A
2	1229	307	241	2056	0.598	1229	1689	1.5	1.5	4.512	A
3	216	54	1207	757	0.285	216	263	0.4	0.4	6.786	A
4	1625	406	291	2149	0.756	1625	1132	3.1	3.2	7.141	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	280	70	1301	1157	0.242	281	270	0.5	0.3	4.220	A
2	1003	251	198	2084	0.481	1006	1385	1.5	1.0	3.470	A
3	176	44	988	866	0.204	177	215	0.4	0.3	5.338	A
4	1327	332	238	2184	0.607	1333	926	3.2	1.6	4.428	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	235	59	1087	1286	0.183	235	226	0.3	0.2	3.516	A
2	840	210	165	2105	0.399	841	1157	1.0	0.7	2.956	A
3	148	37	826	946	0.156	148	180	0.3	0.2	4.608	A
4	1111	278	199	2211	0.503	1113	775	1.6	1.1	3.418	A

2028 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	9.74	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	9.74	A

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	255	100.000
2		ONE HOUR	✓	1518	100.000
3		ONE HOUR	✓	252	100.000
4		ONE HOUR	✓	1538	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	81	39	135
	2	116	0	250	1152
	3	76	143	2	31
	4	192	1305	39	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	5	6	6
	2	4	0	4	9
	3	0	9	0	3
	4	6	10	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.29	5.67	0.4	A	234	351
2	0.81	10.00	4.5	A	1393	2089
3	0.47	12.17	0.9	B	231	347
4	0.81	9.76	4.5	A	1411	2117

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	192	48	1117	1268	0.151	191	288	0.0	0.2	3.533	A
2	1143	286	163	2107	0.542	1138	1146	0.0	1.3	3.982	A
3	190	47	1053	833	0.228	188	247	0.0	0.3	5.869	A
4	1158	289	252	2175	0.532	1153	989	0.0	1.2	3.829	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	229	57	1337	1135	0.202	229	344	0.2	0.3	4.198	A
2	1365	341	195	2086	0.654	1362	1372	1.3	2.0	5.331	A
3	227	57	1260	730	0.310	226	296	0.3	0.5	7.504	A
4	1383	346	302	2141	0.646	1380	1184	1.2	2.0	5.145	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	281	70	1632	957	0.293	280	420	0.3	0.4	5.610	A
2	1671	418	238	2058	0.812	1662	1674	2.0	4.4	9.559	A
3	277	69	1539	593	0.468	276	361	0.5	0.9	11.897	B
4	1693	423	369	2096	0.808	1684	1445	2.0	4.4	9.329	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	281	70	1641	952	0.295	281	423	0.4	0.4	5.666	A
2	1671	418	239	2058	0.812	1671	1683	4.4	4.5	9.996	A
3	277	69	1547	589	0.471	277	363	0.9	0.9	12.173	B
4	1693	423	371	2094	0.809	1693	1453	4.4	4.5	9.764	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	229	57	1350	1127	0.203	230	348	0.4	0.3	4.241	A
2	1365	341	196	2085	0.654	1374	1384	4.5	2.1	5.530	A
3	227	57	1272	725	0.313	228	299	0.9	0.5	7.662	A
4	1383	346	305	2139	0.646	1392	1195	4.5	2.0	5.334	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	192	48	1126	1263	0.152	192	290	0.3	0.2	3.554	A
2	1143	286	164	2106	0.543	1146	1154	2.1	1.3	4.054	A
3	190	47	1061	830	0.229	190	249	0.5	0.3	5.939	A
4	1158	289	255	2173	0.533	1161	996	2.0	1.3	3.897	A

2028 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	13.90	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	13.90	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)	Run automatically
D4	2028 Do Minimum	PM	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	375	100.000
2		ONE HOUR	✓	1416	100.000
3		ONE HOUR	✓	246	100.000
4		ONE HOUR	✓	1752	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	141	59	175
	2	108	0	193	1115
	3	56	156	0	34
	4	148	1569	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	0	4
	2	2	0	1	4
	3	2	3	0	0
	4	1	4	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.53	10.18	1.1	B	344	516
2	0.77	8.05	3.4	A	1299	1949
3	0.46	11.45	0.9	B	226	339
4	0.92	19.76	10.0	C	1608	2411

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	282	71	1319	1146	0.246	281	234	0.0	0.3	4.262	A
2	1066	267	202	2082	0.512	1062	1398	0.0	1.1	3.636	A
3	185	46	1048	836	0.222	184	215	0.0	0.3	5.645	A
4	1319	330	240	2183	0.604	1313	993	0.0	1.6	4.259	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	337	84	1577	990	0.340	336	280	0.3	0.5	5.638	A
2	1273	318	241	2056	0.619	1271	1673	1.1	1.7	4.726	A
3	221	55	1254	733	0.302	221	257	0.3	0.4	7.176	A
4	1575	394	287	2151	0.732	1570	1188	1.6	2.8	6.374	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	413	103	1913	788	0.524	411	340	0.5	1.1	9.724	A
2	1559	390	294	2022	0.771	1552	2030	1.7	3.4	7.816	A
3	271	68	1532	596	0.455	269	314	0.4	0.8	11.233	B
4	1929	482	350	2108	0.915	1903	1451	2.8	9.1	16.516	C

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	413	103	1935	775	0.533	413	343	1.1	1.1	10.179	B
2	1559	390	296	2021	0.772	1559	2051	3.4	3.4	8.048	A
3	271	68	1539	592	0.457	271	316	0.8	0.9	11.451	B
4	1929	482	352	2107	0.916	1926	1457	9.1	10.0	19.762	C

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	337	84	1609	971	0.347	340	284	1.1	0.6	5.866	A
2	1273	318	244	2054	0.620	1280	1705	3.4	1.7	4.850	A
3	221	55	1264	729	0.303	223	260	0.9	0.5	7.302	A
4	1575	394	290	2149	0.733	1603	1197	10.0	2.9	7.176	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	282	71	1330	1139	0.248	283	236	0.6	0.3	4.317	A
2	1066	267	203	2081	0.512	1068	1410	1.7	1.1	3.686	A
3	185	46	1055	832	0.223	186	217	0.5	0.3	5.704	A
4	1319	330	242	2182	0.605	1324	999	2.9	1.6	4.380	A

2028 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	11.22	B

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	11.22	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)	Run automatically
D5	2028 With Development	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	255	100.000
2		ONE HOUR	✓	1561	100.000
3		ONE HOUR	✓	252	100.000
4		ONE HOUR	✓	1597	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	81	39	135
	2	116	0	250	1195
	3	76	143	2	31
	4	192	1364	39	2

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	5	6	6
	2	4	0	4	9
	3	0	9	0	3
	4	6	10	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.31	6.02	0.5	A	234	351
2	0.84	11.36	5.3	B	1432	2149
3	0.49	13.16	1.0	B	231	347
4	0.84	11.61	5.5	B	1465	2198

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	192	48	1161	1241	0.155	191	288	0.0	0.2	3.622	A
2	1175	294	163	2107	0.558	1170	1190	0.0	1.3	4.119	A
3	190	47	1085	817	0.232	188	247	0.0	0.3	6.016	A
4	1202	301	252	2175	0.553	1197	1021	0.0	1.3	4.001	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	229	57	1390	1103	0.208	229	344	0.2	0.3	4.351	A
2	1403	351	195	2086	0.673	1400	1424	1.3	2.2	5.628	A
3	227	57	1299	711	0.318	226	296	0.3	0.5	7.796	A
4	1436	359	302	2141	0.671	1432	1223	1.3	2.2	5.523	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	281	70	1695	920	0.305	280	420	0.3	0.5	5.939	A
2	1719	430	238	2058	0.835	1707	1736	2.2	5.1	10.706	B
3	277	69	1584	570	0.487	276	361	0.5	1.0	12.788	B
4	1758	440	368	2096	0.839	1746	1491	2.2	5.3	10.865	B

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	281	70	1706	913	0.307	281	423	0.5	0.5	6.015	A
2	1719	430	239	2058	0.835	1718	1748	5.1	5.3	11.362	B
3	277	69	1594	565	0.491	277	363	1.0	1.0	13.159	B
4	1758	440	371	2094	0.840	1758	1500	5.3	5.5	11.606	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	229	57	1406	1094	0.210	230	348	0.5	0.3	4.407	A
2	1403	351	196	2085	0.673	1415	1440	5.3	2.3	5.890	A
3	227	57	1312	705	0.321	229	299	1.0	0.5	7.992	A
4	1436	359	306	2138	0.671	1449	1235	5.5	2.3	5.801	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	192	48	1171	1236	0.155	192	290	0.3	0.2	3.649	A
2	1175	294	164	2106	0.558	1179	1199	2.3	1.4	4.199	A
3	190	47	1093	813	0.233	190	249	0.5	0.3	6.092	A
4	1202	301	255	2173	0.553	1206	1029	2.3	1.4	4.080	A

2028 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4	17.13	C

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	17.13	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)	Run automatically
D6	2028 With Development	PM	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1		ONE HOUR	✓	375	100.000
2		ONE HOUR	✓	1475	100.000
3		ONE HOUR	✓	246	100.000
4		ONE HOUR	✓	1797	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1	2	3	4
From	1	0	141	59	175
	2	108	0	193	1174
	3	56	156	0	34
	4	148	1614	35	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1	2	3	4
From	1	0	2	0	4
	2	2	0	1	4
	3	2	3	0	0
	4	1	4	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	0.55	11.03	1.2	B	344	516
2	0.80	9.35	4.1	A	1353	2030
3	0.48	12.72	0.9	B	226	339
4	0.94	25.40	13.1	D	1649	2473

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	282	71	1352	1126	0.251	281	234	0.0	0.3	4.362	A
2	1110	278	202	2082	0.533	1106	1431	0.0	1.2	3.797	A
3	185	46	1092	814	0.228	184	215	0.0	0.3	5.839	A
4	1353	338	240	2183	0.620	1346	1037	0.0	1.7	4.434	A

16:15 - 16:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	337	84	1617	966	0.349	336	280	0.3	0.5	5.854	A
2	1326	331	241	2056	0.645	1323	1712	1.2	1.9	5.062	A
3	221	55	1307	707	0.313	221	257	0.3	0.5	7.559	A
4	1615	404	287	2151	0.751	1610	1241	1.7	3.0	6.831	A

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	413	103	1955	763	0.541	410	340	0.5	1.2	10.400	B
2	1624	406	294	2022	0.803	1615	2072	1.9	4.0	8.967	A
3	271	68	1595	564	0.480	269	314	0.5	0.9	12.397	B
4	1979	495	350	2108	0.938	1945	1514	3.0	11.5	19.705	C

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	413	103	1981	747	0.553	413	343	1.2	1.2	11.028	B
2	1624	406	296	2021	0.804	1624	2098	4.0	4.1	9.349	A
3	271	68	1604	560	0.483	271	316	0.9	0.9	12.719	B
4	1979	495	352	2107	0.939	1972	1522	11.5	13.1	25.403	D

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	337	84	1660	941	0.358	340	285	1.2	0.6	6.172	A
2	1326	331	244	2054	0.646	1335	1756	4.1	1.9	5.238	A
3	221	55	1319	702	0.315	223	260	0.9	0.5	7.729	A
4	1615	404	290	2149	0.752	1655	1252	13.1	3.2	8.129	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1	282	71	1365	1118	0.252	283	236	0.6	0.3	4.428	A
2	1110	278	203	2081	0.534	1113	1445	1.9	1.2	3.861	A
3	185	46	1100	810	0.229	186	217	0.5	0.3	5.908	A
4	1353	338	242	2182	0.620	1359	1044	3.2	1.7	4.571	A

Appendix H

A1(M) Junction 37 Junctions10 Model

Junctions 10
ARCADY 10 - Roundabout Module
Version: 10.0.4.1693 © Copyright TRL Software Limited, 2021
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Filename: 2024-05-22_A1(M) Junction 37.j10
Path: G:\Shared drives\Jobs3000\3465 Employment Site at Goldthorpe\Junction Models\A1(M) Junction 37
Report generation date: 25/06/2024 12:06:16

- »Existing Layout - 2022 Base, AM
- »Existing Layout - 2022 Base, PM
- »Existing Layout - 2028 Do Minimum, AM
- »Existing Layout - 2028 Do Minimum, PM
- »Existing Layout - 2028 With Development, AM
- »Existing Layout - 2028 With Development, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	RFC	Junction Delay (s)	Junction LOS	Queue (PCU)	RFC	Junction Delay (s)	Junction LOS
Existing Layout - 2022 Base								
1 - A1(M) North	0.4	0.25	6.12	A	0.5	0.34	4.54	A
2 - A635 (East)	1.8	0.63			1.1	0.50		
3 - A1(M) South	0.7	0.40			1.0	0.49		
4 - A635 (West)	2.3	0.68			1.2	0.52		
Existing Layout - 2028 Do Minimum								
1 - A1(M) North	0.5	0.29	7.86	A	0.6	0.37	5.32	A
2 - A635 (East)	2.4	0.69			1.3	0.56		
3 - A1(M) South	0.9	0.44			1.4	0.57		
4 - A635 (West)	3.5	0.76			1.5	0.58		
Existing Layout - 2028 With Development								
1 - A1(M) North	0.5	0.31	8.82	A	0.7	0.40	5.85	A
2 - A635 (East)	2.7	0.72			1.5	0.59		
3 - A1(M) South	1.0	0.47			1.5	0.59		
4 - A635 (West)	4.1	0.79			1.7	0.62		

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Junction LOS and Junction Delay are demand-weighted averages.

File summary

File Description

Title	A1(M) Junction 37
Location	
Site number	
Date	05/05/2023
Version	
Status	Existing
Identifier	
Client	
Jobnumber	
Enumerator	Fore Consulting Limited
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

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	AM	ONE HOUR	07:00	08:30	15	✓
D2	2022 Base	PM	ONE HOUR	16:30	18:00	15	✓
D3	2028 Do Minimum	AM	ONE HOUR	07:00	08:30	15	✓
D4	2028 Do Minimum	PM	ONE HOUR	16:30	18:00	15	✓
D5	2028 With Development	AM	ONE HOUR	07:00	08:30	15	✓
D6	2028 With Development	PM	ONE HOUR	16:30	18:00	15	✓

Analysis Set Details

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

Existing Layout - 2022 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout		1, 2, 3, 4	6.12	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	6.12	A

Arms

Arms

Arm	Name	Description	No give-way line
1	A1(M) North		
2	A635 (East)		
3	A1(M) South		
4	A635 (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 - A1(M) North	6.00	6.30	15.9	25.2	74.9	11.4		
2 - A635 (East)	3.60	5.20	22.0	14.7	74.9	27.6		
3 - A1(M) South	6.20	6.75	8.6	22.0	75.8	14.7		
4 - A635 (West)	3.60	5.20	12.5	24.3	76.6	19.7		

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - A1(M) North	1198	✓	75.77
2 - A635 (East)	878	✓	27.69
3 - A1(M) South	839	✓	77.43
4 - A635 (West)	471	✓	30.67

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - A1(M) North	0.934	2473
2 - A635 (East)	0.811	2074
3 - A1(M) South	1.022	2640
4 - A635 (West)	0.904	2190

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	AM	ONE HOUR	07:00	08:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A1(M) North		ONE HOUR	✓	306	100.000
2 - A635 (East)		ONE HOUR	✓	775	100.000
3 - A1(M) South		ONE HOUR	✓	643	100.000
4 - A635 (West)		ONE HOUR	✓	1084	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
	1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)	
From	1 - A1(M) North	0	68	0	238
	2 - A635 (East)	213	0	251	311
	3 - A1(M) South	2	213	0	428
	4 - A635 (West)	209	316	559	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
	1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)	
From	1 - A1(M) North	0	11	0	18
	2 - A635 (East)	9	0	5	6
	3 - A1(M) South	0	4	0	19
	4 - A635 (West)	24	5	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1(M) North	0.25	4.12	0.4	A	281	421
2 - A635 (East)	0.63	7.53	1.8	A	711	1067
3 - A1(M) South	0.40	3.80	0.7	A	590	885
4 - A635 (West)	0.68	7.05	2.3	A	995	1492

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	230	58	816	1711	0.135	230	318	0.0	0.2	2.827	A
2 - A635 (East)	583	146	598	1589	0.367	581	448	0.0	0.6	3.792	A
3 - A1(M) South	484	121	571	2057	0.235	483	607	0.0	0.3	2.594	A
4 - A635 (West)	816	204	321	1900	0.430	813	733	0.0	0.8	3.695	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	275	69	977	1561	0.176	275	381	0.2	0.2	3.258	A
2 - A635 (East)	697	174	715	1494	0.466	695	536	0.6	0.9	4.795	A
3 - A1(M) South	578	145	684	1942	0.298	578	727	0.3	0.5	2.996	A
4 - A635 (West)	974	244	384	1843	0.529	973	877	0.8	1.2	4.622	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	337	84	1194	1357	0.248	336	465	0.2	0.4	4.102	A
2 - A635 (East)	853	213	875	1364	0.625	850	656	0.9	1.7	7.405	A
3 - A1(M) South	708	177	836	1786	0.396	707	889	0.5	0.7	3.784	A
4 - A635 (West)	1194	298	470	1765	0.676	1189	1073	1.2	2.3	6.944	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	337	84	1198	1354	0.249	337	467	0.4	0.4	4.118	A
2 - A635 (East)	853	213	877	1362	0.626	853	657	1.7	1.8	7.525	A
3 - A1(M) South	708	177	839	1783	0.397	708	892	0.7	0.7	3.799	A
4 - A635 (West)	1194	298	471	1764	0.676	1193	1076	2.3	2.3	7.054	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	275	69	982	1556	0.177	276	383	0.4	0.3	3.275	A
2 - A635 (East)	697	174	719	1491	0.467	700	538	1.8	0.9	4.868	A
3 - A1(M) South	578	145	688	1938	0.298	579	731	0.7	0.5	3.009	A
4 - A635 (West)	974	244	386	1841	0.529	979	881	2.3	1.3	4.694	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	230	58	821	1706	0.135	231	320	0.3	0.2	2.840	A
2 - A635 (East)	583	146	601	1587	0.368	585	450	0.9	0.6	3.830	A
3 - A1(M) South	484	121	575	2053	0.236	485	611	0.5	0.4	2.605	A
4 - A635 (West)	816	204	323	1898	0.430	818	737	1.3	0.8	3.732	A

Existing Layout - 2022 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout		1, 2, 3, 4	4.54	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	4.54	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - A1(M) North	1045	✓	75.77
2 - A635 (East)	774	✓	27.69
3 - A1(M) South	858	✓	77.43
4 - A635 (West)	495	✓	30.67

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A1(M) North		ONE HOUR	✓	456	100.000
2 - A635 (East)		ONE HOUR	✓	667	100.000
3 - A1(M) South		ONE HOUR	✓	791	100.000
4 - A635 (West)		ONE HOUR	✓	826	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
From	1 - A1(M) North	0	142	0	314
	2 - A635 (East)	158	0	202	307
	3 - A1(M) South	3	289	0	499
	4 - A635 (West)	166	271	389	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
From	1 - A1(M) North	0	5	0	9
	2 - A635 (East)	3	0	6	3
	3 - A1(M) South	50	5	0	9
	4 - A635 (West)	7	2	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1(M) North	0.34	3.89	0.5	A	418	628
2 - A635 (East)	0.50	5.18	1.1	A	612	918
3 - A1(M) South	0.49	4.34	1.0	A	726	1089
4 - A635 (West)	0.52	4.59	1.2	A	758	1137

Main Results for each time segment
16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	343	86	712	1820	0.189	342	245	0.0	0.2	2.623	A
2 - A635 (East)	502	126	528	1661	0.302	500	527	0.0	0.4	3.219	A
3 - A1(M) South	596	149	585	2041	0.292	594	443	0.0	0.4	2.672	A
4 - A635 (West)	622	155	338	1881	0.331	620	841	0.0	0.5	3.014	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	410	102	852	1685	0.243	410	294	0.2	0.3	3.041	A
2 - A635 (East)	600	150	631	1575	0.381	599	630	0.4	0.6	3.831	A
3 - A1(M) South	711	178	700	1924	0.370	710	531	0.4	0.6	3.190	A
4 - A635 (West)	743	186	404	1821	0.408	742	1006	0.5	0.7	3.526	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	502	126	1043	1500	0.335	501	359	0.3	0.5	3.882	A
2 - A635 (East)	734	184	773	1458	0.504	733	772	0.6	1.0	5.148	A
3 - A1(M) South	871	218	856	1765	0.493	869	649	0.6	1.0	4.317	A
4 - A635 (West)	909	227	494	1740	0.523	908	1231	0.7	1.1	4.566	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	502	126	1045	1498	0.335	502	360	0.5	0.5	3.892	A
2 - A635 (East)	734	184	774	1456	0.504	734	773	1.0	1.1	5.178	A
3 - A1(M) South	871	218	858	1763	0.494	871	651	1.0	1.0	4.341	A
4 - A635 (West)	909	227	495	1739	0.523	909	1233	1.1	1.2	4.589	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	410	102	855	1682	0.244	411	295	0.5	0.3	3.054	A
2 - A635 (East)	600	150	633	1573	0.381	601	632	1.1	0.6	3.854	A
3 - A1(M) South	711	178	702	1922	0.370	713	533	1.0	0.6	3.208	A
4 - A635 (West)	743	186	406	1820	0.408	744	1009	1.2	0.7	3.544	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	343	86	715	1817	0.189	344	247	0.3	0.3	2.634	A
2 - A635 (East)	502	126	530	1659	0.303	503	529	0.6	0.5	3.239	A
3 - A1(M) South	596	149	587	2038	0.292	596	446	0.6	0.4	2.689	A
4 - A635 (West)	622	155	339	1879	0.331	623	844	0.7	0.5	3.033	A

Existing Layout - 2028 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout		1, 2, 3, 4	7.86	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	7.86	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - A1(M) North	1198	✓	75.77
2 - A635 (East)	878	✓	27.69
3 - A1(M) South	839	✓	77.43
4 - A635 (West)	471	✓	30.67

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2028 Do Minimum	AM	ONE HOUR	07:00	08:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A1(M) North		ONE HOUR	✓	321	100.000
2 - A635 (East)		ONE HOUR	✓	808	100.000
3 - A1(M) South		ONE HOUR	✓	690	100.000
4 - A635 (West)		ONE HOUR	✓	1217	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
From	1 - A1(M) North	0	69	0	252
	2 - A635 (East)	218	0	257	333
	3 - A1(M) South	2	217	0	471
	4 - A635 (West)	227	356	634	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
From	1 - A1(M) North	0	11	0	17
	2 - A635 (East)	9	0	5	6
	3 - A1(M) South	0	4	0	17
	4 - A635 (West)	22	4	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1(M) North	0.29	4.74	0.5	A	295	442
2 - A635 (East)	0.69	9.73	2.4	A	741	1112
3 - A1(M) South	0.44	4.14	0.9	A	633	950
4 - A635 (West)	0.76	9.56	3.5	A	1117	1675

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	242	60	905	1628	0.148	241	335	0.0	0.2	3.001	A
2 - A635 (East)	608	152	664	1535	0.396	606	481	0.0	0.7	4.110	A
3 - A1(M) South	519	130	602	2025	0.256	518	668	0.0	0.4	2.685	A
4 - A635 (West)	916	229	328	1894	0.484	912	792	0.0	1.0	4.041	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	289	72	1083	1461	0.197	288	401	0.2	0.3	3.549	A
2 - A635 (East)	726	182	795	1429	0.508	725	576	0.7	1.1	5.429	A
3 - A1(M) South	620	155	721	1904	0.326	620	799	0.4	0.5	3.151	A
4 - A635 (West)	1094	274	392	1836	0.596	1092	948	1.0	1.6	5.338	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	353	88	1323	1237	0.286	353	489	0.3	0.5	4.703	A
2 - A635 (East)	890	222	971	1286	0.692	885	704	1.1	2.3	9.430	A
3 - A1(M) South	760	190	880	1741	0.436	758	976	0.5	0.9	4.117	A
4 - A635 (West)	1340	335	479	1757	0.763	1333	1159	1.6	3.4	9.238	A

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	353	88	1329	1232	0.287	353	492	0.5	0.5	4.740	A
2 - A635 (East)	890	222	975	1283	0.693	889	707	2.3	2.4	9.726	A
3 - A1(M) South	760	190	884	1737	0.437	760	981	0.9	0.9	4.143	A
4 - A635 (West)	1340	335	481	1755	0.763	1340	1163	3.4	3.5	9.564	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	289	72	1091	1453	0.199	289	405	0.5	0.3	3.580	A
2 - A635 (East)	726	182	801	1424	0.510	731	580	2.4	1.1	5.567	A
3 - A1(M) South	620	155	726	1899	0.327	622	806	0.9	0.5	3.173	A
4 - A635 (West)	1094	274	395	1834	0.597	1101	953	3.5	1.7	5.496	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	242	60	911	1622	0.149	242	337	0.3	0.2	3.017	A
2 - A635 (East)	608	152	669	1532	0.397	610	484	1.1	0.7	4.165	A
3 - A1(M) South	519	130	606	2021	0.257	520	673	0.5	0.4	2.698	A
4 - A635 (West)	916	229	330	1892	0.484	919	796	1.7	1.0	4.102	A

Existing Layout - 2028 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout		1, 2, 3, 4	5.32	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.32	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - A1(M) North	1045	✓	75.77
2 - A635 (East)	774	✓	27.69
3 - A1(M) South	858	✓	77.43
4 - A635 (West)	495	✓	30.67

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2028 Do Minimum	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A1(M) North		ONE HOUR	✓	480	100.000
2 - A635 (East)		ONE HOUR	✓	715	100.000
3 - A1(M) South		ONE HOUR	✓	869	100.000
4 - A635 (West)		ONE HOUR	✓	913	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
From	1 - A1(M) North	0	146	0	334
	2 - A635 (East)	162	0	207	346
	3 - A1(M) South	3	296	0	570
	4 - A635 (West)	179	297	437	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
From	1 - A1(M) North	0	5	0	8
	2 - A635 (East)	3	0	6	2
	3 - A1(M) South	50	5	0	8
	4 - A635 (West)	7	2	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1(M) North	0.37	4.36	0.6	A	440	661
2 - A635 (East)	0.56	6.13	1.3	A	656	984
3 - A1(M) South	0.57	5.24	1.4	A	797	1196
4 - A635 (West)	0.58	5.27	1.5	A	838	1257

Main Results for each time segment

16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	361	90	773	1761	0.205	360	258	0.0	0.3	2.747	A
2 - A635 (East)	538	135	579	1619	0.333	536	555	0.0	0.5	3.432	A
3 - A1(M) South	654	164	632	1993	0.328	652	483	0.0	0.5	2.871	A
4 - A635 (West)	687	172	346	1873	0.367	685	938	0.0	0.6	3.197	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	432	108	925	1614	0.267	431	309	0.3	0.4	3.257	A
2 - A635 (East)	643	161	692	1524	0.422	642	664	0.5	0.7	4.212	A
3 - A1(M) South	781	195	756	1867	0.418	780	578	0.5	0.8	3.544	A
4 - A635 (West)	821	205	414	1812	0.453	820	1122	0.6	0.9	3.833	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	528	132	1131	1415	0.374	528	378	0.4	0.6	4.341	A
2 - A635 (East)	787	197	847	1396	0.564	785	812	0.7	1.3	6.067	A
3 - A1(M) South	957	239	925	1695	0.565	954	707	0.8	1.4	5.188	A
4 - A635 (West)	1005	251	506	1729	0.581	1003	1373	0.9	1.4	5.226	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	528	132	1134	1412	0.374	528	379	0.6	0.6	4.362	A
2 - A635 (East)	787	197	849	1394	0.565	787	814	1.3	1.3	6.127	A
3 - A1(M) South	957	239	927	1693	0.565	957	709	1.4	1.4	5.237	A
4 - A635 (West)	1005	251	508	1728	0.582	1005	1376	1.4	1.5	5.268	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	432	108	929	1611	0.268	432	310	0.6	0.4	3.276	A
2 - A635 (East)	643	161	695	1522	0.422	645	666	1.3	0.8	4.254	A
3 - A1(M) South	781	195	759	1863	0.419	784	581	1.4	0.8	3.579	A
4 - A635 (West)	821	205	416	1811	0.453	823	1127	1.5	0.9	3.865	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	361	90	777	1758	0.206	362	259	0.4	0.3	2.763	A
2 - A635 (East)	538	135	581	1616	0.333	539	557	0.8	0.5	3.457	A
3 - A1(M) South	654	164	635	1990	0.329	655	486	0.8	0.5	2.889	A
4 - A635 (West)	687	172	348	1872	0.367	688	943	0.9	0.6	3.220	A

Existing Layout - 2028 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout		1, 2, 3, 4	8.82	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	8.82	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - A1(M) North	1198	✓	75.77
2 - A635 (East)	878	✓	27.69
3 - A1(M) South	839	✓	77.43
4 - A635 (West)	471	✓	30.67

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2028 With Development	AM	ONE HOUR	07:00	08:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A1(M) North		ONE HOUR	✓	335	100.000
2 - A635 (East)		ONE HOUR	✓	821	100.000
3 - A1(M) South		ONE HOUR	✓	727	100.000
4 - A635 (West)		ONE HOUR	✓	1259	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
From	1 - A1(M) North	0	69	0	266
	2 - A635 (East)	218	0	257	346
	3 - A1(M) South	2	217	0	508
	4 - A635 (West)	240	364	655	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
From	1 - A1(M) North	0	11	0	19
	2 - A635 (East)	9	0	5	7
	3 - A1(M) South	0	4	0	18
	4 - A635 (West)	24	5	12	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1(M) North	0.31	5.07	0.5	A	307	461
2 - A635 (East)	0.72	11.03	2.7	B	753	1130
3 - A1(M) South	0.47	4.50	1.0	A	667	1001
4 - A635 (West)	0.79	10.86	4.1	B	1155	1733

Main Results for each time segment

07:00 - 07:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	252	63	926	1608	0.157	251	345	0.0	0.2	3.111	A
2 - A635 (East)	618	155	690	1514	0.408	615	487	0.0	0.7	4.267	A
3 - A1(M) South	547	137	622	2005	0.273	546	683	0.0	0.4	2.795	A
4 - A635 (West)	948	237	328	1894	0.500	943	840	0.0	1.1	4.219	A

07:15 - 07:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	301	75	1109	1437	0.210	301	413	0.2	0.3	3.715	A
2 - A635 (East)	738	185	826	1404	0.526	736	583	0.7	1.2	5.749	A
3 - A1(M) South	654	163	745	1880	0.348	653	818	0.4	0.6	3.326	A
4 - A635 (West)	1132	283	392	1836	0.617	1129	1005	1.1	1.8	5.680	A

07:30 - 07:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	369	92	1353	1209	0.305	368	503	0.3	0.5	5.018	A
2 - A635 (East)	904	226	1009	1256	0.720	898	712	1.2	2.6	10.586	B
3 - A1(M) South	800	200	909	1711	0.468	799	998	0.6	1.0	4.466	A
4 - A635 (West)	1386	347	479	1757	0.789	1377	1229	1.8	4.0	10.373	B

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	369	92	1360	1202	0.307	369	506	0.5	0.5	5.066	A
2 - A635 (East)	904	226	1014	1252	0.722	904	716	2.6	2.7	11.028	B
3 - A1(M) South	800	200	914	1707	0.469	800	1004	1.0	1.0	4.502	A
4 - A635 (West)	1386	347	481	1755	0.790	1386	1233	4.0	4.1	10.861	B

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	301	75	1119	1428	0.211	302	417	0.5	0.3	3.751	A
2 - A635 (East)	738	185	833	1398	0.528	744	588	2.7	1.2	5.936	A
3 - A1(M) South	654	163	751	1873	0.349	655	826	1.0	0.6	3.354	A
4 - A635 (West)	1132	283	395	1833	0.617	1141	1011	4.1	1.8	5.893	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	252	63	933	1601	0.158	253	347	0.3	0.2	3.129	A
2 - A635 (East)	618	155	695	1510	0.409	620	490	1.2	0.7	4.330	A
3 - A1(M) South	547	137	626	2000	0.274	548	689	0.6	0.4	2.813	A
4 - A635 (West)	948	237	330	1892	0.501	951	845	1.8	1.1	4.291	A

Existing Layout - 2028 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Large Roundabout		1, 2, 3, 4	5.85	A

Junction Network

Driving side	Lighting	Network delay (s)	Network LOS
Left	Normal/unknown	5.85	A

Arms

Arms

[same as above]

Roundabout Geometry

[same as above]

Large Roundabout Data

Arm	Circulating flow (PCU/hr)	Has entry-to-exit separation	Entry-to-exit separation (m)
1 - A1(M) North	1045	✓	75.77
2 - A635 (East)	774	✓	27.69
3 - A1(M) South	858	✓	77.43
4 - A635 (West)	495	✓	30.67

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2028 With Development	PM	ONE HOUR	16:30	18:00	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - A1(M) North		ONE HOUR	✓	493	100.000
2 - A635 (East)		ONE HOUR	✓	723	100.000
3 - A1(M) South		ONE HOUR	✓	892	100.000
4 - A635 (West)		ONE HOUR	✓	975	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
From		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
	1 - A1(M) North	0	146	0	347
	2 - A635 (East)	162	0	207	354
	3 - A1(M) South	3	296	0	593
	4 - A635 (West)	192	310	473	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
From		1 - A1(M) North	2 - A635 (East)	3 - A1(M) South	4 - A635 (West)
	1 - A1(M) North	0	5	0	10
	2 - A635 (East)	3	0	6	3
	3 - A1(M) South	50	5	0	10
	4 - A635 (West)	10	3	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - A1(M) North	0.40	4.78	0.7	A	452	679
2 - A635 (East)	0.59	6.75	1.5	A	663	995
3 - A1(M) South	0.59	5.68	1.5	A	819	1228
4 - A635 (West)	0.62	5.90	1.7	A	895	1342

Main Results for each time segment
16:30 - 16:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	371	93	809	1726	0.215	370	268	0.0	0.3	2.877	A
2 - A635 (East)	544	136	615	1588	0.343	542	564	0.0	0.5	3.566	A
3 - A1(M) South	672	168	647	1977	0.340	669	510	0.0	0.6	2.978	A
4 - A635 (West)	734	184	346	1873	0.392	731	971	0.0	0.7	3.370	A

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	443	111	969	1572	0.282	443	320	0.3	0.4	3.455	A
2 - A635 (East)	650	162	736	1488	0.437	649	675	0.5	0.8	4.450	A
3 - A1(M) South	802	200	775	1848	0.434	801	610	0.6	0.8	3.724	A
4 - A635 (West)	877	219	414	1812	0.484	875	1162	0.7	1.0	4.114	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	543	136	1185	1363	0.398	542	392	0.4	0.7	4.747	A
2 - A635 (East)	796	199	901	1352	0.589	793	826	0.8	1.5	6.665	A
3 - A1(M) South	982	246	947	1672	0.587	979	747	0.8	1.5	5.612	A
4 - A635 (West)	1073	268	506	1729	0.621	1071	1421	1.0	1.7	5.833	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	543	136	1188	1360	0.399	543	393	0.7	0.7	4.778	A
2 - A635 (East)	796	199	903	1350	0.590	796	828	1.5	1.5	6.748	A
3 - A1(M) South	982	246	950	1669	0.588	982	749	1.5	1.5	5.678	A
4 - A635 (West)	1073	268	508	1728	0.621	1073	1425	1.7	1.7	5.895	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	443	111	973	1568	0.283	444	322	0.7	0.4	3.479	A
2 - A635 (East)	650	162	739	1485	0.438	653	678	1.5	0.8	4.503	A
3 - A1(M) South	802	200	779	1844	0.435	805	613	1.5	0.8	3.767	A
4 - A635 (West)	877	219	416	1810	0.484	879	1167	1.7	1.0	4.158	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - A1(M) North	371	93	814	1722	0.216	372	269	0.4	0.3	2.895	A
2 - A635 (East)	544	136	618	1586	0.343	545	567	0.8	0.5	3.599	A
3 - A1(M) South	672	168	651	1974	0.340	673	513	0.8	0.6	3.003	A
4 - A635 (West)	734	184	348	1872	0.392	735	976	1.0	0.7	3.398	A

Appendix I

A1(M) Junction 37 Merge / Diverge Assessment

Merge Diagram

A1 J37 | Northbound | 2022 Base AM

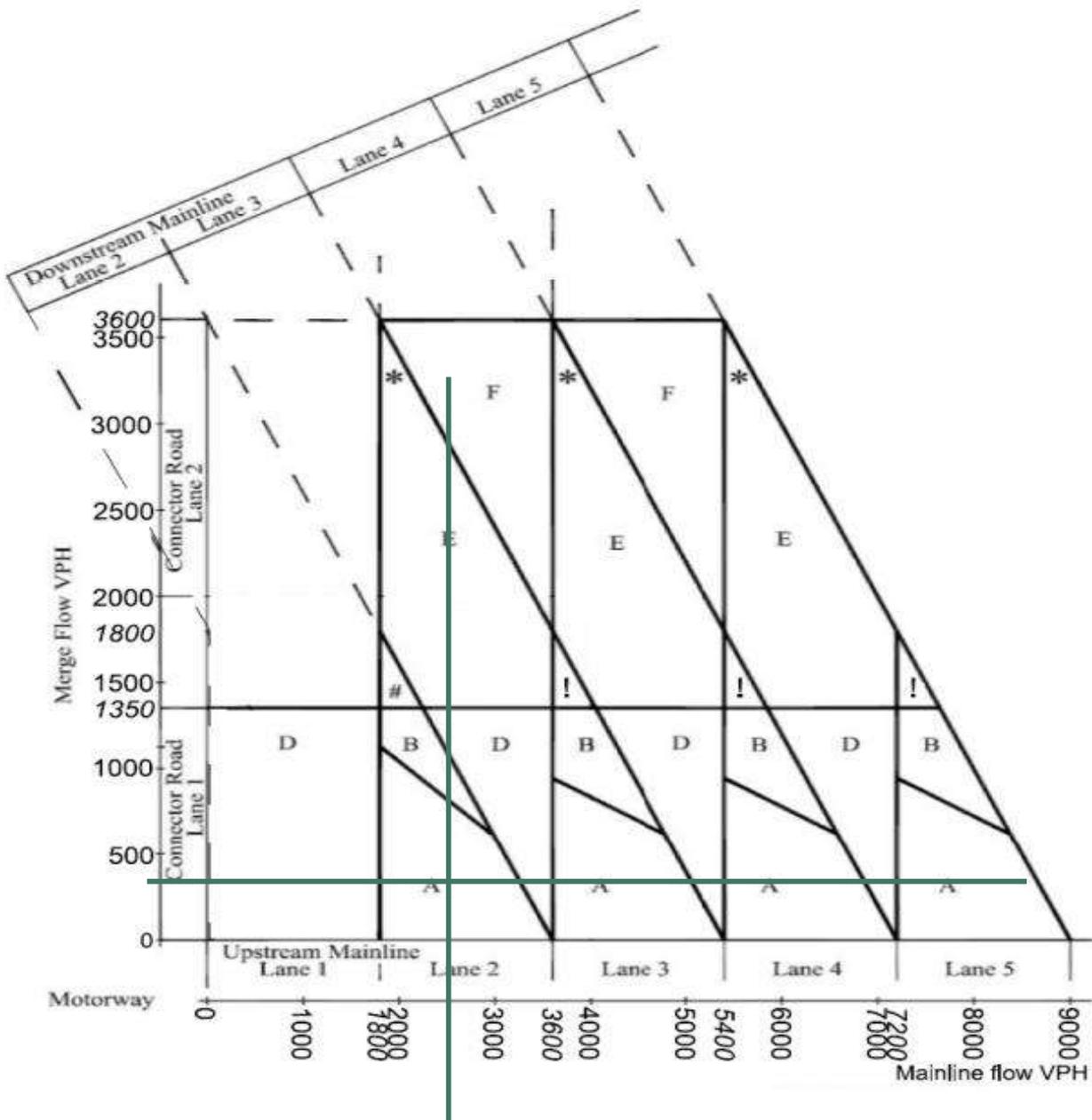
Input Flows

Upstream mainline flow:	2464	vph
Merge flow:	370	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Northbound | 2028 Do Minimum AM

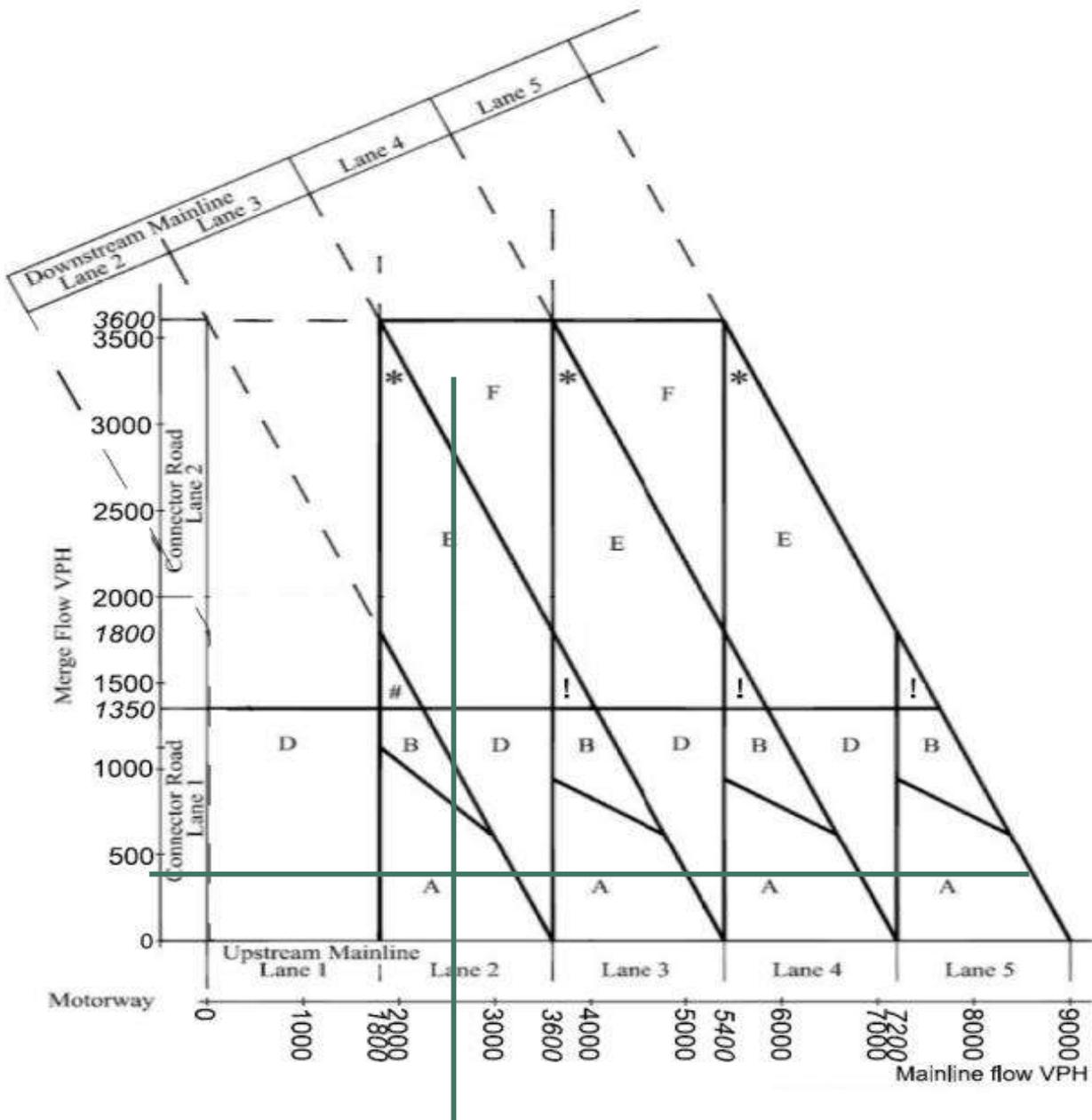
Input Flows

Upstream mainline flow:	2522	vph
Merge flow:	392	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Northbound | 2028 With Development AM

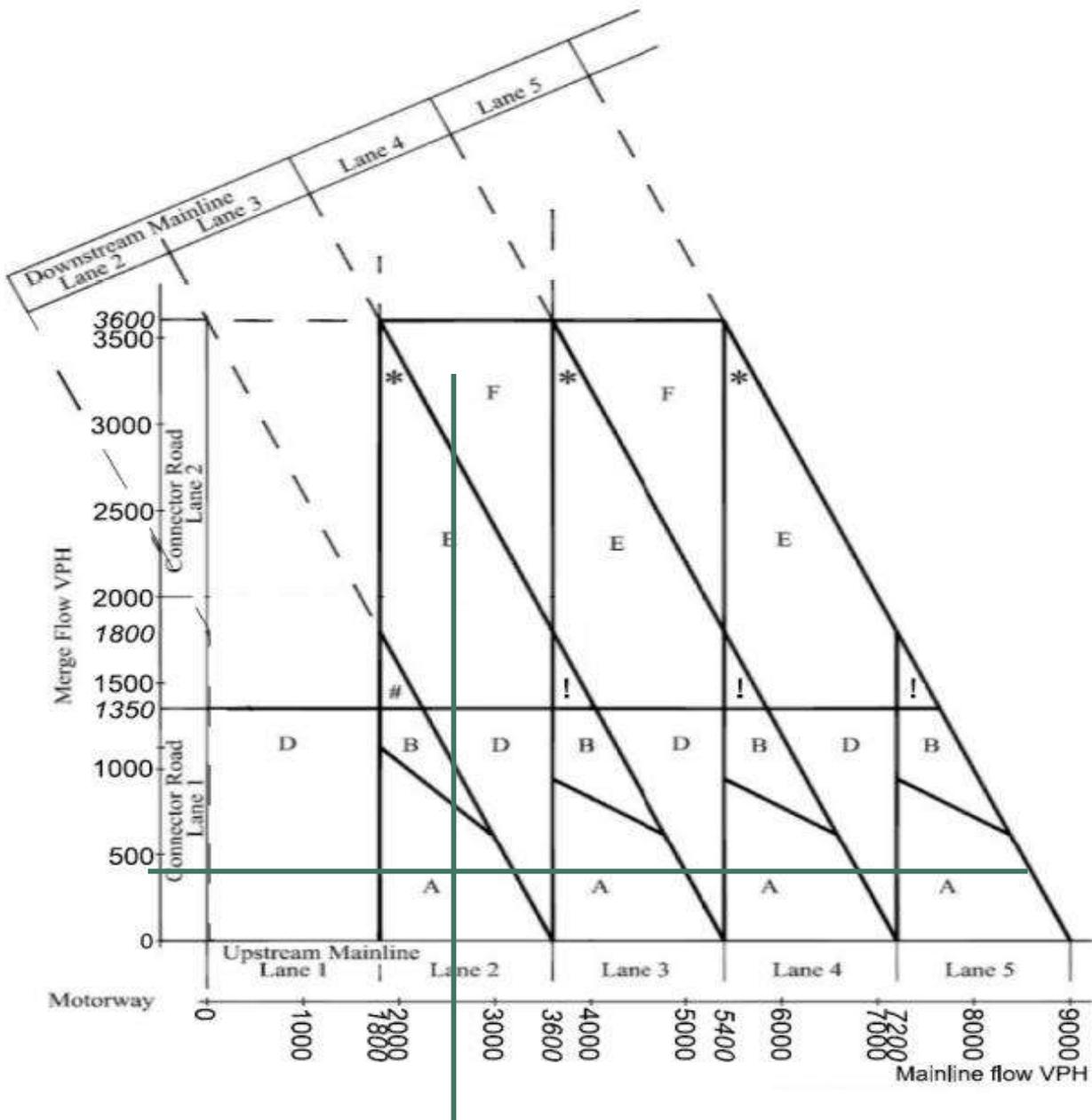
Input Flows

Upstream mainline flow:	2522	vph
Merge flow:	398	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Northbound | 2022 Base PM

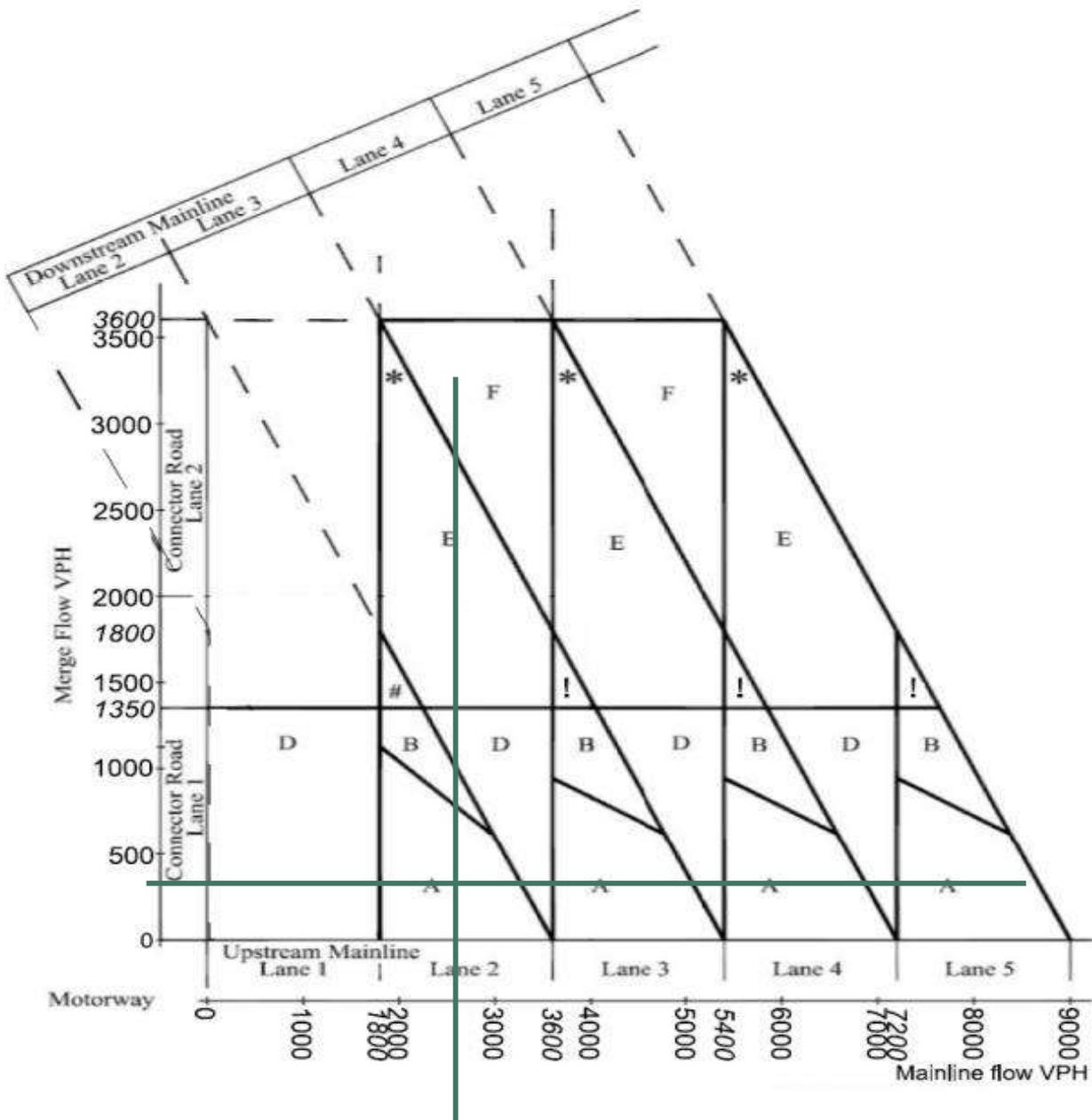
Input Flows

Upstream mainline flow:	2568	vph
Merge flow:	311	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Northbound | 2028 Do Minimum PM

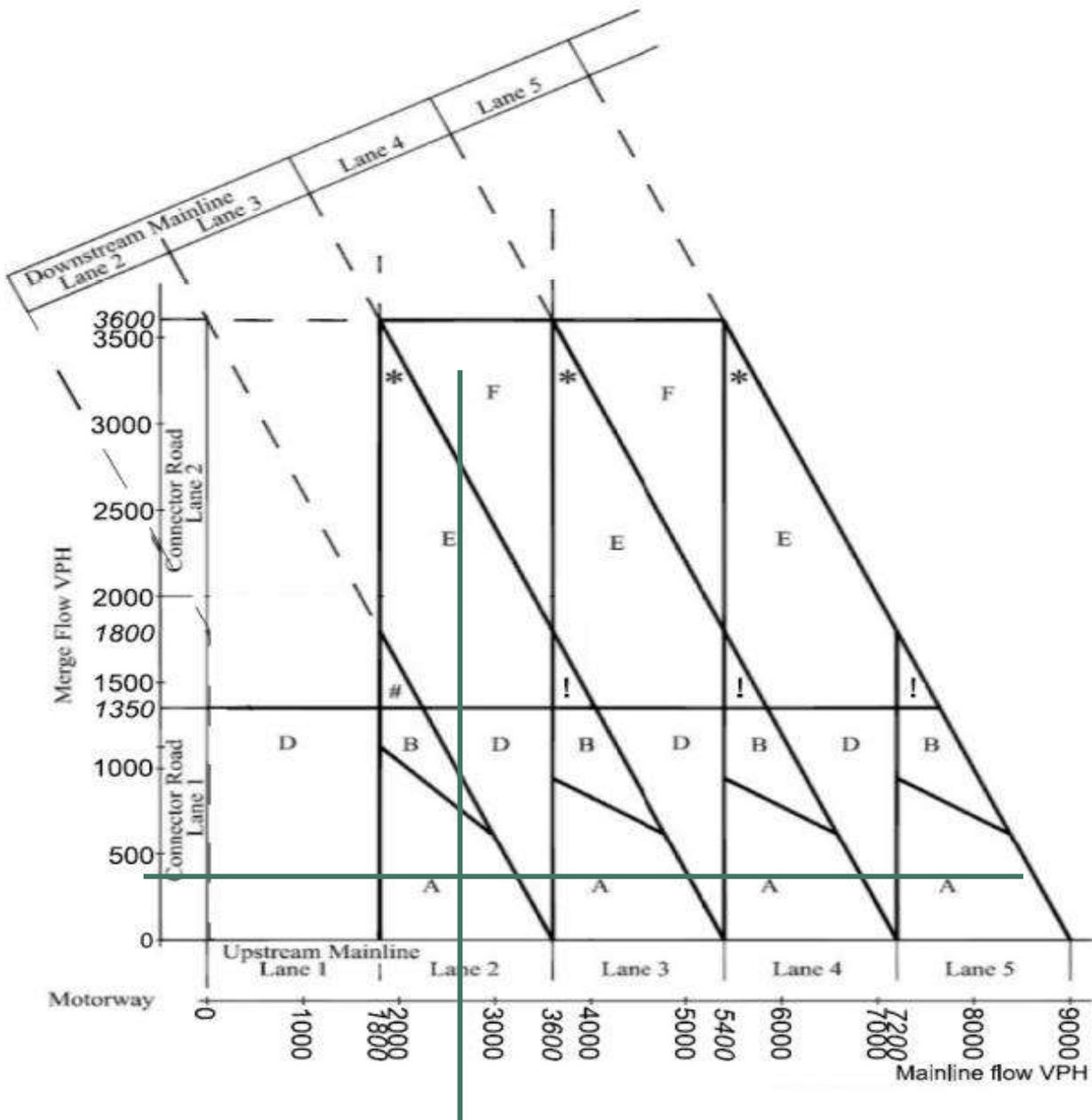
Input Flows

Upstream mainline flow:	2630	vph
Merge flow:	328	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Northbound | 2028 With Development PM

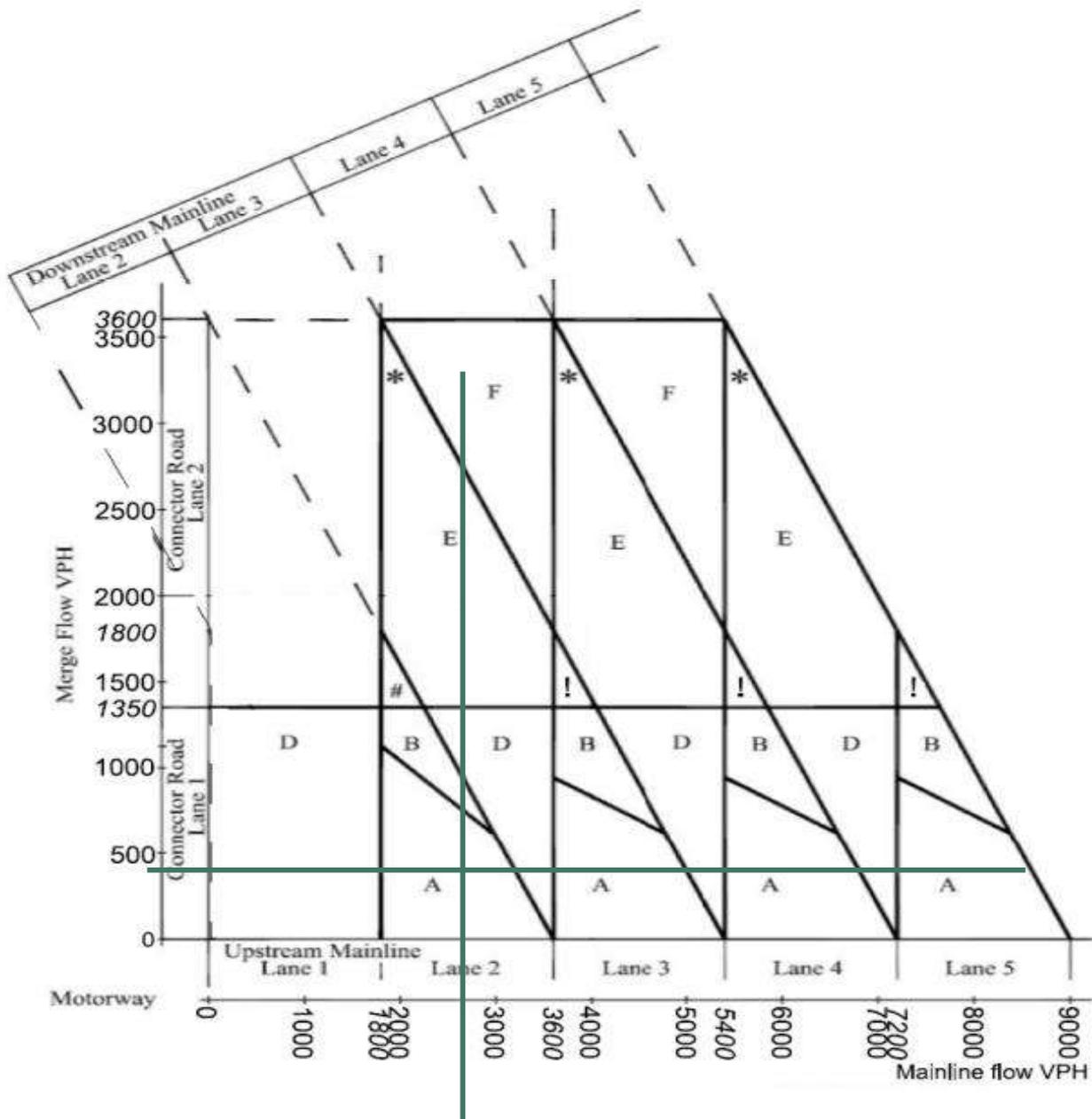
Input Flows

Upstream mainline flow:	2630	vph
Merge flow:	336	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Diverge Diagram

M1 J37 | Northbound | 2022 Base AM

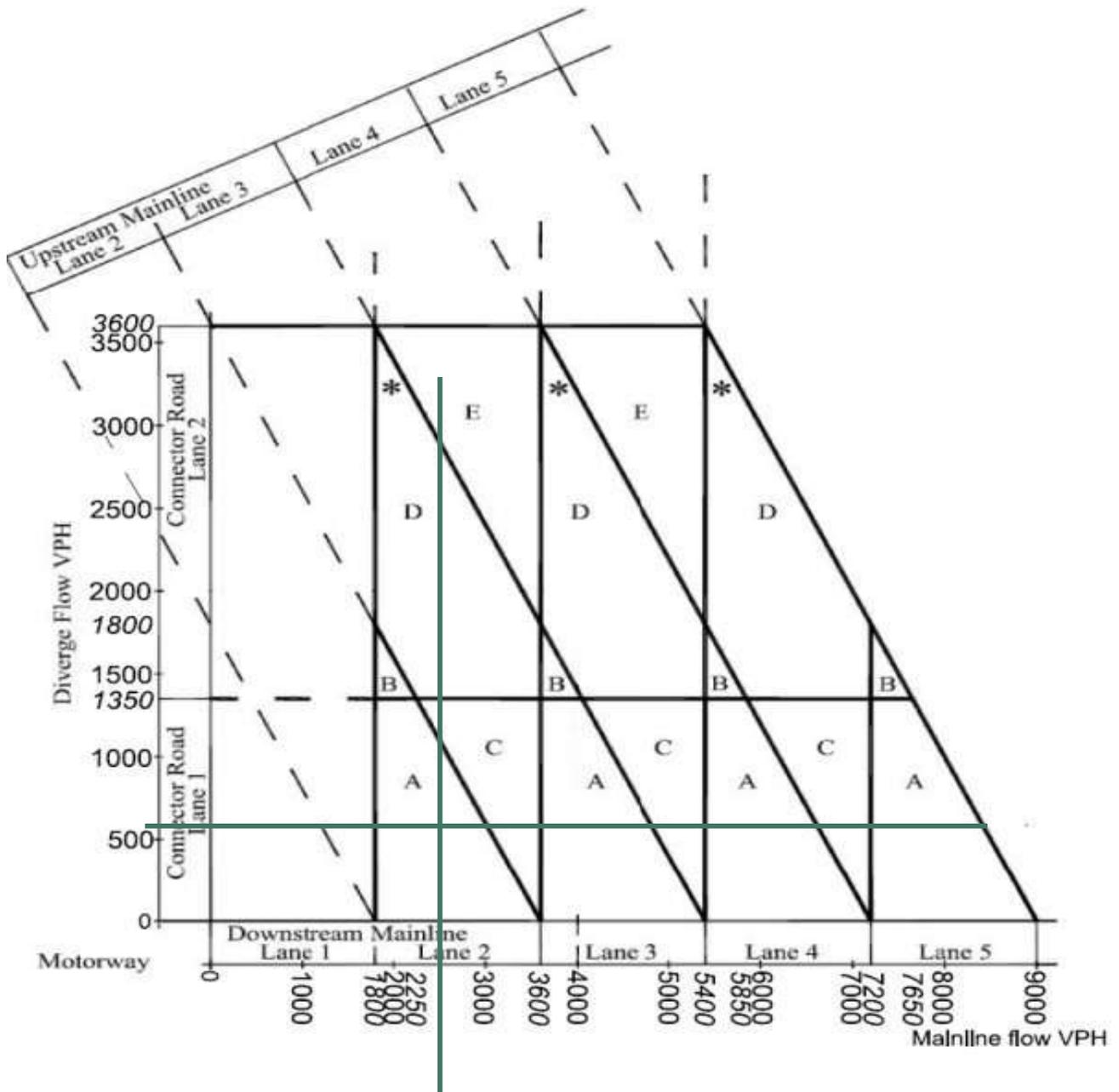
Input Flows

Upstream mainline flow:	2464	vph
Merge flow:	561	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J37 | Northbound | 2028 Do Minimum AM

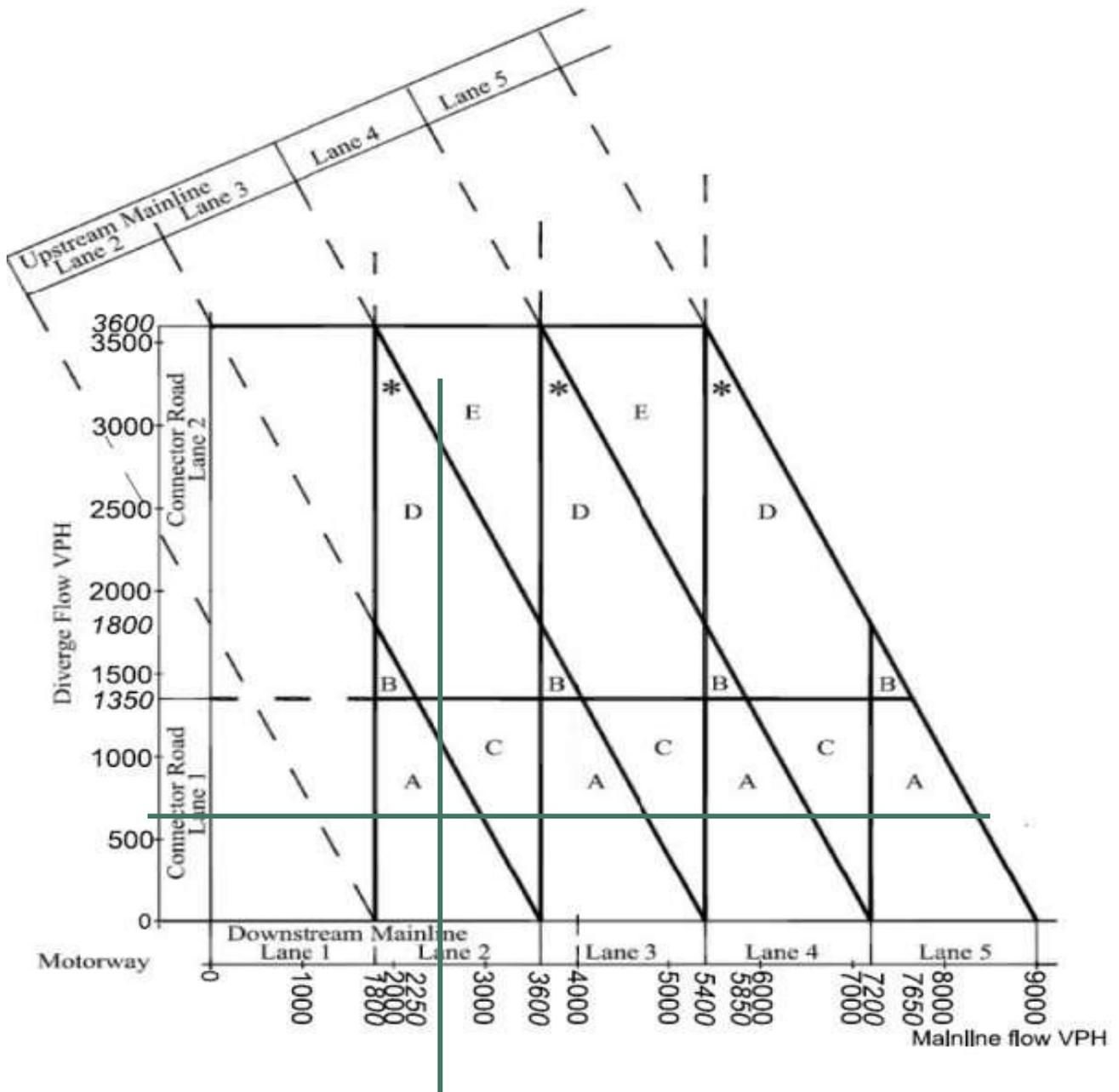
Input Flows

Upstream mainline flow:	2522	vph
Merge flow:	607	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J37 | Northbound | 2028 With Development AM

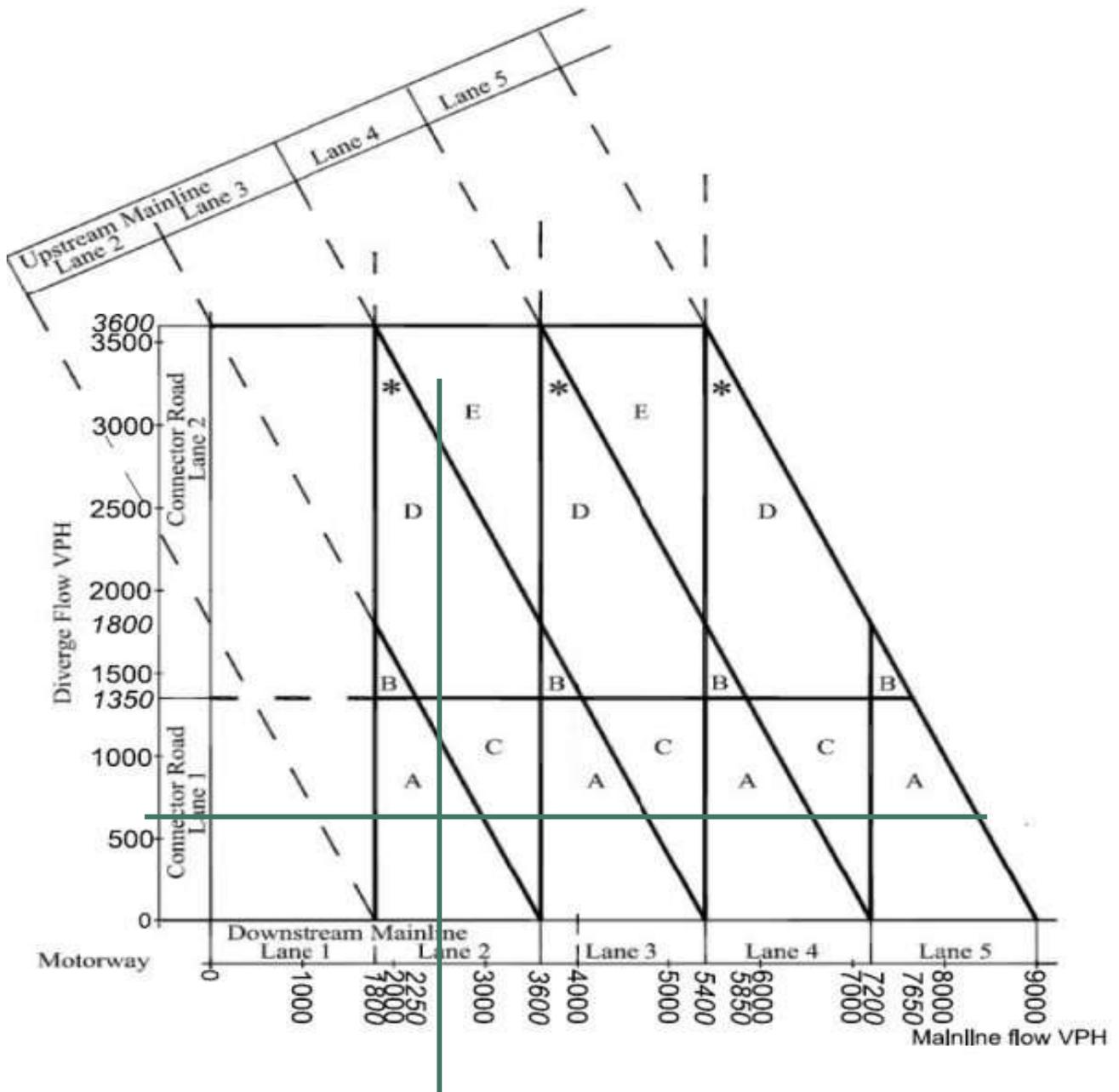
Input Flows

Upstream mainline flow:	2522	vph
Merge flow:	634	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J37 | Northbound | 2028 Do Minimum PM

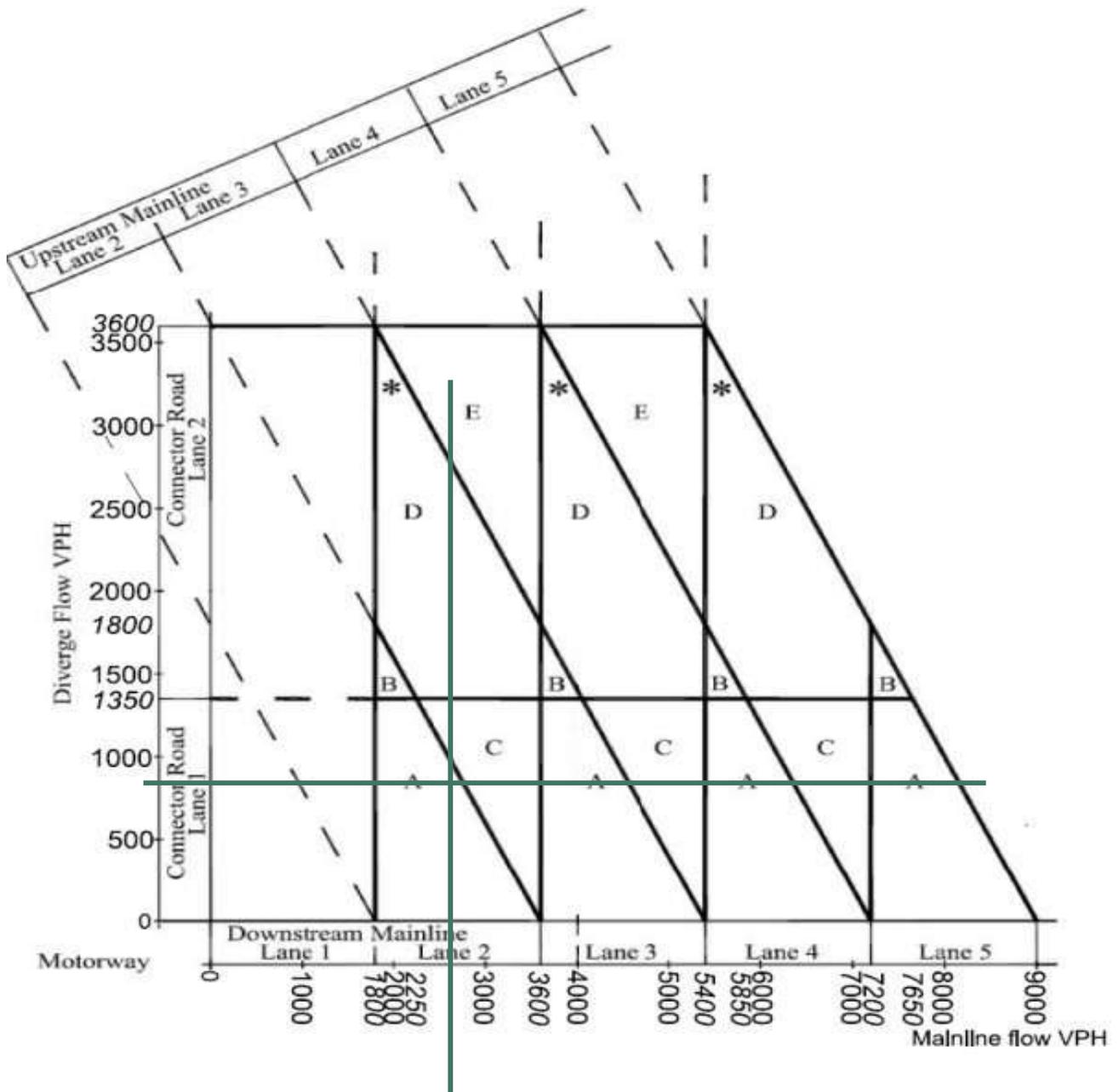
Input Flows

Upstream mainline flow:	2630	vph
Merge flow:	813	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Diverge Diagram

M1 J37 | Northbound | 2028 With Development PM

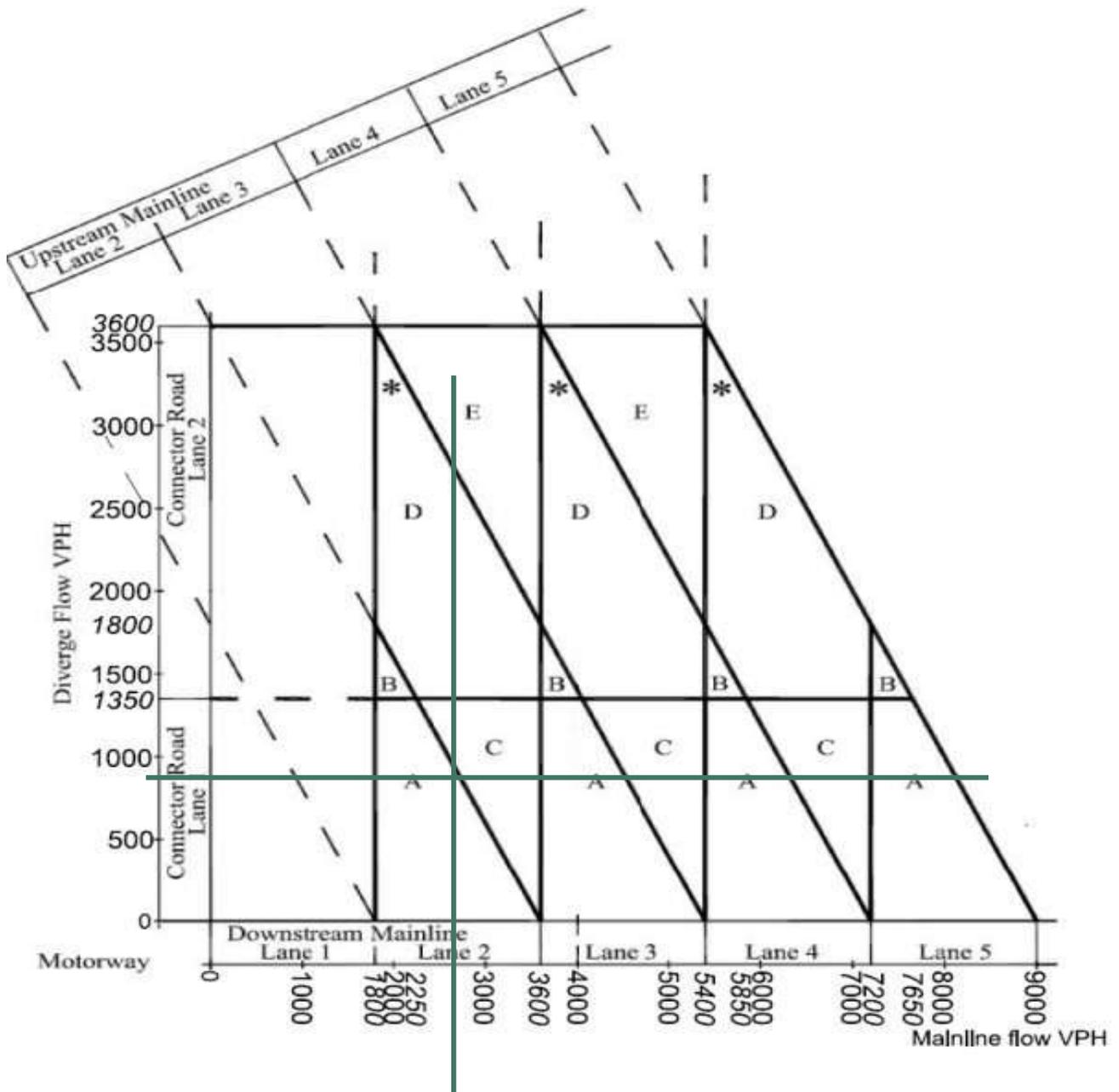
Input Flows

Upstream mainline flow:	2630	vph
Merge flow:	827	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Merge Diagram

A1 J37 | Southbound | 2022 Base AM

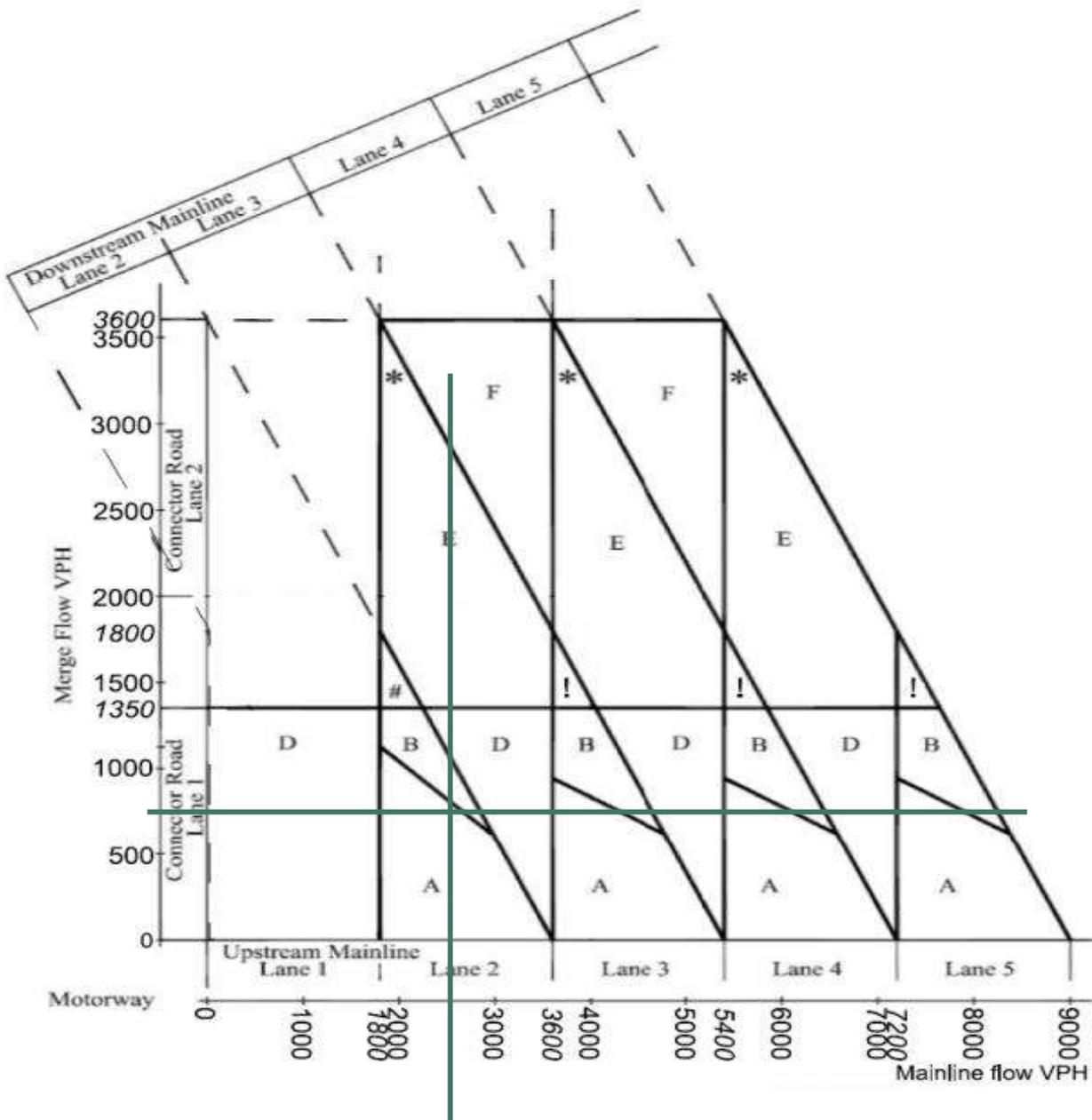
Input Flows

Upstream mainline flow:	2418	vph
Merge flow:	748	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Southbound | 2028 Do Minimum AM

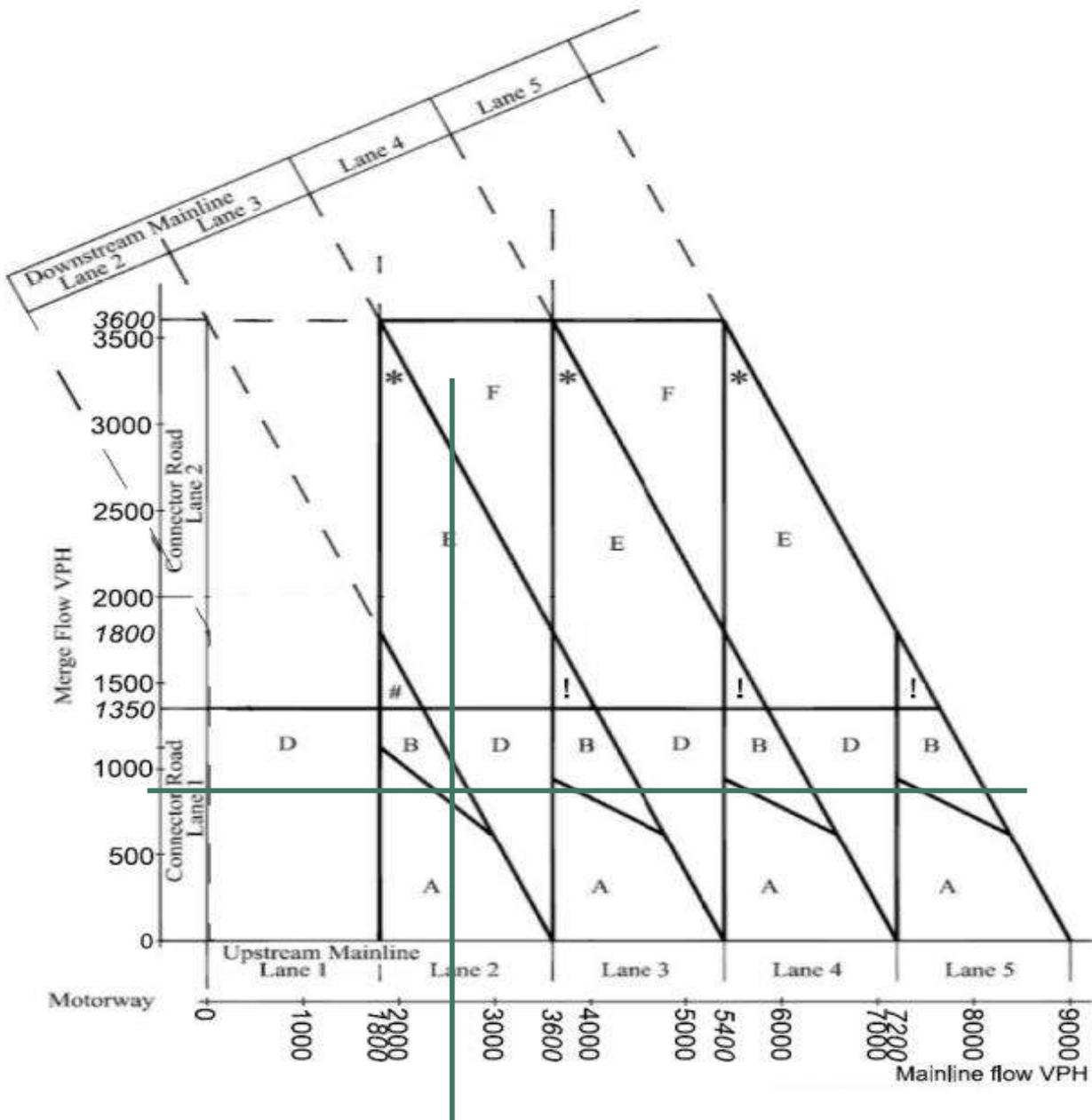
Input Flows

Upstream mainline flow:	2475	vph
Merge flow:	826	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	B

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Southbound | 2028 With Development AM

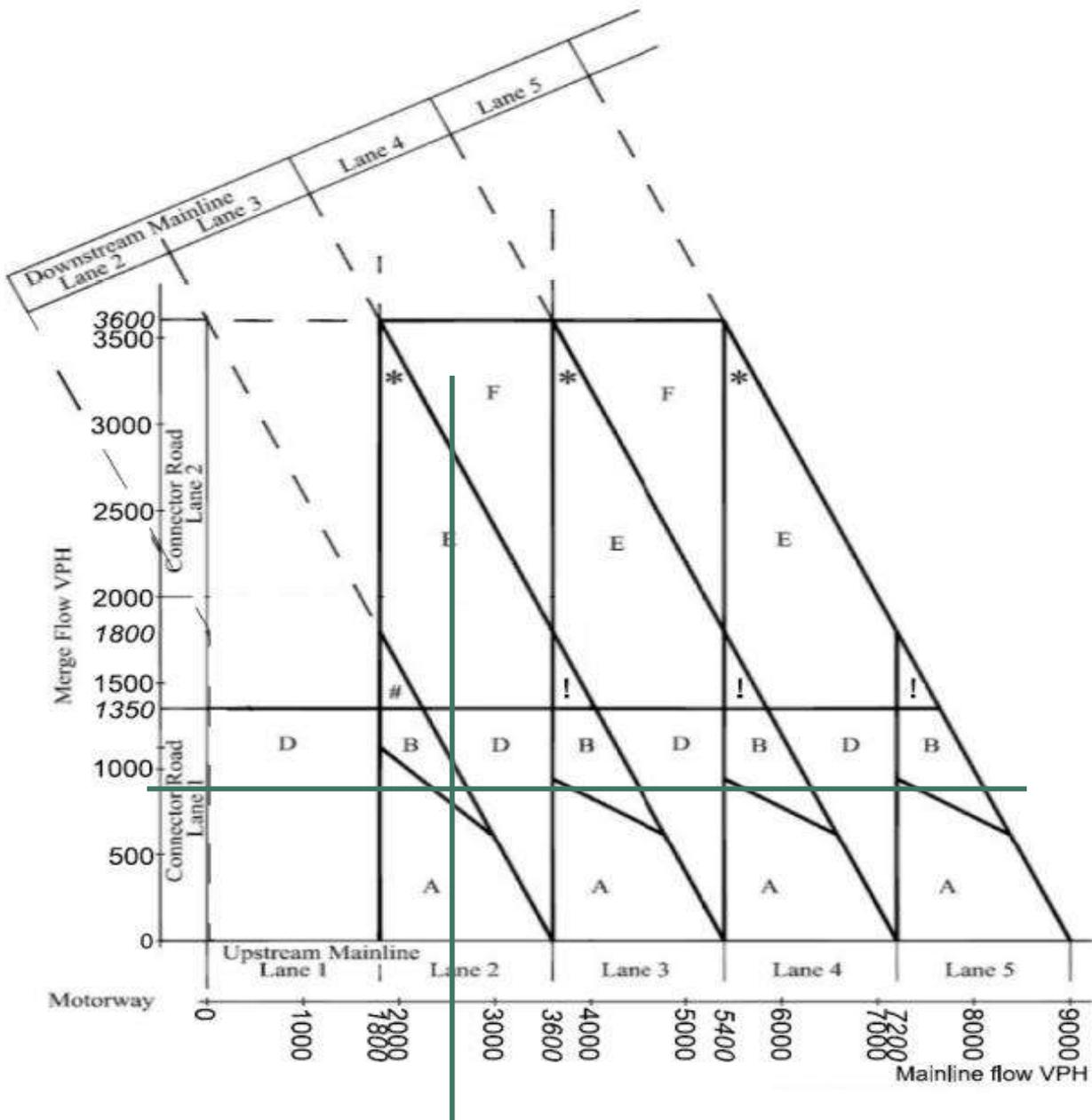
Input Flows

Upstream mainline flow:	2475	vph
Merge flow:	839	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	B

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Southbound | 2022 Base PM

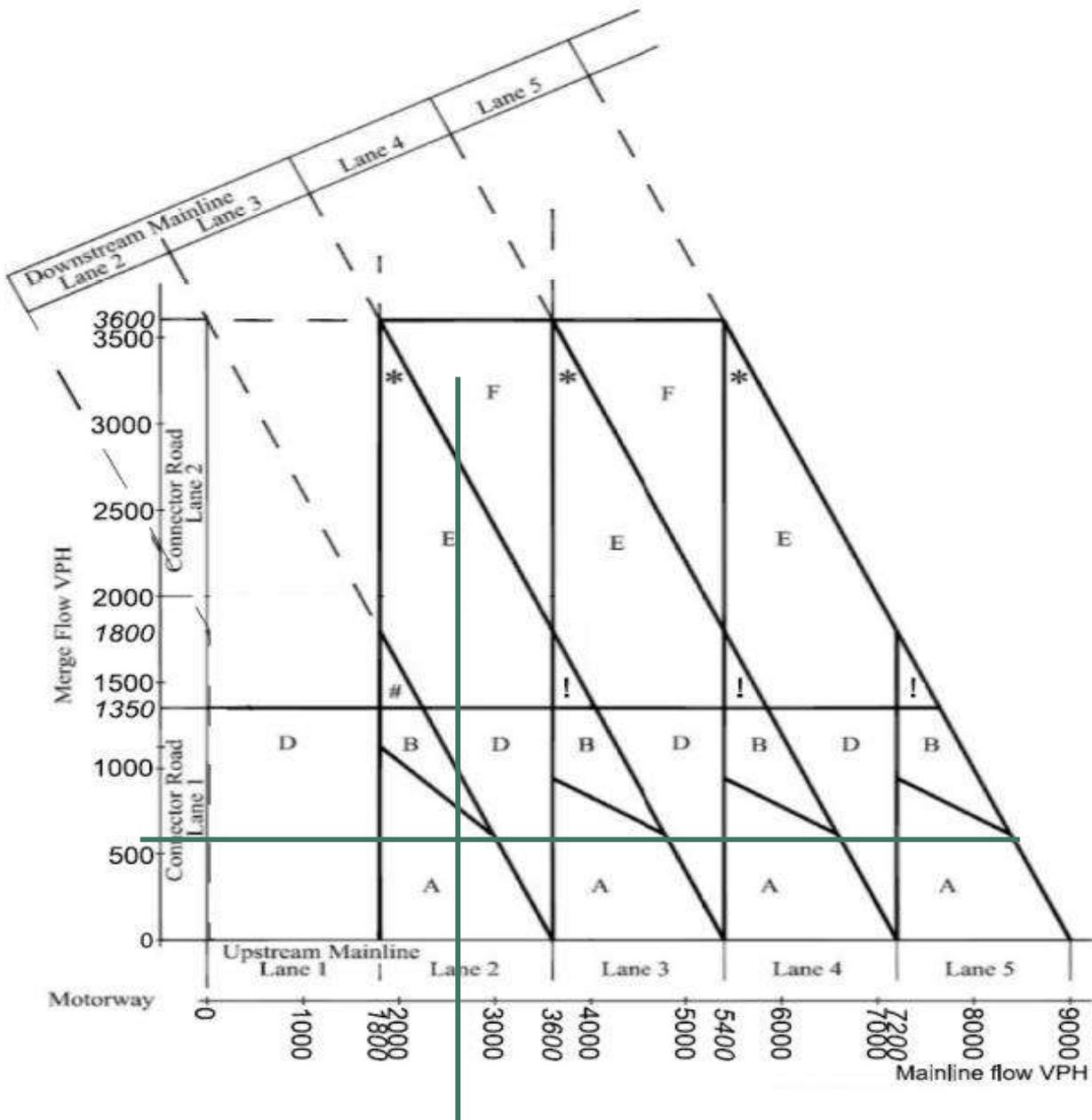
Input Flows

Upstream mainline flow:	2650	vph
Merge flow:	550	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Southbound | 2028 Do Minimum PM

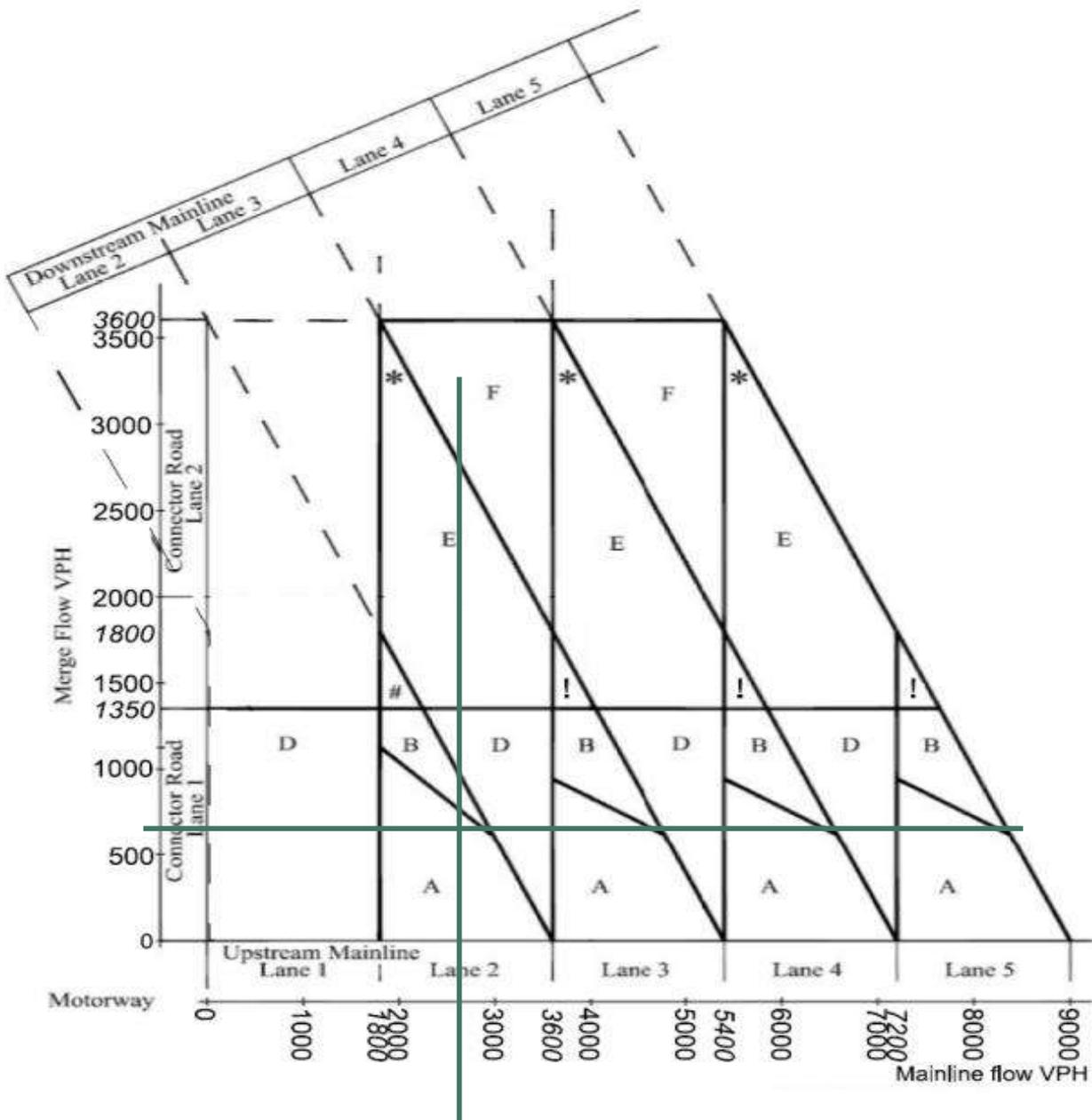
Input Flows

Upstream mainline flow:	2714	vph
Merge flow:	601	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Merge Diagram

A1 J37 | Southbound | 2028 With Development PM

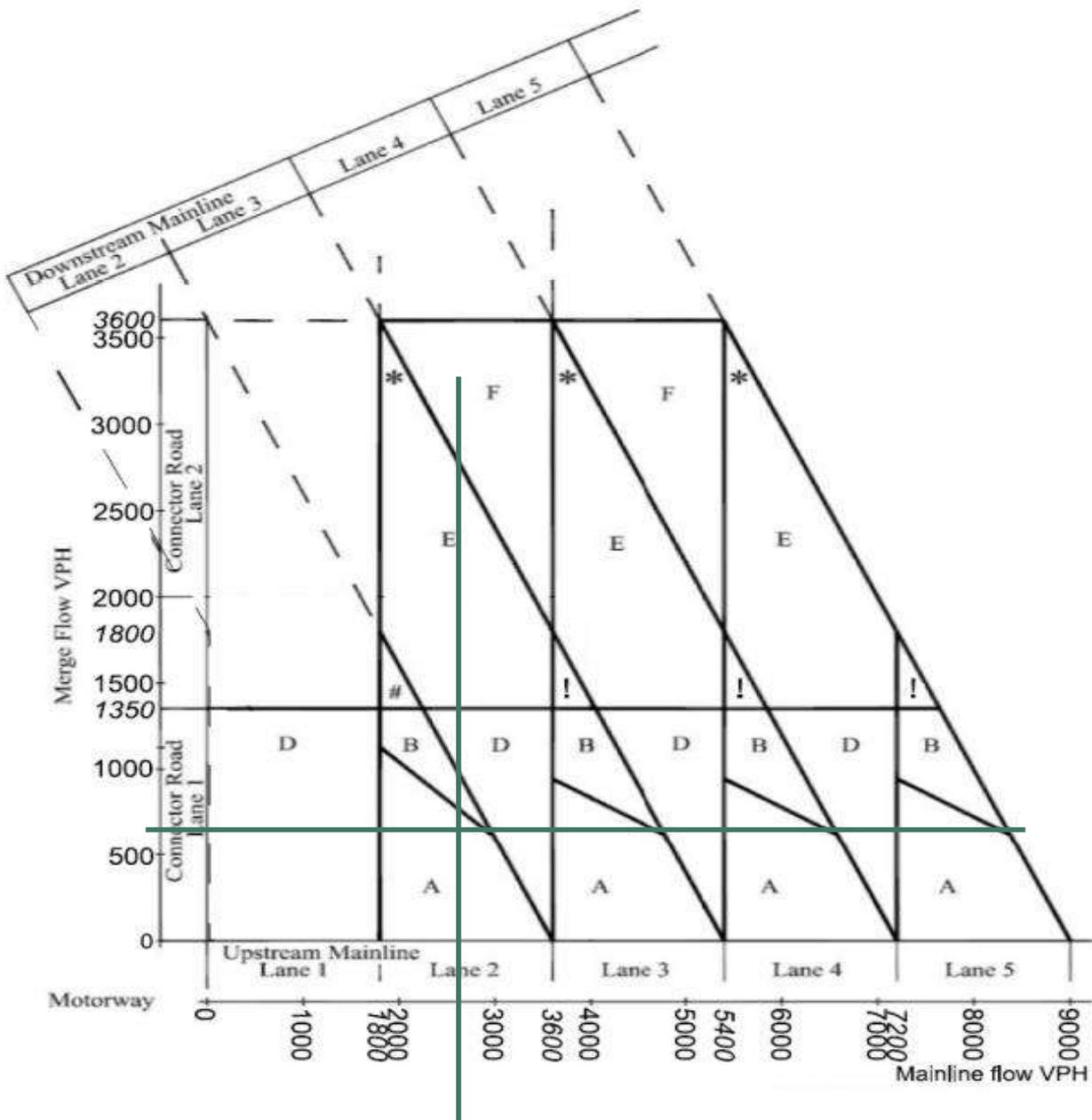
Input Flows

Upstream mainline flow:	2714	vph
Merge flow:	629	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.12b Motorway merging diagram



Diverge Diagram

A1 J37 | Southbound | 2028 Do Minimum AM

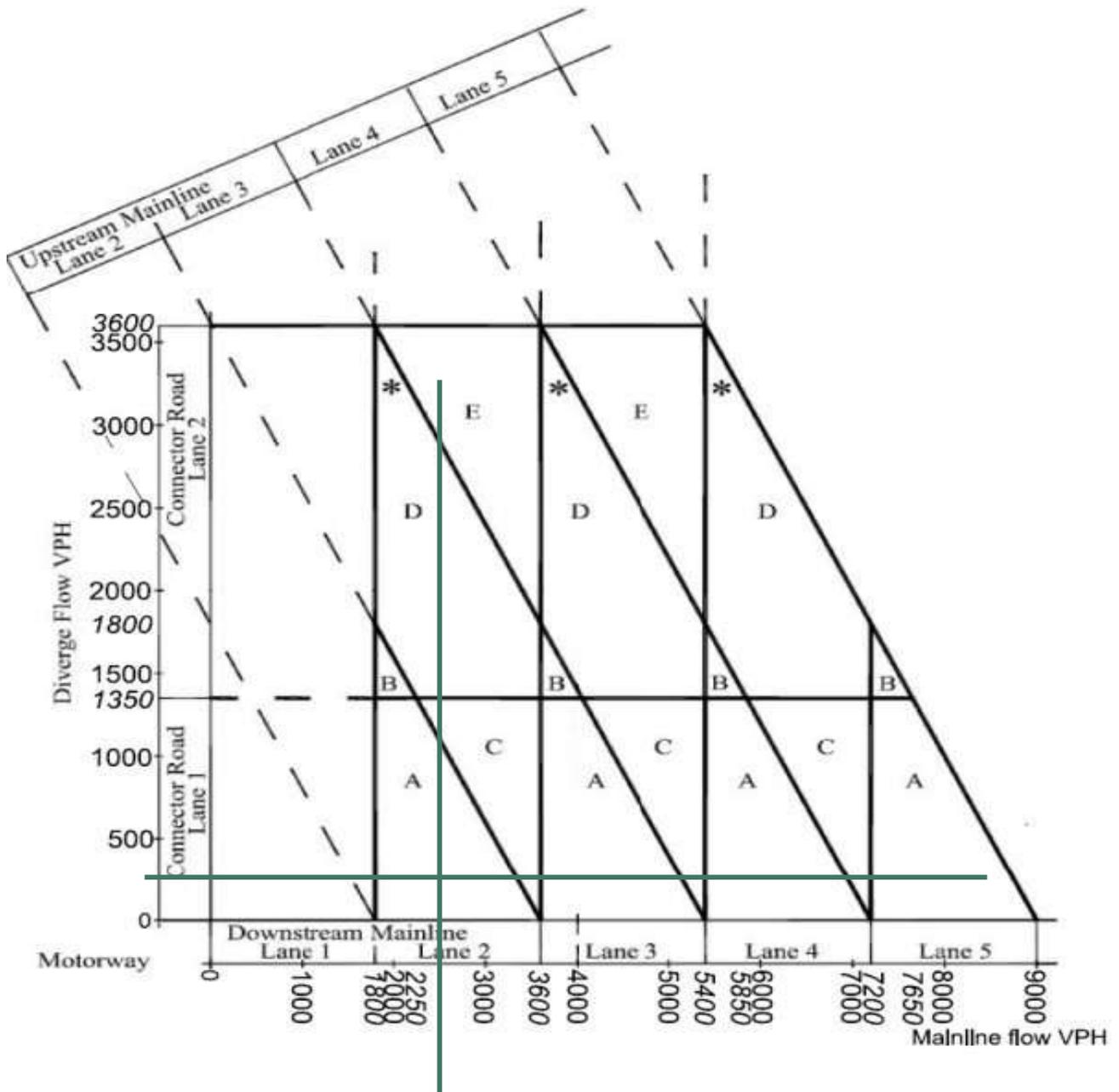
Input Flows

Upstream mainline flow:	2475	vph
Merge flow:	278	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Diverge Diagram

A1 J37 | Southbound | 2022 Base AM

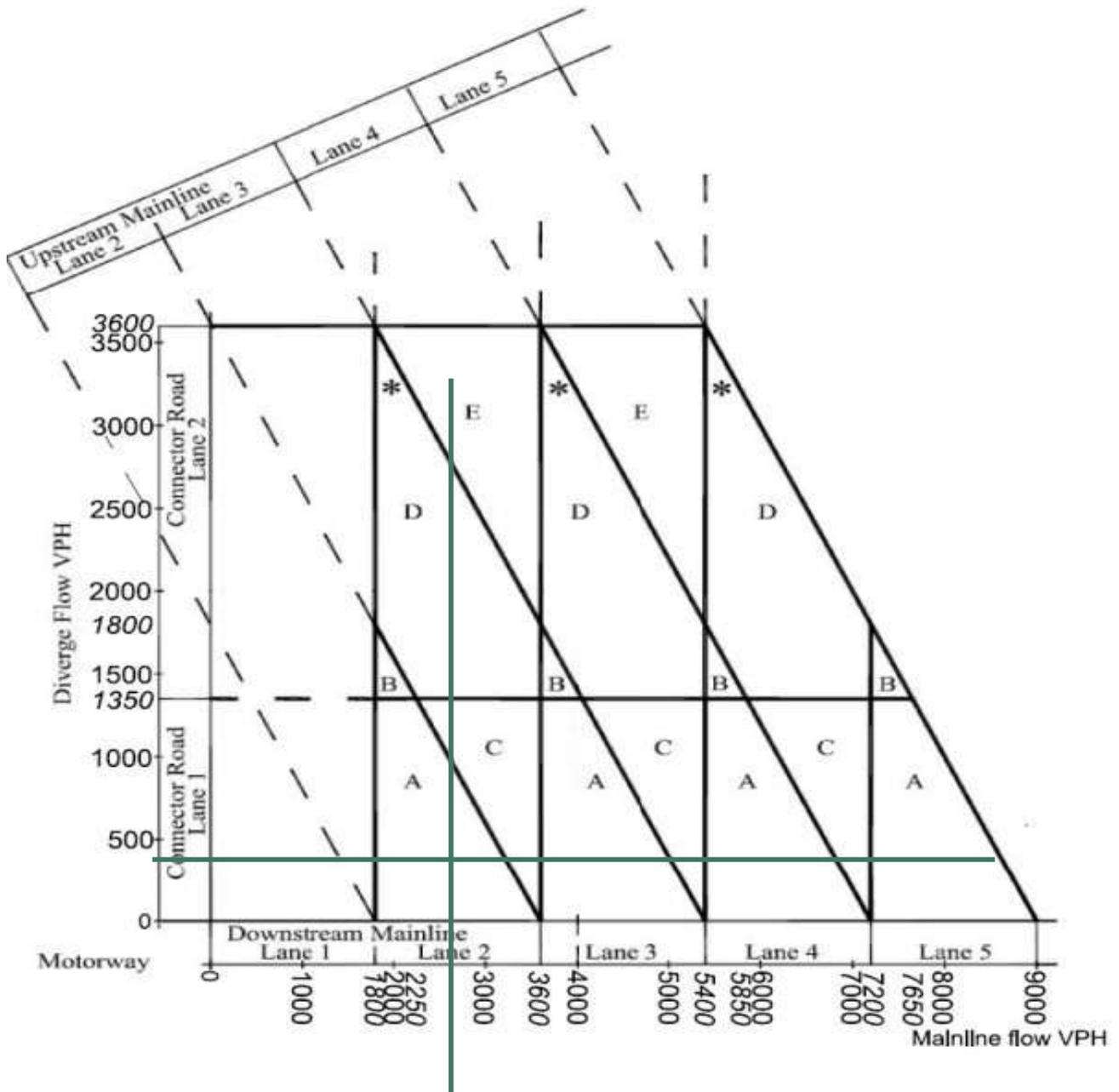
Input Flows

Upstream mainline flow:	2650	vph
Merge flow:	429	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Diverge Diagram

A1 J37 | Southbound | 2028 Do Minimum AM

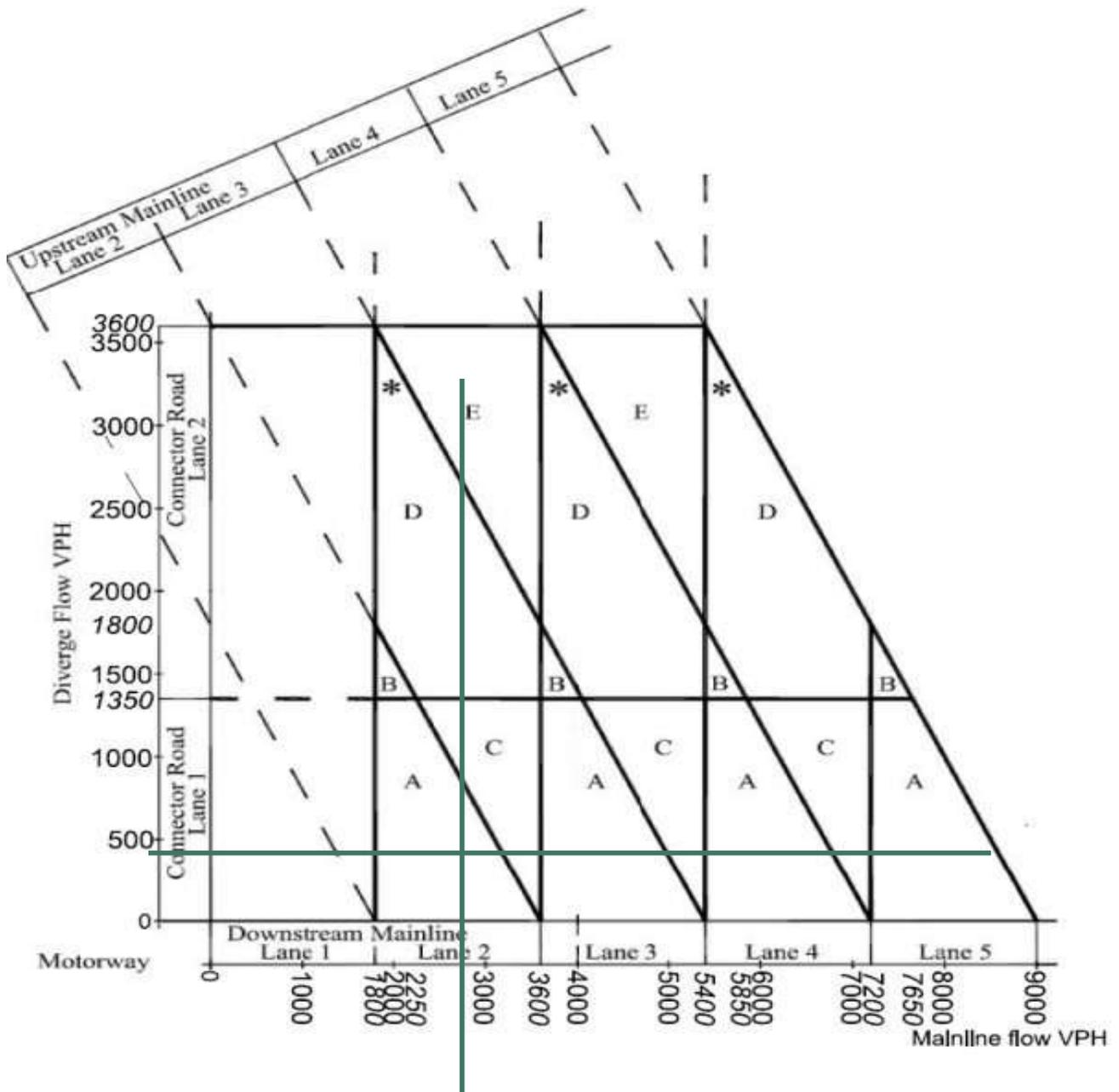
Input Flows

Upstream mainline flow:	2714	vph
Merge flow:	452	vph

Recommended Layout

Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Diverge Diagram

A1 J37 | Southbound | 2028 With Development AM

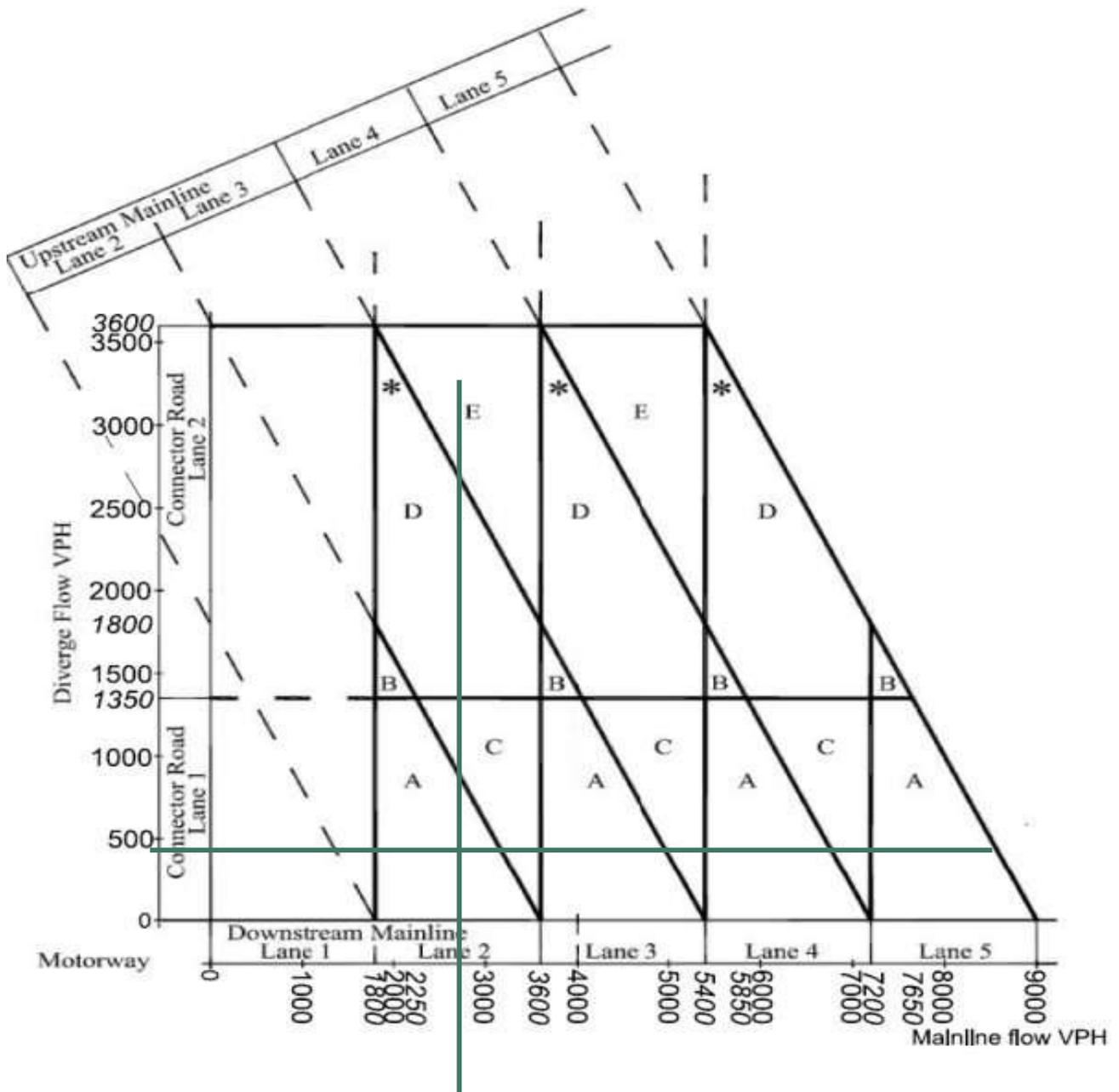
Input Flows

Upstream mainline flow:	2714	vph
Merge flow:	459	vph

Recommended Layout

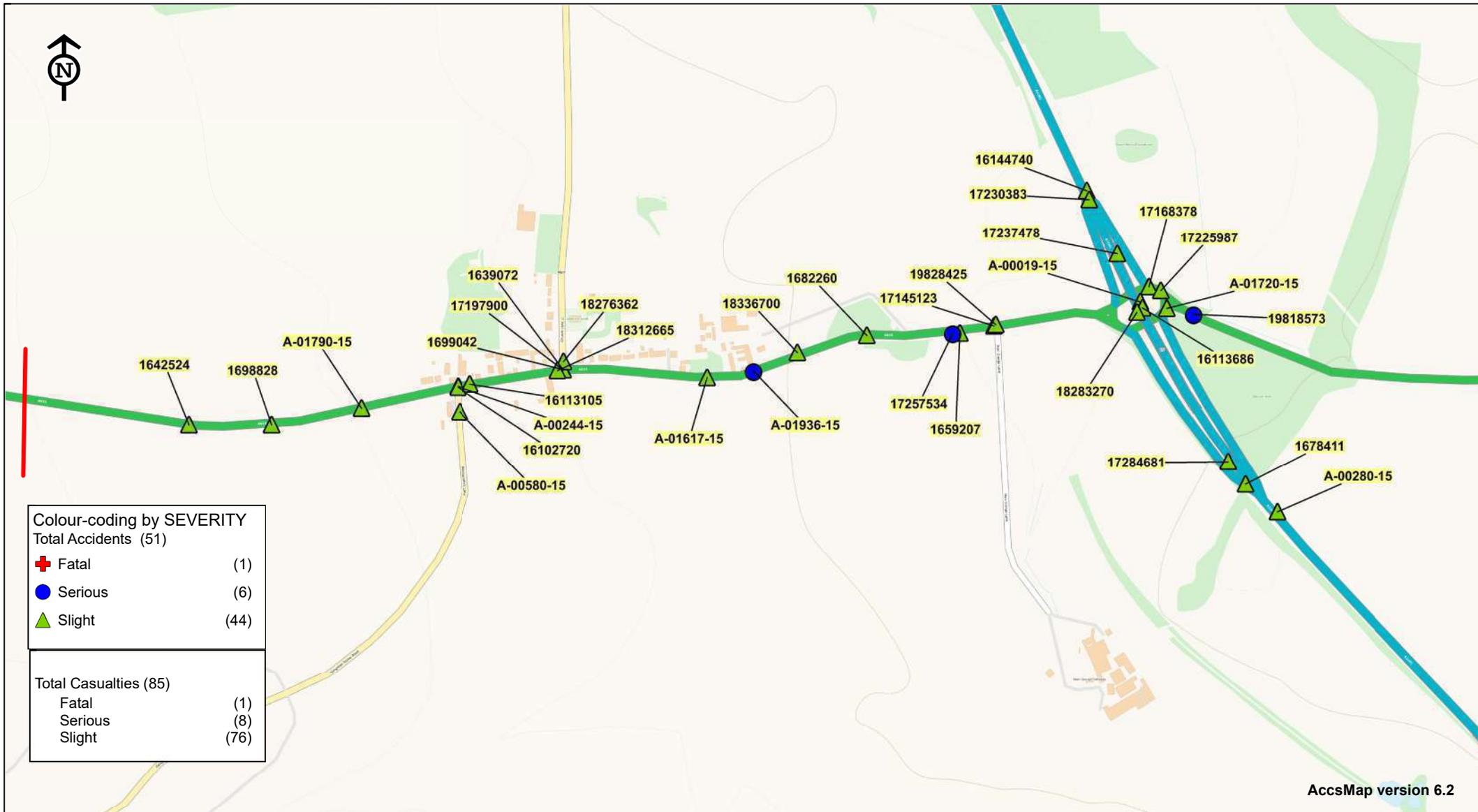
Connector Lanes:	1
Upstream mainline lanes:	2
Downstream Mainline Lanes:	2
Diverge Type:	A

Figure 3.26b Motorway diverging diagram



Appendix J

A1(M) Junction 37 Accident Data



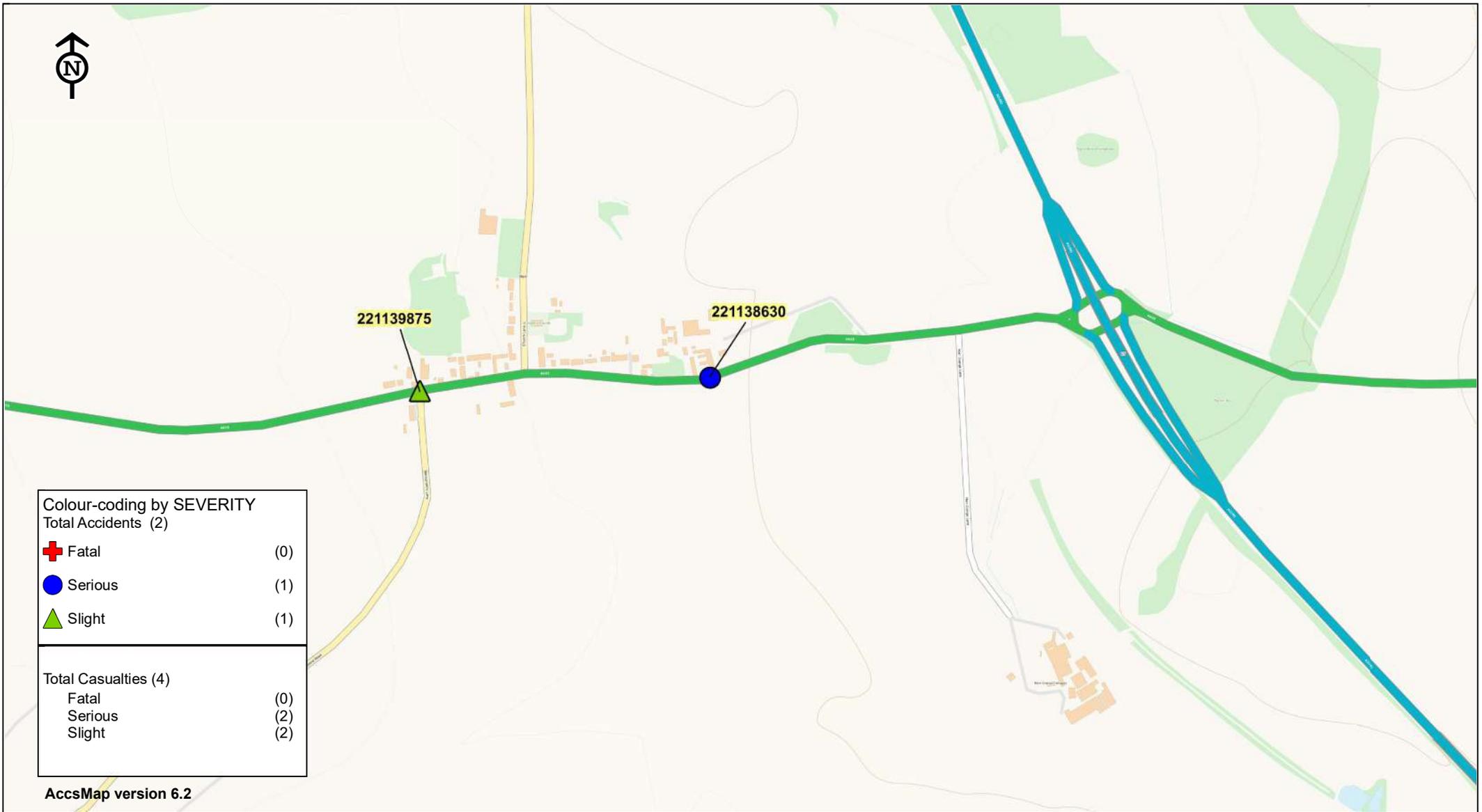
**MAKING SOUTH YORKSHIRE
ROADS SAFER**

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No.
100030252.
South Yorkshire SRP

PLAN 2

**5 Year Collision Data
01/01/2015 to 20/05/2019
A635 Doncaster**

SCALE	Not to Scale
DATE	28/07/2022
DRWG No.	46002/400/NJA
DRN BY	



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100030252.
South Yorkshire SRP

**A635 Doncaster Collision Data
01/01/2022 to 20/05/2022
Provisional**

SCALE	Not to Scale
DATE	28/07/2022
DRWG No.	46002/400/NJA
DRN BY	

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

A-00019-15 06/01/2015 Tuesday Time: 1725 Vehicles 4 Casualties 2 Slight
Easting: 452,662 Northing: 405,371
Unknown Road Surface: Dry Darkness: no street lighting
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) MARR JUNCTION 37
Description: VEH1 HGV TRAVELLING IN LANE 2, MOVES INTO LANE 1 DRIVER NOT SEEING VEH2 WHICH WAS IN LANE 1 ALONGSIDE VEH1 AND COLLISION OCCURS FORCING VEH2 INTO CENTRAL BARRIER AND STOPPING IN LANE 2. VEH 3 FOLLOWING IN LANE 2 STOPS. VEH4 THEN COLLIDES WITH REAR OF VEH 3

Vehicle Reference: 1 Goods >= 7.5 tonnes mgw Changing lane to left
First point of impact: Nearside
Vehicle direction: N to S Journey: Journey as part of work
Age of Driver : 44 Breath test: Negative

Contributory Factors : 405 406 406

Vehicle Reference: 2 Car Going ahead
First point of impact: Offside
Vehicle direction: N to S Journey: Commuting to/from work
Age of Driver : 58 Breath test: Negative

Contributory Factors : 405 406 406

Casualty Reference: 1 Age: 58 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

A-00280-15 25/02/2015 Wednesda Time: 1745 Vehicles 2 Casualties 1 Slight
Easting: 452,955 Northing: 404,926
Raining without high winds Road Surface: Wet/Damp Daylight
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) MARR JUNCTION 37
Description: V2 COLL WITH REAR OF V2 IN SLOWING TRAFFIC ON SB A1M

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: NW to SE Journey: Not known
Age of Driver : Breath test: Not requested
Contributory Factors : 406

Vehicle Reference: 2 Car Going ahead
First point of impact: Back
Vehicle direction: NW to SE Journey: Other
Age of Driver : 22 Breath test: Not requested
Contributory Factors : 406

Casualty Reference: 1 Age: 22 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

A-01720-15 20/11/2015 Friday Time: 1145 Vehicles 3 Casualties 1 Slight
Easting: 452,719 Northing: 405,357
Unknown Road Surface: Dry Daylight
Road Type: Roundabout Speed Limit: 60

Location: BARNSELY ROAD MARR J/W ROUNDABOUT
Description: U/K VEHICLE BRAKES SHARPLY CAUSING V1 TO BRAKE SHARPLY TO AVOID COLL. V2 COLL WITH REAR OF V1. V3 COLL WITH REAR OF V2

Vehicle Reference: 1 Car Moving off
First point of impact: Back
Vehicle direction: E to W Journey: Other
Age of Driver : 26 Breath test: Not requested

Contributory Factors : 406 408 308 308 308

Casualty Reference: 1 Age: 26 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: E to W Journey: Other
Age of Driver : Breath test: Not requested

Contributory Factors : 406 408 308 308 308

Vehicle Reference: 3 Car Going ahead
First point of impact: Front
Vehicle direction: E to W Journey: Other
Age of Driver : Breath test: Not requested

Contributory Factors : 406 408 308 308 308

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

1678411 12/06/2016 Sunday Time: 1523 Vehicles 6 Casualties 12 Slight
Easting: 452,887 Northing: 404,985
Raining without high winds Road Surface: Wet/Damp Daylight
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) DONCASTER AT OR WITHIN 20 MTS OF A1(M) SLIP ROAD (J37)
Description: V5 FAILED TO STOP FOR SLOWING TRAFFIC COLL WITH V4 CAUSING DOMINO EFFECT WITH V3,2 & 1. V6 FOLLOWING SWERVED TO AVOID COLL LEAVING C/W N/S.

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: SE to NW Journey: Not known
Age of Driver : 57 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 1 Age: 57 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 6 Age: 41 Male Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

Vehicle Reference: 2 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: SE to NW Journey: Not known
Age of Driver : 56 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 7 Age: 23 Female Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 8 Age: 86 Male Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 3 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: SE to NW Journey: Not known
Age of Driver : 58 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 10 Age: 49 Female Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 11 Age: 12 Female Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 58 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

Vehicle Reference: 4 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: SE to NW Journey: Not known
Age of Driver : 40 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 5 Age: 9 Male Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 9 Age: 51 Female Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 5 Car Going ahead
First point of impact: Front
Vehicle direction: SE to NW Journey: Not known
Age of Driver : 77 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 3 Age: 77 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

Vehicle Reference: 6 Car Going ahead
First point of impact: Did not impact
Vehicle direction: SE to NW Journey: Not known
Age of Driver : 39 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 12 Age: 61 Female Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 4 Age: 39 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

16113686 04/10/2016 Tuesday Time: 0730 Vehicles 2 Casualties 1 Slight
Easting: 452,667 Northing: 405,358
Fine without high winds Road Surface: Dry Daylight
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) DONCASTER
Description: V2 TRAVELLING BEHIND V1 ON LANE 2 (HEAVY TRAFFIC). AS TRAFFIC IN FRONT
SUDDENLY SLOW V1 BRAKES, V2 FAILS TO SLOW SUFFIECENLTLY AND
COLLIDES WITH REAR OF V1.

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: NW to SE Journey: Journey as part of work
Age of Driver : 46 Breath test: Negative
Contributory Factors : 406

Casualty Reference: 1 Age: 46 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: NW to SE Journey: Journey as part of work
Age of Driver : 32 Breath test: Negative
Contributory Factors : 406

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

16144740 31/12/2016 Saturday Time: 1355 Vehicles 2 Casualties 2 Slight
Easting: 452,548 Northing: 405,607
Fine without high winds Road Surface: Dry Daylight
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) DONCASTER AT OR WITHIN 20 MTS OF A1(M) SLIP ROAD (J37)
Description: V1 TRAVELLING A1 SOUTH APPROACHING JUNCTION 37 (MARR) AND SLOWS FOR SLOWERR MOVING TRAFFIC, V2 THEN COLLIDES WITH REAR OF V1 PUSHING IT INTO THE CENTRAL CRASH BARRIER, V2 THEN DRIVES AWAY FROM SCENE WITHOUT STOPPING.

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: N to S Journey: Other
Age of Driver : 23 Breath test: Negative

Contributory Factors : 405

Casualty Reference: 1 Age: 23 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 17 Female Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: N to S Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 405

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

17168378 16/03/2017 Thursday Time: 1520 Vehicles 2 Casualties 1 Slight
Easting: 452,681 Northing: 405,403
Fine without high winds Road Surface: Dry Daylight
Road Type: Roundabout Speed Limit: 60

Location: MARR ROUNDABOUT (A635) DONCASTER AT OR NR JN WITH A1(M) J37
SOUTHBOUND EXIT

Description: VEHICLE 1 WAS TRAVELLING ALONG BARNSELY ROAD AND PAST OVER THE
ROUNDABOUT HEADING TOWARDS DONCASTER. VEHICLE 2 ENTERED THE
ROUNDABOUT FROM THE SOUTHBOUND A1 JUST AS VEHICLE 1 PAST INFRONT.
VEHICLE 2 THEN HIT THE BACK OF VEHICLE 1 CAUSING IT TO SPIN OFF T
HE ROAD INTO A BUSH. VEHICLE 2 INITIALLY STOPPED TO CHECK THE
CONDITON OF DRIVERS BUT LEFT WITHOUT EXCHANGING DETAILS.

Vehicle Reference: 1 Car Going ahead
First point of impact: Nearside
Vehicle direction: W to E Journey: Commuting to/from work
Age of Driver : 45 Breath test: Driver not contacted

Contributory Factors : 602

Casualty Reference: 1 Age: 45 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :

Ped Location:

Vehicle Reference: 2 Car Moving off
First point of impact: Front
Vehicle direction: N to S Journey: Not known
Age of Driver : Breath test: Driver not contacted

Contributory Factors : 602

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

17225987 25/09/2017 Monday Time: 1325 Vehicles 2 Casualties 1 Slight
Easting: 452,706 Northing: 405,395
Fine without high winds Road Surface: Dry Daylight
Road Type: Roundabout Speed Limit: 60

Location: MARR ROUNDABOUT (A635) DONCASTER AT OR NR JN WITH A1(M) J37
SOUTHBOUND EXIT

Description: V1 WAS STATIONERY. THE DRIVER WAS NOT ON THE BIKE AT THE TIME OF
COLLISION. V2 HAS COLLIDED WITH V1 FORCING V1 INTO THE DRIVERS LEG.

Vehicle Reference: 1 Motorcycle over 50cc and up Parked

First point of impact: Did not impact

Vehicle direction: Parked to Parked

Journey: Commuting to/from work

Age of Driver : 31

Breath test: Not requested

Contributory Factors : 102 102

Vehicle Reference: 2 Car

Going ahead

First point of impact: Front

Vehicle direction: W to SE

Journey: Commuting to/from work

Age of Driver : 22

Breath test: Driver not contacted

Contributory Factors : 102 102

Casualty Reference: 1 Age: 31 Male Pedestrian Severity: Slight

Ped Dir: Pedestrian Ped Movement : In carr not crossing

Ped Location: In carr not crossing

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

17230383 13/10/2017 Friday Time: 1723 Vehicles 2 Casualties 2 Slight
Easting: 452,553 Northing: 405,588
Fine with high winds Road Surface: Dry Daylight
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) SOUTHBOUND DONCASTER AT OR NR JN WITH A1(M) J37 SOUTHBOUND EXIT

Description: VEHICLES 1 AND 2 TRAVELLING SOUTH ON A1M AT JUNCTION 37. AT THIS LOCATION TRAFFIC WHICH WAS HEAVY VEHICLES HAVING SLOWED TO A STOP. VEHICLE 1 HAS FAILED TO REACT IN TIME TRAVELING IN LANE 2 OF 2 AND HAD SWERVED RIGHT IN ORDER TO MISS VEHICLE IN FRONT. VEHICLE 1 HAS THEN IMPACTED WITH THE CENTRAL RESERVATION CONCRETE BARRIER AND HAS BEEN FLIPPED ONTO ITS ROOF. VEHICLE 1 HAS THEN SLID ON ITS ROOF AND IMPACTED WITH VEHICLE 2 WHICH WAS TWO CARS IN FRONT. BOTH PARTIES RECEIVED MINOR INJURIES.

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: NW to SE Journey: Not known
Age of Driver : 29 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 1 Age: 29 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Offside
Vehicle direction: NW to SE Journey: Not known
Age of Driver : 59 Breath test: Negative

Contributory Factors : 406

Casualty Reference: 2 Age: 59 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

17237478 24/10/2017 Tuesday Time: 1250 Vehicles 2 Casualties 1 Slight
Easting: 452,613 Northing: 405,473
Fine without high winds Road Surface: Wet/Damp Daylight
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) SOUTHBOUND DONCASTER
Description: LN 2. ONE LGV INTO BACK OF ANOTHER

Vehicle Reference: 1 Goods >= 7.5 tonnes mgw Going ahead
First point of impact: Back
Vehicle direction: N to S Journey: Journey as part of work
Age of Driver : 57 Breath test: Negative
Contributory Factors : 405 103

Vehicle Reference: 2 Goods >= 7.5 tonnes mgw Going ahead
First point of impact: Front
Vehicle direction: N to S Journey: Journey as part of work
Age of Driver : 49 Breath test: Negative
Contributory Factors : 405 103

Casualty Reference: 1 Age: 49 Male Driver/rider Severity: Slight
Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

17284681 17/12/2017 Sunday Time: 1632 Vehicles 3 Casualties 1 Slight
Easting: 452,850 Northing: 405,033
Fine without high winds Road Surface: Wet/Damp Daylight
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) NORTHBOUND DONCASTER
Description: THREE VEHICLE MINOR INJURY RTC, ALL THREE VEHICLES TRAVELLING A1M, NBC, IN HEAVY SLOW MOVING TRAFFIC, VEHICLES BRAKING AHEAD, V1 AND V2 BRAKE AND SLOW, THENNCOME TO A STOP. V3 COLLIDES WITH THE REAR OF V2, PUSHING IT INTO THE REAR OF V1.

Vehicle Reference: 1 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: SE to NW Journey: Other
Age of Driver : 51 Breath test: Not requested

Contributory Factors : 406

Vehicle Reference: 2 Car Slowing or Stopping
First point of impact: Back
Vehicle direction: SE to NW Journey: Other
Age of Driver : 48 Breath test: Not requested

Contributory Factors : 406

Casualty Reference: 1 Age: 48 Male Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 3 Goods >= 7.5 tonnes mgw Going ahead
First point of impact: Front
Vehicle direction: SE to NW Journey: Journey as part of work
Age of Driver : 31 Breath test: Not requested

Contributory Factors : 406

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

18283270 17/03/2018 Saturday Time: 1757 Vehicles 3 Casualties 2 Slight
Easting: 452,655 Northing: 405,349
Snowing with high winds Road Surface: Frost/Ice Darkness: no street lighting
Road Type: Dual carriageway Speed Limit: 70

Location: A1(M) NORTHBOUND DONCASTER
Description: ALL VEHICLES WERE TRAVELLING NORTH ALONG THE A1 MOTORWAY.
WEATHER CONDITIONS HAVE BEEN POOR WITH SNOW FALLING AND ON THE
CARRIAGEWAY. VEHICLE 1 LOSES CONTROL ON THE ICE AND SKIDS IN FRONT
OF VEHICLE 2 WHICH PUSHES VEHICLE 1 BACK INTO LANE TWO WHERE IT CO
LLIDES WITH VEHICLE 3

Vehicle Reference: 1 Car Going ahead
First point of impact: Nearside
Vehicle direction: S to N Journey: Other
Age of Driver : 26 Breath test: Negative

Contributory Factors : 103

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 34 Breath test: Negative

Contributory Factors : 103

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

Vehicle Reference: 3 Car Going ahead
First point of impact: Front
Vehicle direction: S to N Journey: Other
Age of Driver : 50 Breath test: Negative

Contributory Factors : 103

Casualty Reference: 1 Age: 50 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Casualty Reference: 2 Age: 17 Male Passenger Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Accidents between dates 01/01/2015 and 20/05/2019 (53) months
Selection: Notes:
Selected using Manual Selection

19818573 25/02/2019 Monday Time: 1350 Vehicles 2 Casualties 2 Serious
Easting: 452,776 Northing: 405,345
Fine without high winds Road Surface: Dry Daylight
Road Type: Single carriageway Speed Limit: 60

Location: BARNSELY ROAD (A635) DONCASTER
Description: V1 TAVELLING ALONG BARNSELY ROAD IN SCAWSBY DONCASTER TOWARDS DONCASTER WITNESSES STATES V1 WAS VEERING ABOUT THIS HAS THEN CROSSED THE THE WHITE LINES AND INTO V2 TRAVELLING IN TBE OPPOSITE DIRECTION. TWO VEHICLE RTC WITH INJURIES TO BOTH DRIVERS , DRIVER OF V2 SUSPECTED BROKEN ARM .

Vehicle Reference: 1 Car Going ahead
First point of impact: Front
Vehicle direction: NW to SE Journey: Commuting to/from work
Age of Driver : 69 Breath test: Negative

Contributory Factors : 706

Casualty Reference: 1 Age: 69 Female Driver/rider Severity: Slight

Ped Dir: Ped Movement :
Ped Location:

Vehicle Reference: 2 Car Going ahead
First point of impact: Front
Vehicle direction: SE to NW Journey: Taking pupil to/from school
Age of Driver : 38 Breath test: Negative

Contributory Factors : 706

Casualty Reference: 2 Age: 38 Female Driver/rider Severity: Serious

Ped Dir: Ped Movement :
Ped Location: