ATKINS

A46 Stoneleigh Junction Improvement

Transport Assessment Appendices

Warwickshire County Council

December 2017

Appendices

Appendix A. Scoping Note

Technical Note

Project:	A46 Link Road - Stoneleigh	**To:**	Warwickshire County Council
Subject:	Phase 1 Transportation Scoping Note	**From:**	Atkins, Transportation
Date:	18 Sep 2017	**cc:**	

1.1. Introduction

Atkins has been commissioned to prepare a Transport Assessment to support a planning application for the first phase of the A46 Link Road Project. The A46 Link Road scheme is a proposal to construct a new road from the A46 Stoneleigh Junction around the south of Coventry, and connecting to either the A45 or A452.

The scheme consists of three phases:

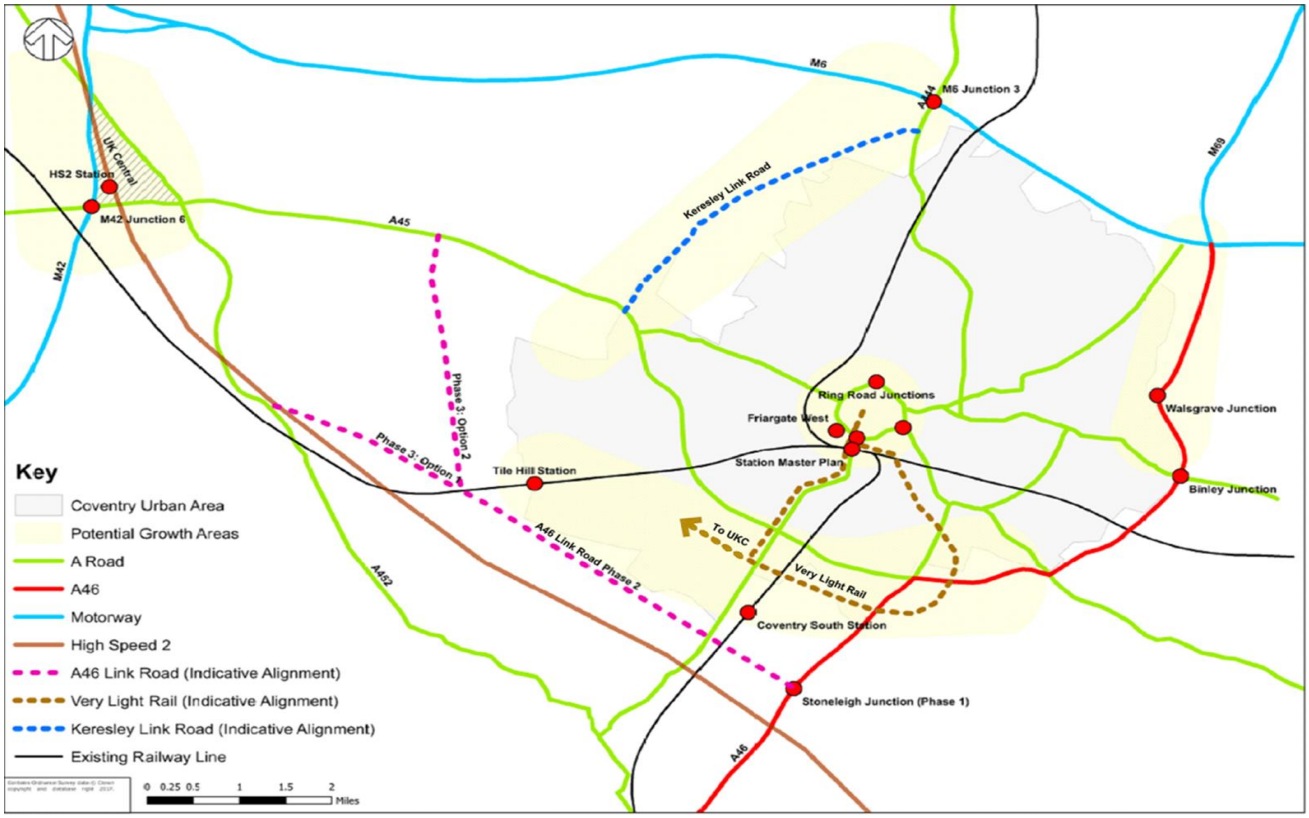
- Phase 1 of the A46 Link Road is a stand-alone junction improvement at Stoneleigh Junction;
- Phase 2 of the scheme would run from the A46 Stoneleigh Junction to Westwood Heath, and would aim to improve access to University of Warwick and Westwood Heath Business Park; and
- Phase 3 of the scheme would link the Phase 2 infrastructure with either the A45 to the west of Coventry or the A452 in the Balsall Common area.

Detailed design of the Phase 1 section is ongoing and construction is expected to start in 2018, subject to this planning application.

Phases 2 and 3 are still at the option assessment stage, and will be progressed through design stages following identification of a preferred route and further business case work.

An extract from Strategic Outline Business Case documents showing the indicative route plan is provided at **Figure 1**.

Figure 1. Indicative A46 Link Road Alignment



Technical Note

This Technical Note forms a Scoping Note setting out the proposed scope and study area of the Transport Assessment (TA) for Phase 1 only; the stand-alone junction improvement at Stoneleigh Junction. It will be submitted to Warwickshire County Council (WCC) Development Management officers to seek agreement to the suggested scope and study area.

It is envisaged that the note will also be submitted to Highways England as the A46 forms part of the Strategic Road Network (SRN), as well as Coventry City Council (CCC) who are part of the consortium promoting the overall scheme.

1.2. Policy

The Transport Assessment will be prepared in accordance with 'Travel Plans, Transport Assessments and Statements in Decision Taking' (March 2014).

A brief review of relevant local and national transport related policy will be undertaken to ensure the proposed development accords with the relevant policy documents. This review will include the National Planning Policy Framework (NPPF), WCC Local Transport Plan and Coventry Local Plan.

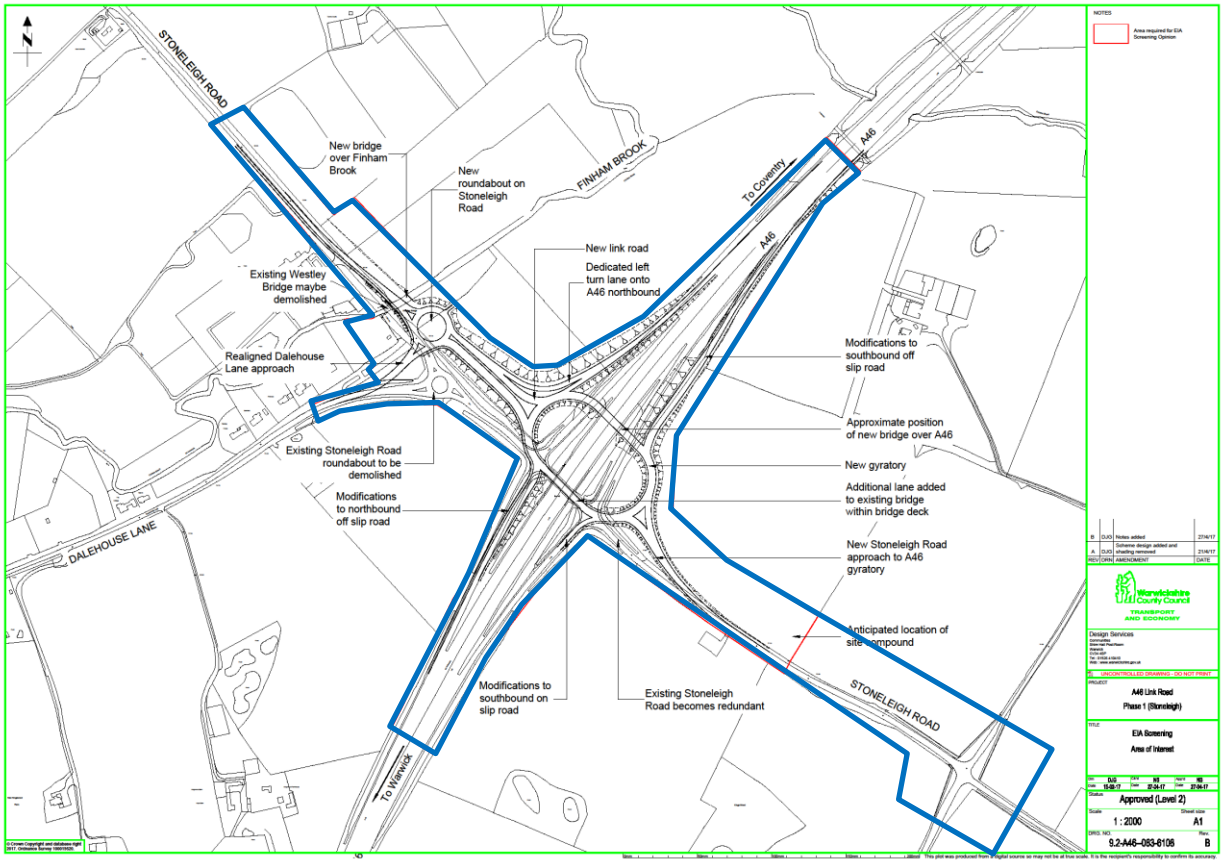
1.3. Baseline Conditions

A review of the baseline conditions will be undertaken to include:

- An overview of the existing road network;
- A high level review of existing sustainable travel facilities to include walking, cycling and public transport; and
- A review of committed infrastructure improvements in the local area.

A review of personal injury accident (PIA) data for the latest available five year period will be undertaken for the area within the blue line shown in **Figure 2**, below.

Figure 2. PIA Study Area



1.4. Traffic Data

In order to inform the assessment of the scheme, future year peak hour turning count data will be extracted from the Kenilworth and Stoneleigh Wide Area (KSWA) Model. This S-Paramics model was developed by Vectos Microsim (VM) for WCC to assess the impact of growth strategies in the area.

To understand and assess current operation, WCC have also provided manual classified Turning Count Data from a survey undertaken on 15 March 2017 at the A46 Stoneleigh junction, as well as data from a survey undertaken on Tuesday 23 Feb 2016 for the Stoneleigh Road / Dalehouse Lane Roundabout.

1.5. Operational Assessment

1.5.1. Assessment Scenarios

It is proposed to consider the following assessment years:

- 2017 Base Year; and
- 2029 Future Year;

In 'Travel Plans, Transport Assessments and Statements in Decision-Taking' committed development is defined as "*development that is consented or allocated where there is a reasonable degree of certainty will proceed within the next three years*". As such, the use of the KSWA model flows with Local Plan development aspirations will be used to robustly assess those developments which it is deemed have a reasonable certainty of being brought forward.

With the exception of the Base scenario for which traffic survey data is available, it is proposed that assessment flows will be extracted from KSWA model iterations. The following scenarios will be assessed for the AM and PM peak hours:

- 2017 Base;
- 2029 Future Year Without A46 Link Road; and
- 2029 Future Year With Phase 1 of A46 Link Road.

1.5.2. Junction Capacity Assessment

In order to understand the impact of the Phase 1 proposals on the highway network, junction capacity assessment is proposed at the following locations:

- A46 Stoneleigh Junction; and
- Stoneleigh Road / Dalehouse Lane Roundabout.

It is recognised that the new route created by the completed A46 Link Road scheme (Phase 1,2 and 3) will have impacts on the wider highway network. The wider impacts of Phase 2 and 3 will be assessed in the TAs prepared for these phases. However, the standalone nature of Phase 1 and its relatively limited potential to cause significant route reassignment on the wider highway network is reflected by the size of the proposed study area.

1.5.3. Stoneleigh Village Assessment

It is proposed to assess the flow differences resulting from the Phase 1 scheme in the Stoneleigh Village. This assessment will look at the relative differences in peak hour link flow coming to/from the Birmingham Road arm of the B4115/Stoneleigh Road/Birmingham Road junction.

Depending on the outcomes of this link flow assessment, it may be necessary to ensure impacts from the Phase 1 scheme on Stoneleigh Village are not significant. If this is the case, it is proposed to investigate existing potential solutions at this location. Growth aspirations at Stoneleigh Park and HS2 construction activities have already identified potential mitigation measures at this location as part of the ongoing Stoneleigh Traffic Management Study.

1.5.4. Additional Assessments

In addition to capacity assessments, the TA will include details to demonstrate that the design will not have adverse impacts on operation in terms of layout. Swept path analysis and forward visibilities at the A46 Stoneleigh junction, and the Stoneleigh Road / Dalehouse Lane will be provided.

Visibility splays will be illustrated at locations where the proposed scheme may result in changes to existing visibilities, such as the Hydroponics garden centre and properties off Dalehouse Lane.

It is understood that Stage 2 Road Safety Audit (RSA) will be required for the planning application, and this will need to consider potential safety impacts of the scheme on NMUs in addition to vehicles.

1.5.5. Impact on the SRN

The impact of the Phase 1 proposals on the SRN will be demonstrated by the junction capacity assessment for the A46 Stoneleigh junction. The RSA will identify impacts on all road users.

1.5.6. Impact on the Coventry City Council Road Network

It is considered that the standalone nature of the Phase 1 proposals is not likely to have any significant impacts on the road network maintained by Coventry City Council. As such, no assessment is proposed at this stage. The new route created by the completed A46 Link Road scheme (Phase 1,2 and 3) is likely to have impacts on the highway network in Coventry which will need to be assessed when these stages are progressed.

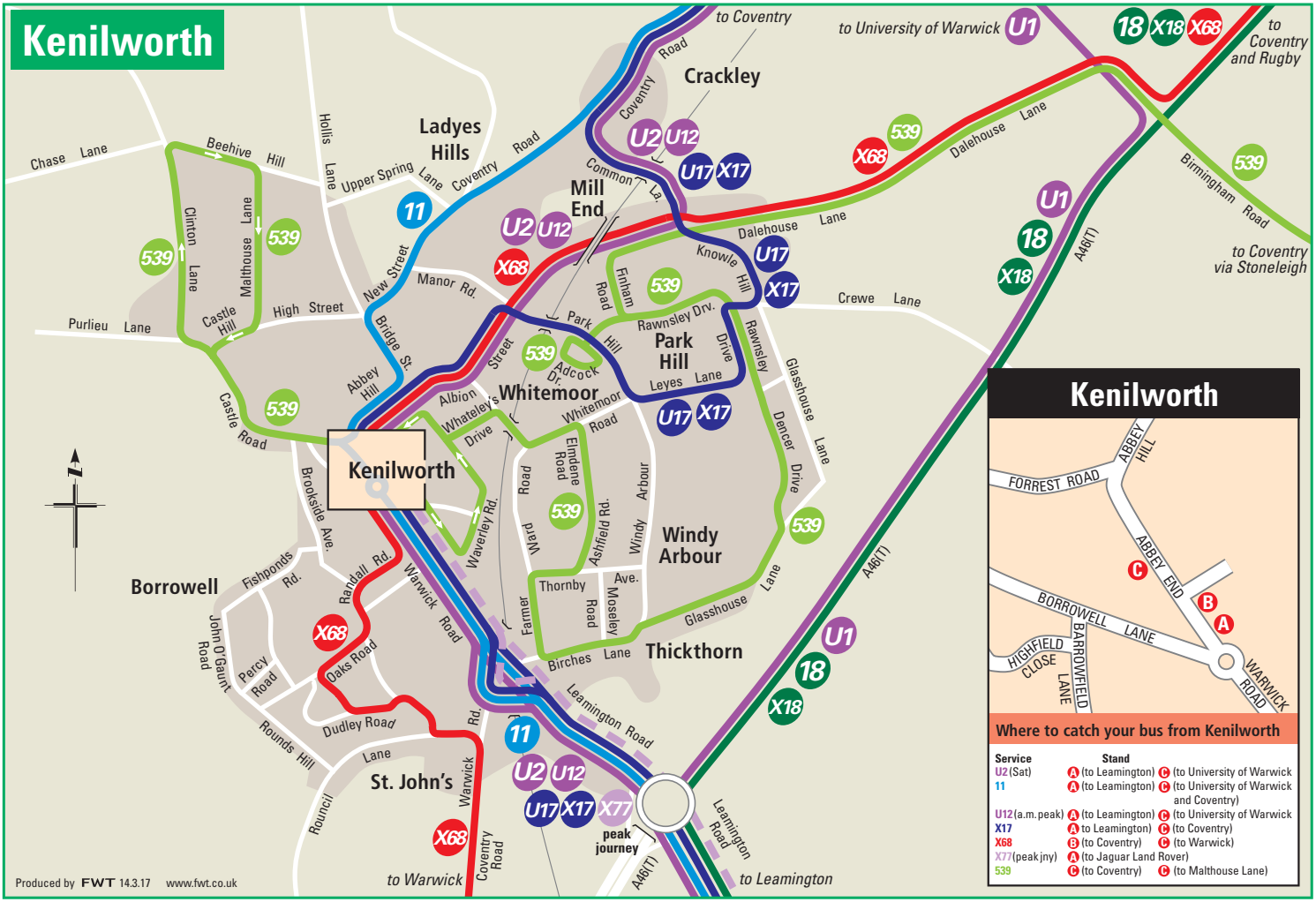
1.6. Summary

This Scoping Note is to be submitted to WCC for their comment and approval of the following:

- The PIA study area shown at **Figure 2**;
- The assessment scenarios (**Section 1.5.1**);
- The assessment study area (**Section 1.5.2 &3**); and
- The additional assessments (**Section 1.5.4**).

Appendix B. Kenilworth Bus Map

Kenilworth



Kenilworth

Where to catch your bus from Kenilworth

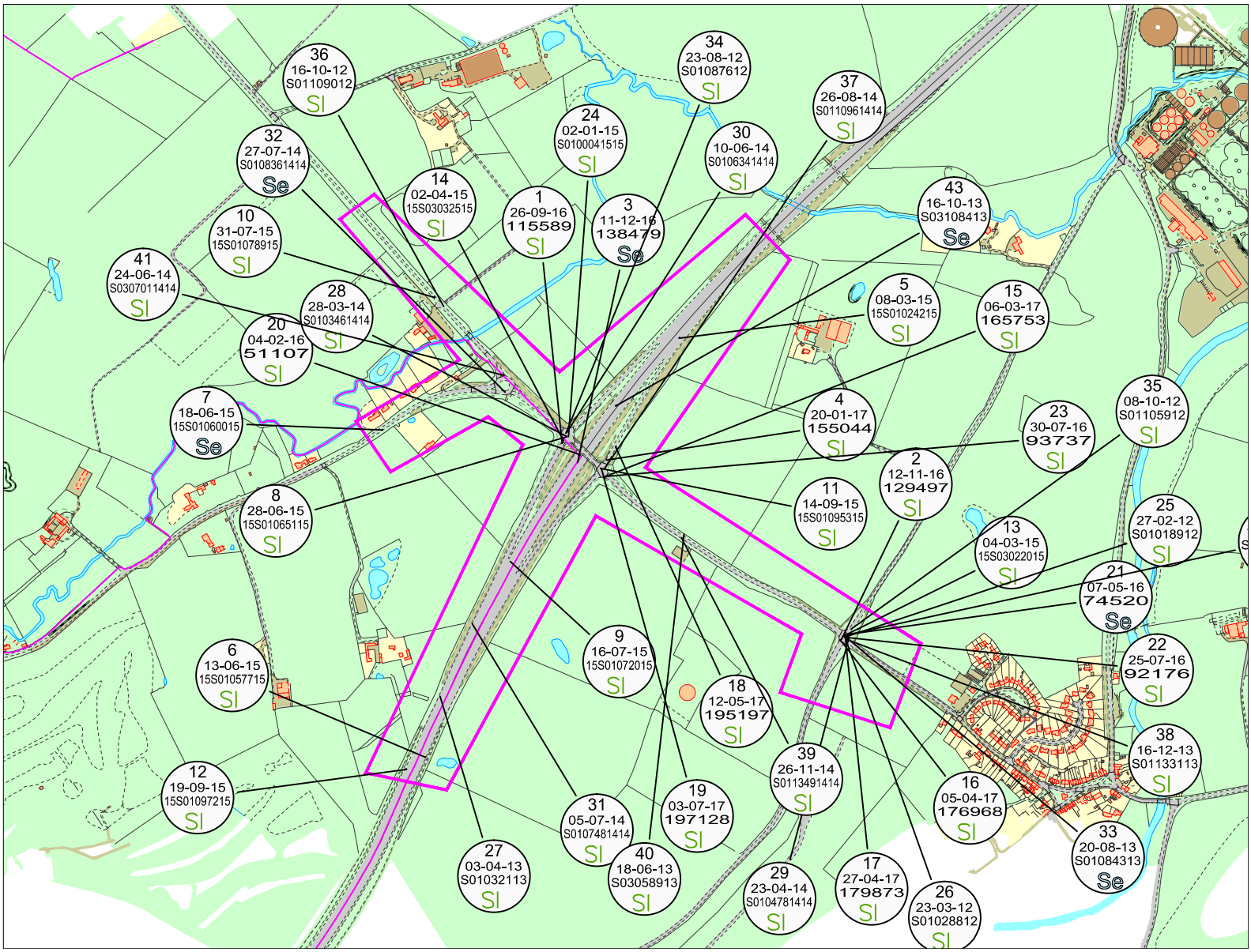
Service	Stand
U2 (Sat)	A (to Leamington) C (to University of Warwick
11	A (to Leamington) C (to University of Warwick and Coventry)
U12 (a.m. peak)	A (to Leamington) C (to University of Warwick
X17	A (to Leamington) C (to Coventry)
X68	B (to Coventry) C (to Warwick)
X77 (peak jny)	A (to Jaguar Land Rover)
539	C (to Coventry) C (to Malthouse Lane)

Appendix C. PIA Data

A46 Stoneleigh 01/01/2012 - 12/09/2017
27 Feb 2012 to 03 Jul 2017

Report produced: 20/09/2017

Road Safety Intelligence Team
Tel: 01926 412740
Email: rsinfo@warwickshire.gov.uk


36 16-10-12 S01109012 Sl
34 23-08-12 S01087612 Sl
37 26-08-14 S0110961414 Sl
24 02-01-15 S0100041515 Sl
30 10-06-14 S0106341414 Sl
32 27-07-14 S0108361414 Se
14 02-04-15 15S03032515 Sl
1 26-09-16 115589 Sl
3 11-12-16 138479 Se
43 16-10-13 S03108413 Se
10 31-07-15 15S01078915 Sl
41 24-06-14 S0307011414 Sl
28 28-03-14 S0103461414 Sl
5 08-03-15 15S01024215 Sl
15 06-03-17 165753 Sl
20 04-02-16 51107 Sl
7 18-06-15 15S01060015 Se
4 20-01-17 155044 Sl
35 08-10-12 S01105912 Sl
23 30-07-16 93737 Sl
2 12-11-16 129497 Sl
8 28-06-15 15S01065115 Sl
11 14-09-15 15S01095315 Sl
25 27-02-12 S01018912 Sl
13 04-03-15 15S03022015 Sl
21 07-05-16 74520 Se
9 16-07-15 15S01072015 Sl
6 13-06-15 15S01057715 Sl
18 12-05-17 195197 Sl
22 25-07-16 92176 Sl
38 16-12-13 S01133113 Sl
39 26-11-14 S0113491414 Sl
12 19-09-15 15S01097215 Sl
16 05-04-17 176968 Sl
31 05-07-14 S0107481414 Sl
19 03-07-17 197128 Sl
33 20-08-13 S01084313 Se
27 03-04-13 S01032113 Sl
40 18-06-13 S03058913 Sl
29 23-04-14 S0104781414 Sl
17 27-04-17 179873 Sl
26 23-03-12 S01028812 Sl

ALL ROAD USERS - ACCIDENTS

Year	Fatal	Serious	Slight	Total
2012	0	0	5	5
2013	0	3	3	6
2014	0	1	7	8
2015	0	1	10	11
2016	0	2	5	7
2017	0	0	6	6

Month	Fatal	Serious	Slight	Total
January	0	0	2	2
February	0	0	2	2
March	0	0	5	5
April	0	0	5	5
May	0	1	1	2
June	0	1	5	6
July	0	1	6	7
August	0	1	2	3
September	0	0	3	3
October	0	2	2	4
November	0	0	2	2
December	0	1	1	2

Day	Fatal	Serious	Slight	Total
Sunday	0	3	2	5
Monday	0	0	8	8
Tuesday	0	1	5	6
Wednesday	0	1	5	6
Thursday	0	1	5	6
Friday	0	0	6	6
Saturday	0	1	5	6

Ped Crossing	Fatal	Serious	Slight	Total
Not at crossing	0	7	36	43
Zebra	0	0	0	0
Pelican	0	0	0	0
Ped Phase	0	0	0	0
Footbridge	0	0	0	0
Refuge	0	0	0	0
Unknown	0	0	0	0

Bends (Veh Totals)	Fatal	Serious	Slight	Total
Left Hand Bend	0	0	0	0
Right Hand Bend	0	0	0	0

Time	Fatal	Serious	Slight	Total
0000-0059	0	0	1	1
0100-0159	0	0	2	2
0200-0259	0	0	1	1
0300-0359	0	0	0	0
0400-0459	0	0	0	0
0500-0559	0	0	1	1
0600-0659	0	0	0	0
0700-0759	0	0	2	2
0800-0859	0	1	1	2
0900-0959	0	0	1	1
1000-1059	0	0	1	1
1100-1159	0	0	2	2
1200-1259	0	1	2	3
1300-1359	0	0	2	2
1400-1459	0	1	1	2
1500-1559	0	0	1	1
1600-1659	0	1	4	5
1700-1759	0	0	5	5
1800-1859	0	2	3	5
1900-1959	0	0	3	3
2000-2059	0	1	1	2
2100-2159	0	0	1	1
2200-2259	0	0	0	0
2300-2359	0	0	1	1

Lighting	Fatal	Serious	Slight	Total
Daylight	0	5	23	28
Darkness	0	2	13	15

Weather	Fatal	Serious	Slight	Total
Fine without high winds	0	7	29	36
Raining without high winds	0	0	6	6
Snowing without high winds	0	0	0	0
Fine with high winds	0	0	0	0
Raining with high winds	0	0	0	0
Snowing with high winds	0	0	0	0
Fog or mist - if hazard	0	0	1	1
Other	0	0	0	0
Unknown	0	0	0	0

Road Surface	Fatal	Serious	Slight	Total
Dry	0	5	25	30
Wet/Damp	0	2	11	13
Snow	0	0	0	0
Frost/Ice	0	0	0	0
Flood	0	0	0	0
Unknown	0	0	0	0

District	Fatal	Serious	Slight	Total
Warwick	0	7	36	43

Road Class	Fatal	Serious	Slight	Total
M	0	0	0	0
A(M)	0	0	0	0
A	0	2	13	15
B	0	3	9	12
Other	0	2	14	16

Speed Limit	Fatal	Serious	Slight	Total
20	0	0	0	0
30	0	0	0	0
40	0	1	0	1
50	0	2	10	12
60	0	2	15	17
70	0	2	11	13

Obstruction (Veh Totals)	Fatal	Serious	Slight	Total
Sign/Signal	0	0	0	0
Lamp Post	0	0	0	0
Pole	0	0	0	0
Tree	0	0	0	0
Bus Stop	0	0	0	0
Barrier	0	0	2	2
Other	0	0	4	4

Junction Type	Fatal	Serious	Slight	Total
Not at Junction	0	2	8	10
Roundabout	0	1	1	2
Mini R'about	0	0	0	0
T or Staggered	0	0	5	5
Slip Road	0	0	7	7
Crossroads	0	3	12	15
Multiple Junct	0	0	0	0
Private Drive	0	1	3	4
Other Junction	0	0	0	0
Unknown	0	0	0	0

ALL ROAD USERS - CASUALTIES

Year	Fatal	Serious	Slight	Total
2012	0	0	8	8
2013	0	3	7	10
2014	0	1	12	13
2015	0	1	15	16
2016	0	2	8	10
2017	0	0	9	9

Month	Fatal	Serious	Slight	Total
January	0	0	2	2
February	0	0	2	2
March	0	0	10	10
April	0	0	8	8
May	0	1	3	4
June	0	1	7	8
July	0	1	11	12
August	0	1	3	4
September	0	0	4	4
October	0	2	5	7
November	0	0	2	2
December	0	1	2	3

Day	Fatal	Serious	Slight	Total
Sunday	0	3	3	6
Monday	0	0	12	12
Tuesday	0	1	9	10
Wednesday	0	1	9	10
Thursday	0	1	7	8
Friday	0	0	11	11
Saturday	0	1	8	9

Ped Crossing	Fatal	Serious	Slight	Total
Not at crossing	0	7	59	66
Zebra	0	0	0	0
Pelican	0	0	0	0
Ped Phase	0	0	0	0
Footbridge	0	0	0	0
Refuge	0	0	0	0
Unknown	0	0	0	0

Bends	Fatal	Serious	Slight	Total
Left Hand Bend	0	0	0	0
Right Hand Bend	0	0	0	0

Casualty Age	Fatal	Serious	Slight	Total
0 - 5	0	0	0	0
6 - 10	0	0	0	0
11 - 16	0	0	4	4
17 - 25	0	0	13	13
26 - 35	0	1	10	11
36 - 45	0	2	10	12
46 - 55	0	2	10	12
56 - 64	0	1	5	6
65+	0	1	7	8
Unknown	0	0	0	0

Time	Fatal	Serious	Slight	Total
0000-0059	0	0	1	1
0100-0159	0	0	4	4
0200-0259	0	0	1	1
0300-0359	0	0	0	0
0400-0459	0	0	0	0
0500-0559	0	0	2	2
0600-0659	0	0	0	0
0700-0759	0	0	3	3
0800-0859	0	1	2	3
0900-0959	0	0	1	1
1000-1059	0	0	2	2
1100-1159	0	0	3	3
1200-1259	0	1	6	7
1300-1359	0	0	3	3
1400-1459	0	1	1	2
1500-1559	0	0	2	2
1600-1659	0	1	5	6
1700-1759	0	0	10	10
1800-1859	0	2	3	5
1900-1959	0	0	3	3
2000-2059	0	1	4	5
2100-2159	0	0	1	1
2200-2259	0	0	0	0
2300-2359	0	0	2	2

Lighting	Fatal	Serious	Slight	Total
Daylight	0	5	39	44
Darkness	0	2	20	22

Weather	Fatal	Serious	Slight	Total
Fine without high winds	0	7	51	58
Raining without high winds	0	0	7	7
Snowing without high winds	0	0	0	0
Fine with high winds	0	0	0	0
Raining with high winds	0	0	0	0
Snowing with high winds	0	0	0	0
Fog or mist - if hazard	0	0	1	1
Other	0	0	0	0
Unknown	0	0	0	0

Road Surface	Fatal	Serious	Slight	Total
Dry	0	5	45	50
Wet/Damp	0	2	14	16
Snow	0	0	0	0
Frost/Ice	0	0	0	0
Flood	0	0	0	0
Unknown	0	0	0	0

District	Fatal	Serious	Slight	Total
Warwick	0	7	59	66

Road Class	Fatal	Serious	Slight	Total
M	0	0	0	0
A(M)	0	0	0	0
A	0	2	19	21
B	0	3	14	17
Other	0	2	26	28

Speed Limit	Fatal	Serious	Slight	Total
20	0	0	0	0
30	0	0	0	0
40	0	1	0	1
50	0	2	16	18
60	0	2	26	28
70	0	2	17	19

Obstruction	Fatal	Serious	Slight	Total
Sign/Signal	0	0	0	0
Lamp Post	0	0	0	0
Pole	0	0	0	0
Tree	0	0	0	0
Bus Stop	0	0	0	0
Barrier	0	0	2	2
Other	0	0	7	7

ALL ROAD USERS - CASUALTIES

Junction Type	Fatal	Serious	Slight	Total
Not at Junction	0	2	14	16
Roundabout	0	1	2	3
Mini R'about	0	0	0	0
T or Staggered	0	0	7	7
Slip Road	0	0	9	9
Crossroads	0	3	20	23
Multiple Junct	0	0	0	0
Private Drive	0	1	7	8
Other Junction	0	0	0	0
Unknown	0	0	0	0

D-PRINT CRASH REPORT

20-Sep-2017
09:00:35

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
1	**Road No A46 Grid 431980E** **Section Ref 273476N**	SLIGHT	26/09/2016	2	19:40	DRK STL	Dry	Fine			
	NB SLIP ROAD STONELEIGH A46 STONELEIGH ROAD								Warwick		
	LEARNER DRIVER OF VEH002 HAS BEEN HESITANT AT THE JUNCTION AT THE TOP OF THE SLIP ROAD, VEH001 HAS THEN COLLIDED WITH THE REAR OF VEH002 BY UNKNOWN MEANS..						Veh1, car, SW -> NW Veh2, car, SW -> NW				Casualties 1 Vehicles 2
2	**Road No B4115 Grid 432562E** **Section Ref 273068N**	SLIGHT	12/11/2016	7	11:55	L	Wet/Damp	Rain		R.TURN	P/C
	STONELEIGH B4115 BIRMINGHAM RD								Warwick		
	VEH01 AT CROSSROADS FAILS TO GIVE WAY TO CYCLIST APPROACHING FROM NEARSIDE FRONT NEARSIDE OF VEH01 COLLIDED WITH FRONT OF BIKE CAUSING RIDER TO BE THROWN ACROSS THE BONNET AND COME TO REST ON THE FLOOR WITH MINOR INJURIES						Veh1, car, SE -> NE Veh2, pedal cycle, SW -> NE				Casualties 1 Vehicles 2
3	**Road No A46 Grid 432012E** **Section Ref 273436N**	SERIOUS	11/12/2016	1	08:15	L	Wet/Damp	Fine			HGV
	STONELEIGH A46								Warwick		
	VEH 2 TRAVELS A46 S/B TOWARDS WARWICK. VEH 1 TRAVELS IN THE SAME DIRECTION. VEH 1 RUNS INTO REAR AT VEH 2. VEH 1 LEAVES CARRIAGEWAY TO NEARSIDE.						Veh1, car, NE -> SW Veh2, goods > 7.5t, NE -> SW				Casualties 2 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

20-Sep-2017
09:00:35

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
4	**Road No A46 Grid 432072E** **Section Ref 273441N**	SLIGHT	20/01/2017	6	16:50	DRK NSL	Wet/Damp	Fine			
	STONELEIGH SOUTH SLIP RD A46 STONELEIGH RD								Warwick		
	VEH 02 AND VEH 03 WERE STATIONARY ON THE OFF SLIP OF THE A46 SOUTH STONELEIGH ON THE JUNCTION TO STONELEIGH ROAD. VEH 01 HAS THEN COME UP THE SLIP ROAD AND DRIVEN INTO THE REAR OF VEH 02 FORCING IT INTO THE REAR OF VEH 03.						Veh1, car, NE -> SW Veh2, car, NE -> SW Veh3, car, NE -> SW				Casualties 1 Vehicles 3
5	**Road No A46 Grid 432224E** **Section Ref 273695N**	SLIGHT	08/03/2015	1	13:33	L	Wet/Damp	Rain			GV
	A 46 STONELEIGH SB CW AY JW A 46 SB SLIP OFF RD.								Warwick		
	V2 TRAVELLING A 46 SB, V1 ENTERS A 46 SB FROM SB SLIP OFF RD COLLIDING NS V2. V1 FAILS TO STOP.						Veh1, goods < 3.5t, NE -> SW Veh2, car, NE -> SW				Casualties 1 Vehicles 2
6	**Road No A46 Grid 431695E** **Section Ref 272822N**	SLIGHT	13/06/2015	7	00:34	DRK STL	Wet/Damp	Rain		S.VEH	
	A46 M/P 88/4 AT STONELEIGH								Warwick		
	V1 TRAV SB IN BAD WEATHER CONDITIONS AQUAPLANED AND LEFT RD TO N/S CRASH BARRIER						Veh1, car, NE -> SW				Casualties 1 Vehicles 1

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
7	**Road No** **Grid 431606E** **Section** **Ref 273504N**	SERIOUS	18/06/2015	5	14:32	L	Dry	Fine			HGV M/C
	DALEHOUSE LANE KENILWORTH J/W DRIVEWAY TO WESTLEY HOUSE								Warwick		
	V2 DELIVERY VAN IS MAKING A DELIVERY TO WESTLEY HOUSE, OWNER OF PROPERY HAS MOVED HER CAR V3 ONTO O/S VERGE SO V2 CAN REVERSE INTO DRIVEWAY FROM MAIN RD , V2 HAS AMBER WARNING LGTS ON, AT SAME TIME V1 MCYCLE APPS OVER BROW OF HILL TRAV AT SPEED, SEES V2, BRAKES HARD, STRIKES V2 AND LEAVES RD TO O/S COLL/W PARKED V3, APP V4 MCYCLE COMING UP FROM BEH V1 SEES WHATS HAPPENING , BRAKES AND LEAVES RD TO N/S						Veh1, m/cycle > 500cc, SW -> NE Veh2, goods > 7.5t, SE -> NW Veh3, car, P -> P Veh4, m/cycle > 500cc, SW -> NE			Casualties 1 Vehicles 4	
8	**Road No A46** **Grid 431988E** **Section** **Ref 273489N**	SLIGHT	28/06/2015	1	16:00	L	Dry	Fine			
	A46 STONELEIGH RD J/W STONELEIGH RD NR KENILWORTH								Warwick		
	V1 TRAV UP SLIP RD CARRIES STRAIGHT ONTO MAIN RD COLL/W PASSING V2, V1 FAILS TO STOP AT SCENE						Veh1, car, SW -> NE Veh2, car, SE -> NW			Casualties 1 Vehicles 2	
9	**Road No A46** **Grid 431872E** **Section** **Ref 273230N**	SLIGHT	16/07/2015	5	17:45	L	Dry	Fine			PSV
	A 46 NB CW APPROX 100 M SW OF STONELEIGH JUNCTION.								Warwick		
	V1,2 AND 3 TRAVELLING IN LANE 1 OF SLOW MOVING TRAFFIC, V1 COLLIDES REAR OF V2 WHICH IS SHUNTED FORWARD INTO THE REAR V3.						Veh1, bus or coach, SW -> NE Veh2, car, SW -> NE Veh3, car, SW -> NE			Casualties 3 Vehicles 3	

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
10	**Road No** **Grid 431714E** **Section** **Ref 273780N**	SLIGHT	31/07/2015	6	17:15	L	Dry	Fine			
	STONELEIGH RD KENILWORTH J/W TURN TO BROOK FARM								Warwick		
	V1 FAILS TO SEE STAT VEHS UP AHEAD AND COLL/W REAR V2 , THE IMPACT PUSHING V2 INTO V3 AND V3 INTO REAR V4						Veh1, car, NW -> SE Veh2, car, NW -> SE Veh3, car, NW -> SE Veh4, car, NW -> SE				Casualties 3 Vehicles 4
11	**Road No** **Grid 432060E** **Section** **Ref 273424N**	SLIGHT	14/09/2015	2	09:10	L	Wet/Damp	Fine		R.TURN	
	BIRMINGHAM RD, KENILWORTH JW A 46 SB SLIP OFF RD.								Warwick		
	V1 STATIONARY AT TOP OF A 46 SB SLIP OFF RD WAITING TO MTURN RT ONTO BIRMINGHAM RD. V2 STATIONARY ON BIRMINGHAMR RD WAITING TO TURN RT ONTO A 46 SB SLIP ON RD. V1 AND 2 COMMENCE RT TURN MANOUVERES AT EXACTLY THE SAME TIME REULTING IN A COLLISION.						Veh1, car, NE -> NW Veh2, car, NW -> SW				Casualties 1 Vehicles 2
12	**Road No A46** **Grid 431656E** **Section** **Ref 272797N**	SLIGHT	19/09/2015	7	11:50	L	Dry	Fine			
	A46 KENILWORTH BY PASS M/P 88/4, IN VICINITY OF KINGSWOOD FARMHOUSE								Warwick		
	BOTH VEHS TRAV NB IN LANE 1 , V2 BRAKES HARD TO AVOID PLASTIC BUILDERS BUCKET IN CARRIAGEWAY AND IS STRUCK IN REAR BY V1						Veh1, car, SW -> NE Veh2, car, SW -> NE				Casualties 2 Vehicles 2
13	**Road No B4115** **Grid 432565E** **Section** **Ref 273074N**	SLIGHT	04/03/2015	4	17:35	L	Dry	Fine		R.TURN	
	B 4115, STONELEIGH JW STONELEIGH RD.								Warwick		
	V1 TRAVELLING SOUTH ALONG THE B 4115, V2 TRAVELLING IN OP DIRECTION. AT CROSSROADS V1 TURNS RT ACROSS PATH OF V2 STRIKING FRONT TO FRONT.						Veh1, car, NE -> NW Veh2, car, SW -> NE				Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
14	**Road No A46 Grid 431983E** **Section Ref 273481N**	SLIGHT	02/04/2015	5	18:40	L	Dry	Fine			
	A 46 NB SLIP OFF RD, STONELEIGH JW STONELEIGH RD.								Warwick		
	V2 WAITING ON A 46 NB SLIP OFF RD TO ENTER STONELEIGH RD IS STRUCK IN REAR BY V1. IMPACT SHUNTS V2 ONTO STONELEIGH RD, V1 DRIVES OFF FROM SCENE.						Veh1, car, SW -> NE Veh2, car, SW -> NE				Casualties 1 Vehicles 2
15	**Road No U0 Grid 432065E** **Section Ref 273405N**	SLIGHT	06/03/2017	2	20:17	DRK NSL	Dry	Fine		S.VEH	
	STONELEIGH ROAD STONELEIGH UNSPECIFIED ROAD OR LOCATION STONELEIGH SLIP OFF A46								Warwick		
	VEH01 TRAVELLING ON EXIT SLIP ROAD FROM A46 SOUTHBOUND, FAILS TO SLOW/STOP AND GIVE WAY, CROSSES JUNCTION AND LEAVES ACRRIAGEWAY STRAIGHT AHEAD INTO A DITCH AND BUSHES						Veh1, car, NE -> SW				Casualties 3 Vehicles 1
16	**Road No B4115 Grid 432559E** **Section Ref 273067N**	SLIGHT	05/04/2017	4	17:07	L	Dry	Fine			P/C
	STONELEIGH B4115 BIRMINGHAM ROAD								Warwick		
	V001 HAS BEEN WAITING TO CROSS THE JUNCTION, C001 HAS BEEN TRAVELLING ALONG B4115 ON HIS CYCLE. V001 HAS NOT SEEN C001 AND HAS STARTED TO CROSS THE JUNCTION AND C001 HAS HIT V001						Veh1, car, SE -> NW Veh2, pedal cycle, SW -> NE				Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
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STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
17	**Road No B4115 Grid 432570E** **Section Ref 273070N**	SLIGHT	27/04/2017	5	08:20	L	Dry	Fine			P/C
	ASHOW ROAD B4115 STONELEIGH ROAD								Warwick		
	CALLER WAS CYCLING ALONG B4115 SOUTHBOUND WHEN A SILVER CITROEN PULLED OUT OF STONELEIGH ROAD AND COLLIDED WITH CALLER SENDING HIM ONTO THE BONNET OF A WAITING VEHICLE ON BIRMINGHAM ROAD. THIS OCCURED ON B4115 STONELEIGH CROSSROADS. CALLER WAS INJURED WITH A SPRAINED ANKLE AND GRAZES TO HIS KNEE. ALL PARTIES STOPPED AND CALLER WAS DROPPED INTO WORK BY CITROEN DRIVER.						Veh1, car, NW -> SE Veh2, pedal cycle, NE -> SW Veh3, car, SE -> NW			Casualties 1 Vehicles 3	
18	**Road No A46 Grid 432091E** **Section Ref 273469N**	SLIGHT	12/05/2017	6	16:28	L	Wet/Damp	Rain			
	SLIPROAD TO STONELEIGH A46								Warwick		
	VEH01 WAS TRAVELLING UP THE SLIP ROAD OFF THE A46 TOWARDS A45 LEFT LANE TO STONELEIGH. VEHICLES VEH02, VEH03 AND VEH04 HAVE BEEN STATIONARY IN A LINE OF QUEING TRAFFIC IN THE RIGH HAD LANE OF THE SLIP ROAD. VEH01 HAS COLLIDED WITH THE REAR OF VEH02 CAUSING A CONCERTINA EFFET ONTO VEH03 AND VEH04.						Veh1, car, N -> S Veh2, car, N -> S Veh3, car, N -> S Veh4, car, N -> S			Casualties 1 Vehicles 4	

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
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FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
19	**Road No U** **Grid 432062E** **Section** **Ref 273422N**	SLIGHT	03/07/2017	2	10:42	L	Dry	Fine		R.TURN	
	STONELEIGH ROAD AT JN WITH SLIP OFF RD A46								Warwick		
	VEH 001 HAS BEEN ON THE A46 AND HAS TAKEN THE STONELEIGH EXIT UP TO A T JUNCTION WITH STONELEIGH ROAD. VEH 002 HAS BEEN IN THE RIGHT HAND LANE AT THE JUNCTION AND HAS PULLED OUT INTO THE CARRIAGEWAY WHERE IT HAS COLLIDED WITH V002 WHO HAS BEEN TRAVELLING ON STONELEIGH ROAD FROM STONELEIGH, HEADING OVER THE A46. VEH 002S FRONT OFFSIDE CORNER HAS BEEN DAMAGED AND COLLIDED WITH VEH 001S N/S CORNER FRONT. DRIVER OF VEH 001 HAS A HIGH HEART RATE BUT REFUSED TO GO TO HOSPITAL. PASSENGERS OF VEH 001 HAS BRUSING AND SWELLING TO UPPER LEFT ARM DUE TO AIR BAG.						Veh1, car, NE -> NW Veh2, car, SE -> NW				Casualties 2 Vehicles 2
20	**Road No A46** **Grid 432018E** **Section** **Ref 273452N**	SLIGHT	04/02/2016	5	18:40	DRK NSL	Dry	Fine			
	UNDER STONELEIGH RD OVER BRIDGE NR KENILWORTH A46								Warwick		
	ALL VEHICLES WERE TRAVELLING NORTHBOUND IN LANE 3. V004 HAS SLOWED DOWN TO AROUND 20MPH DUE TO A STANDSTILL TRAFFIC AHEAD OF HIM. V003 AND V002 HAVE THEN SLOWED DOWN ALSO AS PER FLOW OF SLOW TRAFFIC. V001 HAS FAILED TO SLOW DOWN AND STOP[IN TIME AND HAS COLLIDED WITH V002. THIS HAS THEN CAUSED A CONCERTINA EFFECT CAUSING V002 TO COLLIDE WITH V003 AND V003 TO COLLIDE WITH V004 ALL WERE REAR END SHUNTS.						Veh1, car, SW -> NE Veh2, car, SW -> NE Veh3, car, SW -> NE Veh4, car, SW -> NE				Casualties 1 Vehicles 4
21	**Road No B4115** **Grid 432568E** **Section** **Ref 273077N**	SERIOUS	07/05/2016	7	12:22	L	Dry	Fine			
	AT STONELEIGH B4115 BIRMINGHAM ROAD								Warwick		
	V001 HAS PULLED OUT FROM JUNTION ONTO MAIN ROAD INTO PATH OF V002						Veh1, car, NW -> SE Veh2, car, SW -> NE				Casualties 3 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
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STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
22	**Road No B4115 Grid 432570E** **Section Ref 273072N**	SLIGHT	25/07/2016	2	16:50	L	Dry	Fine			P/C
	STONELEIGH B4115 BIRMINGHAM ROAD								Warwick		
	VEH02 WAS TRAVELLING STRAIGHT AHEAD, VEH01 OULLED OUT OF CROSSROADS DESPITE VEH02 HAVING RIGHT OF WAY. VEH02 COLLIDED WITH PASSENGER SIDE REAR QUARTER CAUSING INJURY TO RIDER OF VEH02 (PEDAL CYCLIST) AND DAMAGE TO HIS BICYCLE						Veh1, car, NW -> SE Veh2, pedal cycle, NE -> SW				Casualties 1 Vehicles 2
23	**Road No U0 Grid 432070E** **Section Ref 273407N**	SLIGHT	30/07/2016	7	02:28	DRK STL	Dry	Fine			
	STONELEIGH RD STONELEIGH UNSPECIFIED ROAD OR LOCATION STONELEIGH SLIP OFF A46								Warwick		
	Veh 1 followed Veh 2 onto A46 after it made off at the speed having jailed to stop for veh 1 on the London Rd in Coventry. Veh 1 states Veh 2 made off at speed of 80-100mph Veh1 has continued on A46 into Warwickshire Force Area. Trying to evade Veh 1, Veh 2 has left the A46 southbound at Stoneleigh. At the top of the slip road Veh2 has failed to giveway and failed to negotiate the left hand turn, crossing to offside and colliding head on with Veh 3.						Veh1, car, NE -> SW Veh2, car, NE -> SE Veh3, car, SE -> NW				Casualties 1 Vehicles 3
24	**Road No Grid 431993E** **Section Ref 273490N**	SLIGHT	02/01/2015	6	14:47	L	Dry	Fine		R.TURN	
	STONELEIGH RD J/W A46 NB SLIP RD STONELEIGH								Warwick		
	V1 TRAV UP THE A46 SLIP RD AT SPEED FAILS TO STOP AT JCT, TURNS RGT ONTO STONELEIGH RD COLL/W PASSING V2						Veh1, car, SW -> SE Veh2, car, NW -> SE				Casualties 1 Vehicles 2
25	**Road No B4115 Grid 432568E** **Section Ref 273072N**	SLIGHT	27/02/2012	2	07:50	L	Dry	Fine			P/C
	B4115 Birmingham Road, at its Junction with C32, Stoneleigh								Warwick		
	V1 pulled out of Birmingham Rd onto B4115 into path of V2 (cycle) . V1 collided with V2						Veh1, car, SE -> NW Veh2, pedal cycle, NE -> SW				Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
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STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
26	**Road No B4115 Grid 432571E** **Section Ref 273066N**	SLIGHT	23/03/2012	6	23:50	DRK NSL	Dry	Fine			
	B4115 Coventry Rd, at its Junction with C32 Birmingham Rd, Stoneleigh								Warwick		
	V1 trav NW failed to give way at x rds and collided with V2 trav SW on main rd						Veh1, car, SE -> NW Veh2, car, NE -> SW				Casualties 2 Vehicles 2
27	**Road No A46 Grid 431726E** **Section Ref 272948N**	SLIGHT	03/04/2013	4	05:40	DRK NSL	Wet/Damp	Fine			HGV
	A46 at Marker Post 88.5								Warwick		
	All vehs trav nb. V1 ran into rear of slower moving V2. V1 veered into central reservation. V3unable to avoid and hit rear of V1						Veh1, car, SW -> NE Veh2, goods > 7.5t, SW -> NE Veh3, car, SW -> NE				Casualties 2 Vehicles 3
28	**Road No Grid 431990E** **Section Ref 273490N**	SLIGHT	28/03/2014	6	12:50	L	Dry	Fine		R.TURN	
	STONELEIGH RD, KENILWORTH JW A 46 NB EXIT SLIP OFF ROAD.								Warwick		
	V1 STATIONARY AT TOP OF SLIP OFF ROAD WAITING TO TURN RT. V1 COMMENCES RT TURN MANOUVERE FAILING TO SEE V2 APPROACHING FROM THE RT.						Veh1, car, SW -> SE Veh2, car, SE -> NW				Casualties 3 Vehicles 2
29	**Road No Grid 432577E** **Section Ref 273069N**	SLIGHT	23/04/2014	4	01:30	DRK NSL	Dry	Fine		S.VEH	
	STONELEIGH RD J/W B4115 CROSSROADS STONELEIGH								Warwick		
	V1 TAXI TRAV TOO FAST LOSES CONTROL ON NEG CROSSROADS LEAVING RD TO N/S HEDGEROW						Veh1, taxi, NW -> SE				Casualties 3 Vehicles 1

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
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PSV	*Bus/Coach*

Street Lighting

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STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
30	**Road No A46 Grid 431990E** **Section Ref 273499N**	SLIGHT	10/06/2014	3	21:35	DRK STL	Dry	Fine			
	A46 SLIP RD NB J/W BIRMINGHAM RD STONELEIGH								Warwick		
	V1 BEGINS TO CROSS OVER JCT FAILING TO GIVE WAY TO APP V2 RESULTING IN COLL						Veh1, car, SW -> NE Veh2, car, NW -> SE				Casualties 1 Vehicles 2
31	**Road No A46 Grid 431793E** **Section Ref 273100N**	SLIGHT	05/07/2014	7	01:00	DRK NSL	Wet/Damp	Rain		S.VEH	
	A 46 NB KENILWORTH TO STONELEIGH APPROX 155 M SW NB SLIP OFF RD TO STONELEIGH.								Warwick		
	V1 TRAVELLING A 46 NB PRIOR TO STONELEIGH JCT HAS SWERVED TO AVOID HITTING DEER IN CW,DRIVER LOSES CONTROL LEAVING CW TO NEARSIDE COMING TO REST IN DITCH.						Veh1, car, SW -> NE				Casualties 1 Vehicles 1
32	**Road No Grid 431861E** **Section Ref 273583N**	SERIOUS	27/07/2014	1	18:10	L	Dry	Fine		S.VEH	P/C
	DALEHOUSE LANE ISLAND J/W STONELEIGH RD WESTLEY BRIDGE NR KENILWORTH								Warwick		
	PCYCLIST RIDING DOWN GRADIENT TOWARDS ISLAND, ON ENTERING ISLAND HE LOST CONTROL AND FALLEN FROM BIKE LANDING HEADFIRST ON TARMAC						Veh1, pedal cycle, SE -> NW				Casualties 1 Vehicles 1
33	**Road No B4115 Grid 432567E** **Section Ref 273076N**	SERIOUS	20/08/2013	3	16:00	L	Dry	Fine		R.TURN	P/C
	B4115 Ashow Rd, at its Junction with C32 Birmingham Rd, Stoneleigh								Warwick		
	V1 trav SW turned right into minor road across path of V2 trav NE						Veh1, car, NE -> NW Veh2, pedal cycle, SW -> NE				Casualties 2 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
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Street Lighting

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FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
34	**Road No C32 Grid 431988E** **Section Ref 273497N**	SLIGHT	23/08/2012	5	12:10	L	Dry	Fine		R.TURN	
	C32 Birmingham Rd, at its Junction with A46 Kenilworth By Pass, Stoneleigh								Warwick		
	V1 trav NE failed to give way at T junc and collided with V2 trav SE on main rd						Veh1, car, SW -> SE Veh2, car, NW -> SE				Casualties 1 Vehicles 2
35	**Road No B4115 Grid 432582E** **Section Ref 273089N**	SLIGHT	08/10/2012	2	15:35	L	Wet/Damp	Rain		R.TURN	GV
	B4115, at its Junction with C32 Birmingham Road, Stoneleigh								Warwick		
	V1 turning R from B4115 at xroads with Birmingham Road, V1 pulls out and collides with V2 tvl SE						Veh1, car, NE -> NW Veh2, goods < 3.5t, NW -> SE				Casualties 2 Vehicles 2
36	**Road No C32 Grid 431733E** **Section Ref 273762N**	SLIGHT	16/10/2012	3	13:05	L	Dry	Fine			
	C32 Stoneleigh Rd, Kenilworth 150m NW of Dalehouse Lane								Warwick		
	Vs 1,2,3 trav SE. V3 waiting to turn rt into private drive, V2 stopped behind. V1 ran into rear of V2 which was pushed into rear of V3. V4 trav NW took avoiding action and left carriageway to n/s						Veh1, agric veh, NW -> SE Veh2, car, NW -> SE Veh3, car, NW -> SE Veh4, car, SE -> NW				Casualties 2 Vehicles 4
37	**Road No Grid 432068E** **Section Ref 273423N**	SLIGHT	26/08/2014	3	19:25	L	Dry	Fine			
	UC STONELEIGH RD JW A 46 KENILWORTH BY PASS SB SLIP OFF RD.								Warwick		
	V1 EXITS A 46 SB ON SLIP OFF RD. AT GIVE WAY JW STONELEIGH RD V1 COLLIDES WITH V2 TRAVELLING ON STONELEIGH RD TOWARDS STONELEIGH.						Veh1, car, NE -> SW Veh2, car, NW -> SE				Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

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FACTORS

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R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
38	**Road No B4115 Grid 432571E** **Section Ref 273068N**	SLIGHT	16/12/2013	2	18:42	DRK NSL	Wet/Damp	Fine			
	B4115 Stoneleigh Road, at its Junction with C32 Birmingham Road, Stoneleigh								Warwick		
	V1 tvl NW from Stoneleigh Village to Kennilworth Ave. At Xroads with B4115 V1 failed to give way and pulled across c/way into path of V2 causing collision						Veh1, car, SE -> NW Veh2, car, SW -> NE				Casualties 1 Vehicles 2
39	**Road No Grid 432229E** **Section Ref 273278N**	SLIGHT	26/11/2014	4	19:16	DRK NSL	Wet/Damp	Fog Mist			
	BIRMINGHAM RD, STONELEIGH APPRIOX 400 M NW JW B 4115.								Warwick		
	V1 TRAVELLING SE, FOR UK REASON IS TRAVELLING ON WRONG SIDE OF RD. V2 TRAVELLING IN OP DIRECTION IS FORCED ONTO NEARSIDE VERGE BUT IS STILL STRUCK BY V1.						Veh1, car, NW -> SE Veh2, car, SE -> NW				Casualties 1 Vehicles 2
40	**Road No C32 Grid 432234E** **Section Ref 273287N**	SLIGHT	18/06/2013	3	17:10	L	Dry	Fine		R.TURN	
	C32 Birmingham Rd , Stoneleigh 230m SE of j/w A46 Kenilworth By Pass								Warwick		
	Both vehs trav SE. V2 stopped, signalling to turn right into field gateway. V1 ran into rear of V2						Veh1, car, NW -> SE Veh2, car, NW -> SW				Casualties 2 Vehicles 2
41	**Road No Grid 431857E** **Section Ref 273618N**	SLIGHT	24/06/2014	3	07:00	L	Dry	Fine			GV M/C
	STONELEIGH RD(GIBBETT HILL RD) JW DALE HOUSE LANE,KENILWORTH.								Warwick		
	V2 AND 1 APPROACHING TRAFFIC ISLAND. VEHICLE ENTERS ISLAND FROM PRIOR EXIT. V2 STOPS SUDDENLY AND IS STRUCK IN REAR BY FOLLOWING V1.						Veh1, goods < 3.5t, W -> SE Veh2, m/cycle 50 - 125cc, NW -> SE				Casualties 2 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
42	**Road No B4115 Grid 432569E** **Section Ref 273076N**	SERIOUS	13/10/2013	1	18:50	DRK NSL	Wet/Damp	Fine			
	B4115 Ashow Rd, at its Junction with C32 Birmingham Rd, Stoneleigh								Warwick		
	V1 trav SE overshot crossroads in contravention of give way and collided with V2 trav SW on main rd						Veh1, car, NW -> SE Veh2, car, NE -> SW				Casualties 1 Vehicles 2
43	**Road No A46 Grid 432092E** **Section Ref 273554N**	SERIOUS	16/10/2013	4	20:04	DRK NSL	Dry	Fine			
	A46 at Marker Post 89.2, Kenilworth								Warwick		
	V2 stopped on S/B C/way of A46 due to puncture, V2 is possibly not showing lights and is hit by V1 also tvl south, v1 is pushed into lane 2 and is hit by V3						Veh1, car, NE -> SW Veh2, car, P -> P Veh3, taxi, NE -> SW				Casualties 2 Vehicles 3

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street LIghts Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

Appendix D. Existing Layout Junction Modelling Outputs

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.1.4646 []

Filename: Existing A46 Stoneleigh Junction.j9
Path: \\wsatkins\project\GBEMC\WGE\Projects\Trans\20171179 A46 Stoneleigh Road junction improvement\7 WIP\TA\Capacity Assessment
Report generation date: 02/11/2017 14:09:58

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	2017									
Junction 1 - Stream B-CD	58.9	408.67	1.22	F		120.5	800.17	1.38	F	
Junction 1 - Stream B-AD	0.4	21.26	0.28	C		0.3	19.06	0.21	C	
Junction 1 - Stream A-BCD	1.3	6.51	0.31	A	88.38	1.2	7.46	0.32	A	214.98
Junction 1 - Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Junction 1 - Stream C-B	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Junction 2 - Stream B-ACD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Junction 2 - Stream A-D	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Junction 2 - Stream D-AB	0.9	16.76	0.45	C	43.04	1.7	24.21	0.62	C	266.03
Junction 2 - Stream D-BC	5.1	83.21	0.86	F		6.2	116.91	0.94	F	
Junction 2 - Stream C-ABD	16.9	75.92	0.96	F		110.1	532.08	1.26	F	
	2029									
Junction 1 - Stream B-CD	483.9	3319.74	2.24	F		441.7	3101.03	2.21	F	
Junction 1 - Stream B-AD	1.5	40.40	0.59	E		3.0	60.97	0.76	F	
Junction 1 - Stream A-BCD	7.5	23.95	0.77	C	940.92	4.3	15.58	0.67	C	910.37
Junction 1 - Stream D-ABC	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Junction 1 - Stream C-B	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Junction 2 - Stream B-ACD	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Junction 2 - Stream A-D	0.0	0.00	0.00	A		0.0	0.00	0.00	A	
Junction 2 - Stream D-AB	2.9	37.96	0.74	E	239.53	3.4	41.64	0.78	E	232.70
Junction 2 - Stream D-BC	27.4	470.10	1.31	F		15.5	266.04	1.16	F	
Junction 2 - Stream C-ABD	98.9	417.07	1.22	F		103.3	464.70	1.24	F	

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	(untitled)
Location	
Site number	
Date	31/10/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WSATKINS\cart5172
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	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:45	09:15	15	✓
D2	2017	PM	ONE HOUR	16:45	18:15	15	✓
D3	2029	AM	ONE HOUR	07:45	09:15	15	✓
D4	2029	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	88.38	F
2	untitled	Crossroads	Two-way	43.04	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description	Arm type
1	A	untitled		Major
	B	A46 nb Offslip		Minor
	C	untitled		Major
	D	A46 nb Onslip (exit only)		Minor
2	A	untitled		Major
	B	A46 sb Onslip (exit only)		Minor
	C	untitled		Major
	D	A46 sb Offslip		Minor

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
1	A	7.30			150.0	✓	0.00
	C	7.30			0.0		-
2	A	7.30			0.0		-
	C	7.30			250.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Junction	Arm	Minor arm type	Lane width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
1	B	Two lanes		3.00	3.00	96	30
	D	One lane	2.20			0	0
2	B	One lane	2.20			0	0
	D	Two lanes		3.00	3.00	150	29

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
1	A-D	661	-	-	-	-	-	-	0.242	0.345	0.242	-	-	-
1	B-A	523	0.090	0.227	0.227	-	-	-	0.143	0.325	-	0.227	0.227	0.114
1	B-C	643	0.093	0.235	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	523	0.090	0.227	0.227	-	-	-	0.143	0.325	0.143	-	-	-
1	B-D, offside lane	523	0.090	0.227	0.227	-	-	-	0.143	0.325	0.143	-	-	-
1	C-B	574	0.210	0.210	0.300	-	-	-	-	-	-	-	-	-
1	D-A	574	-	-	-	-	-	-	0.210	-	0.083	-	-	-
1	D-B, nearside lane	440	0.120	0.120	0.273	-	-	-	0.191	0.191	0.076	-	-	-
1	D-B, offside lane	440	0.120	0.120	0.273	-	-	-	0.191	0.191	0.076	-	-	-
1	D-C	440	-	0.120	0.273	0.095	0.191	0.191	0.191	0.191	0.076	-	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B	Slope for D-C
2	A-D	574	-	-	-	-	-	-	0.210	0.300	0.210	-	-	-
2	B-A	440	0.076	0.191	0.191	-	-	-	0.120	0.273	-	0.191	0.191	0.095
2	B-C	574	0.083	0.210	-	-	-	-	-	-	-	-	-	-
2	B-D, nearside lane	440	0.076	0.191	0.191	-	-	-	0.120	0.273	0.120	-	-	-
2	B-D, offside lane	440	0.076	0.191	0.191	-	-	-	0.120	0.273	0.120	-	-	-
2	C-B	719	0.263	0.263	0.375	-	-	-	-	-	-	-	-	-
2	D-A	642	-	-	-	-	-	-	0.235	-	0.093	-	-	-
2	D-B, nearside lane	540	0.148	0.148	0.335	-	-	-	0.235	0.235	0.093	-	-	-
2	D-B, offside lane	540	0.148	0.148	0.335	-	-	-	0.235	0.235	0.093	-	-	-
2	D-C	540	-	0.148	0.335	0.117	0.235	0.235	0.235	0.235	0.093	-	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	A		ONE HOUR	✓	656	100.000
	B		ONE HOUR	✓	567	100.000
	C		ONE HOUR	✓	1131	100.000
	D		ONE HOUR	✓	0	100.000
2	A		ONE HOUR	✓	525	100.000
	B		ONE HOUR	✓	0	100.000
	C		ONE HOUR	✓	702	100.000
	D		ONE HOUR	✓	393	100.000

Origin-Destination Data

Junction 1

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	0	593	63
	B	64	0	502	1
	C	638	0	0	493
	D	0	0	0	0

Junction 2

Demand (PCU/hr)

		To			
		A	B	C	D
From	A	0	84	441	0
	B	0	0	0	0
	C	300	402	0	0
	D	177	0	216	0

Vehicle Mix

Junction 1

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Junction 2

Heavy Vehicle Percentages

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	B-CD	1.22	408.67	58.9	F	461	692
	B-AD	0.28	21.26	0.4	C	59	89
	A-BCD	0.31	6.51	1.3	A	181	271
	A-B					0	0
	A-C					421	632
	D-ABC	0.00	0.00	0.0	A	0	0
	C-D					452	679
	C-A					585	878
	C-B	0.00	0.00	0.0	A	0	0
2	B-ACD	0.00	0.00	0.0	A	0	0
	A-B					77	116
	A-C					405	607
	A-D	0.00	0.00	0.0	A	0	0
	D-AB	0.45	16.76	0.9	C	162	244
	D-BC	0.86	83.21	5.1	F	198	297
	C-ABD	0.96	75.92	16.9	F	590	885
	C-D					0	0
	C-A					54	82

Main Results for each time segment

07:45 - 08:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	378	95	518	0.730	368	0.0	2.7	24.790	C
	B-AD	49	12	342	0.142	48	0.0	0.2	13.425	B
	A-BCD	109	27	789	0.139	108	0.0	0.4	5.816	A
	A-B	0	0			0				
	A-C	385	96			385				
	D-ABC	0	0	253	0.000	0	0.0	0.0	0.000	A
	C-D	371	93			371				
	C-A	480	120			480				
	C-B	0	0	466	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	282	0.000	0	0.0	0.0	0.000	A
	A-B	63	16			63				
	A-C	332	83			332				
	A-D	0	0	436	0.000	0	0.0	0.0	0.000	A
	D-AB	133	33	524	0.254	132	0.0	0.4	10.061	B
	D-BC	163	41	367	0.443	159	0.0	0.8	18.743	C
	C-ABD	430	107	764	0.563	423	0.0	1.7	11.492	B
	C-D	0	0			0				
	C-A	99	25			99				

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	452	113	492	0.918	434	2.7	7.1	55.835	F
	B-AD	58	14	307	0.189	58	0.2	0.3	15.891	C
	A-BCD	161	40	826	0.195	160	0.4	0.6	5.964	A
	A-B	0	0			0				
	A-C	429	107			429				
	D-ABC	0	0	202	0.000	0	0.0	0.0	0.000	A
	C-D	443	111			443				
	C-A	574	143			574				
	C-B	0	0	445	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	241	0.000	0	0.0	0.0	0.000	A
	A-B	76	19			76				
	A-C	396	99			396				
	A-D	0	0	407	0.000	0	0.0	0.0	0.000	A
	D-AB	159	40	492	0.323	159	0.4	0.5	11.838	B
	D-BC	194	49	332	0.585	192	0.8	1.4	27.702	D
	C-ABD	557	139	777	0.717	551	1.7	3.2	17.374	C
	C-D	0	0			0				
	C-A	74	19			74				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	553	138	454	1.219	448	7.1	33.5	185.026	F
	B-AD	71	18	258	0.275	70	0.3	0.4	21.062	C
	A-BCD	270	67	884	0.305	267	0.6	1.3	6.461	A
	A-B	0	0			0				
	A-C	453	113			453				
	D-ABC	0	0	114	0.000	0	0.0	0.0	0.000	A
	C-D	543	136			543				
	C-A	702	176			702				
	C-B	0	0	416	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	181	0.000	0	0.0	0.0	0.000	A
	A-B	92	23			92				
	A-C	486	121			486				
	A-D	0	0	369	0.000	0	0.0	0.0	0.000	A
	D-AB	195	49	443	0.440	194	0.5	0.8	15.802	C
	D-BC	238	59	284	0.837	228	1.4	4.0	61.170	F
	C-ABD	765	191	796	0.961	727	3.2	12.8	48.420	E
	C-D	0	0			0				
	C-A	7	2			7				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	553	138	453	1.221	452	33.5	58.9	376.774	F
	B-AD	71	18	257	0.276	71	0.4	0.4	21.260	C
	A-BCD	271	68	885	0.306	271	1.3	1.3	6.509	A
	A-B	0	0			0				
	A-C	451	113			451				
	D-ABC	0	0	80	0.000	0	0.0	0.0	0.000	A
	C-D	543	136			543				
	C-A	702	176			702				
	C-B	0	0	415	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	171	0.000	0	0.0	0.0	0.000	A
	A-B	92	23			92				
	A-C	486	121			486				
	A-D	0	0	359	0.000	0	0.0	0.0	0.000	A
	D-AB	195	49	431	0.453	195	0.8	0.9	16.763	C
	D-BC	238	59	275	0.864	234	4.0	5.1	83.206	F
	C-ABD	773	193	801	0.965	757	12.8	16.9	75.915	F
	C-D	0	0			0				
	C-A	0	0			0				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	452	113	491	0.921	482	58.9	51.4	408.673	F
	B-AD	58	14	306	0.189	58	0.4	0.3	16.057	C
	A-BCD	163	41	828	0.196	165	1.3	0.7	6.022	A
	A-B	0	0			0				
	A-C	427	107			427				
	D-ABC	0	0	165	0.000	0	0.0	0.0	0.000	A
	C-D	443	111			443				
	C-A	574	143			574				
	C-B	0	0	444	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	227	0.000	0	0.0	0.0	0.000	A
	A-B	76	19			76				
	A-C	396	99			396				
	A-D	0	0	391	0.000	0	0.0	0.0	0.000	A
	D-AB	159	40	476	0.335	160	0.9	0.6	12.611	B
	D-BC	194	49	318	0.611	207	5.1	1.9	38.843	E
	C-ABD	579	145	795	0.728	630	16.9	4.1	31.151	D
	C-D	0	0			0				
	C-A	52	13			52				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	378	95	518	0.731	507	51.4	19.3	257.603	F
	B-AD	49	12	341	0.142	49	0.3	0.2	13.547	B
	A-BCD	111	28	790	0.140	112	0.7	0.4	5.860	A
	A-B	0	0			0				
	A-C	383	96			383				
	D-ABC	0	0	229	0.000	0	0.0	0.0	0.000	A
	C-D	371	93			371				
	C-A	480	120			480				
	C-B	0	0	465	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	278	0.000	0	0.0	0.0	0.000	A
	A-B	63	16			63				
	A-C	332	83			332				
	A-D	0	0	432	0.000	0	0.0	0.0	0.000	A
	D-AB	133	33	519	0.257	134	0.6	0.4	10.306	B
	D-BC	163	41	364	0.447	166	1.9	0.9	20.452	C
	C-ABD	435	109	768	0.566	444	4.1	1.8	12.648	B
	C-D	0	0			0				
	C-A	94	23			94				

2017, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	214.98	F
2	untitled	Crossroads	Two-way	266.03	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	A		ONE HOUR	✓	551	100.000
	B		ONE HOUR	✓	666	100.000
	C		ONE HOUR	✓	1089	100.000
	D		ONE HOUR	✓	0	100.000
2	A		ONE HOUR	✓	493	100.000
	B		ONE HOUR	✓	0	100.000
	C		ONE HOUR	✓	823	100.000
	D		ONE HOUR	✓	416	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction 1

		To			
		A	B	C	D
From	A	0	0	475	76
	B	49	0	616	1
	C	774	0	0	315
	D	0	0	0	0

Demand (PCU/hr)

Junction 2

		To			
		A	B	C	D
From	A	0	120	373	0
	B	0	0	0	0
	C	239	584	0	0
	D	238	0	178	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Heavy Vehicle Percentages

Junction 2

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	B-CD	1.38	800.17	120.5	F	566	849
	B-AD	0.21	19.06	0.3	C	45	68
	A-BCD	0.32	7.46	1.2	A	175	263
	A-B					0	0
	A-C					330	496
	D-ABC	0.00	0.00	0.0	A	0	0
	C-D					289	434
	C-A					710	1065
	C-B	0.00	0.00	0.0	A	0	0
2	B-ACD	0.00	0.00	0.0	A	0	0
	A-B					110	165
	A-C					342	513
	A-D	0.00	0.00	0.0	A	0	0
	D-AB	0.62	24.21	1.7	C	218	328
	D-BC	0.94	116.91	6.2	F	163	245
	C-ABD	1.26	532.08	110.1	F	749	1123
	C-D					0	0
	C-A					6	10

Main Results for each time segment

16:45 - 17:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	464	116	543	0.854	444	0.0	4.9	35.112	E
	B-AD	37	9	345	0.108	37	0.0	0.1	12.803	B
	A-BCD	112	28	728	0.154	111	0.0	0.4	6.412	A
	A-B	0	0			0				
	A-C	302	76			302				
	D-ABC	0	0	242	0.000	0	0.0	0.0	0.000	A
	C-D	237	59			237				
	C-A	583	146			583				
	C-B	0	0	482	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	256	0.000	0	0.0	0.0	0.000	A
	A-B	90	23			90				
	A-C	281	70			281				
	A-D	0	0	404	0.000	0	0.0	0.0	0.000	A
	D-AB	179	45	543	0.330	177	0.0	0.5	10.757	B
	D-BC	134	34	354	0.379	131	0.0	0.7	17.631	C
	C-ABD	581	145	739	0.786	565	0.0	4.1	21.477	C
	C-D	0	0			0				
	C-A	38	10			38				

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	554	139	522	1.061	502	4.9	18.0	103.175	F
	B-AD	44	11	311	0.143	44	0.1	0.2	14.857	B
	A-BCD	160	40	751	0.212	159	0.4	0.6	6.697	A
	A-B	0	0			0				
	A-C	336	84			336				
	D-ABC	0	0	185	0.000	0	0.0	0.0	0.000	A
	C-D	283	71			283				
	C-A	696	174			696				
	C-B	0	0	464	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	204	0.000	0	0.0	0.0	0.000	A
	A-B	108	27			108				
	A-C	335	84			335				
	A-D	0	0	367	0.000	0	0.0	0.0	0.000	A
	D-AB	214	53	514	0.416	213	0.5	0.8	13.106	B
	D-BC	160	40	313	0.511	158	0.7	1.1	25.228	D
	C-ABD	740	185	746	0.992	697	4.1	14.7	60.879	F
	C-D	0	0			0				
	C-A	0	0			0				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	679	170	492	1.381	490	18.0	65.1	322.344	F
	B-AD	54	14	263	0.207	54	0.2	0.3	18.943	C
	A-BCD	252	63	787	0.320	250	0.6	1.1	7.403	A
	A-B	0	0			0				
	A-C	355	89			355				
	D-ABC	0	0	52	0.000	0	0.0	0.0	0.000	A
	C-D	347	87			347				
	C-A	852	213			852				
	C-B	0	0	439	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	118	0.000	0	0.0	0.0	0.000	A
	A-B	132	33			132				
	A-C	411	103			411				
	A-D	0	0	310	0.000	0	0.0	0.0	0.000	A
	D-AB	262	66	462	0.567	260	0.8	1.4	19.289	C
	D-BC	196	49	253	0.774	188	1.1	3.0	55.663	F
	C-ABD	906	227	718	1.262	714	14.7	62.8	209.160	F
	C-D	0	0			0				
	C-A	0	0			0				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	679	170	491	1.383	491	65.1	112.2	646.950	F
	B-AD	54	14	262	0.207	54	0.3	0.3	19.057	C
	A-BCD	253	63	789	0.321	253	1.1	1.2	7.460	A
	A-B	0	0			0				
	A-C	353	88			353				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	347	87			347				
	C-A	852	213			852				
	C-B	0	0	438	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	45	0.000	0	0.0	0.0	0.000	A
	A-B	132	33			132				
	A-C	411	103			411				
	A-D	0	0	257	0.000	0	0.0	0.0	0.000	A
	D-AB	262	66	423	0.620	261	1.4	1.7	24.209	C
	D-BC	196	49	208	0.942	183	3.0	6.2	116.910	F
	C-ABD	906	227	718	1.262	717	62.8	110.0	438.685	F
	C-D	0	0			0				
	C-A	0	0			0				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	554	139	521	1.063	521	112.2	120.5	800.170	F
	B-AD	44	11	310	0.143	45	0.3	0.2	14.960	B
	A-BCD	161	40	753	0.213	163	1.2	0.6	6.760	A
	A-B	0	0			0				
	A-C	335	84			335				
	D-ABC	0	0	61	0.000	0	0.0	0.0	0.000	A
	C-D	283	71			283				
	C-A	696	174			696				
	C-B	0	0	463	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	82	0.000	0	0.0	0.0	0.000	A
	A-B	108	27			108				
	A-C	335	84			335				
	A-D	0	0	251	0.000	0	0.0	0.0	0.000	A
	D-AB	214	53	441	0.486	216	1.7	1.1	17.860	C
	D-BC	160	40	214	0.748	169	6.2	4.0	95.673	F
	C-ABD	740	185	747	0.991	740	110.0	110.1	532.082	F
	C-D	0	0			0				
	C-A	0	0			0				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	464	116	543	0.855	538	120.5	102.1	746.242	F
	B-AD	37	9	345	0.108	37	0.2	0.1	12.887	B
	A-BCD	113	28	730	0.156	114	0.6	0.4	6.461	A
	A-B	0	0			0				
	A-C	301	75			301				
	D-ABC	0	0	159	0.000	0	0.0	0.0	0.000	A
	C-D	237	59			237				
	C-A	583	146			583				
	C-B	0	0	481	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	143	0.000	0	0.0	0.0	0.000	A
	A-B	90	23			90				
	A-C	281	70			281				
	A-D	0	0	284	0.000	0	0.0	0.0	0.000	A
	D-AB	179	45	485	0.370	181	1.1	0.7	13.106	B
	D-BC	134	34	250	0.536	144	4.0	1.4	40.350	E
	C-ABD	620	155	767	0.808	758	110.1	75.4	440.660	F
	C-D	0	0			0				
	C-A	0	0			0				

2029, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	940.92	F
2	untitled	Crossroads	Two-way	239.53	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	A		ONE HOUR	✓	664	100.000
	B		ONE HOUR	✓	986	100.000
	C		ONE HOUR	✓	1404	100.000
	D		ONE HOUR	✓	0	100.000
2	A		ONE HOUR	✓	613	100.000
	B		ONE HOUR	✓	0	100.000
	C		ONE HOUR	✓	867	100.000
	D		ONE HOUR	✓	493	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction 1

		To			
		A	B	C	D
From	A	0	0	532	132
	B	125	0	861	0
	C	742	0	0	662
	D	0	0	0	0

Demand (PCU/hr)

Junction 2

		To			
		A	B	C	D
From	A	0	179	434	0
	B	0	0	0	0
	C	384	483	0	0
	D	263	0	230	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Heavy Vehicle Percentages

Junction 2

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	B-CD	2.24	3319.74	483.9	F	790	1185
	B-AD	0.59	40.40	1.5	E	115	172
	A-BCD	0.77	23.95	7.5	C	392	588
	A-B					0	0
	A-C					217	326
	D-ABC	0.00	0.00	0.0	A	0	0
	C-D					607	911
	C-A					681	1021
	C-B	0.00	0.00	0.0	A	0	0
2	B-ACD	0.00	0.00	0.0	A	0	0
	A-B					164	246
	A-C					398	597
	A-D	0.00	0.00	0.0	A	0	0
	D-AB	0.74	37.96	2.9	E	241	362
	D-BC	1.31	470.10	27.4	F	211	317
	C-ABD	1.22	417.07	98.9	F	780	1170
	C-D					0	0
	C-A					16	24

Main Results for each time segment

07:45 - 08:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	648	162	510	1.272	495	0.0	38.2	155.174	F
	B-AD	94	24	330	0.285	92	0.0	0.4	16.558	C
	A-BCD	226	56	716	0.315	222	0.0	0.9	8.015	A
	A-B	0	0			0				
	A-C	274	69			274				
	D-ABC	0	0	174	0.000	0	0.0	0.0	0.000	A
	C-D	498	125			498				
	C-A	559	140			559				
	C-B	0	0	460	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	247	0.000	0	0.0	0.0	0.000	A
	A-B	135	34			135				
	A-C	327	82			327				
	A-D	0	0	404	0.000	0	0.0	0.0	0.000	A
	D-AB	198	50	501	0.395	195	0.0	0.7	12.836	B
	D-BC	173	43	339	0.511	169	0.0	1.1	22.737	C
	C-ABD	573	143	791	0.725	560	0.0	3.4	16.650	C
	C-D	0	0			0				
	C-A	79	20			79				

08:00 - 08:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	774	194	478	1.619	478	38.2	112.3	609.198	F
	B-AD	112	28	292	0.385	111	0.4	0.7	21.870	C
	A-BCD	339	85	741	0.457	336	0.9	1.8	9.844	A
	A-B	0	0			0				
	A-C	258	64			258				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	595	149			595				
	C-A	667	167			667				
	C-B	0	0	437	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	194	0.000	0	0.0	0.0	0.000	A
	A-B	161	40			161				
	A-C	390	98			390				
	A-D	0	0	368	0.000	0	0.0	0.0	0.000	A
	D-AB	236	59	460	0.514	235	0.7	1.1	17.418	C
	D-BC	207	52	297	0.697	202	1.1	2.2	40.067	E
	C-ABD	765	191	812	0.941	733	3.4	11.4	43.711	E
	C-D	0	0			0				
	C-A	15	4			15				

08:15 - 08:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	948	237	430	2.204	430	112.3	241.8	1493.430	F
	B-AD	138	34	239	0.576	135	0.7	1.4	37.112	E
	A-BCD	594	148	784	0.758	574	1.8	6.6	19.710	C
	A-B	0	0			0				
	A-C	137	34			137				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	729	182			729				
	C-A	817	204			817				
	C-B	0	0	406	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	102	0.000	0	0.0	0.0	0.000	A
	A-B	197	49			197				
	A-C	478	119			478				
	A-D	0	0	314	0.000	0	0.0	0.0	0.000	A
	D-AB	290	72	404	0.717	284	1.1	2.5	31.714	D
	D-BC	253	63	235	1.077	219	2.2	10.9	143.549	F
	C-ABD	955	239	784	1.218	776	11.4	56.0	168.912	F
	C-D	0	0			0				
	C-A	0	0			0				

08:30 - 08:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	948	237	424	2.235	424	241.8	372.7	2402.629	F
	B-AD	138	34	234	0.587	137	1.4	1.5	40.398	E
	A-BCD	612	153	796	0.768	608	6.6	7.5	23.954	C
	A-B	0	0			0				
	A-C	119	30			119				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	729	182			729				
	C-A	817	204			817				
	C-B	0	0	401	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	21	0.000	0	0.0	0.0	0.000	A
	A-B	197	49			197				
	A-C	478	119			478				
	A-D	0	0	268	0.000	0	0.0	0.0	0.000	A
	D-AB	290	72	390	0.743	288	2.5	2.9	37.963	E
	D-BC	253	63	193	1.311	191	10.9	26.4	378.716	F
	C-ABD	955	239	784	1.217	783	56.0	98.9	361.567	F
	C-D	0	0			0				
	C-A	0	0			0				

08:45 - 09:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	774	194	471	1.644	471	372.7	448.6	2989.518	F
	B-AD	112	28	286	0.394	115	1.5	0.7	23.629	C
	A-BCD	353	88	758	0.466	374	7.5	2.0	11.142	B
	A-B	0	0			0				
	A-C	244	61			244				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	595	149			595				
	C-A	667	167			667				
	C-B	0	0	431	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	82	0.000	0	0.0	0.0	0.000	A
	A-B	161	40			161				
	A-C	390	98			390				
	A-D	0	0	269	0.000	0	0.0	0.0	0.000	A
	D-AB	236	59	390	0.606	241	2.9	1.8	27.244	D
	D-BC	207	52	207	0.999	203	26.4	27.4	470.103	F
	C-ABD	779	195	822	0.948	810	98.9	91.2	417.072	F
	C-D	0	0			0				
	C-A	0	0			0				

09:00 - 09:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	648	162	507	1.279	507	448.6	483.9	3319.738	F
	B-AD	94	24	328	0.287	95	0.7	0.5	17.093	C
	A-BCD	230	57	720	0.319	234	2.0	1.0	8.274	A
	A-B	0	0			0				
	A-C	270	68			270				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	498	125			498				
	C-A	559	140			559				
	C-B	0	0	458	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	157	0.000	0	0.0	0.0	0.000	A
	A-B	135	34			135				
	A-C	327	82			327				
	A-D	0	0	310	0.000	0	0.0	0.0	0.000	A
	D-AB	198	50	402	0.492	201	1.8	1.1	19.912	C
	D-BC	173	43	253	0.683	244	27.4	9.8	286.771	F
	C-ABD	653	163	849	0.769	835	91.2	45.5	294.779	F
	C-D	0	0			0				
	C-A	0	0			0				

2029, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	untitled	Crossroads	Two-way	910.37	F
2	untitled	Crossroads	Two-way	232.70	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2029	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	A		ONE HOUR	✓	652	100.000
	B		ONE HOUR	✓	989	100.000
	C		ONE HOUR	✓	1157	100.000
	D		ONE HOUR	✓	0	100.000
2	A		ONE HOUR	✓	608	100.000
	B		ONE HOUR	✓	0	100.000
	C		ONE HOUR	✓	839	100.000
	D		ONE HOUR	✓	490	100.000

Origin-Destination Data

Demand (PCU/hr)

Junction 1

		To			
		A	B	C	D
From	A	0	0	506	146
	B	173	0	816	0
	C	666	0	0	491
	D	0	0	0	0

Demand (PCU/hr)

Junction 2

		To			
		A	B	C	D
From	A	0	162	446	0
	B	0	0	0	0
	C	327	512	0	0
	D	284	0	206	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 1

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Heavy Vehicle Percentages

Junction 2

		To			
		A	B	C	D
From	A	10	10	10	10
	B	10	10	10	10
	C	10	10	10	10
	D	10	10	10	10

Results

Results Summary for whole modelled period

Junction	Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	B-CD	2.21	3101.03	441.7	F	749	1123
	B-AD	0.76	60.97	3.0	F	159	238
	A-BCD	0.67	15.58	4.3	C	367	550
	A-B					0	0
	A-C					231	347
	D-ABC	0.00	0.00	0.0	A	0	0
	C-D					451	676
	C-A					611	917
	C-B	0.00	0.00	0.0	A	0	0
2	B-ACD	0.00	0.00	0.0	A	0	0
	A-B					149	223
	A-C					409	614
	A-D	0.00	0.00	0.0	A	0	0
	D-AB	0.78	41.64	3.4	E	261	391
	D-BC	1.16	266.04	15.5	F	189	284
	C-ABD	1.24	464.70	103.3	F	758	1138
	C-D					0	0
	C-A					11	17

Main Results for each time segment

16:45 - 17:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	614	154	500	1.228	484	0.0	32.6	138.401	F
	B-AD	130	33	340	0.383	128	0.0	0.7	18.417	C
	A-BCD	228	57	736	0.310	225	0.0	0.8	7.734	A
	A-B	0	0			0				
	A-C	263	66			263				
	D-ABC	0	0	203	0.000	0	0.0	0.0	0.000	A
	C-D	370	92			370				
	C-A	501	125			501				
	C-B	0	0	461	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	245	0.000	0	0.0	0.0	0.000	A
	A-B	122	30			122				
	A-C	336	84			336				
	A-D	0	0	407	0.000	0	0.0	0.0	0.000	A
	D-AB	214	53	518	0.413	211	0.0	0.8	12.759	B
	D-BC	155	39	343	0.453	152	0.0	0.9	20.386	C
	C-ABD	569	142	763	0.746	555	0.0	3.6	18.337	C
	C-D	0	0			0				
	C-A	63	16			63				

17:00 - 17:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	734	183	466	1.575	465	32.6	99.6	553.786	F
	B-AD	156	39	304	0.512	154	0.7	1.1	26.086	D
	A-BCD	329	82	762	0.432	326	0.8	1.5	9.138	A
	A-B	0	0			0				
	A-C	257	64			257				
	D-ABC	0	0	66	0.000	0	0.0	0.0	0.000	A
	C-D	441	110			441				
	C-A	599	150			599				
	C-B	0	0	438	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	190	0.000	0	0.0	0.0	0.000	A
	A-B	146	36			146				
	A-C	401	100			401				
	A-D	0	0	370	0.000	0	0.0	0.0	0.000	A
	D-AB	255	64	482	0.529	254	0.8	1.2	17.169	C
	D-BC	185	46	301	0.616	182	0.9	1.6	32.559	D
	C-ABD	748	187	778	0.961	712	3.6	12.6	50.075	F
	C-D	0	0			0				
	C-A	6	1			6				

17:15 - 17:30

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	898	225	413	2.175	413	99.6	221.0	1390.790	F
	B-AD	190	48	254	0.750	184	1.1	2.7	52.399	F
	A-BCD	535	134	804	0.665	524	1.5	4.1	14.436	B
	A-B	0	0			0				
	A-C	183	46			183				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	541	135			541				
	C-A	733	183			733				
	C-B	0	0	407	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	95	0.000	0	0.0	0.0	0.000	A
	A-B	178	45			178				
	A-C	491	123			491				
	A-D	0	0	316	0.000	0	0.0	0.0	0.000	A
	D-AB	313	78	418	0.747	306	1.2	2.8	33.444	D
	D-BC	227	57	239	0.948	208	1.6	6.3	95.424	F
	C-ABD	924	231	746	1.239	740	12.6	58.6	186.200	F
	C-D	0	0			0				
	C-A	0	0			0				

17:30 - 17:45

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	898	225	407	2.205	407	221.0	343.7	2285.815	F
	B-AD	190	48	252	0.757	189	2.7	3.0	60.975	F
	A-BCD	543	136	810	0.670	542	4.1	4.3	15.584	C
	A-B	0	0			0				
	A-C	175	44			175				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	541	135			541				
	C-A	733	183			733				
	C-B	0	0	405	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	0	0.000	0	0.0	0.0	0.000	A
	A-B	178	45			178				
	A-C	491	123			491				
	A-D	0	0	267	0.000	0	0.0	0.0	0.000	A
	D-AB	313	78	402	0.777	311	2.8	3.4	41.637	E
	D-BC	227	57	196	1.156	190	6.3	15.5	240.359	F
	C-ABD	924	231	746	1.238	745	58.6	103.3	395.718	F
	C-D	0	0			0				
	C-A	0	0			0				

17:45 - 18:00

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	734	183	459	1.599	459	343.7	412.4	2816.026	F
	B-AD	156	39	301	0.517	163	3.0	1.2	29.934	D
	A-BCD	336	84	770	0.436	346	4.3	1.6	9.708	A
	A-B	0	0			0				
	A-C	250	63			250				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	441	110			441				
	C-A	599	150			599				
	C-B	0	0	435	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	70	0.000	0	0.0	0.0	0.000	A
	A-B	146	36			146				
	A-C	401	100			401				
	A-D	0	0	265	0.000	0	0.0	0.0	0.000	A
	D-AB	255	64	402	0.636	261	3.4	2.1	29.068	D
	D-BC	185	46	207	0.894	193	15.5	13.4	266.039	F
	C-ABD	754	189	783	0.964	773	103.3	98.7	464.701	F
	C-D	0	0			0				
	C-A	0	0			0				

18:00 - 18:15

Junction	Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	B-CD	614	154	497	1.236	497	412.4	441.7	3101.027	F
	B-AD	130	33	339	0.385	132	1.2	0.7	19.389	C
	A-BCD	231	58	739	0.312	234	1.6	0.9	7.931	A
	A-B	0	0			0				
	A-C	260	65			260				
	D-ABC	0	0	0	0.000	0	0.0	0.0	0.000	A
	C-D	370	92			370				
	C-A	501	125			501				
	C-B	0	0	459	0.000	0	0.0	0.0	0.000	A
2	B-ACD	0	0	146	0.000	0	0.0	0.0	0.000	A
	A-B	122	30			122				
	A-C	336	84			336				
	A-D	0	0	302	0.000	0	0.0	0.0	0.000	A
	D-AB	214	53	434	0.493	218	2.1	1.1	18.619	C
	D-BC	155	39	250	0.620	200	13.4	2.1	105.722	F
	C-ABD	632	158	809	0.781	798	98.7	57.1	351.711	F
	C-D	0	0			0				
	C-A	0	0			0				

Junctions 9

ARCADY 9 - Roundabout Module

Filename: Existing Stoneleigh Rd Dalehouse Lane Junction.j9
Path: \\wsatkins\project\GBEMC\WGE\Projects\Trans\20171179 A46 Stoneleigh Road junction improvement\7 WIP\TA\Capacity Assessment
Report generation date: 16/11/2017 22:55:10

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	LOS	Junction Delay (s)
	[Lane Simulation] - 2017									
Arm 1	18.5	80.98		F	109.46	74.2	267.90		F	139.15
Arm 2	72.2	174.64		F		26.0	70.10		F	
Arm 3	1.1	5.66		A		0.4	3.67		A	
	[Lane Simulation] - 2029									
Arm 1	60.0	230.96		F	414.60	100.7	358.84		F	286.78
Arm 2	250.3	745.63		F		107.8	289.18		F	
Arm 3	2.2	8.44		A		0.4	3.75		A	

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	31/10/2017
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WSATKINS\cart5172
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	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	1695689800	931	110.79

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:45	09:15	15	✓
D2	2017	PM	ONE HOUR	16:45	18:15	15	✓
D3	2029	AM	ONE HOUR	07:45	09:15	15	✓
D4	2029	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2017, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	Arm 2 - Lane Simulation	Arm 2: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Stoneleigh Rd (NW)	Standard Roundabout	1,2,3	109.46	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Stoneleigh Rd (NW)	
2	Stoneleigh Rd (SE)	
3	Dalehouse Lane	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	3.20	7.00	20.0	32.0	39.0	32.0	
2	4.00	7.30	26.0	21.0	39.0	45.0	
3	3.75	8.40	44.0	10.0	39.0	40.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.649	1705
2	0.655	1827
3	0.680	2006

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

Lane Simulation: Arm options

Arm	Lane capacity source	Traffic Considering Secondary Lanes (%)
1	Evenly split	10.00
2	Evenly split	10.00
3	Evenly split	10.00

Lanes

Arm	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1	1 [Give-way line]	1	2	✓	3.00	0	99999
		2	1,(2),3	✓	3.00	0	99999
	2	1	(1,2,3)		Infinity		
2	1 [Give-way line]	1	(1),3	✓	3.00	0	99999
		2	1,2	✓	3.00	0	99999
	2	1	(1,2,3)		Infinity		
3	1 [Give-way line]	1	1,2,3		Infinity	0	99999

Entry Lane slope and intercept

Arm	Lane level	Lane	Final slope	Final intercept (PCU/hr)
1	1 [Give-way line]	1	0.324	852
		2	0.324	852
2	1 [Give-way line]	1	0.327	914
		2	0.327	914
3	1 [Give-way line]	1	0.680	2006

Lane Movements

Arm	Lane Level	Lane	Destination arm		
			1	2	3
1	1 [Give-way line]	1		✓	
		2	✓		✓
	2	1	✓	✓	✓
2	1 [Give-way line]	1			✓
		2	✓	✓	
	2	1	✓	✓	✓
3	1 [Give-way line]	1	✓	✓	✓

Secondary Lane Movements

Arm	Lane Level	Lane	Destination arm		
			1	2	3
1	1 [Give-way line]	1			
		2		✓	
	2	1			
2	1 [Give-way line]	1	✓		
		2			
	2	1			
3	1 [Give-way line]	1			

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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	✓	683	100.000
2		ONE HOUR	✓	1211	100.000
3		ONE HOUR	✓	570	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	4	653	26
	2	936	2	273
	3	77	488	5

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	80.98	18.5	F	626	939
2	174.64	72.2	F	1109	1664
3	5.66	1.1	A	525	787

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	516	129	373	515	765	0.0	2.2	12.887	B
2	910	227	27	910	861	0.0	4.0	14.982	B
3	429	107	708	429	229	0.0	0.4	3.446	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	613	153	443	615	905	2.2	3.9	21.302	C
2	1089	272	31	1081	1027	4.0	10.0	28.339	D
3	509	127	839	509	273	0.4	0.7	4.295	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	748	187	549	723	1029	3.9	14.3	52.272	F
2	1329	332	37	1213	1235	10.0	43.9	86.992	F
3	630	158	947	631	303	0.7	1.0	5.442	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	753	188	550	736	1029	14.3	18.5	80.984	F
2	1325	331	38	1213	1248	43.9	72.2	174.353	F
3	633	158	946	633	305	1.0	1.1	5.658	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	616	154	450	639	990	18.5	5.1	48.870	E
2	1087	272	32	1187	1056	72.2	45.2	174.639	F
3	518	129	922	517	297	1.1	0.7	4.838	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	512	128	375	513	833	5.1	2.0	15.866	C
2	915	229	26	999	862	45.2	11.0	73.922	F
3	430	107	777	430	247	0.7	0.5	4.065	A

Lane Results

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

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	453	732	0.620	453	0.0	1.3	9.537	A
			2	1,(2),3	62	732	0.085	62	0.0	0.1	5.690	A
		2	1	(1,2,3)	516			515	0.0	0.7	3.792	A
	Exit	1	1		765			765	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	256	905	0.283	257	0.0	0.4	5.957	A
			2	1,2	653	905	0.722	653	0.0	1.6	8.695	A
		2	1	(1,2,3)	910			910	0.0	2.0	7.048	A
	Exit	1	1		861			861	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	429	1525	0.281	429	0.0	0.4	3.446	A
	Exit	1	1		229			229	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	538	709	0.759	537	1.3	1.8	11.613	B
			2	1,(2),3	77	709	0.109	77	0.1	0.2	6.312	A
		2	1	(1,2,3)	613			615	0.7	1.9	10.322	B
	Exit	1	1		905			905	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	310	904	0.344	310	0.4	0.6	6.458	A
			2	1,2	771	904	0.854	771	1.6	2.2	9.826	A
		2	1	(1,2,3)	1089			1082	2.0	7.2	19.454	C
	Exit	1	1		1027			1027	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	509	1435	0.355	509	0.4	0.7	4.295	A
	Exit	1	1		273			273	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	625	674	0.927	625	1.8	2.5	14.008	B
			2	1,(2),3	98	674	0.145	98	0.2	0.2	7.134	A
		2	1	(1,2,3)	748			723	1.9	11.5	39.107	E
	Exit	1	1		1029			1029	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	348	902	0.387	349	0.6	0.7	6.942	A
			2	1,2	864	902	0.959	864	2.2	2.7	10.845	B
		2	1	(1,2,3)	1329			1213	7.2	40.5	77.255	F
	Exit	1	1		1235			1235	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	630	1362	0.463	631	0.7	1.0	5.442	A
	Exit	1	1		303			303	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	639	674	0.948	638	2.5	2.6	14.688	B
			2	1,(2),3	97	674	0.145	97	0.2	0.2	7.143	A
		2	1	(1,2,3)	753			736	11.5	15.7	67.310	F
	Exit	1	1		1029			1029	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	349	901	0.387	349	0.7	0.7	7.008	A
			2	1,2	864	901	0.959	864	2.7	2.7	11.042	B
		2	1	(1,2,3)	1325			1213	40.5	68.8	164.455	F
	Exit	1	1		1248			1248	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	633	1362	0.464	633	1.0	1.1	5.658	A
	Exit	1	1		305			305	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	557	707	0.788	558	2.6	1.9	12.946	B
			2	1,(2),3	81	707	0.114	81	0.2	0.1	6.934	A
		2	1	(1,2,3)	616			637	15.7	3.0	36.861	E
	Exit	1	1		990			990	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	343	903	0.379	343	0.7	0.7	7.008	A
			2	1,2	843	903	0.934	844	2.7	2.5	10.884	B
		2	1	(1,2,3)	1087			1186	68.8	42.0	164.912	F
	Exit	1	1		1056			1056	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	518	1379	0.375	517	1.1	0.7	4.838	A
	Exit	1	1		297			297	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	453	731	0.620	453	1.9	1.3	10.178	B
			2	1,(2),3	60	731	0.082	60	0.1	0.1	5.937	A
		2	1	(1,2,3)	512			513	3.0	0.7	6.285	A
	Exit	1	1		833			833	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	282	905	0.312	282	0.7	0.5	6.484	A
			2	1,2	715	905	0.789	716	2.5	1.9	9.965	A
		2	1	(1,2,3)	915			997	42.0	8.6	64.864	F
	Exit	1	1		862			862	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	430	1478	0.291	430	0.7	0.5	4.065	A
	Exit	1	1		247			247	0.0	0.0	0.000	A

2017, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	Arm 1 - Lane Simulation	Arm 1: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Stoneleigh Rd (NW)	Standard Roundabout	1,2,3	139.15	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2017	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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	✓	903	100.000
2		ONE HOUR	✓	1116	100.000
3		ONE HOUR	✓	290	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	4	868	31
	2	794	9	313
	3	42	246	2

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	267.90	74.2	F	830	1244
2	70.10	26.0	F	1027	1540
3	3.67	0.4	A	265	398

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	676	169	193	680	639	0.0	3.8	18.219	C
2	845	211	27	843	845	0.0	3.0	11.469	B
3	218	55	613	218	258	0.0	0.2	2.778	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	815	204	234	805	753	3.8	10.7	39.607	E
2	993	248	34	994	1005	3.0	5.3	17.620	C
3	263	66	723	263	305	0.2	0.2	3.161	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1010	252	281	880	892	10.7	44.9	121.704	F
2	1235	309	37	1192	1124	5.3	20.2	44.359	E
3	316	79	857	316	372	0.2	0.3	3.568	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	991	248	278	869	922	44.9	74.2	248.513	F
2	1234	309	35	1222	1113	20.2	26.0	70.100	F
3	317	79	883	317	373	0.3	0.4	3.671	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	812	203	230	872	786	74.2	56.9	267.903	F
2	1008	252	37	1038	1065	26.0	6.7	39.975	E
3	260	65	756	260	319	0.4	0.2	3.350	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	674	169	193	792	637	56.9	18.7	139.562	F
2	844	211	33	839	952	6.7	2.9	13.302	B
3	218	54	612	218	260	0.2	0.1	2.972	A

Lane Results

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

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	600	790	0.759	600	0.0	1.8	10.157	B
			2	1,(2),3	80	790	0.102	80	0.0	0.2	5.597	A
		2	1	(1,2,3)	676			680	0.0	1.8	8.568	A
	Exit	1	1		639			639	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	277	905	0.306	277	0.0	0.5	6.016	A
			2	1,2	566	905	0.625	566	0.0	1.4	8.039	A
		2	1	(1,2,3)	845			843	0.0	1.2	4.074	A
	Exit	1	1		845			845	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	218	1589	0.137	218	0.0	0.2	2.778	A
	Exit	1	1		258			258	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	704	777	0.906	704	1.8	2.4	11.986	B
			2	1,(2),3	102	777	0.131	102	0.2	0.2	5.897	A
		2	1	(1,2,3)	815			805	1.8	8.1	28.340	D
	Exit	1	1		753			753	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	322	903	0.357	323	0.5	0.6	6.415	A
			2	1,2	672	903	0.744	671	1.4	1.7	8.919	A
		2	1	(1,2,3)	993			994	1.2	3.0	9.531	A
	Exit	1	1		1005			1005	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	263	1514	0.173	263	0.2	0.2	3.161	A
	Exit	1	1		305			305	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	763	761	1.003	763	2.4	2.9	13.455	B
			2	1,(2),3	116	761	0.152	116	0.2	0.2	6.542	A
		2	1	(1,2,3)	1010			879	8.1	41.8	109.125	F
	Exit	1	1		892			892	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	401	902	0.445	402	0.6	0.9	7.276	A
			2	1,2	791	902	0.877	790	1.7	2.3	10.148	B
		2	1	(1,2,3)	1235			1192	3.0	17.0	35.142	E
	Exit	1	1		1124			1124	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	316	1423	0.222	316	0.2	0.3	3.568	A
	Exit	1	1		372			372	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	757	762	0.993	757	2.9	2.9	13.629	B
			2	1,(2),3	112	762	0.147	112	0.2	0.2	6.651	A
		2	1	(1,2,3)	991			869	41.8	71.0	235.851	F
	Exit	1	1		922			922	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	406	902	0.450	406	0.9	0.8	7.370	A
			2	1,2	816	902	0.905	816	2.3	2.5	10.449	B
		2	1	(1,2,3)	1234			1222	17.0	22.7	60.674	F
	Exit	1	1		1113			1113	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	317	1405	0.226	317	0.3	0.4	3.671	A
	Exit	1	1		373			373	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	755	778	0.970	755	2.9	2.8	13.426	B
			2	1,(2),3	117	778	0.150	117	0.2	0.2	6.479	A
		2	1	(1,2,3)	812			871	71.0	53.8	255.467	F
	Exit	1	1		786			786	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	338	902	0.375	339	0.8	0.6	6.745	A
			2	1,2	697	902	0.773	699	2.5	1.8	9.625	A
		2	1	(1,2,3)	1008			1035	22.7	4.3	31.373	D
	Exit	1	1		1065			1065	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	260	1492	0.174	260	0.4	0.2	3.350	A
	Exit	1	1		319			319	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	689	790	0.872	692	2.8	2.1	12.310	B
			2	1,(2),3	101	790	0.127	101	0.2	0.2	6.199	A
		2	1	(1,2,3)	674			790	53.8	16.4	127.936	F
	Exit	1	1		637			637	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	272	903	0.302	272	0.6	0.5	6.114	A
			2	1,2	571	903	0.632	567	1.8	1.4	8.233	A
		2	1	(1,2,3)	844			843	4.3	1.0	5.795	A
	Exit	1	1		952			952	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	218	1590	0.137	218	0.2	0.1	2.972	A
	Exit	1	1		260			260	0.0	0.0	0.000	A

2029, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	Arm 2 - Lane Simulation	Arm 2: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Stoneleigh Rd (NW)	Standard Roundabout	1,2,3	414.60	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2029	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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	✓	779	100.000
2		ONE HOUR	✓	1384	100.000
3		ONE HOUR	✓	775	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	699	80
	2	1138	4	242
	3	142	633	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	230.96	60.0	F	710	1064
2	745.63	250.3	F	1269	1904
3	8.44	2.2	A	713	1070

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	588	147	485	586	947	0.0	3.0	16.301	C
2	1038	259	58	1029	1013	0.0	10.1	28.026	D
3	584	146	846	586	241	0.0	0.7	4.424	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	702	175	575	692	1067	3.0	7.8	33.949	D
2	1249	312	70	1142	1197	10.1	39.8	86.526	F
3	698	174	944	698	268	0.7	1.3	6.016	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	848	212	708	749	1113	7.8	36.0	111.546	F
2	1537	384	77	1162	1380	39.8	133.8	273.973	F
3	861	215	960	861	279	1.3	2.2	8.444	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	849	212	696	754	1101	36.0	60.0	230.957	F
2	1516	379	74	1143	1376	133.8	227.9	572.215	F
3	856	214	943	854	274	2.2	2.2	8.326	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	699	175	577	776	1081	60.0	40.5	229.215	F
2	1242	311	80	1156	1273	227.9	250.3	745.635	F
3	701	175	957	702	279	2.2	1.3	6.504	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	572	143	480	641	1058	40.5	9.5	96.740	F
2	1033	258	67	1156	1054	250.3	221.6	658.031	F
3	582	145	955	583	268	1.3	0.8	5.352	A

Lane Results

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

Lanes: Main Results for each time segment

07:45 - 08:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	484	695	0.696	484	0.0	1.5	10.713	B
			2	1,(2),3	102	695	0.147	102	0.0	0.2	6.345	A
		2	1	(1,2,3)	588			586	0.0	1.3	6.305	A
	Exit	1	1		947			947	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	251	895	0.280	252	0.0	0.4	6.198	A
			2	1,2	778	895	0.870	776	0.0	2.3	9.917	A
		2	1	(1,2,3)	1038			1029	0.0	7.4	18.992	C
	Exit	1	1		1013			1013	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	584	1431	0.408	586	0.0	0.7	4.424	A
	Exit	1	1		241			241	0.0	0.0	0.000	A

08:00 - 08:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	568	666	0.853	568	1.5	2.2	13.303	B
			2	1,(2),3	125	666	0.188	124	0.2	0.4	7.426	A
		2	1	(1,2,3)	702			694	1.3	5.3	21.631	C
	Exit	1	1		1067			1067	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	281	891	0.315	280	0.4	0.6	6.569	A
			2	1,2	862	891	0.967	862	2.3	2.7	11.084	B
		2	1	(1,2,3)	1249			1143	7.4	36.5	76.508	F
	Exit	1	1		1197			1197	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	698	1364	0.512	698	0.7	1.3	6.016	A
	Exit	1	1		268			268	0.0	0.0	0.000	A

08:15 - 08:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	609	623	0.977	609	2.2	2.8	15.906	C
			2	1,(2),3	141	623	0.226	140	0.4	0.5	8.715	A
		2	1	(1,2,3)	848			749	5.3	32.7	96.848	F
	Exit	1	1		1113			1113	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	287	889	0.323	287	0.6	0.5	6.835	A
			2	1,2	875	889	0.985	875	2.7	2.8	11.460	B
		2	1	(1,2,3)	1537			1162	36.5	130.5	263.627	F
	Exit	1	1		1380			1380	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	861	1353	0.636	861	1.3	2.2	8.444	A
	Exit	1	1		279			279	0.0	0.0	0.000	A

08:30 - 08:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	617	627	0.985	618	2.8	2.8	16.587	C
			2	1,(2),3	136	627	0.218	136	0.5	0.4	8.908	A
		2	1	(1,2,3)	849			754	32.7	56.8	215.950	F
	Exit	1	1		1101			1101	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	281	889	0.316	281	0.5	0.6	6.719	A
			2	1,2	863	889	0.970	863	2.8	2.8	11.548	B
		2	1	(1,2,3)	1516			1144	130.5	224.5	561.896	F
	Exit	1	1		1376			1376	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	856	1364	0.627	854	2.2	2.2	8.326	A
	Exit	1	1		274			274	0.0	0.0	0.000	A

08:45 - 09:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	632	665	0.950	633	2.8	2.6	15.469	C
			2	1,(2),3	143	665	0.214	143	0.4	0.3	8.498	A
		2	1	(1,2,3)	699			774	56.8	37.6	215.256	F
	Exit	1	1		1081			1081	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	285	888	0.321	284	0.6	0.7	6.893	A
			2	1,2	871	888	0.981	872	2.8	2.7	11.478	B
		2	1	(1,2,3)	1242			1156	224.5	246.9	735.628	F
	Exit	1	1		1273			1273	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	701	1356	0.517	702	2.2	1.3	6.504	A
	Exit	1	1		279			279	0.0	0.0	0.000	A

09:00 - 09:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	522	697	0.750	527	2.6	1.8	13.402	B
			2	1,(2),3	114	697	0.163	114	0.3	0.2	7.496	A
		2	1	(1,2,3)	572			636	37.6	7.5	84.528	F
	Exit	1	1		1058			1058	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	285	892	0.319	285	0.7	0.6	6.831	A
			2	1,2	871	892	0.976	872	2.7	2.7	11.367	B
		2	1	(1,2,3)	1033			1155	246.9	218.3	650.397	F
	Exit	1	1		1054			1054	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	582	1356	0.429	583	1.3	0.8	5.352	A
	Exit	1	1		268			268	0.0	0.0	0.000	A

2029, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Last Run	Lane Simulation	Arm 1 - Lane Simulation	Arm 1: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Last Run	Lane Simulation	Arm 2 - Lane Simulation	Arm 2: Queue at end of modelled period is greater than 10 PCU. Delay is likely to have been underestimated.
Warning	Geometry	Arm 3 - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (s)	Junction LOS
1	Stoneleigh Rd (NW)	Standard Roundabout	1,2,3	286.78	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2029	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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	✓	1022	100.000
2		ONE HOUR	✓	1274	100.000
3		ONE HOUR	✓	269	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1	2	3
From	1	0	921	101
	2	941	2	331
	3	72	197	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1	2	3
From	1	10	10	10
	2	10	10	10
	3	10	10	10

Results

Results Summary for whole modelled period

Arm	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	358.84	100.7	F	936	1404
2	289.18	107.8	F	1169	1754
3	3.75	0.4	A	248	372

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	765	191	147	764	763	0.0	5.0	19.467	C
2	957	239	74	956	837	0.0	4.9	16.737	C
3	198	50	713	197	317	0.0	0.2	2.905	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	920	230	182	886	896	5.0	14.7	43.910	E
2	1134	284	87	1124	981	4.9	12.7	33.658	D
3	246	61	832	245	379	0.2	0.3	3.308	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1119	280	210	948	978	14.7	60.5	148.750	F
2	1408	352	98	1220	1060	12.7	62.2	116.758	F
3	290	73	899	289	420	0.3	0.4	3.733	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	1123	281	226	969	990	60.5	100.7	307.335	F
2	1411	353	97	1232	1098	62.2	107.8	254.117	F
3	305	76	911	305	418	0.4	0.3	3.753	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	918	230	182	955	979	100.7	89.5	358.836	F
2	1155	289	93	1235	1043	107.8	87.3	289.177	F
3	243	61	918	243	410	0.3	0.2	3.512	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Circulating flow (PCU/hr)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	773	193	153	931	875	89.5	44.3	229.182	F
2	952	238	91	1109	993	87.3	35.4	166.497	F
3	207	52	822	207	379	0.2	0.2	3.268	A

Lane Results

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

Lanes: Main Results for each time segment

16:45 - 17:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	632	805	0.786	632	0.0	1.9	10.177	B
			2	1,(2),3	133	805	0.165	132	0.0	0.3	5.865	A
		2	1	(1,2,3)	765			765	0.0	2.8	10.003	B
	Exit	1	1		763			763	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	296	890	0.333	295	0.0	0.5	6.211	A
			2	1,2	662	890	0.744	661	0.0	1.7	8.989	A
		2	1	(1,2,3)	957			958	0.0	2.7	8.591	A
	Exit	1	1		837			837	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	198	1521	0.130	197	0.0	0.2	2.905	A
	Exit	1	1		317			317	0.0	0.0	0.000	A

17:00 - 17:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	728	794	0.918	727	1.9	2.6	11.899	B
			2	1,(2),3	160	794	0.201	160	0.3	0.3	6.424	A
		2	1	(1,2,3)	920			888	2.8	11.8	32.951	D
	Exit	1	1		896			896	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	356	885	0.402	355	0.5	0.8	7.042	A
			2	1,2	769	885	0.869	769	1.7	2.2	10.172	B
		2	1	(1,2,3)	1134			1126	2.7	9.7	24.453	C
	Exit	1	1		981			981	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	246	1440	0.171	245	0.2	0.3	3.308	A
	Exit	1	1		379			379	0.0	0.0	0.000	A

17:15 - 17:30

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	771	784	0.983	770	2.6	2.9	13.155	B
			2	1,(2),3	178	784	0.226	178	0.3	0.3	6.663	A
		2	1	(1,2,3)	1119			948	11.8	57.3	136.780	F
	Exit	1	1		978			978	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	390	882	0.442	391	0.8	0.7	7.547	A
			2	1,2	832	882	0.944	830	2.2	2.7	11.032	B
		2	1	(1,2,3)	1408			1221	9.7	58.8	106.806	F
	Exit	1	1		1060			1060	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	290	1395	0.208	289	0.3	0.4	3.733	A
	Exit	1	1		420			420	0.0	0.0	0.000	A

17:30 - 17:45

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	789	779	1.013	789	2.9	2.9	13.113	B
			2	1,(2),3	182	779	0.234	181	0.3	0.4	7.063	A
		2	1	(1,2,3)	1123			971	57.3	97.4	295.323	F
	Exit	1	1		990			990	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	393	882	0.446	394	0.7	0.8	7.670	A
			2	1,2	837	882	0.948	838	2.7	2.5	11.211	B
		2	1	(1,2,3)	1411			1230	58.8	104.4	244.094	F
	Exit	1	1		1098			1098	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	305	1387	0.220	305	0.4	0.3	3.753	A
	Exit	1	1		418			418	0.0	0.0	0.000	A

17:45 - 18:00

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	780	794	0.983	780	2.9	2.9	13.085	B
			2	1,(2),3	175	794	0.220	176	0.4	0.3	7.030	A
		2	1	(1,2,3)	918			955	97.4	86.3	346.931	F
	Exit	1	1		979			979	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	390	883	0.442	390	0.8	0.9	7.430	A
			2	1,2	844	883	0.956	845	2.5	2.5	11.090	B
		2	1	(1,2,3)	1155			1235	104.4	83.9	279.198	F
	Exit	1	1		1043			1043	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	243	1382	0.176	243	0.3	0.2	3.512	A
	Exit	1	1		410			410	0.0	0.0	0.000	A

18:00 - 18:15

Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	LOS
1	Entry	1	1	2	762	803	0.950	763	2.9	2.5	12.598	B
			2	1,(2),3	168	803	0.210	168	0.3	0.3	6.683	A
		2	1	(1,2,3)	773			931	86.3	41.4	217.557	F
	Exit	1	1		875			875	0.0	0.0	0.000	A
2	Entry	1	1	(1),3	349	884	0.395	352	0.9	0.6	7.381	A
			2	1,2	757	884	0.857	758	2.5	2.3	10.781	B
		2	1	(1,2,3)	952			1106	83.9	32.5	156.643	F
	Exit	1	1		993			993	0.0	0.0	0.000	A
3	Entry	1	1	1,2,3	207	1447	0.143	207	0.2	0.2	3.268	A
	Exit	1	1		379			379	0.0	0.0	0.000	A

Appendix E. Proposed Scheme Layout

Stoneleigh Road

50

50

Footway/Cycleway Width
over new bridge: 4.0m

50

40

Footway/Cycleway Width: 3.5m

Standalone
Toucan Crossing

A46 Coventry

50

40

50

Dalehouse Lane

Footway/Cycleway Width
over new bridge: 4.0m

50

Traffic Signal Junction
Incorporating Toucan
Crossing

Footway/Cycleway Width
over existing bridge: 3.0m

50

50

Traffic Signal Junction
Incorporating Toucan
Crossing

A46 Warwick

Standalone
Toucan
Crossing

See Insert A

Stoneleigh Road

Key

- Shared use footway/cycleway
- Verge
- Carriageway
- Area for Police Speed Enforcement Vehicle
- Verge for carriageway widening in Phase 2
- New bridge
- Traffic Signal Pole

Insert A

50

50

Stoneleigh Road

NOTES

Signalised pedestrian/cycle crossings on all A46 slip lanes

Carriageway lane widths 3.5m

Red tactile paving to be installed at signalised crossings and buff coloured tactile paving to be installed at uncontrolled crossings.

All speed limits shown are proposed.

There are no known Departures from Standard.

REV	DRN	AMENDMENT	DATE

Warwickshire County Council
TRANSPORT AND ECONOMY

Design Services
Communities
Shire Hall Post Room
Warwick
CV34 4SP
Tel : 01926 410410
Web : www.warwickshire.gov.uk

FS 26655

C:\DesignServices\9.2\A460833 Drawings\3-01 AutoCAD\9.2-A46--083-010.dwg

PROJECT

A46 Link Road

Phase 1 (Stoneleigh)

TITLE

Stage 1 - Road Safety Audit

General Arrangement

Drn	CDT	Ck'd	NS	App'd	NS
Date	14-08-17	Date	23-08-17	Date	23-08-17

Status: Approved (Level 2)

Scale: 1:1000

Sheet size: A1

DRG. NO.: 9.2-A46--083-010

Rev.: -

0mm 50mm 100mm 150mm 200mm

This plot was produced from a digital source so may not be at true scale. It is the recipient's responsibility to confirm its accuracy.

Issue v12.1

Appendix F. Proposed Scheme Junction Modelling Results

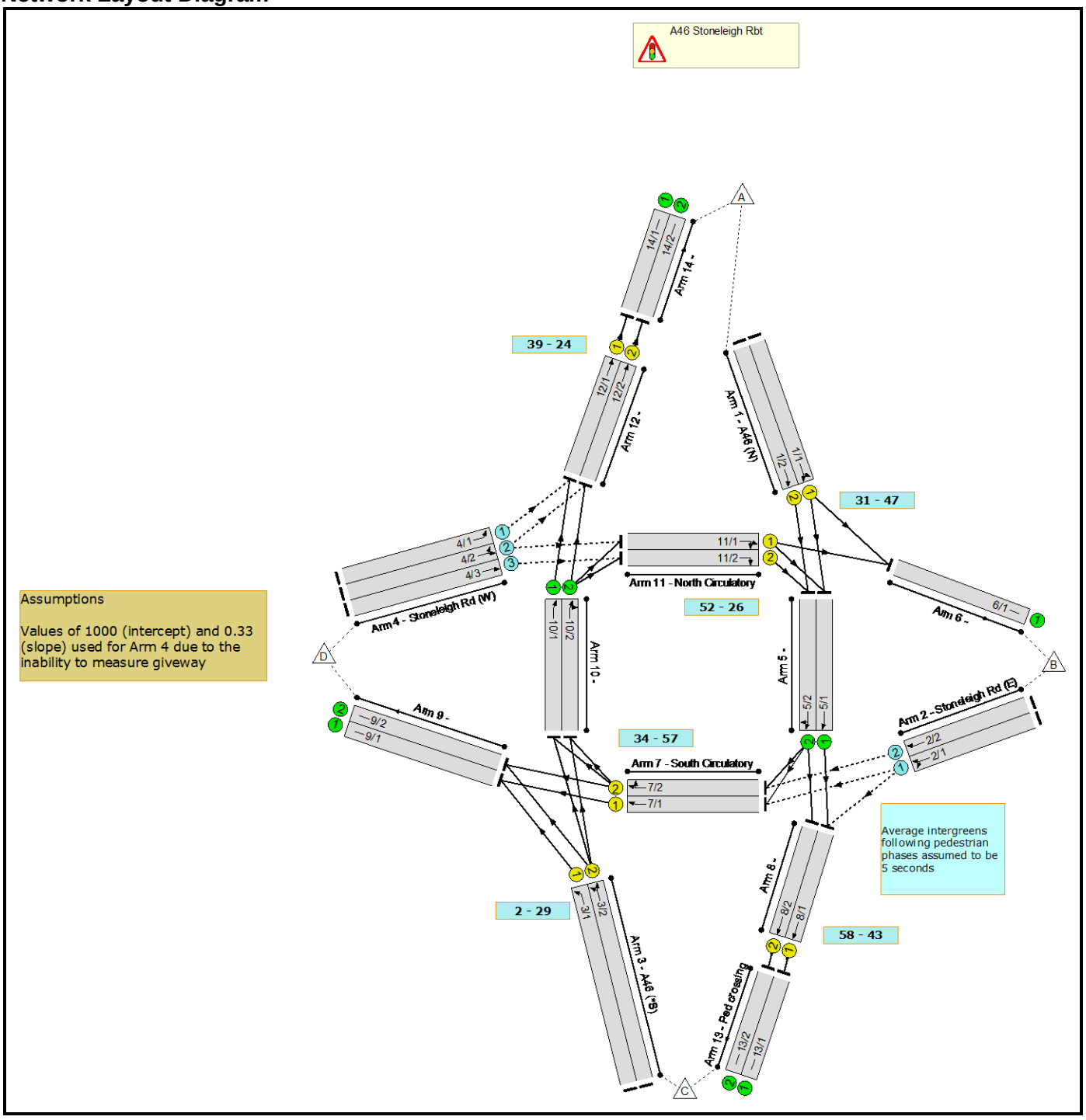
Full Input Data And Results

User and Project Details

Project:	**17044**
Title:	**A46 Stoneleigh Rbt**
Location:	Stoneleigh
Additional detail:	Without left slip model and updated 2029 flows.
File name:	A46 Stoneleigh original layout without left slip - Traffic Flows Issued 25 Sept 2017 Update (1).lsg3x
Author:	Stuart Hanson
Company:	JCT Consultancy Ltd
Address:	LinSig House, Deepdale Enterprise park, Nettleham, Lincoln LN2 2LL

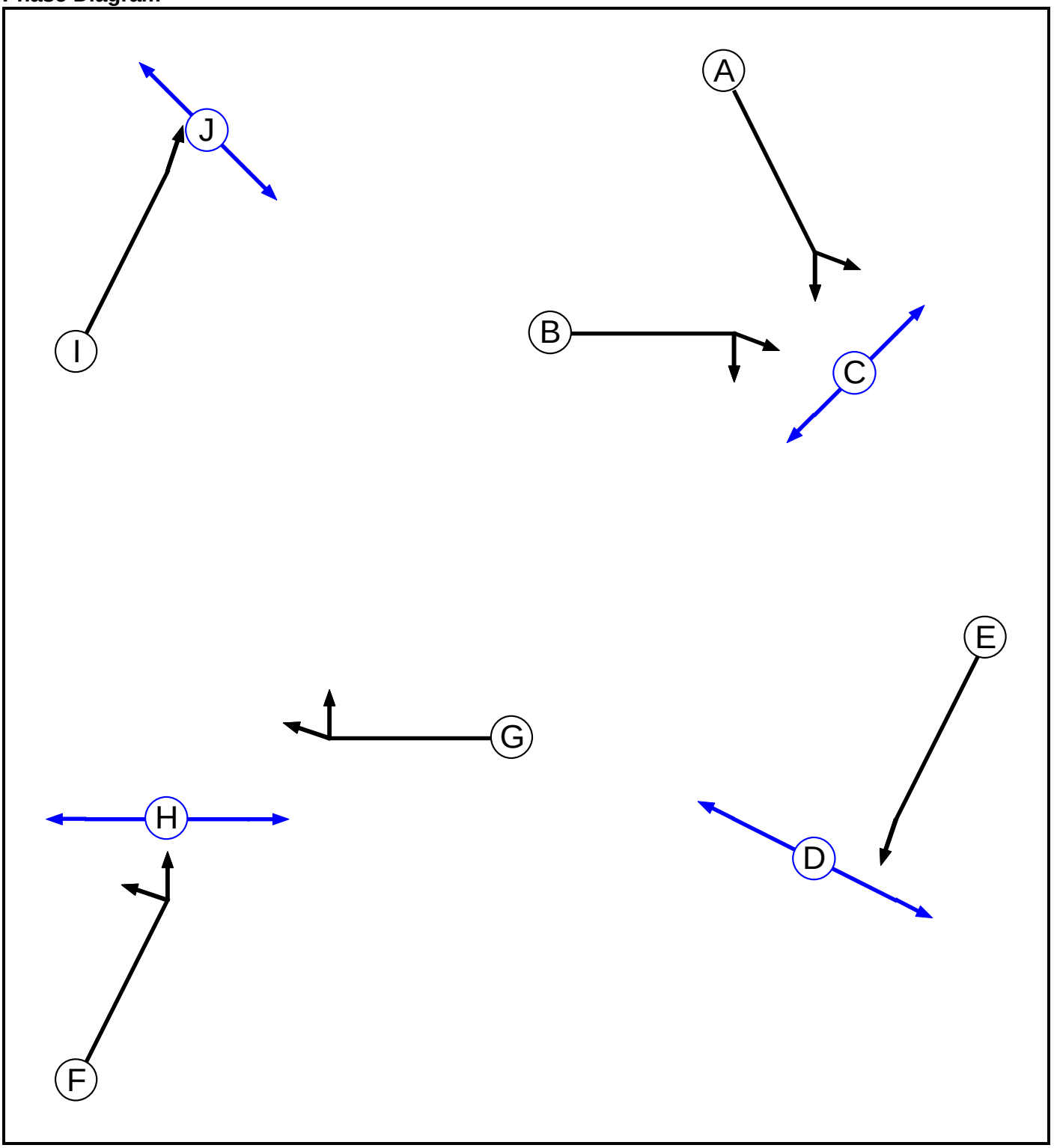
Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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	Pedestrian	1		5	5
D	Pedestrian	2		5	5
E	Traffic	2		7	7
F	Traffic	3		7	7
G	Traffic	3		7	7
H	Pedestrian	3		5	5
I	Traffic	4		7	7
J	Pedestrian	4		5	5

Phase Intergreens Matrix

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

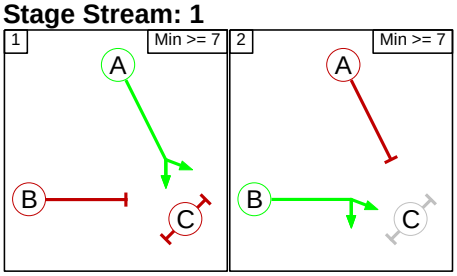
Phases in Stage

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

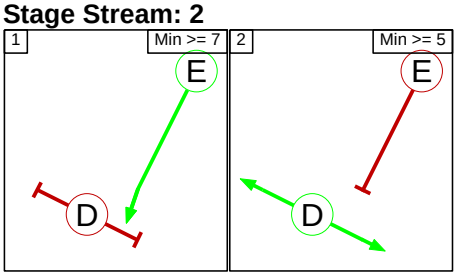
Full Input Data And Results

Stage Diagram

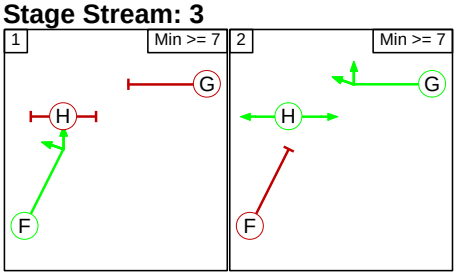
Stage Stream: 1



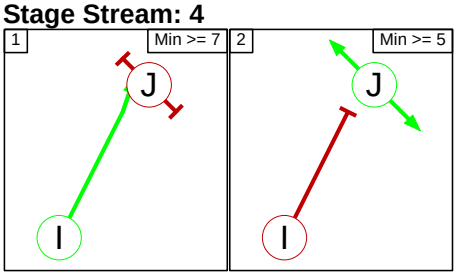
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



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					

Stage Stream: 4

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

Full Input Data And Results

Prohibited Stage Change

Stage Stream: 1

	To Stage		
		1	2
From Stage	1		5
	2	5	

Stage Stream: 2

	To Stage		
		1	2
From Stage	1		5
	2	5	

Stage Stream: 3

	To Stage		
		1	2
From Stage	1		5
	2	5	

Stage Stream: 4

	To Stage		
		1	2
From Stage	1		5
	2	5	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A46 Stoneleigh Rbt											
Lane	**Movement**	**Max Flow when Giving Way (PCU/Hr)**	**Min Flow when Giving Way (PCU/Hr)**	**Opposing Lane**	**Opp. Lane Coeff.**	**Opp. Mvmnts.**	**Right Turn Storage (PCU)**	**Non-Blocking Storage (PCU)**	**RTF**	**Right Turn Move up (s)**	**Max Turns in Intergreen (PCU)**
2/1 (Stoneleigh Rd (E))	7/1 (Ahead)	1067	0	5/1	0.35	All	-	-	-	-	-
				5/2	0.35	All					
	8/1 (Left)	1067	0	5/1	0.35	All					
				5/2	0.35	All					
2/2 (Stoneleigh Rd (E))	7/2 (Ahead)	1067	0	5/1	0.35	All	-	-	-	-	-
				5/2	0.35	All					
4/1 (Stoneleigh Rd (W))	12/1 (Left)	1000	0	10/1	0.33	All	-	-	-	-	-
				10/2	0.33	All					
4/2 (Stoneleigh Rd (W))	11/1 (Ahead)	1000	0	10/1	0.33	All	-	-	-	-	-
				10/2	0.33	All					
	12/2 (Left)	1000	0	10/1	0.33	All					
				10/2	0.33	All					
4/3 (Stoneleigh Rd (W))	11/2 (Ahead)	1000	0	10/1	0.33	All	-	-	-	-	-
				10/2	0.33	All					

Full Input Data And Results

Lane Input Data

Junction: A46 Stoneleigh Rbt

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A46 (N))	U	A	2	3	60.0	User	1900	-	-	-	-	-
1/2 (A46 (N))	U	A	2	3	60.0	User	1900	-	-	-	-	-
2/1 (Stoneleigh Rd (E))	O		2	3	60.0	Inf	-	-	-	-	-	-
2/2 (Stoneleigh Rd (E))	O		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (A46 (*S))	U	F	2	3	60.0	User	1900	-	-	-	-	-
3/2 (A46 (*S))	U	F	2	3	60.0	User	1900	-	-	-	-	-
4/1 (Stoneleigh Rd (W))	O		2	3	60.0	Inf	-	-	-	-	-	-
4/2 (Stoneleigh Rd (W))	O		2	3	60.0	Inf	-	-	-	-	-	-
4/3 (Stoneleigh Rd (W))	O		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	18.3	Inf	-	-	-	-	-	-
5/2	U		2	3	18.3	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (South Circulatory)	U	G	2	3	24.3	User	1900	-	-	-	-	-
7/2 (South Circulatory)	U	G	2	3	24.3	User	1900	-	-	-	-	-
8/1	U	E	2	3	10.4	User	1900	-	-	-	-	-
8/2	U	E	2	3	10.4	User	1900	-	-	-	-	-
9/1	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1	U		2	3	17.4	Inf	-	-	-	-	-	-
10/2	U		2	3	17.4	Inf	-	-	-	-	-	-
11/1 (North Circulatory)	U	B	2	3	27.8	User	1900	-	-	-	-	-
11/2 (North Circulatory)	U	B	2	3	27.8	User	1900	-	-	-	-	-
12/1	U	I	2	3	11.1	User	1900	-	-	-	-	-
12/2	U	I	2	3	11.1	User	1900	-	-	-	-	-

13/1 (Ped crossing)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2 (Ped crossing)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1	U		2	3	60.0	Inf	-	-	-	-	-	-
14/2	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2029 - issued 25 Sep 2017'	08:00	09:00	01:00	
2: 'PM 2029 - issued 25 Sept 2017'	17:00	18:00	01:00	
3: 'AM 2034 - issued 25 Sep 2017'	08:00	09:00	01:00	
4: 'PM 2034 - issued 25 Sept 2017'	17:00	18:00	01:00	

Scenario 1: 'AM 2029' (FG1: 'AM 2029 - issued 25 Sep 2017', Plan 1: '1234')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	263	0	230	493
	B	132	0	179	302	613
	C	0	125	0	861	986
	D	662	259	483	0	1404
	Tot.	794	647	662	1393	3496

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM 2029
Junction: A46 Stoneleigh Rbt	
1/1	263
1/2	230
2/1	307
2/2	306
3/1	493
3/2	493
4/1	468
4/2	468
4/3	468
5/1	15
5/2	698
6/1	647
7/1	243
7/2	421
8/1	194
8/2	468
9/1	736
9/2	657
10/1	66
10/2	191
11/1	399
11/2	468
12/1	534
12/2	260
13/1	194
13/2	468
14/1	534
14/2	260

Full Input Data And Results

Lane Saturation Flows

Junction: A46 Stoneleigh Rbt								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A46 (N) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A46 (N) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Stoneleigh Rd (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Stoneleigh Rd (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A46 (*S) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A46 (*S) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (Stoneleigh Rd (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Stoneleigh Rd (W) Lane 2)	Infinite Saturation Flow						Inf	Inf
4/3 (Stoneleigh Rd (W) Lane 3)	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (South Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (South Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/1	This lane uses a directly entered Saturation Flow						1900	1900
8/2	This lane uses a directly entered Saturation Flow						1900	1900
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf
11/1 (North Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
11/2 (North Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
12/1	This lane uses a directly entered Saturation Flow						1900	1900
12/2	This lane uses a directly entered Saturation Flow						1900	1900
13/1 (Ped crossing Lane 1)	Infinite Saturation Flow						Inf	Inf
13/2 (Ped crossing Lane 2)	Infinite Saturation Flow						Inf	Inf
14/1	Infinite Saturation Flow						Inf	Inf
14/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: 'PM 2029' (FG2: 'PM 2029 - issued 25 Sept 2017', Plan 1: '1234')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	284	0	206	490
	B	146	0	162	300	608
	C	0	173	0	816	989
	D	491	154	512	0	1157
	Tot.	637	611	674	1322	3244

Traffic Lane Flows

Lane	Scenario 2: PM 2029
Junction: A46 Stoneleigh Rbt	
1/1	284
1/2	206
2/1	304
2/2	304
3/1	494
3/2	495
4/1	386
4/2	385
4/3	386
5/1	126
5/2	592
6/1	611
7/1	245
7/2	407
8/1	288
8/2	386
9/1	739
9/2	583
10/1	73
10/2	246
11/1	453
11/2	386
12/1	459
12/2	178
13/1	288
13/2	386
14/1	459
14/2	178

Full Input Data And Results

Lane Saturation Flows

Junction: A46 Stoneleigh Rbt								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A46 (N) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A46 (N) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Stoneleigh Rd (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Stoneleigh Rd (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A46 (*S) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A46 (*S) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (Stoneleigh Rd (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Stoneleigh Rd (W) Lane 2)	Infinite Saturation Flow						Inf	Inf
4/3 (Stoneleigh Rd (W) Lane 3)	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (South Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (South Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/1	This lane uses a directly entered Saturation Flow						1900	1900
8/2	This lane uses a directly entered Saturation Flow						1900	1900
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf
11/1 (North Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
11/2 (North Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
12/1	This lane uses a directly entered Saturation Flow						1900	1900
12/2	This lane uses a directly entered Saturation Flow						1900	1900
13/1 (Ped crossing Lane 1)	Infinite Saturation Flow						Inf	Inf
13/2 (Ped crossing Lane 2)	Infinite Saturation Flow						Inf	Inf
14/1	Infinite Saturation Flow						Inf	Inf
14/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 3: 'AM 2034' (FG3: 'AM 2034 - issued 25 Sep 2017', Plan 1: '1234')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	273	0	239	512
	B	136	0	185	313	634
	C	0	130	0	893	1023
	D	686	269	501	0	1456
	Tot.	822	672	686	1445	3625

Traffic Lane Flows

Lane	Scenario 3: AM 2034
Junction: A46 Stoneleigh Rbt	
1/1	273
1/2	239
2/1	317
2/2	317
3/1	511
3/2	512
4/1	485
4/2	486
4/3	485
5/1	16
5/2	724
6/1	672
7/1	252
7/2	436
8/1	201
8/2	485
9/1	763
9/2	682
10/1	68
10/2	198
11/1	415
11/2	485
12/1	553
12/2	269
13/1	201
13/2	485
14/1	553
14/2	269

Full Input Data And Results

Lane Saturation Flows

Junction: A46 Stoneleigh Rbt								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A46 (N) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A46 (N) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Stoneleigh Rd (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Stoneleigh Rd (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A46 (*S) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A46 (*S) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (Stoneleigh Rd (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Stoneleigh Rd (W) Lane 2)	Infinite Saturation Flow						Inf	Inf
4/3 (Stoneleigh Rd (W) Lane 3)	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (South Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (South Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/1	This lane uses a directly entered Saturation Flow						1900	1900
8/2	This lane uses a directly entered Saturation Flow						1900	1900
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf
11/1 (North Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
11/2 (North Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
12/1	This lane uses a directly entered Saturation Flow						1900	1900
12/2	This lane uses a directly entered Saturation Flow						1900	1900
13/1 (Ped crossing Lane 1)	Infinite Saturation Flow						Inf	Inf
13/2 (Ped crossing Lane 2)	Infinite Saturation Flow						Inf	Inf
14/1	Infinite Saturation Flow						Inf	Inf
14/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: ' PM 2034' (FG4: 'PM 2034 - issued 25 Sept 2017', Plan 1: '1234')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	294	0	213	507
	B	151	0	168	311	630
	C	0	179	0	846	1025
	D	509	160	531	0	1200
	Tot.	660	633	699	1370	3362

Traffic Lane Flows

Lane	Scenario 4: PM 2034
Junction: A46 Stoneleigh Rbt	
1/1	294
1/2	213
2/1	315
2/2	315
3/1	513
3/2	512
4/1	400
4/2	400
4/3	400
5/1	131
5/2	613
6/1	633
7/1	254
7/2	421
8/1	299
8/2	400
9/1	767
9/2	603
10/1	75
10/2	255
11/1	470
11/2	400
12/1	475
12/2	185
13/1	299
13/2	400
14/1	475
14/2	185

Full Input Data And Results

Lane Saturation Flows

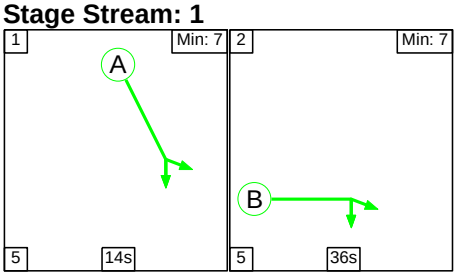
Junction: A46 Stoneleigh Rbt								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A46 (N) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
1/2 (A46 (N) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
2/1 (Stoneleigh Rd (E) Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (Stoneleigh Rd (E) Lane 2)	Infinite Saturation Flow						Inf	Inf
3/1 (A46 (*S) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A46 (*S) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (Stoneleigh Rd (W) Lane 1)	Infinite Saturation Flow						Inf	Inf
4/2 (Stoneleigh Rd (W) Lane 2)	Infinite Saturation Flow						Inf	Inf
4/3 (Stoneleigh Rd (W) Lane 3)	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (South Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (South Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
8/1	This lane uses a directly entered Saturation Flow						1900	1900
8/2	This lane uses a directly entered Saturation Flow						1900	1900
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
10/2	Infinite Saturation Flow						Inf	Inf
11/1 (North Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
11/2 (North Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
12/1	This lane uses a directly entered Saturation Flow						1900	1900
12/2	This lane uses a directly entered Saturation Flow						1900	1900
13/1 (Ped crossing Lane 1)	Infinite Saturation Flow						Inf	Inf
13/2 (Ped crossing Lane 2)	Infinite Saturation Flow						Inf	Inf
14/1	Infinite Saturation Flow						Inf	Inf
14/2	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

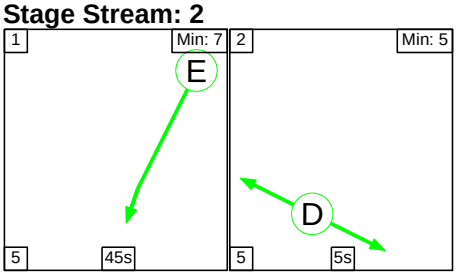
Scenario 1: 'AM 2029' (FG1: 'AM 2029 - issued 25 Sep 2017', Plan 1: '1234')

Stage Sequence Diagram

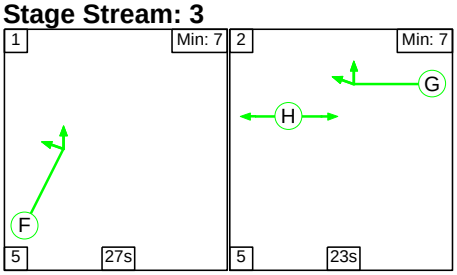
Stage Stream: 1



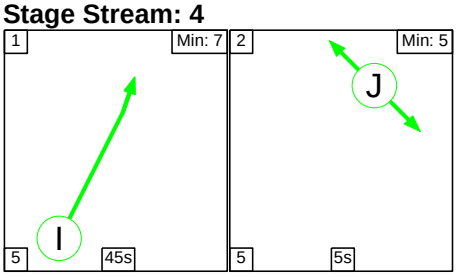
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	14	36
Change Point	22	41

Stage Stream: 2

Stage	1	2
Duration	45	5
Change Point	50	40

Stage Stream: 3

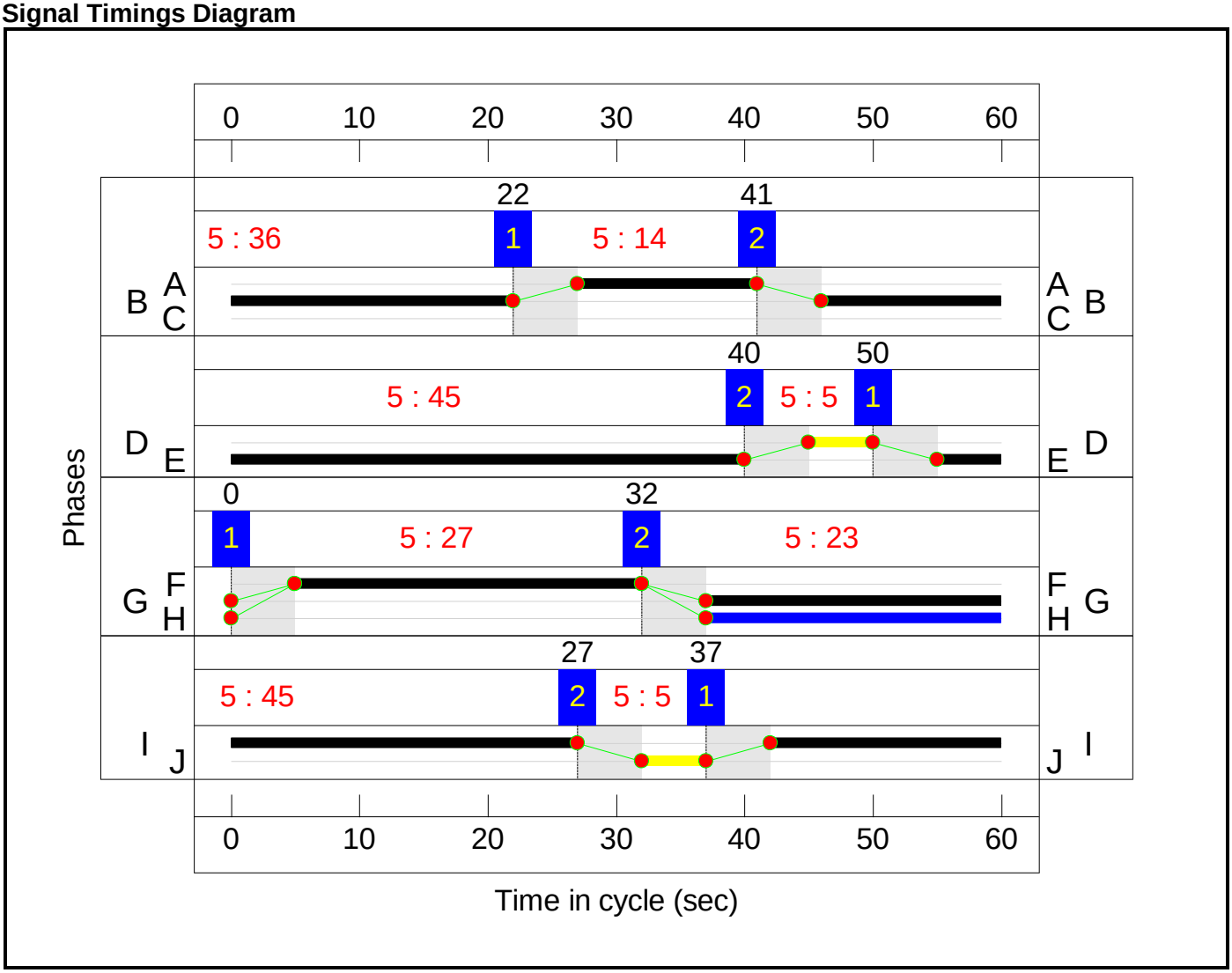
Stage	1	2
Duration	27	23
Change Point	0	32

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	45	5
Change Point	37	27

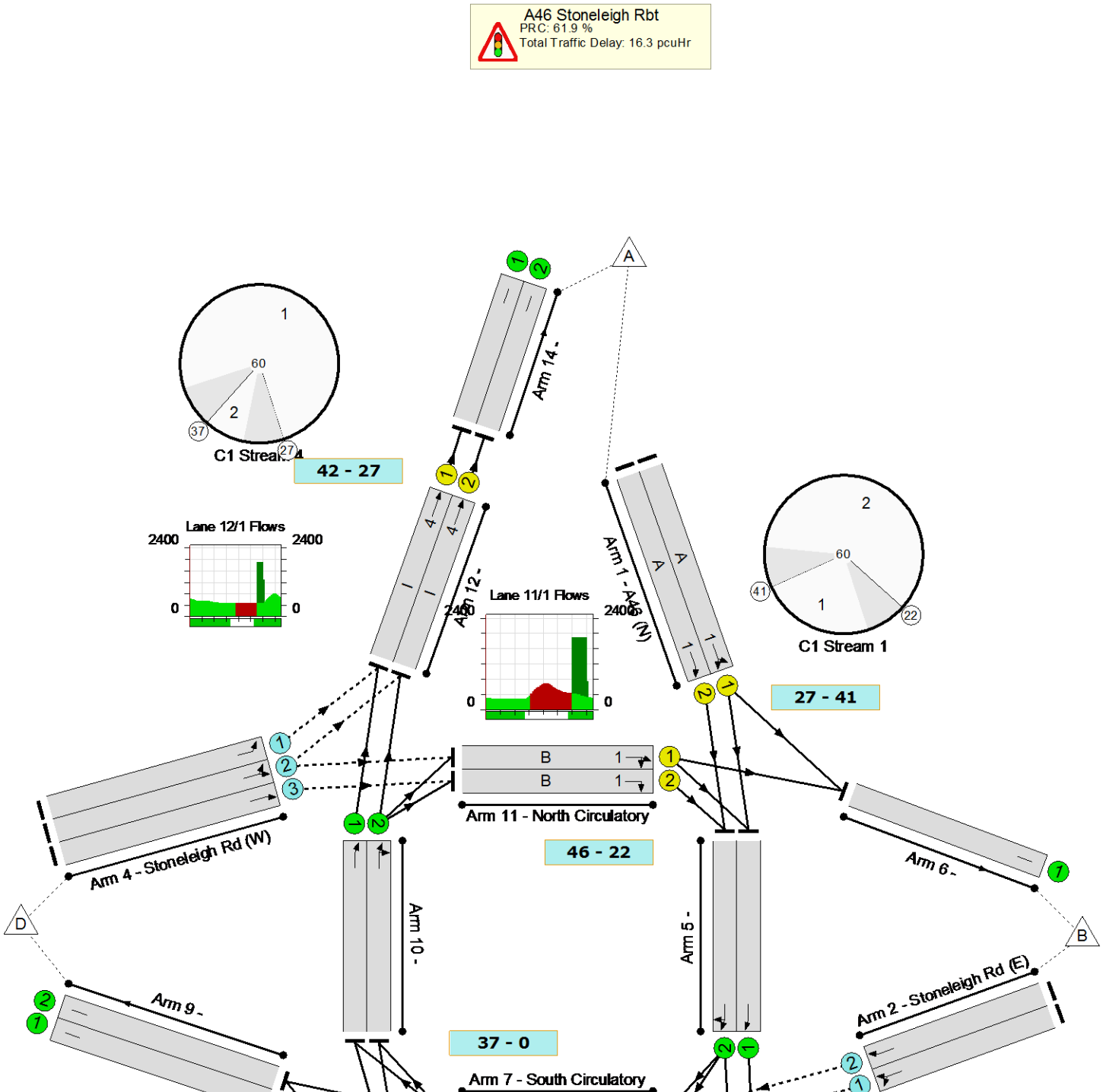
Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram

Full Input Data And Results



Assumptions

Values of 1000 (intercept) and 0.33 (slope) used for Arm 4 due to the inability to measure giveway

Full Input Data And Results

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: A46 Stoneleigh Rbt	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**55.6%**
A46 Stoneleigh Rbt	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**55.6%**
1/1	A46 (N) Ahead Left	U	1	N/A	A		1	14	-	263	1900	475	55.4%
1/2	A46 (N) Ahead	U	1	N/A	A		1	14	-	230	1900	475	48.4%
2/1	Stoneleigh Rd (E) Ahead Left	O	N/A	N/A	-		-	-	-	307	Inf	817	37.6%
2/2	Stoneleigh Rd (E) Ahead	O	N/A	N/A	-		-	-	-	306	Inf	817	37.4%
3/1	A46 (*S) Left	U	3	N/A	F		1	27	-	493	1900	887	55.6%
3/2	A46 (*S) Left Ahead	U	3	N/A	F		1	27	-	493	1900	887	55.6%
4/1	Stoneleigh Rd (W) Left	O	N/A	N/A	-		-	-	-	468	Inf	915	51.2%
4/2	Stoneleigh Rd (W) Ahead Left	O	N/A	N/A	-		-	-	-	468	Inf	915	51.2%
4/3	Stoneleigh Rd (W) Ahead	O	N/A	N/A	-		-	-	-	468	Inf	915	51.2%
5/1	Ahead	U	N/A	N/A	-		-	-	-	15	Inf	Inf	0.0%
5/2	Right Ahead	U	N/A	N/A	-		-	-	-	698	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	647	Inf	Inf	0.0%
7/1	South Circulatory Ahead	U	3	N/A	G		1	23	-	243	1900	760	32.0%
7/2	South Circulatory Ahead Right	U	3	N/A	G		1	23	-	421	1900	760	55.4%
8/1	Ahead	U	2	N/A	E		1	45	-	194	1900	1457	13.3%
8/2	Ahead	U	2	N/A	E		1	45	-	468	1900	1457	32.1%

Full Input Data And Results

9/1		U	N/A	N/A	-		-	-	-	736	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	657	Inf	Inf	0.0%
10/1	Ahead	U	N/A	N/A	-		-	-	-	66	Inf	Inf	0.0%
10/2	Right Ahead	U	N/A	N/A	-		-	-	-	191	Inf	Inf	0.0%
11/1	North Circulatory Right Ahead	U	1	N/A	B		1	36	-	399	1900	1172	34.1%
11/2	North Circulatory Right	U	1	N/A	B		1	36	-	468	1900	1172	39.9%
12/1	Ahead	U	4	N/A	I		1	45	-	534	1900	1457	36.7%
12/2	Ahead	U	4	N/A	I		1	45	-	260	1900	1457	17.8%
13/1	Ped crossing	U	N/A	N/A	-		-	-	-	194	Inf	Inf	0.0%
13/2	Ped crossing	U	N/A	N/A	-		-	-	-	468	Inf	Inf	0.0%
14/1		U	N/A	N/A	-		-	-	-	534	Inf	Inf	0.0%
14/2		U	N/A	N/A	-		-	-	-	260	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: A46 Stoneleigh Rbt	**-**	**-**	**2017**	**0**	**0**	**9.6**	**6.7**	**0.0**	**16.3**	**-**	**-**	**-**	**-**
A46 Stoneleigh Rbt	**-**	**-**	**2017**	**0**	**0**	**9.6**	**6.7**	**0.0**	**16.3**	**-**	**-**	**-**	**-**
1/1	263	263	-	-	-	1.4	0.6	-	2.0	28.0	3.8	0.6	4.4
1/2	230	230	-	-	-	1.2	0.5	-	1.7	26.5	3.3	0.5	3.7
2/1	307	307	307	0	0	0.0	0.3	-	0.3	3.5	0.0	0.3	0.3
2/2	306	306	306	0	0	0.0	0.3	-	0.3	3.5	0.0	0.3	0.3
3/1	493	493	-	-	-	1.6	0.6	-	2.2	16.1	5.9	0.6	6.5
3/2	493	493	-	-	-	1.6	0.6	-	2.2	16.1	5.9	0.6	6.5
4/1	468	468	468	0	0	0.0	0.5	-	0.5	4.0	0.0	0.5	0.5
4/2	468	468	468	0	0	0.0	0.5	-	0.5	4.0	0.0	0.5	0.5
4/3	468	468	468	0	0	0.0	0.5	-	0.5	4.0	0.0	0.5	0.5
5/1	15	15	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	698	698	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	647	647	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	243	243	-	-	-	0.5	0.2	-	0.7	10.6	1.5	0.2	1.7
7/2	421	421	-	-	-	1.2	0.6	-	1.8	15.3	3.8	0.6	4.5
8/1	194	194	-	-	-	0.1	0.1	-	0.2	3.1	0.7	0.1	0.8
8/2	468	468	-	-	-	0.0	0.2	-	0.2	1.9	0.0	0.2	0.3
9/1	736	736	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	657	657	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	66	66	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/2	191	191	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	399	399	-	-	-	0.9	0.3	-	1.2	10.8	4.3	0.3	4.6
11/2	468	468	-	-	-	0.8	0.3	-	1.1	8.4	3.9	0.3	4.2
12/1	534	534	-	-	-	0.3	0.3	-	0.6	3.9	2.3	0.3	2.6

Full Input Data And Results

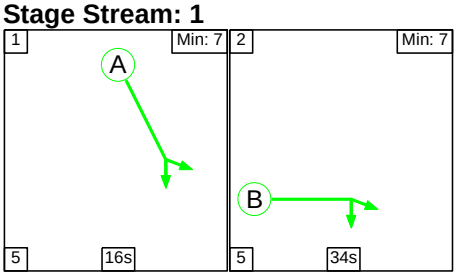
12/2	260	260	-	-	-	0.1	0.1	-	0.2	2.9	0.8	0.1	0.9
13/1	194	194	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
13/2	468	468	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/1	534	534	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
14/2	260	260	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1	Stream: 1 PRC for Signalled Lanes (%):	62.5	Total Delay for Signalled Lanes (pcuHr):	6.03	Cycle Time (s):	60
C1	Stream: 2 PRC for Signalled Lanes (%):	180.1	Total Delay for Signalled Lanes (pcuHr):	0.41	Cycle Time (s):	60
C1	Stream: 3 PRC for Signalled Lanes (%):	61.9	Total Delay for Signalled Lanes (pcuHr):	6.91	Cycle Time (s):	60
C1	Stream: 4 PRC for Signalled Lanes (%):	145.5	Total Delay for Signalled Lanes (pcuHr):	0.78	Cycle Time (s):	60
	PRC Over All Lanes (%):	61.9	Total Delay Over All Lanes(pcuHr):	16.30		

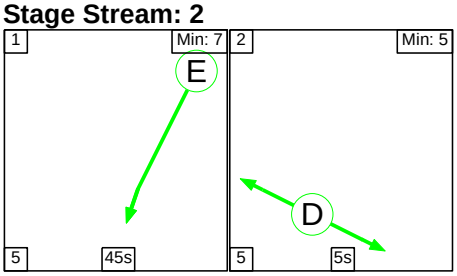
Full Input Data And Results
Scenario 2: 'PM 2029' (FG2: 'PM 2029 - issued 25 Sept 2017', Plan 1: '1234')

Stage Sequence Diagram

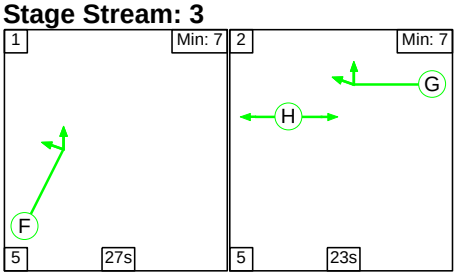
Stage Stream: 1



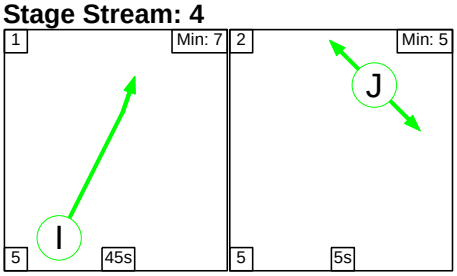
Stage Stream: 2



Stage Stream: 3



Stage Stream: 4



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	16	34
Change Point	26	47

Stage Stream: 2

Stage	1	2
Duration	45	5
Change Point	53	43

Stage Stream: 3

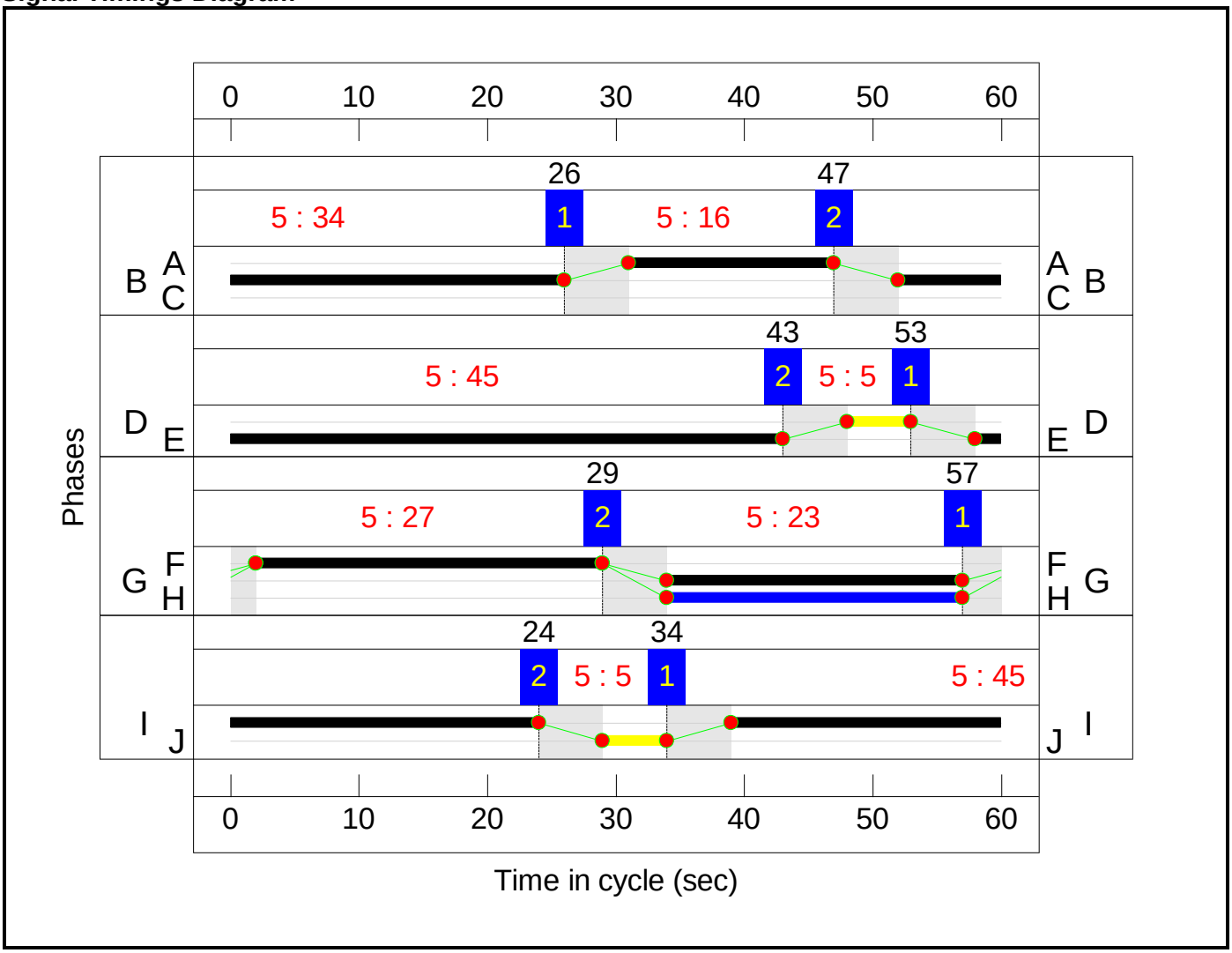
Stage	1	2
Duration	27	23
Change Point	57	29

Full Input Data And Results

Stage Stream: 4

Stage	1	2
Duration	45	5
Change Point	34	24

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram