

Appendix 13 TN8: A508 Corridor Technical Note



M1J15 NORTHAMPTON GATEWAY
STRATEGIC RAIL FREIGHT INTERCHANGE

TECHNICAL NOTE 8: A508 CORRIDOR

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1.0 INTRODUCTION

- 1.1 ADC Infrastructure Ltd is commissioned by Roxhill (Junction 15) Ltd to provide transport advice with regards to their Nationally Significant Infrastructure Project (NSIP) for the development of a Strategic Rail Freight Interchange (SRFI) facility adjacent to M1 Junction 15 in Northamptonshire (known as Northampton Gateway SRFI).
- 1.2 It was agreed with the Transport Working Group that the transport impacts of the Northampton Gateway SRFI development be modelled using the Northamptonshire Strategic Transport Model (NSTM2) which is maintained on Northamptonshire County Council's (NCC's) behalf by WSP.
- 1.3 The outputs of the NSTM2 are being analysed to identify the impacts of the proposed development and judge the requirements for mitigation across the transport network.
- 1.4 This Technical Note therefore presents a summary of the analysis of the A508 corridor between M1 Junction 15 and the A5, based on NSTM2 traffic data taken from modelling the 2031 D1 (Reference Case) and 2031 J1a and J1c (Development Case) scenarios. Please note that the traffic data used will change following further iterations of the NSTM2. Therefore, this document is intended to remain 'live' during the period of the Environmental Impact Assessment for the development.

2.0 NSTM TRAFFIC FLOWS AND STUDY AREA JUNCTIONS

Assessment scenarios

- 2.1 The agreed assessment scenarios for the project are summarised in the table below.

Scenario	ID	Description
Reference Case	B1	2021 Opening Year
	C1	2021 DfT 02/2013 Circular Compliant
	D1	2031 Future Year
Development Case without highway mitigation	E1	2021 Opening Year
	F1	2021 DfT 02/2013 Circular Compliant
	G1	2031 Future Year
Development Case with highway mitigation	H1	2021 Opening Year
	I1	2021 DfT 02/2013 Circular Compliant
	J1	2031 Future Year

- 2.2 Up until September 2017 WSP were continuing to work on the Opening Year and DfT 02/1013 Circular compliant assessment scenarios. Assessment of the development impact has therefore been undertaken based on the 2031 Future Year assessment scenario. This is a robust position to adopt as this scenario has the greatest traffic growth and therefore represents the scenario when peak hour highway capacity is lowest and when the development has greatest potential to impact upon the operation of the highway network.
- 2.3 A range of scenarios within the 2031 Future Year have been examined using the NSTM2. These are listed in the table below.

Scenario	ID	Description
Reference Case	D1	2031 do-minimum (without development, no highway mitigation)
Development Case without highway mitigation	G1	D1 + development traffic (with development, no highway mitigation)
Development Case with highway mitigation	J0	G1 + site access with A508 dualling between site and M1J15, M1J15 improvement
	J1	J0 + Roade Bypass
	J1a	J1 + right turn ban for HGVs departing site access
	J1b	J1a + M1 Junction 15a improvement

- 2.4 In addition, and as part of the work reported in this technical note, the following new Development Case scenario has now also been modelled in the NSTM2.

Scenario	ID	Description
Development Case with highway mitigation	J1c	J1b + left-in, left-out at A508 Courteenhall Road

NSTM2 outputs

- 2.5 Traffic flows for the D1 (Reference Case) scenario and J1a and J1c (Development Case) scenarios are used in this technical note. They have been provided by WSP along with the following model outputs, all of which are provided at **Appendix A**:
- flow difference plots showing the change in traffic flows between the D1 and J1a, and the D1 and J1c scenarios

- reassignment plots showing the reassignment of background traffic in the J1a and J1c scenario due to the effects of the proposed development (including highway mitigation works)
- junction v/c (ratio of traffic volume to capacity) plots
- delay plots
- development traffic plots showing where the development traffic is routeing.

Study area junctions

- 2.6 With regards to the A508 Corridor the J1a vs D1 (J1a Development Case compared to the Reference Case) and J1c vs D1 (J1c Development Case compared to the Reference Case) flow difference and traffic re-assignment plots both show that the result of the proposed development and associated highway mitigation works, is a significant reassignment of background traffic onto the A508. This is a desirable outcome of the mitigation proposals as the A508 is a primary route and the reassignment leads to a consequential reduction in traffic on many of the surrounding local roads and villages.
- 2.7 The fact that the NSTM2 is forecasting this level of traffic reassignment to the A508, suggests that the traffic increases are within the link capacity of the road and can be accommodated. This is confirmed by the more detailed assessment presented at **Appendix B**.
- 2.8 However, the changes in traffic flows has the potential to adversely impact the operation of key junctions along the A508. Therefore, the NSTM2 outputs provided at **Appendix A** have been interrogated to determine the scale, location and cause of any impacts due to the combination of the proposed development and associated highway mitigation works.
- 2.9 Based on a review of the NSTM2 data, along with an understanding of the existing traffic conditions, the following locations were identified as requiring more detailed assessment within this technical note:
- NSTM2 junction 329 – A508/Courteenhall Road T-junction
 - NSTM2 junction 383 – A508/Rookery Lane/Ashton Road staggered crossroads
 - NSTM2 junction 408 – A508/Pury Road ghost island T-junction.
- 2.10 Turning counts for these junctions were therefore extracted from the NSTM2. These are provided at **Appendix C**.

3.0 A508/COURTEENHALL ROAD T-JUNCTION

Introduction

- 3.1 The D1 (Reference Case) NSTM2 delay plots ([Appendix A](#)) show that in the 2031 future assessment year, journey times for traffic travelling southbound on the A508 would be subject to a delay resulting from traffic waiting to turn right from the A508 into Courteenhall Road. The V/C plots show that the junction is forecast to operate above 100% of capacity in the AM peak hour and between 85% and 100% in the PM peak hour.
- 3.2 In the J1a (Development Case) scenario, traffic flows on the A508 increase and the existing capacity problems are exacerbated.
- 3.3 The change in average delay per pcus for A508 southbound traffic between the Reference Case and the Development Case is summarised below.

Scenario	AM Peak A508 SB delay (in seconds)	PM Peak A508 SB delay (in seconds)	Difference (in seconds)
D1 Reference Case	27	46	+19
J1a Development Case	97	266	+169

- 3.4 It can be seen that the result of the proposed development and the highway mitigation works would be an increase in the delay to drivers travelling southbound on the A508. In the evening peak hour, the average delay is forecast to increase by 2.8 minutes per pcu.
- 3.5 The table below summaries the forecast demand for right turns into Courteenhall Road from the A508, and the demand for right turns out of Courteenhall Road in the 2031 future assessment scenarios.

Scenario	AM peak hour		PM peak hour	
	Right turn from A508 (pcus)	Right turn from Courteenhall Rd (pcus)	Right turn from A508 (pcus)	Right turn from Courteenhall Rd (pcus)
D1 Reference Case	300	80	270	98
J1a Development Case	270	11	224	48
Difference (pcus)	-30 (-10%)	-69 (-86%)	-46 (-17%)	-50 (-51%)

- 3.6 The comparison shows that the consequence of the development proposals, and without amending the junction layout, there would already be a reduction in demand for both right turning movements associated with Courteenhall Road. There is a large reduction in the demand for right turn movements out of Courteenhall Road to travel south on the A508, which supports the view that drivers would choose to access the A508 south via Knock Lane and the new roundabout junction on the Roade Bypass¹.

Capacity assessment

- 3.7 The operation of the junction was modelled² in the PICADY module of Junctions 8 using the D1 (Reference Case) and J1a (Development Case) traffic flows provided at [Appendix C](#). A

¹ See Section 3 for assessment of the implication of these traffic increases on Knock Lane

² The junction has no storage for right turners from Courteenhall Road. However, WSP have advised that to achieve appropriate journey time validation in the NSTM2 it was found necessary to model the right turn movement with a 1pcu storage for right turning traffic. This represents the real-world situation of NB drivers on the A508 slowing to let right turners through. Accordingly, the PICADY model has replicated this 1 pcu storage.

summary of the PICADY results are shown below, with the full results provided at [Appendix D](#). The modelling demonstrates that in the 2031 reference case the junction is forecast to operate significantly over capacity. The high through flows on the A508 would mean there would be insufficient gaps in the mainline traffic flow for drivers to exit Courteenhall Road, and there would be large delays for traffic turning right into the road.

- 3.8 It is noted that the more detailed PICADY model predicts significantly higher delay for traffic exiting Courteenhall Road than shown in the NSTM2. This is because the geometry of the Courteenhall Road approach to the junction allows storage for only one right turning vehicle before left turning vehicles are blocked, which can be more accurately represented in PICADY. The PICADY model also predicts a greater delay for right turning traffic in both the AM and PM peak hour D1 (Reference Case) scenarios and the AM peak hour J1a (Development Case) scenarios than the NSTM2. There is however, good correlation between the right turn delay forecast in NSTM2 and the PICADY model for the J1a PM peak hour.
- 3.9 The effect of the development proposals would be to exacerbate these problems, with the operation of the junction forecast to worsen with in the J1a (Development Case).

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A1 - D1						
Stream B-C	52.03	2333.11	2.71	20.14	4425.53	325.40
Stream B-A	27.91	2414.59	2.66	53.05	4165.67	316.31
Stream C-AB	10.26	140.19	1.19	27.11	286.23	1.39
Stream C-A	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-
A1 - J1A						
Stream B-C	138.41	1709.17	9999999999.00	25.80	1423.97	9999999999.00
Stream B-A	7.03	1920.23	9999999999.00	28.02	1425.04	9999999999.00
Stream C-AB	33.37	392.30	1.57	20.87	236.58	1.29
Stream C-A	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

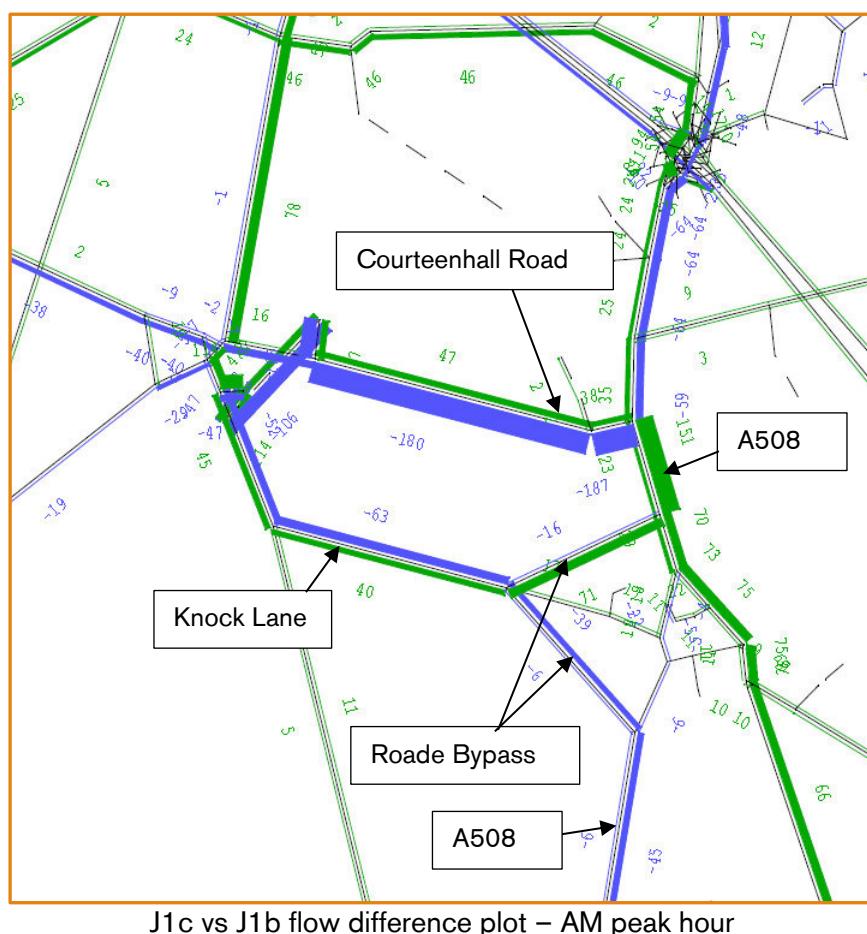
Arm A is A508 South,
 Arm B is Courteenhall Road
 Arm C is A508 North

Proposed highway mitigation

- 3.10 To improve the operation of the junction it is proposed that the junction be amended to become a left-in, left-out only. With the proposed left-in, left-out junction arrangement in place, right turning traffic to and from Courteenhall Road would instead use Roade Bypass and the new roundabout junction on Knock Lane. The scheme would significantly reduce the delay for southbound traffic on the A508, and overcome the problem of right turning traffic exiting Courteenhall Road from blocking left turning traffic.
- 3.11 Other solutions were considered including provision of a ghost island right turn facility at the junction and traffic signals. However, these were dismissed in favour of the proposed left-in, left-out arrangement.
- 3.12 Provision of a ghost island right turn harbourage facility on the A508 would require a significant realignment of the A508 and it could increase the number of drivers choosing to rat run through Blisworth to reach the A43. Capacity modelling also demonstrated that there would be

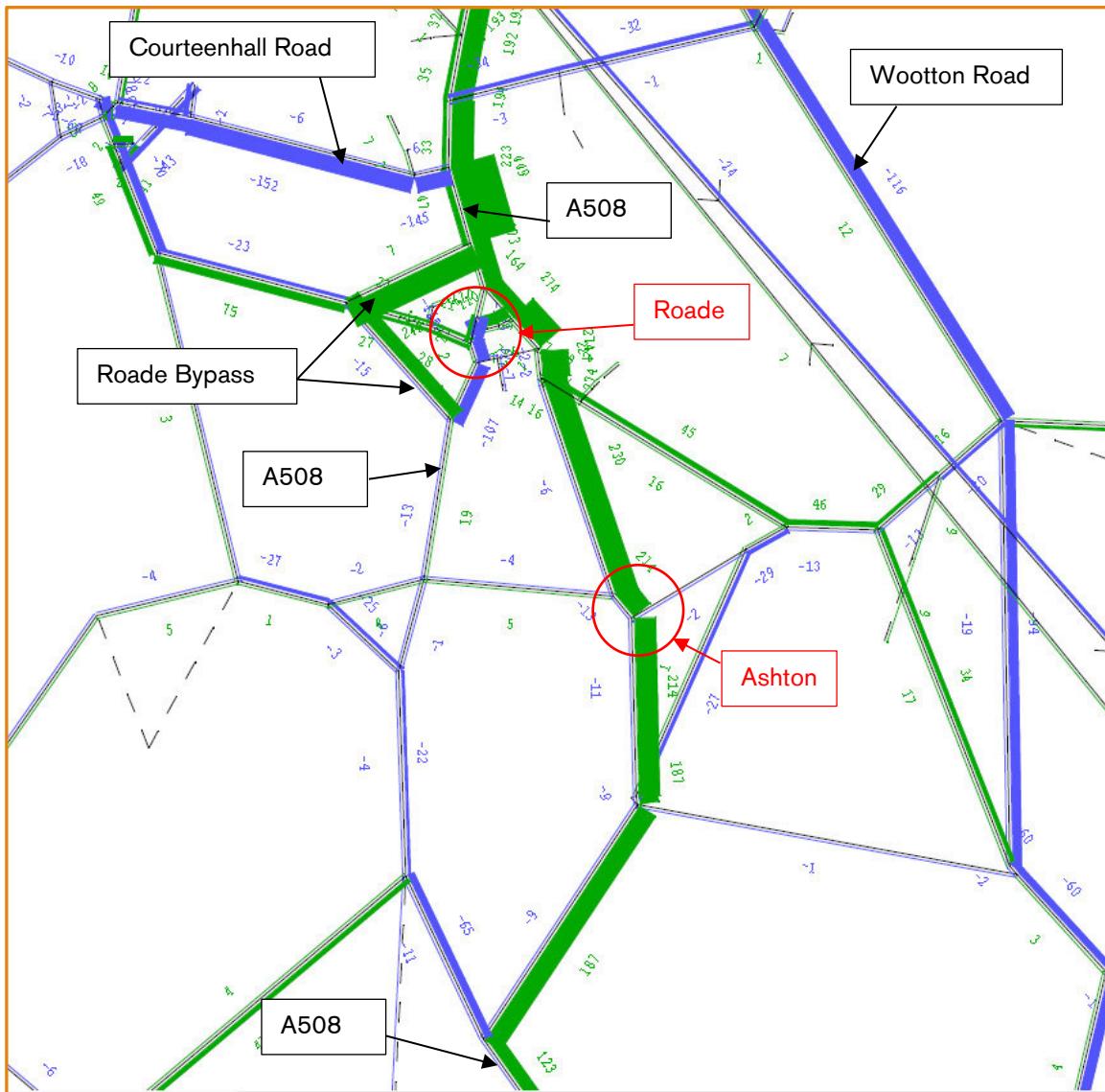
substantial delays for right turning traffic out of Courteenhall Road, which in turn would block left turning traffic exiting the junction.

- 3.13 Traffic signals were dismissed, as it would not be possible to provide the required forward visibility to the signal heads and they would introduce additional delay for northbound traffic on the A508.
- 3.14 The proposed left-in, left-out arrangement is shown at **Drawing NGW-BWB-GEN-XX-SK-C-SK23-S3-P1**. The arrangement provides a channelising island on Courteenhall Road and a central island on the A508 to prevent drivers turning right into or out of Courteenhall Road. The A508 in the northbound and southbound direction would provide a 4m wide carriageway with 1m hard strips, therefore providing a clearance of 6m each side of the central island. This would provide sufficient room for one vehicle to pass another in the event of a breakdown. The existing bus stop layby to the south of the junction would need to be closed, and the bus stop relocated. A small right turn harbourage facility would also be provided for the Courteenhall Estate access.
- 3.15 To understand the impact of the proposed scheme on traffic flows, the proposed left-in, left-out arrangement has been modelled in the NSTM2 (scenario J1c).
- 3.16 The effect of the scheme is shown in the J1b vs J1c flow difference plots extracts show below, in which the reductions in traffic flow are shown in blue and increases in green.



- 3.17 The AM peak hour flow difference plots show the proposed left-in, left-out arrangement has a relatively localised impact, but reduces the amount of traffic using Courteenhall Road to rat run between the A508 and the A43.
- 3.18 In the PM peak hour (shown over the page), the delay associated with the right turn movement from the A508 into Courteenhall Road is large and hence removing this has a wider impact on

traffic flows. Background traffic reassigned to the A508 southbound away from local roads, particularly from Wootton Road to the east of the M1. The southbound traffic flow on the A508 is forecast to increase by nearly 500 pcus³. As in the AM peak hour, there are also reductions in traffic flows through Milton Malsor and Blisworth as traffic no longer uses these routes to rat run between the A508 and A43.



- 3.19 The J1c vs D1 (Reference Case) flow difference plots are provided at **Appendix A** and show the overall impact of the proposed alteration to the junction layout compared to the reference case. Turning counts were extracted for the left-in, left-out junction from the J1c scenario (**Appendix B**) and used to model the operation of the proposed junction in PICADY. A summary of the PICADY results are shown below, with the full results provided at **Appendix D**.

³ It can however be seen that part of the reassigned traffic travelling southbound on the A508, chooses to route through Ashton and re-join the A508 at Grafton Regis, rather than continue around the Roade Bypass. This is considered further at Section 4 of this technical note, where it is demonstrated that this driver behaviour is forecast in the NSTM2 to avoid delays associated with the A508/Rookery Lane/Ashton Road staggered crossroads junction to the south of Roade. By improving the A508/Rookery Lane/Ashton Road crossroads, this delay can be significantly reduced and it is shown that traffic reassigned back to the A508, rather than travel through Ashton.

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A1 - J1C						
Stream B-C	8.83	110.01	0.95	0.56	23.95	0.32
Stream B-A	0.00	0.00	0.00	0.00	0.00	0.00
Stream C-A	-	-	-	-	-	-
Stream C-B	0.00	0.00	0.00	0.00	0.00	0.00
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

Arm A is A508 South,

Arm B is Courteenhall Road

Arm C is A508 North

- 3.20 The results demonstrate that the proposed left-in, left-out arrangement would work well within the 0.85 ratio of flow to capacity (RFC) design threshold in the PM peak hour, with the average delay for vehicles exiting Courteenhall Road reducing significantly from the D1 (Reference Case) scenario, see the table at paragraph 3.7. In the AM peak hour, the left turn from Courteenhall Road would operate over the 0.85 design threshold, but it would operate within 100% of capacity and with a very significant reduction in queuing and delay as compared to the D1 reference case scenario.
- 3.21 It is therefore concluded the proposed left-in, left-out arrangement for the A508 Courteenhall Road junction would offer a substantial improvement compared with the existing junction arrangement. Delays for southbound traffic on the A508 would be removed and journey times would improve as a result. In addition, the proposed arrangement is shown to reduce the number of drivers using Courteenhall Road to rat run between the A508 and the A43, therefore reducing the volume of traffic passing through Blisworth village.

4.0 KNOCK LANE/BLISWORTH ROAD

- 4.1 As discussed in Section 3, the flow difference plots (**Appendix A**) for the J1c (Development Case) scenario, show that as a result of the proposed development, Knock Lane/Blisworth Road would be subject to an increase in traffic compared to the D1 (Reference Case) scenario.
- 4.2 The traffic flows on Knock Lane for the 2031 D1 (Reference Case) and J1c (Development Case) scenarios are summarised in the below tables, along with the flow difference. Also included in the tables is the section of Stoke Road between Knock Lane and Blisworth, on the basis that anyone rerouting to use Knock Lane due to the combined impact of Roade Bypass and the left-in left-out at Courteenhall Road, would also likely use this section of road.

Scenario D1 (2031 Ref)	AM Peak				PM Peak			
	Lights	HGVs	Total Veh	Two-way (veh)	Lights	HGVs	Total Veh	Two-way (veh)
Knock Lane EB	56	0	56	58	21	0	21	30
Knock Lane WB	2	0	2		9	0	9	
Stoke Road NB	149	2	151	598	537	2	539	747
Stoke Road SB	447	0	447		208	0	208	

Scenario J1c (2031 Dev)	AM Peak				PM Peak			
	Lights	HGVs	Total Veh	Two-way (veh)	Lights	HGVs	Total Veh	Two-way (veh)
Knock Lane EB	241	0	241	285	149	0	149	234
Knock Lane WB	44	0	44		85	0	85	
Stoke Road NB	136	1	137	586	470	2	472	771
Stoke Road SB	449	0	449		299	0	299	

Flow diff (J1c-D1)	AM Peak				PM Peak			
	Lights	HGVs	Total Veh	Two-way (veh)	Lights	HGVs	Total Veh	Two-way (veh)
Knock Lane EB	185	0	185	227	128	0	128	204
Knock Lane WB	42	0	42		76	0	76	
Stoke Road NB	-13	-1	-14	-12	-67	0	-67	24
Stoke Road SB	2	0	2		91	0	91	

- 4.3 The Knock Lane traffic flows are very light in the D1 (Reference Case) scenario. In the Development Case scenario (with the addition of Roade Bypass and the left-in, left-out at the A508 Courteenhall junction), there is an increase in traffic in both directions on Knock Lane. The increases are consistent with the changes to the highway network and tidal nature of flows in the AM and PM hour periods. Overall, a maximum increase in two-way flow of 227 vehicles is forecast during the peak hours, with a maximum peak hour two-way flow on the road of 285 vehicles.
- 4.4 Knock Lane varies in width between approximately 4.8m and 5.3m and is wide enough for two cars to pass, or a car and HGV to pass at slower speeds. Therefore, whilst the above change in peak hour traffic flows represents a large percentage increase compared to the reference case, the actual traffic flow levels remain low, and well within the range experienced on other similar rural roads. The total traffic levels are therefore acceptable in terms of link capacity.
- 4.5 Stoke Road (between Knock Lane and Blisworth) is subject to higher traffic flows, the flow difference and traffic reassignment plots demonstrate that Stoke Road benefits from other traffic reductions associated with drivers reassigning from the Northampton Road/Stoke Road corridor to use the A508 and A43. Hence a modest reduction in traffic flow is forecast in the AM peak because of the proposed development. In the PM peak, an increase of 24 two-way vehicles is forecast. This is a small change and would not materially impact on the operation of the road.

- 4.6 The existing PIA record on Knock Lane/Blisworth Road has been examined to determine if there are any existing PIA problems that could be exacerbated by an increase in traffic flows on the road. The last 5 year accident history for knock Lane/Blisworth Road, identifies only three PIAs on the road. Two PIAs classified as slight and one serious as shown at **Figure 1** below.

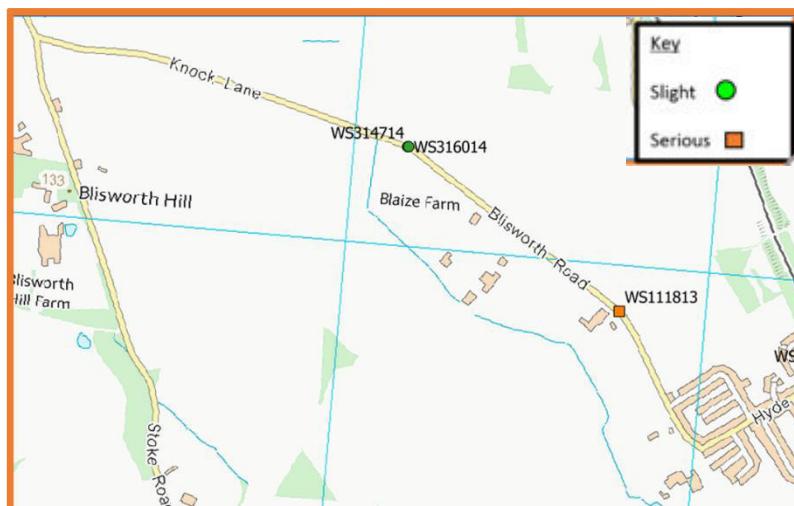


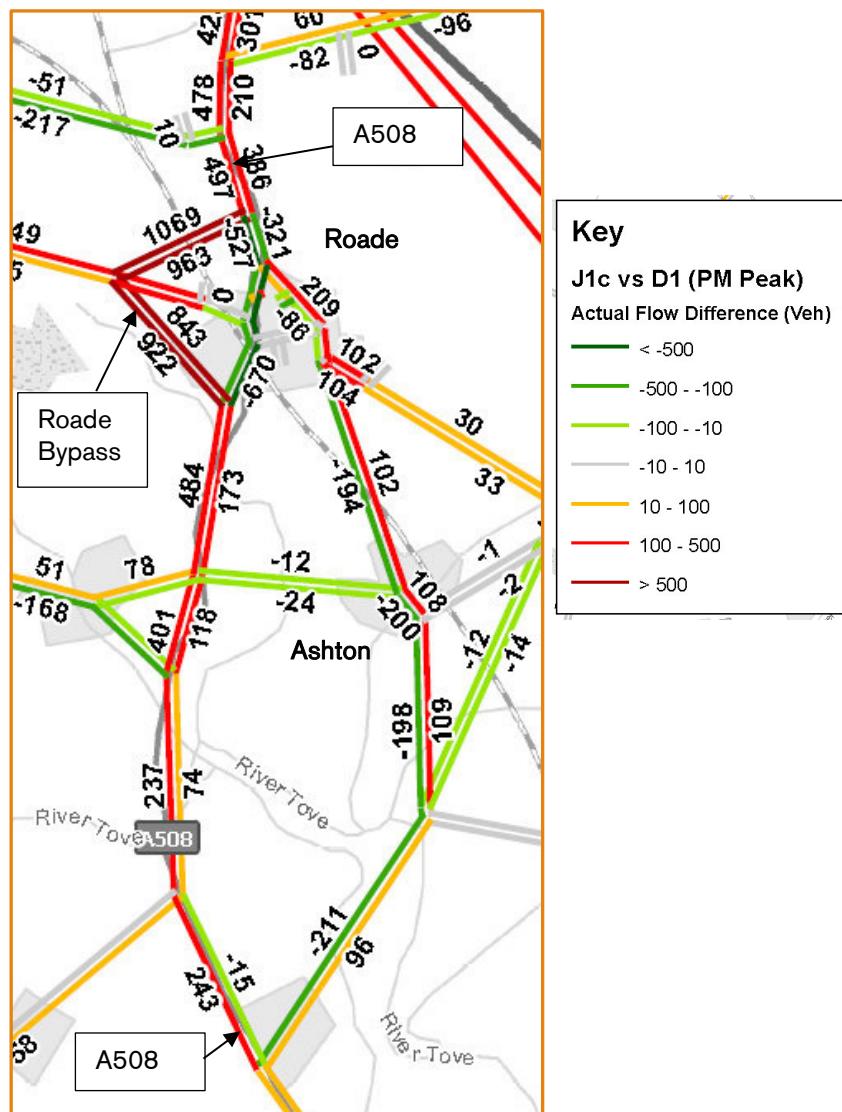
Figure 1: location of respective accidents on Knock Lane/Blisworth Road

- 4.7 The two slight PIAs (WS314714, WS316014) both occurred in frost/ice road conditions, almost in the exact location of each other along Blisworth Road. Both accidents also occurred within three days of each other and same time period (08:00-08:59), thus indicating a similar correlation behind the causation of the respective accidents. The former occurred at 08:30 on 6 December 2014 and involved a car travelling in a southwards direction along Blisworth Road but the car lost control when negotiating right hand bend. The latter occurred at 08:45 on 9 December 2014 and also involved a car also travelling south along Blisworth Road and losing control whilst negotiating right hand bend.
- 4.8 The serious accident (WS111813) was due to driver following the vehicle in front too closely. It involved a car and motorcycle, both travelling south east along Blisworth Road, the motorcycle failed to stop and caused a rear end collision with the car.
- 4.9 Therefore, the causal factors for these PIAs are very specific and do not relate passing traffic. The serious accident was a result of driver error, not the road conditions. It is therefore concluded that there is not an existing accident history on Knock Lane/Blisworth Road that would be exacerbated by the proposed increases in traffic along the road.
- 4.10 Notwithstanding the above, the Stoke Road/Knock Lane T-junction is observed to be in a poor state of repair, with no road markings, with evidence of existing drainage problems and vehicles overrunning the carriageway edge. There would be an increased number of turning movements at the junction resulting from the proposed development. Therefore, the improvement shown at Drawing **NGW-BWB-GEN-XX-SK-C-SK29-S3-P2** is proposed. This comprises widening Knock Lane to 5.5m on the approach to the Stoke Road junction, new road markings, and improvements to the drainage.

5.0 A508/ROOKERY LANE/ASHTON ROAD STAGGERED CROSSROADS

Introduction

- 5.1 As discussed in Section 3, the removal of the (up to) 5 minute delay for southbound traffic on the A508 at the A508/Courteenhall Road junction leads to additional traffic been drawn back onto the A508.
- 5.2 However, it is observed that in the PM peak hour some traffic is choosing to leave the A508 at Roade and cut through Ashton before joining the A508 again at Grafton Regis (see the J1c vs D1 PM peak flow difference plots extract shown below).



J1c (Development Case) vs D1 (Reference Case) flow difference plot PM Peak

- 5.3 It was considered that a potential cause for traffic assigning away from the southern section of the A508 could be the delay associated with right turning traffic at the Rookery Lane/Ashton Road staggered crossroads junction. The junction does not provide harbourage facilities and hence traffic turning right from the A508 blocks ahead traffic. The J1c delay plots provided at **Appendix A** show delays of 103 seconds and 190 seconds for A508 southbound traffic at the this junction.
- 5.4 Further journey time data from the NSTM2 was also obtained, comparing the journey times in the D1 (Reference Case) scenario to the J1c (Development Case) scenario on the section of

the A508 between Roade and the Pury Road junction. The journey time comparison is shown in the table below.

Southbound	2031 AM Peak			2031 PM Peak		
	without dev (scenario D1)	with dev (scenario J1c)	difference	without dev (scenario D1)	with dev (scenario J1c)	difference
Journey time (s)	302	417	+115	239	368	+129
Speed	48.61 kph	26.62 kph	-21.99 kph	61.49 kph	30.16 kph	-31.33 kph

Northbound	2031 AM Peak			2031 PM Peak		
	without dev (scenario D1)	with dev (scenario J1c)	difference	without dev (scenario D1)	with dev (scenario J1c)	difference
Journey time (s)	225	188	-37	247	220	-27
Speed	65.24 kph	58.94kph	-6.3 kph	59.41 kph	50.47 kph	-8.94 kph

- 5.5 The results show that overall there is an increase in journey time and a reduction on vehicle speeds associated with the J1c Development Case scenario on this section of the A508 for southbound traffic.
- 5.6 The select link analysis plots provided at **Appendix A** also show that the development would increase traffic flows at this junction.

Capacity assessment

- 5.7 The operation of the junction was therefore modelled in the PICADY module of Junctions 8 using the D1 (Reference Case) and J1c (Development Case) traffic flows provided at **Appendix B**. A summary of the PICADY results are shown below, with the full results provided at **Appendix E**.

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
					A1 - D1			
Stream B-C	0.02	8.27	0.01	A	0.08	7.76	0.08	A
Stream B-AD	0.32	26.77	0.25	D	0.09	12.43	0.08	B
Stream A-BCD	1.61	6.05	0.36	A	6.33	21.86	0.78	C
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-A	2.46	47.09	0.74	E	0.69	12.00	0.41	B
Stream D-BC	3.54	88.32	0.81	F	0.15	25.48	0.13	D
Stream C-ABD	1.10	7.30	0.30	A	0.27	4.68	0.11	A
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
A1 - J1c								
Stream B-C	0.43	8248.99	705.50	F	0.05	8.87	0.05	A
Stream B-AD	12.89	426505.17	618.14	F	0.10	24.69	0.10	C
Stream A-BCD	135.93	354.12	1.18	F	72.68	232.13	1.12	F
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-A	76.34	1129.37	3.35	F	9.50	102.86	0.98	F
Stream D-BC	13.05	2292.91	3.06	F	1.12	465.18	0.87	F
Stream C-ABD	6.19	12.28	0.64	B	0.80	4.11	0.21	A
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-

Arm A is A508 North

Arm B is Ashton Road

Arm C is A508 South

Arm D is Rookery Lane

- 5.8 The modelling demonstrates that in the 2031 D1 (Reference Case) scenario the junction is forecast to be approaching capacity, with average delays of up to 88 seconds the Rookery Lane arm. In the 2031 J1c (Development Case) scenario, the high through flows on the A508 would mean that the junction would operate over capacity, with large delays for A508 southbound traffic and traffic turning out of the minor arms.

Safety

- 5.9 NCC have previously highlighted a potential accident issue on the bends to the south of the Rookery Lane junction. The following sections are therefore an extract from the PIA assessment presented in full in the Transport Assessment. The PIA data was obtained from NCC for the five-year period between 1 November 2011 and 31 October 2016.
- 5.10 As shown in **Figure 2**, 11 accidents were recorded over the five-year period in the area to the south of the junction. The 11 PIAs resulted in 18 casualties. Seven of the PIAs were slight in nature and three were of serious severity. There has also been one PIA that resulted in a fatality. The table below summarises the severity of casualties resulting from the 11 PIAs.

Severity	Casualties
Slight	10
Serious	7
Fatal	1
Total	18

- 5.11 The PIA resulting in a fatality (TS801014) occurred in May 2014 and resulted in four casualties, including the fatality. The accident took place along the A508 200m south of the Rookery Lane/Ashton Road staggered crossroad junction. The accident involved a car travelling south and losing control on a right-hand bend, subsequently skidding. This results in the car entering the path of another car and causing a collision. The accident happened at 19:40 in the evening, but in daylight, and occurred in wet/damp road conditions as it was raining.



Figure 2: location of respective accidents in study area

5.12 Five other accidents (WS023914, WS055814, WS067414, WS131214, WS070415) also involved vehicles losing control, including all of the accidents in the cluster shown in the inset of **Figure 2** on the bend in the road. These are described below:

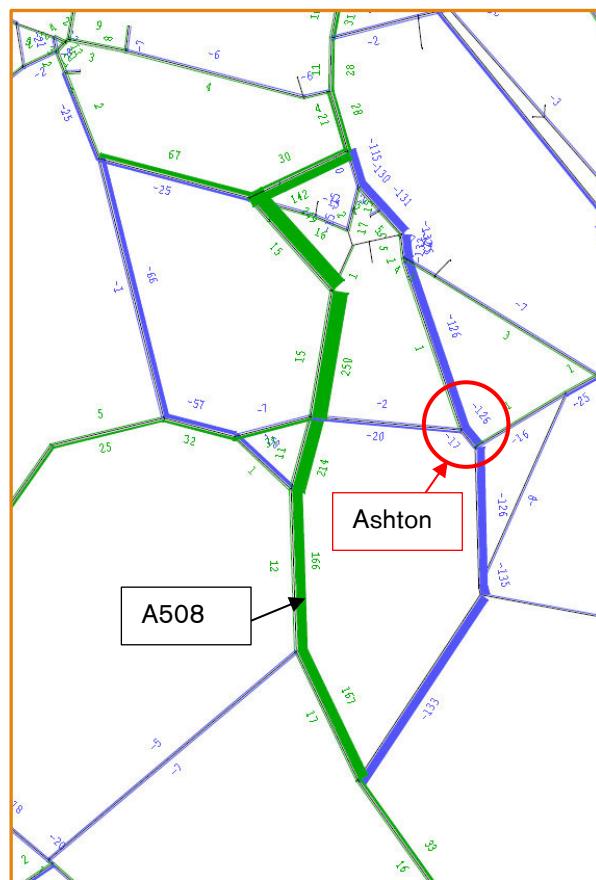
- WS023914- car travelling southbound along the A508 loses control in wet/damp road conditions when negotiating series of bends, subsequently leaves the carriageway and comes to rest against a nearby tree. This accident resulted in injuries categorised as slight in nature and occurred at 01:00 in the morning in darkness (no street lighting).
- WS055814- car travelling northbound along the A508 loses control in wet/damp road conditions when negotiating left hand bend and skids across carriageway and into the path of oncoming traffic. This accident resulted in injuries categorised as slight in nature and occurred at 21:15 in the evening in darkness (no street lighting).
- WS067414- car travelling southbound along the A508 and begins to slide, due to the frost/icy road conditions when negotiating bends and attempts to over correct, causing the car to roll and coming to rest in field. This accident resulted in injuries categorised as slight in nature and occurred at 07:30 in the morning in daylight.
- WS070415- car travelling northbound along the A508 in dark conditions (without street lighting) loses control when negotiating a left hand bend and subsequently collides with a hedge causing the car to spin and overturn. This accident resulted in injuries

- categorised as slight in nature and occurred at 00:53 in the morning. The accident causal factors note that the driver was traveling too fast for the road conditions.
- WS131214- car travelling southbound along the A508 loses control in rainy weather conditions when negotiating right hand bend and subsequently collides with a car travelling in the opposite direction. This accident resulted in injuries of serious severity and occurred at 11:00 in the morning.
- 5.13 Three further accidents occurred in wet/damp road conditions (WS038713, WS296013, WS289614), two of which resulted in injuries of serious severity with the remaining accident resulted in injuries categorised as slight in nature. All three of the accidents happened in darkness.
- 5.14 The remaining two accidents in the study area (WS101713, WS110115) are summarised, below. Both resulted in injuries categorised as slight in nature and did not indicate an apparent trend:
- WS101713- HGV travelling south along the A508 and the trailer of the HGV crossed double white line road markings and subsequently collides with car travelling in opposite direction.
 - WS110115- car travelling southbound along the A508 collides into the rear of another car which is waiting to turn right towards Stoke Bruerne.
- 5.15 The above analysis indicates that there is a trend of drivers losing control in the adverse road conditions, exacerbated by the horizontal and vertical alignment of the A508 in this location.. Seven of the accidents happened in 'wet/damp' conditions and one accident occurred in 'frost/ice' road conditions.
- 5.16 It is noted that there appears to have been some recent works undertaken at the location of the cluster of PIAs on the bend to improve the road drainage, and this should be monitored by NCC moving forwards to see whether it leads to a decrease in the number of PIA.
- 5.17 Nevertheless, the proposed development would increase traffic flows on this section of the A508 and, without appropriate mitigation, could lead to an increase in the frequency of PIAs at this location.
- ### Proposed highway mitigation
- 5.18 When taken together, the decrease in the operational performance at the junction combined with the potential for the increased traffic flows on the A508 to exacerbate the existing PIA problem, it is concluded that highway mitigation is appropriate at this location.
- 5.19 To improve the both the capacity and road safety record of the junction it is proposed to realign and upgrade the junction to provide a staggered crossroads with ghost island harbourage facilities for right turning traffic from the A508. The junction works would improve the visibility for the minor arms, and the realignment works would remove the tight bend to the south of the junction, which is the location of the PIA cluster identified above.
- 5.20 The proposed improvement works are shown at **Drawing NGW-BWB-GEN-XX-SK-C-SK19-S3-P2**. The improved junction would provide 3.65m wide lanes in each direction on the A508, with 3.5m wide ghost island lanes provided for right turning traffic into Rookery Lane and Ashton Road. The Rookery Lane and Ashton Road approaches to the junction would be widened to allow a vehicle waiting to turn tight without blocking left turning traffic on both arms.
- 5.21 The operation of the junction was therefore modelled in the PICADY using the D1 (Reference Case) and J1c (Development Case) traffic flows provided at **Appendix B**. A summary of the PICADY results are shown below, with the full results provided at **Appendix E**.

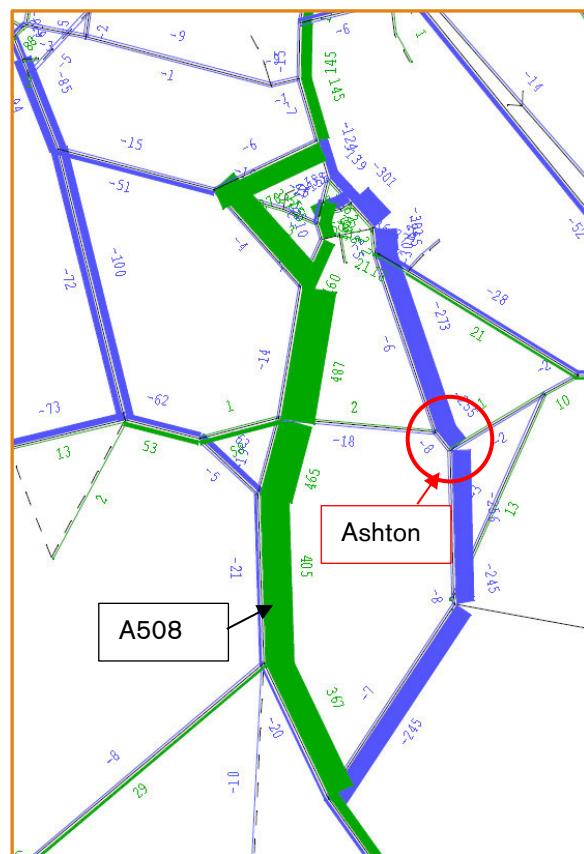
	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - J1c								
Stream B-C	0.00	12.43	0.00	B	0.04	6.71	0.04	A
Stream B-AD	0.89	84.33	0.49	F	0.08	18.56	0.07	C
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream A-D	0.72	13.58	0.39	B	1.65	23.66	0.60	C
Stream D-A	3.08	40.40	0.74	E	2.81	32.02	0.73	D
Stream D-BC	1.80	157.27	0.66	F	0.18	76.34	0.16	F
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.30	12.19	0.23	B	0.07	6.97	0.07	A

Arm A is A508 North
 Arm B is Ashton Road
 Arm C is A508 South
 Arm D is Rookery Lane

- 5.22 The PICADY assessment demonstrates the junction would operate within the 0.85 design threshold of ratio of flow to capacity and with an improvement compared to the 2031 reference case. Some delays would remain on the Rookery Lane and Ashton Road arms of the junction, but delays for traffic on the A508 would be removed.
- 5.23 The proposed improvement scheme has therefore been tested in the NSTM2 to confirm that it will have the desired effect of drawing southbound A508 traffic back onto the A508 instead of routing through the Ashton. Extracts of the test showing the flow difference plots comparing the J1c scenario versus the J1c scenario + the proposed A508/Rookery Lane/Ashton Road improvement are provided below for the AM and PM peak hours, in which blue represents a reduction in traffic flow and green represents an increase in traffic flow.
- 5.24 The flow difference plots show that the proposed improvement scheme has the desired effect of encouraging traffic that would otherwise route through Ashton back onto the A508 southbound and should therefore be promoted as part of the proposed development.



AM peak hour – traffic flow difference plot
J1c vs J1c + Rookery Lane/Ashton Road improvement



PM peak hour – traffic flow difference plot
J1c vs J1c + Rookery Lane/Ashton Road improvement

6.0 A508/PURY ROAD GHOST ISLAND T-JUNCTION

Introduction

- 6.1 Analysis of the NSTM2 data indicates a worsening of the operation of the A508/Pury Road ghost island T-junction between the D1 (Reference Case) scenario and the J1c (Development Case) scenario, as summarised in the below table.

Scenario	AM peak hour		PM peak hour	
	V/C	V/C	V/C	V/C
D1 Reference Case	101%		89%	
J1a Development Case	109%		103%	
Difference	+8%		+14%	

Capacity assessment

- 6.2 The operation of the junction was therefore modelled in the PICADY module of Junctions 8 using the D1 (Reference Case) and J1c (Development Case) traffic flows provided at [Appendix B](#). A summary of the PICADY results are shown below, with the full results provided at [Appendix F](#).

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Traffic Flows - D1 2031 Base						
Stream B-C	0.79	10.51	0.44	2.16	25.78	0.69
Stream B-A	0.03	46.28	0.03	1.09	52.11	0.54
Stream C-A	-	-	-	-	-	-
Stream C-B	22.85	130.35	1.02	1.53	16.97	0.61
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-
Traffic Flows - J1c 2031 WD						
Stream B-C	2.16	21.37	0.70	10.92	122.10	1.02
Stream B-A	0.21	493.17	0.25	3.25	266.98	0.91
Stream C-A	-	-	-	-	-	-
Stream C-B	31.43	176.59	1.07	4.72	46.79	0.85
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

Arm A is A508 South
 Arm B is Pury Road
 Arm C is A508 North

- 6.3 As can be seen, the RFC from the PICADY model compares well to those forecast by the NSTM2. However, the more detailed PICADY model forecasts greater delays at the junction in both the D1 (Reference Case) and J1c (Development Case) scenarios.
- 6.4 In the J1c (Development Case) scenario there is a significant increase in the delay for right turning traffic exiting Pury Road, as compared to the D1(Reference Case) scenario. However, it is noted that this right turn flow is very low, with only a 2 pcus demand in the AM peak hour in each scenario. In the PM peak hour, the right turn flow reduces from 72 pcus in the D1 (Reference Case) scenario, to 41 pcus in the J1c (Development Case) scenario.

- 6.5 However, the largest increases in traffic flow at the junction are along the A508, which sees an increase of 127 pcus travelling northbound past the junction in the AM peak hour, with an increase of 213 pcus in the southbound direction. The equivalent changes in the PM peak hour are 259 pcus in the northbound direction and 26 pcus in the southbound direction.
- 6.6 Further inspection of the turning flows at the junction show that there is a large right turn movement from the A508 into Pury Road. In the D1 (Reference Case) scenario this right turn flow is 572 pcus in the AM peak hour and 301 pcus in the PM peak hour. In the J1c (Development Case) scenario, the right turn movements are 556 pcus and 353 pcus in the AM and PM peak hours, respectively. The PICADY assessment demonstrates that this high right turn flow would mean a delay of some 130 seconds for right turners in the AM peak hour D1 (Reference Case) scenario with a queue of some 23 pcus. This queue would extend back beyond the right turn storage space provided at the junction and hence would also impact on A508 through flows. The queuing is forecast to increase in the J1c (Development Case) scenario.

Proposed highway mitigation

- 6.7 Without fundamentally altering the junction layout, there are limited options to address the above identified deterioration in junction performance. Whilst the traffic flows suggest that a roundabout may better serve the forecast traffic demands, this would introduce additional delay on the A508 and may encourage more traffic to use Pury Road. Therefore, this has not been considered further.
- 6.8 It would, however, be possible to extend the length of the right turn lane into Pury Road, therefore providing additional storage to accommodate the forecast increased right turn queue. The proposed improvement is shown on **Drawing NGW-BWB-GEN-XX-SK-C-SK17-S3-P2**. This would increase the right turn storage by some 30m or 5 pcus. The improvement would also include widening to the northbound and southbound A508 carriageway to provide 3.65m through lane and a 3.5m right turn lane.
- 6.9 The operation of junction with the proposed improvement scheme has been modelled in PICADY using the J1c (Development Case) traffic flows. A summary of the PICADY results are shown below, with the full results provided at **Appendix F**.

	AM (J1c)			PM (J1c)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Traffic Flows - 2031 WD						
Stream B-C	1.78	17.45	0.65	3.30	41.00	0.79
Stream B-A	0.06	111.71	0.06	1.28	113.18	0.61
Stream C-A	-	-	-	-	-	-
Stream C-B	27.54	156.37	1.06	4.01	39.40	0.82
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

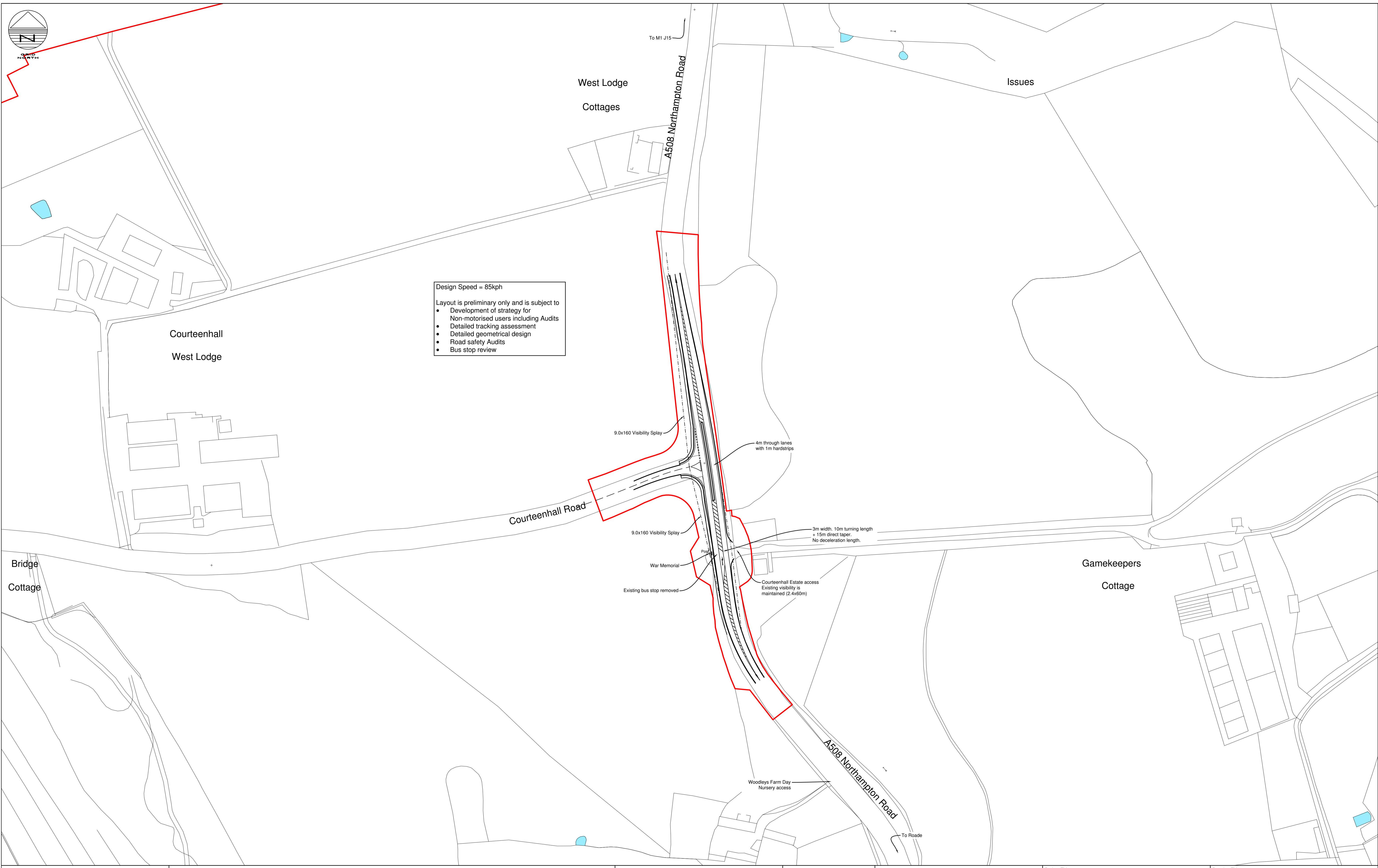
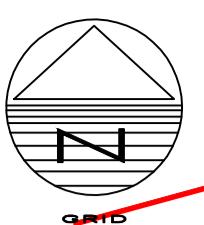
Arm A is A508 South
 Arm B is Pury Road
 Arm C is A508 North

- 6.10 The results indicated that whilst the improvement scheme would not achieve a nil detriment improvement, it would provide significant reductions in delays as compared to the existing layout with the J1c traffic flow set. The right turn queue in the AM peak hour would increase by 5 pcus as compared to the reference case, which is matched by the additional storage provided as part of the improvement.

7.0 SUMMARY AND CONCLUSIONS

- 7.1 This technical note has considered the impact of the proposed development and associated highway mitigation works on traffic conditions along the A508 corridor.
- 7.2 The strategic transport model (NSTM2) forecasts a significant reassignment of background traffic onto the A508. This is a desirable outcome of the mitigation proposals as the A508 is a primary route and the reassignment has the positive impact of reducing traffic flows on many of the surrounding local roads and villages. However, there is potential for the increased traffic flow on the A508 to adversely impact the operation of key junctions along the corridor.
- 7.3 Therefore, the NSTM2 outputs have been interrogated to determine the scale, location and cause of any impacts due to the combination of the proposed development and associated highway mitigation works and a number of junctions are identified for further detailed assessment within this technical note.
- 7.4 As a result of the detailed assessment work presented in this technical note, improvement schemes are proposed at the following three junctions:
- **A508/Courteenhall Road T-junction:** proposed alteration to become a left-in, left-out layout, to address the existing delay issue exacerbated by the increase in background traffic that is drawn back onto the A508 as a result of releasing the existing constraints a M1 J15 and at Roade.
 - **A508/Rookery Lane/Ashton Road staggered T-junction:** alignment improved and provided with ghost island harbourage facilities to address a delay problem associated with southbound traffic on the A508 and address the existing safety issue to the south of the junction.
 - **A508/Pury Road ghost-island T-junction:** lengthening of the existing right turn harbourage facility to assist with the high number of right turning vehicles.
- 7.5 In addition, a minor improvement scheme is proposed at the Stoke Road/Knock Lane junction to widen the approach, provide new road markings, and improve the drainage conditions at the junction.

DRAWINGS



Notes

1. Do not scale this drawing. All dimensions must be checked/verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. Refer to Appendix 7/1 of the contract specification for details of proposed Pavement Types and restrictions.

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ISSUES & REVISIONS

Rev	Date	Details of issue / revision	Drw	Rev
P1	11.08.17	Preliminary Issue	PG	DM

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Drawn: P. Goodyear Reviewed: D. Mackrory
BWB Ref: NTH 2315 Date: 11.08.17 Scale@A1: 1:1250

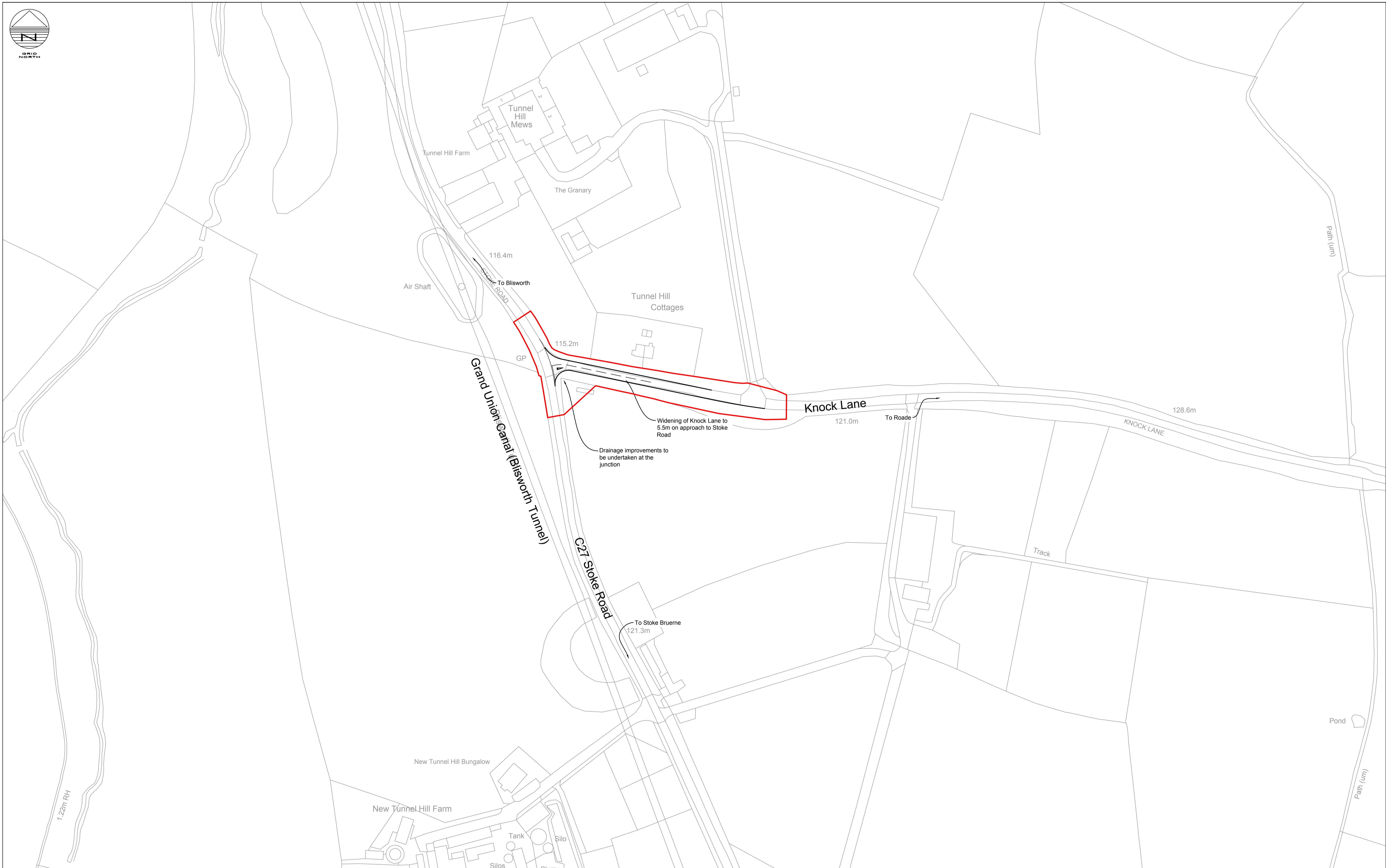
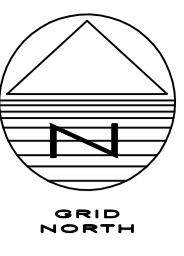
Project Title
**NORTHAMPTON
GATEWAY RAIL FREIGHT
INTERCHANGE**

Drawing Status
FOR COMMENT

Drawing Title
**A508 COURTEENHALL
ROAD JUNCTION
GENERAL ARRANGEMENT
LEFT IN AND LEFT OUT**

Project - Originator - Zone - Level - Type - Role - Number
NGW-BWB-GEN-XX-SK-C-SK23

Status S3 **Rev** P1



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P1	23.08.17	Preliminary Issue	SRH	SRH
P2	25.08.17	Proposals updated	SRH	SRH

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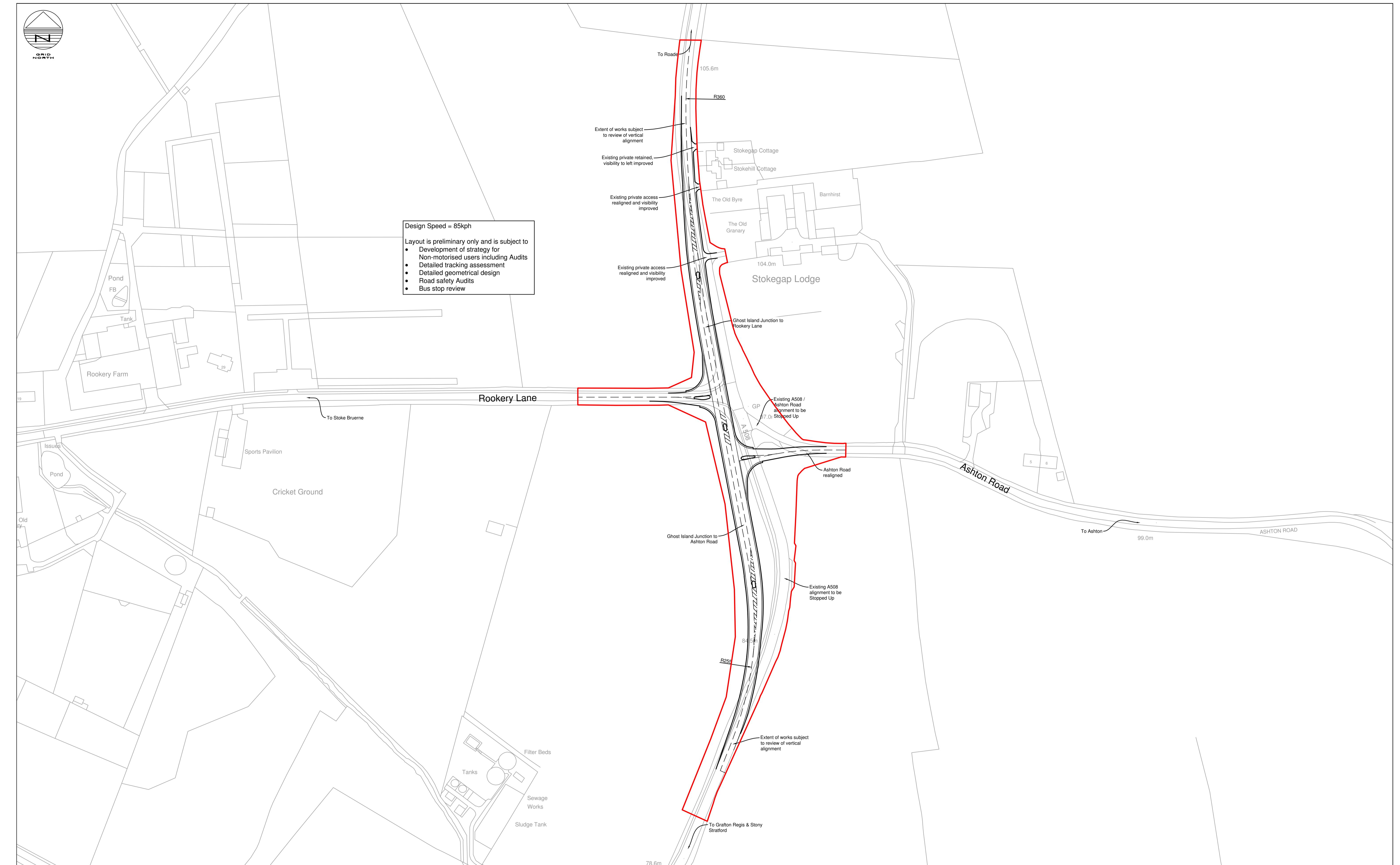
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GATEWAY RAIL FREIGHT
INTERCHANGE**

Drawing Status
FOR COMMENT

Drawing Title
**KNOCK LANE / C27 STOKE
ROAD
GENERAL ARRANGEMENT**

Project - Originator - Zone - Level - Type - Role - Number
NGW-BWB-GEN-XX-SK-C-SK29

Status Rev
S3 P2



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Rev	Date	Details of issue / revision	Drw	Rev
P1	25.07.17	Preliminary Issue	SRH	SRH
P2	16.08.17	Order limits added	PG	PG

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Project Title
**NORTHAMPTON
GATEWAY RAIL FREIGHT
INTERCHANGE**

Drawing Title
**A508 ROOKERY LANE /
ASHTON ROAD JUNCTION
GENERAL ARRANGEMENT**

Project - Originator - Zone - Level - Type - Role - Number
NGW-BWB-GEN-XX-SK-C-SK19

Status S3

Rev P2

Drawing Status
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BWB Ref: NTH 2315 **Date:** 25.07.17 **Scale@A1:** 1:1250



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Rev	Date	Details of issue / revision	Drw	Rev
P1	20.07.17	Preliminary Issue	SRH	SRH
P2	16.08.17	Order limits shown	PG	PG



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Project Title

NORTHAMPTON
GATEWAY RAIL FREIGHT
INTERCHANGE

Drawing Title

A508 PURY ROAD
JUNCTION
GENERAL ARRANGEMENT

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
NGW-BWB-GEN-XX-SK-C-SK17	S3	P2

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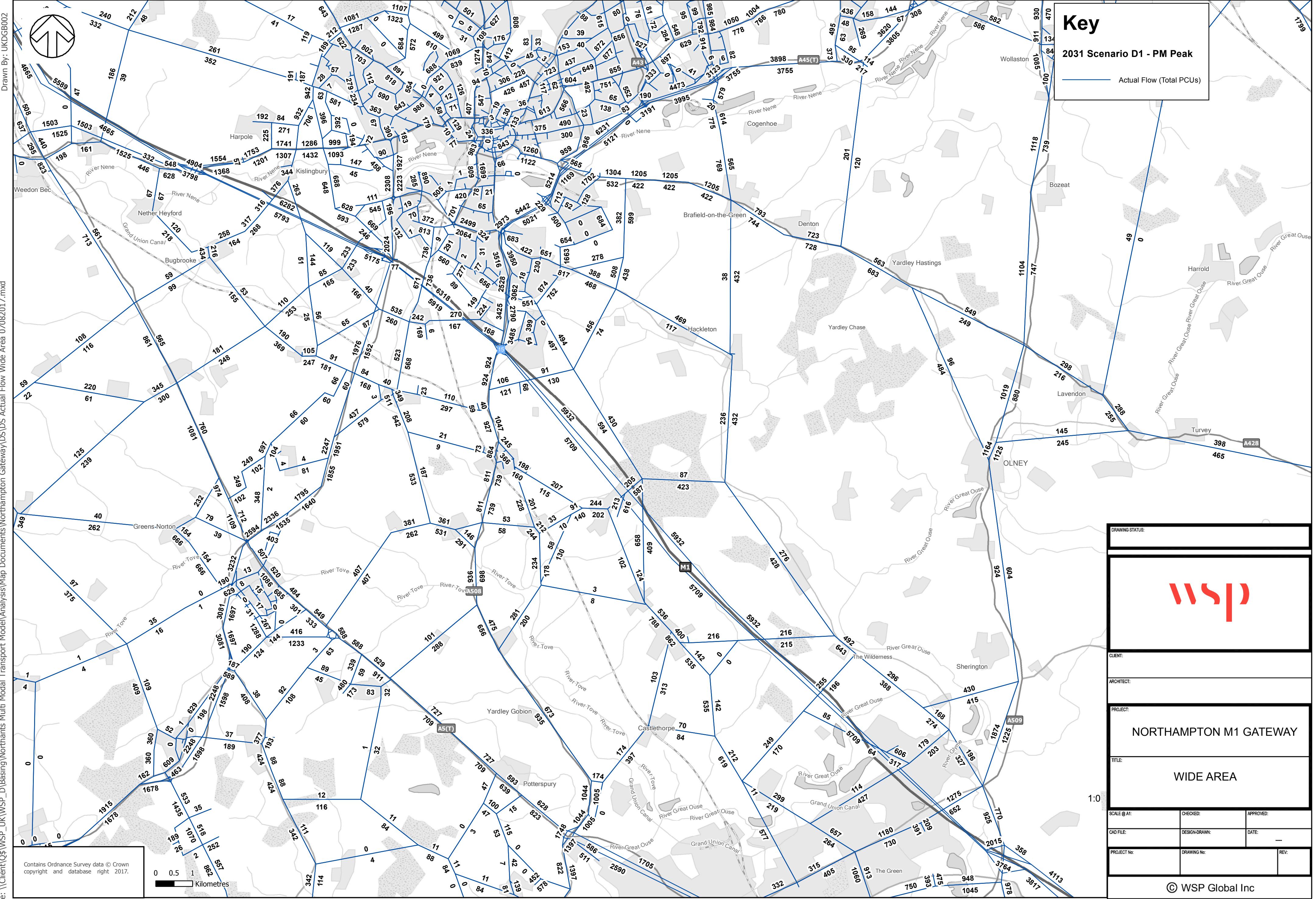
APPENDIX A

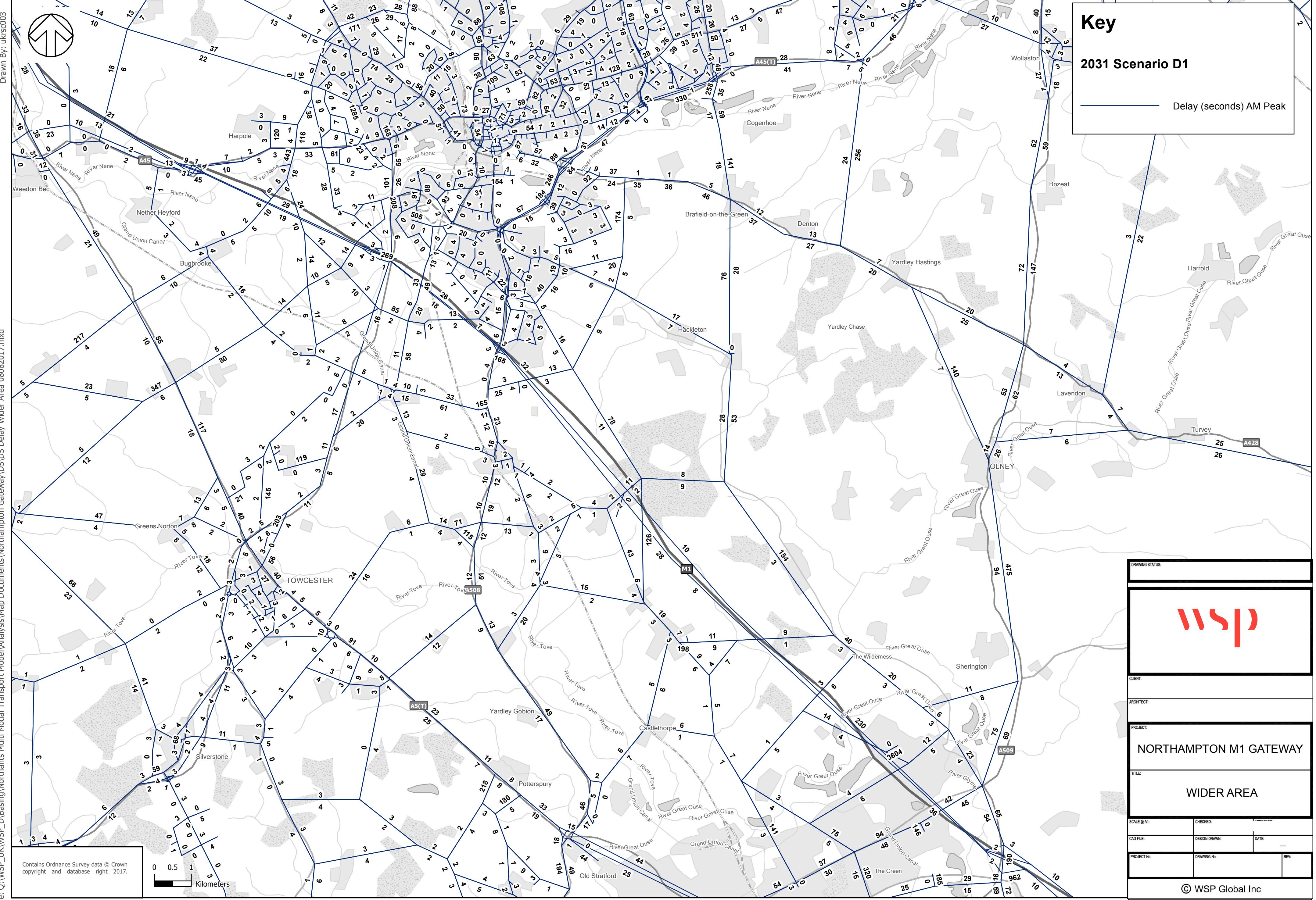
NSTM2 OUTPUTS

D1 - 2031 REFERENCE CASE NSTM2 OUTPUTS

ACTUAL FLOWS
DELAYS
V/C PLOTS

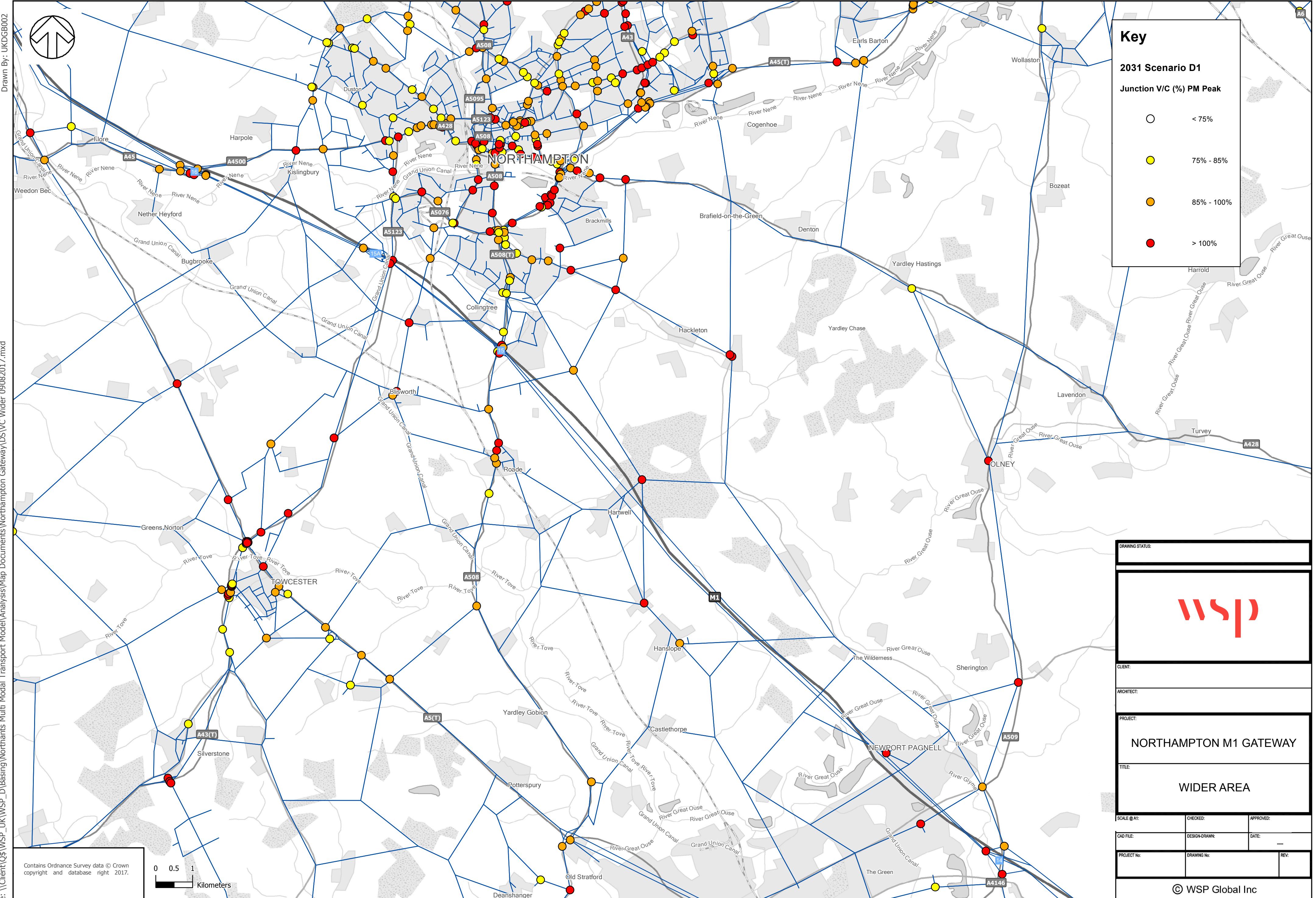








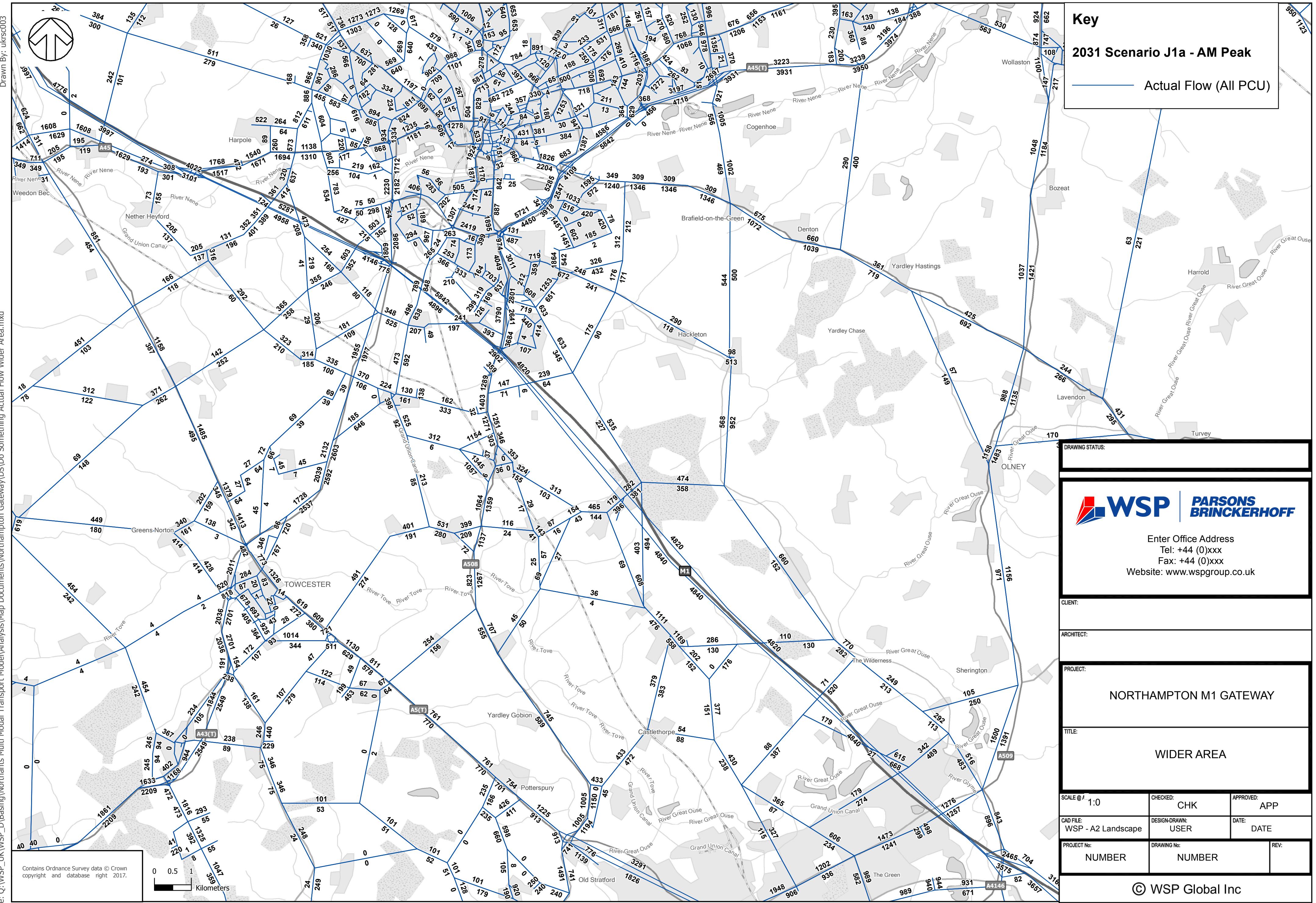


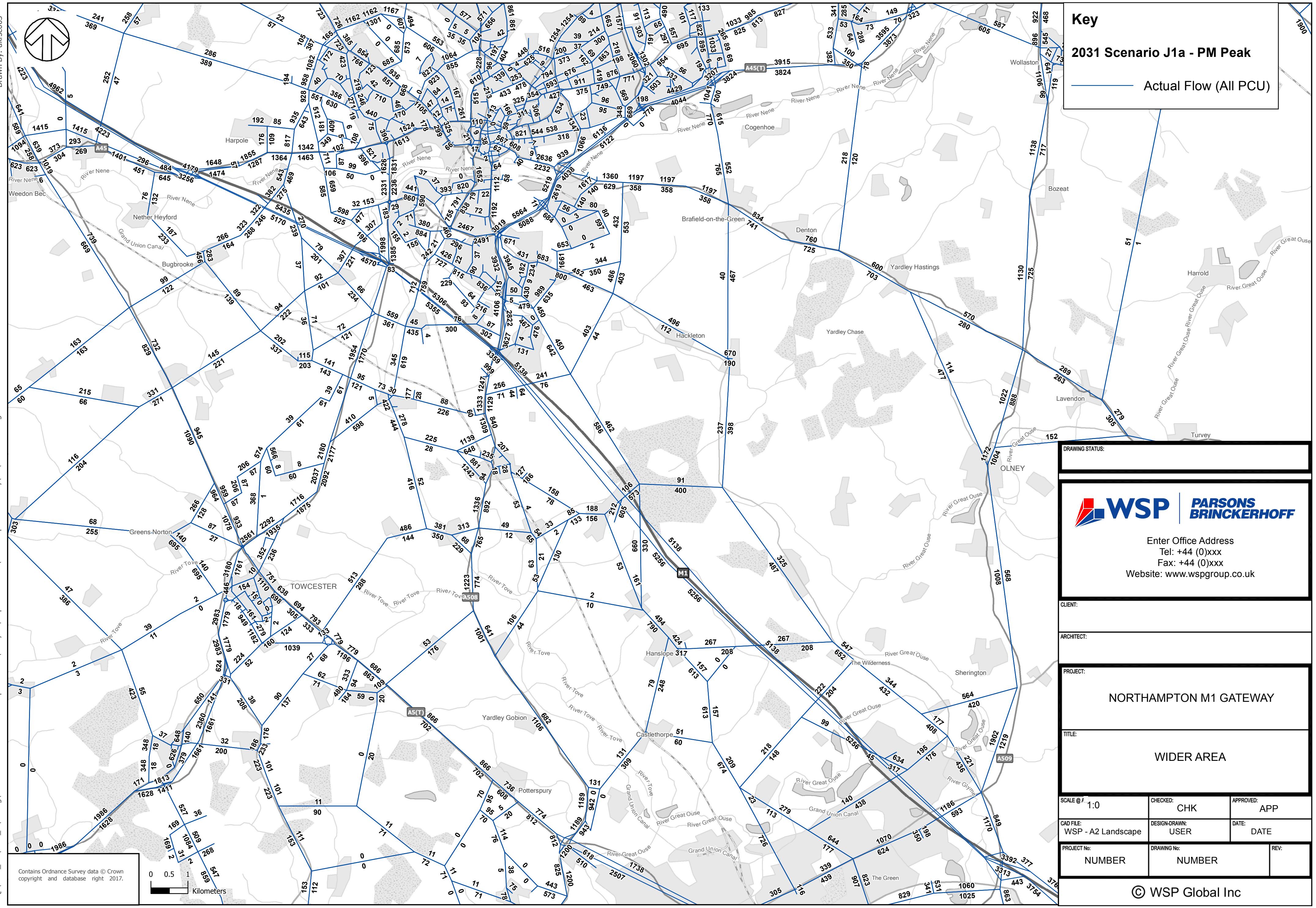


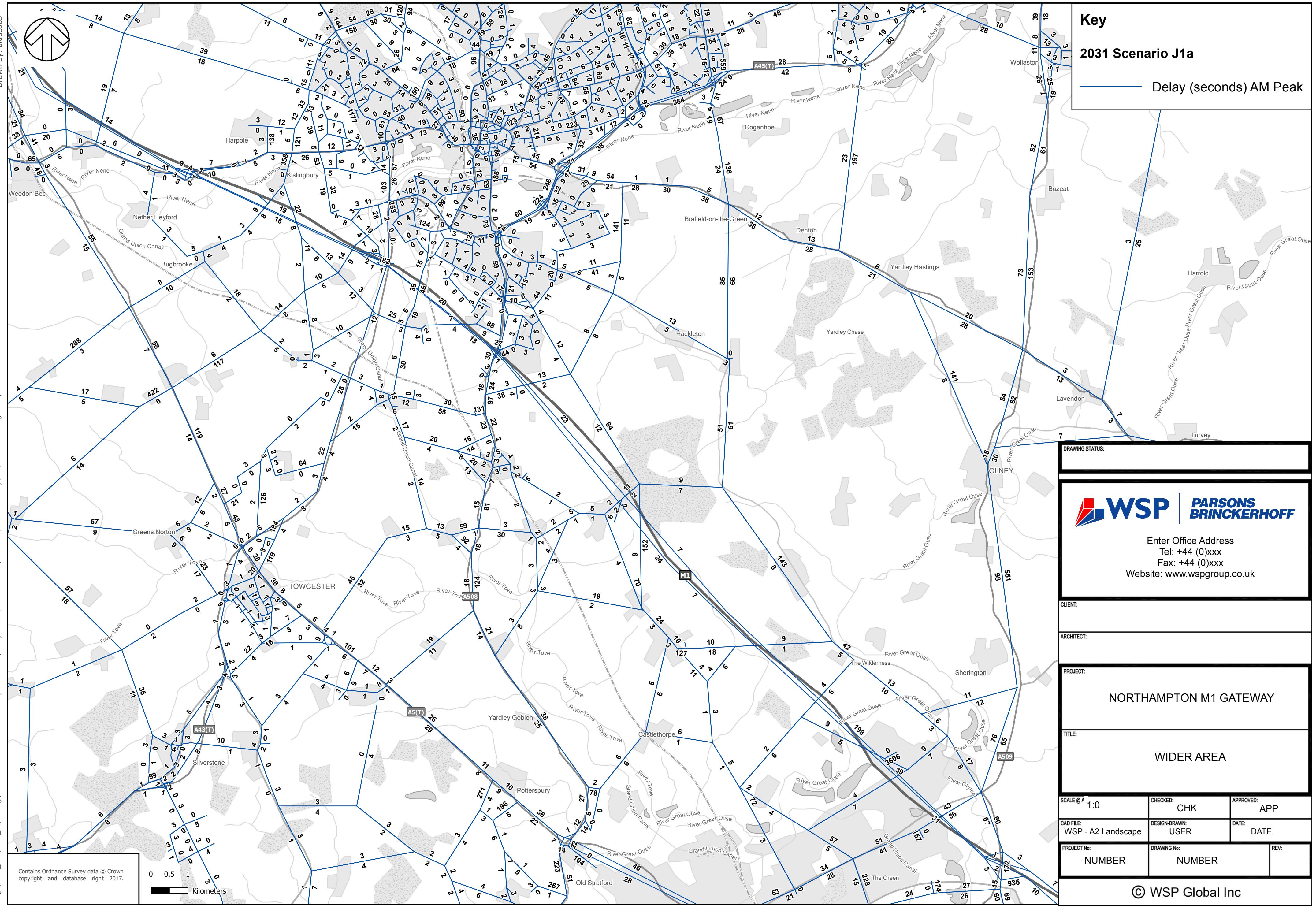
J1a - 2031 DEVELOPMENT CASE NSTM2 OUTPUTS

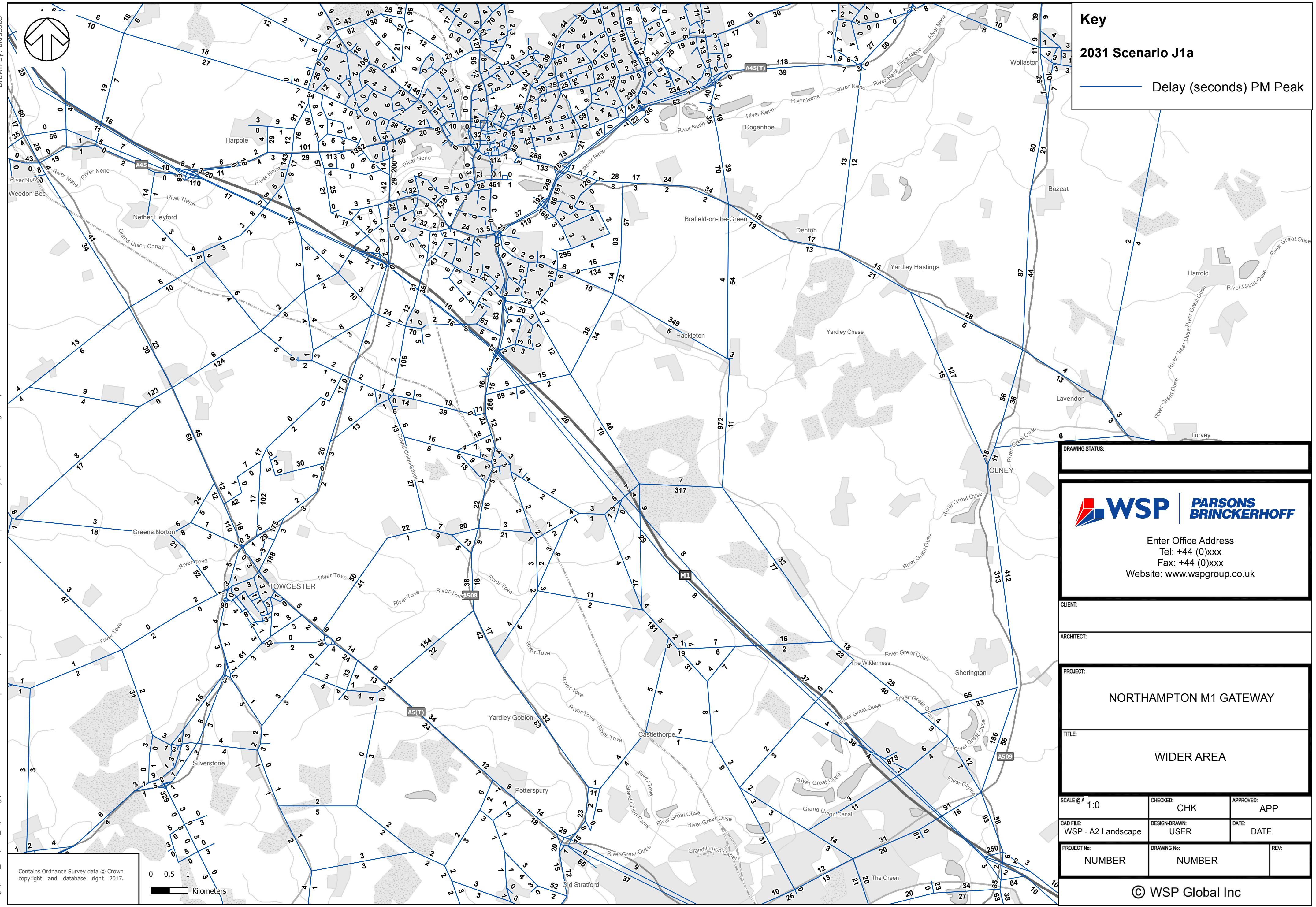
ACTUAL FLOWS
DELAYS
V/C PLOTS

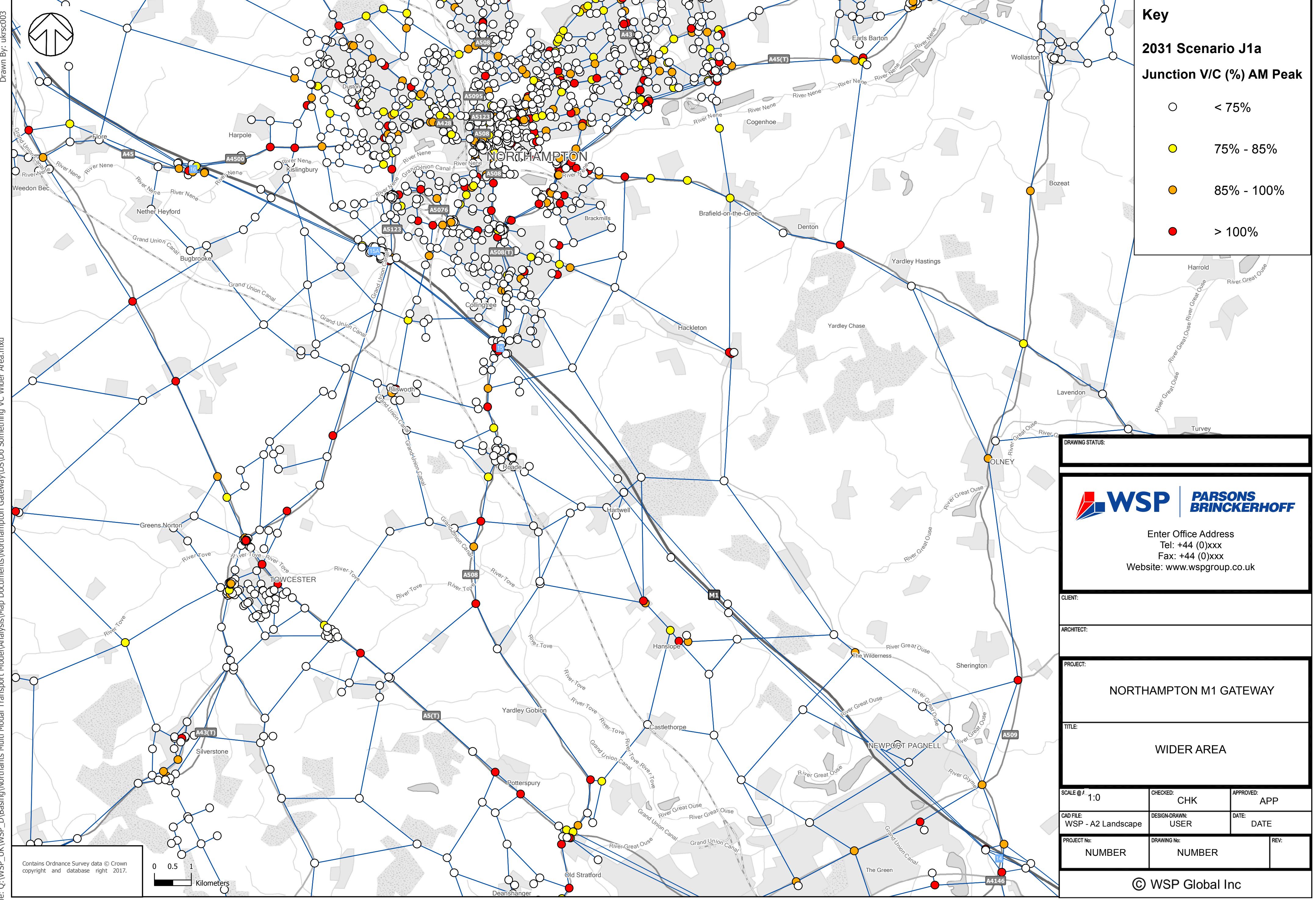
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REASSIGNMENT PLOTS (COMPARED TO D1)

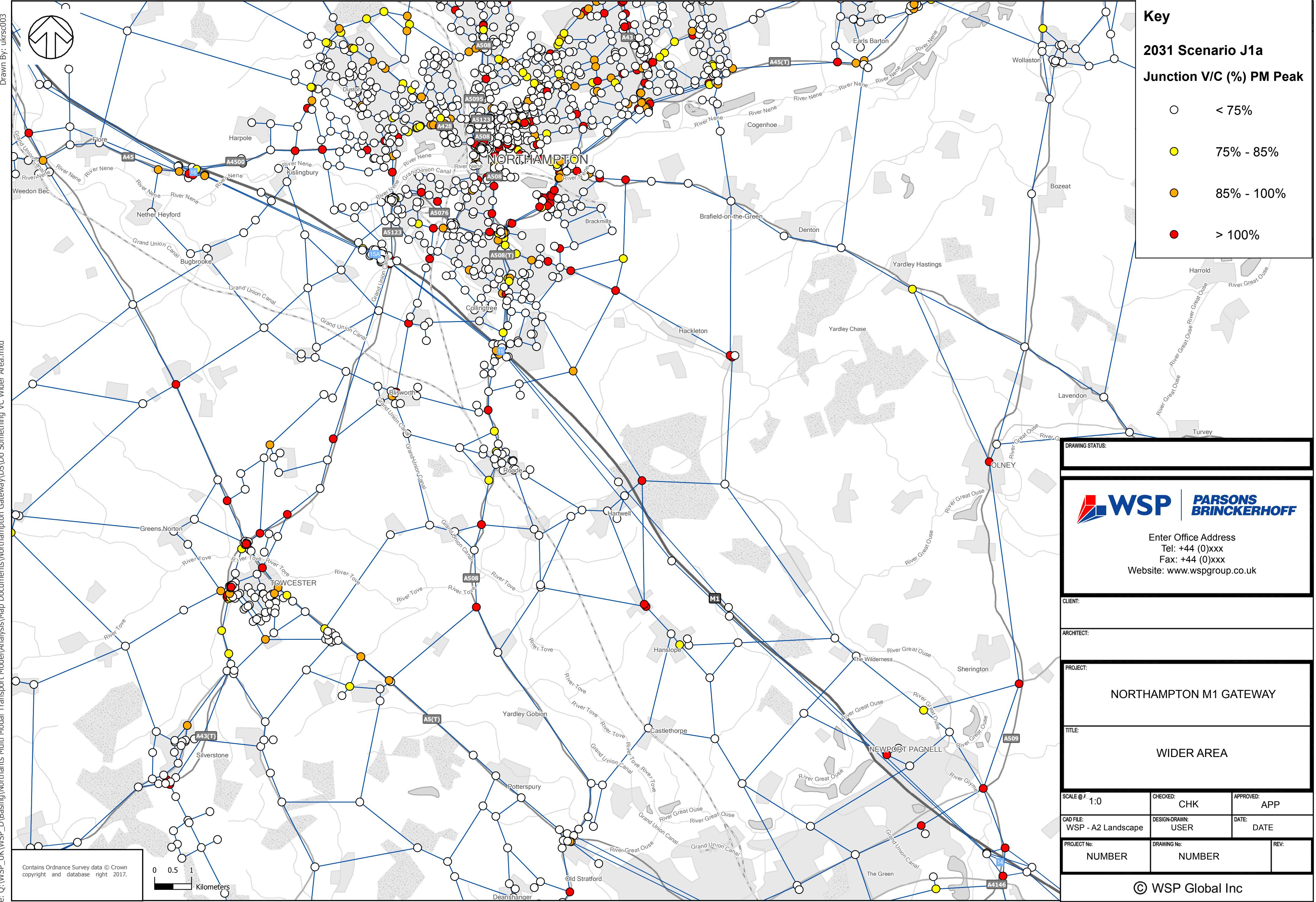


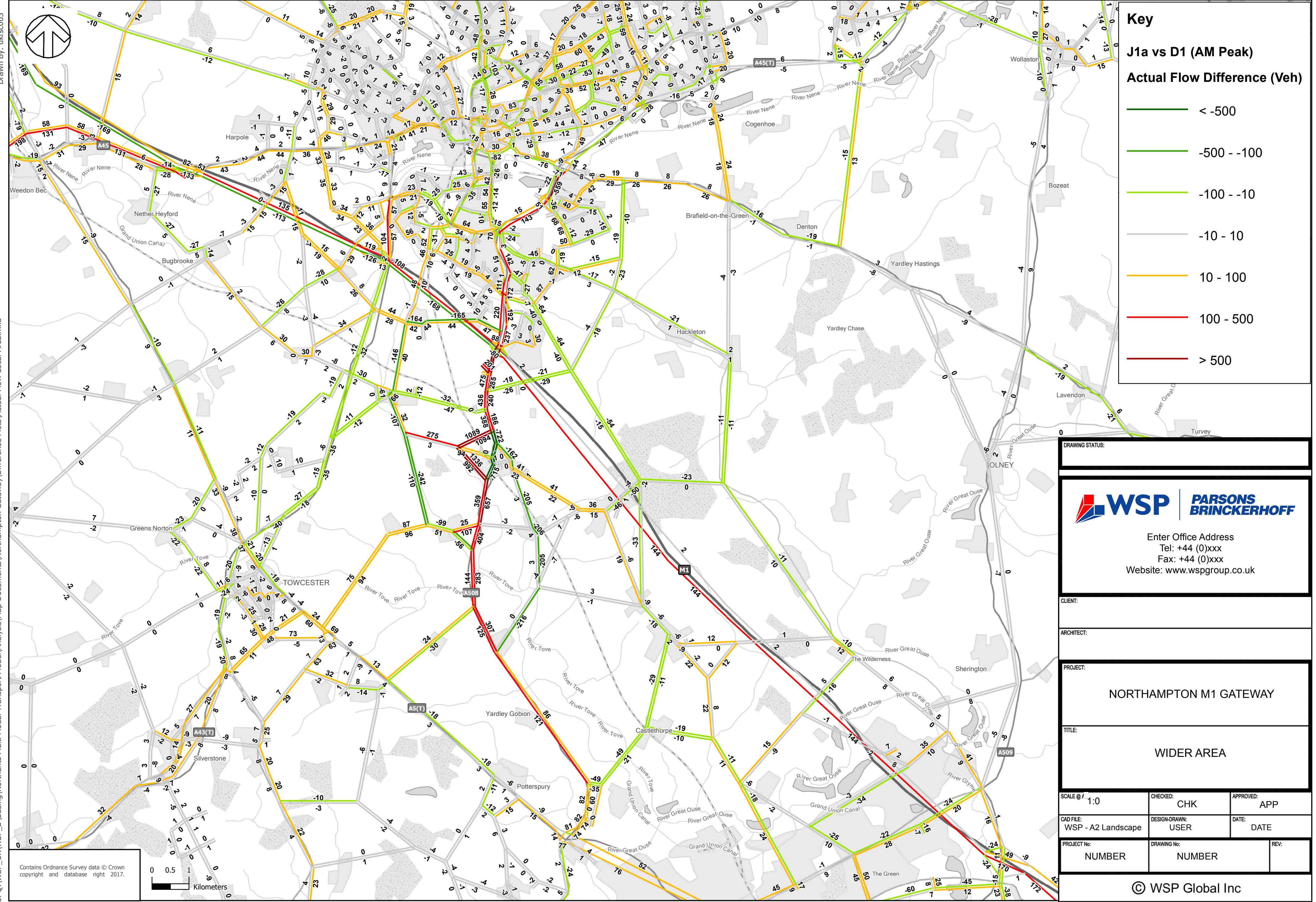


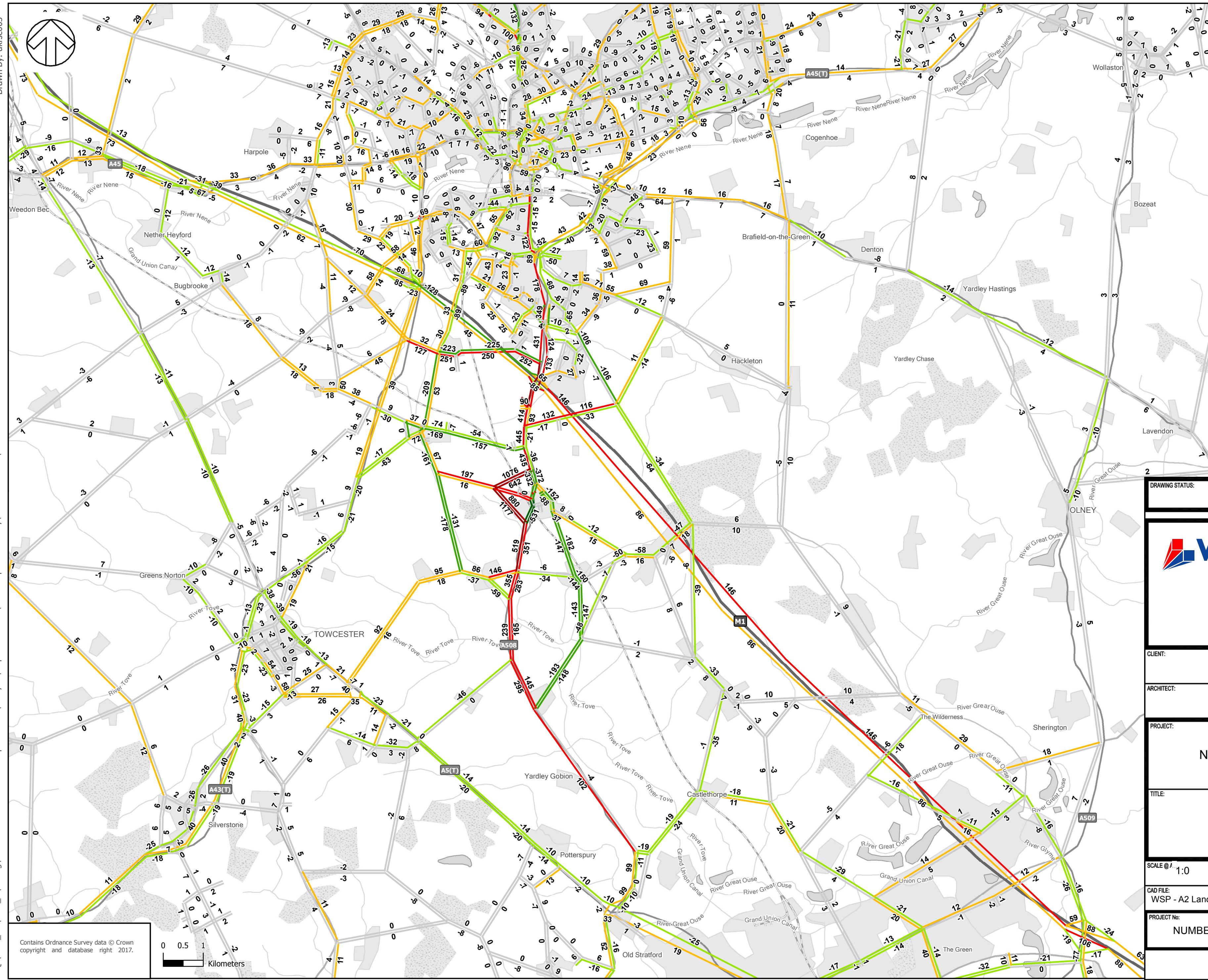
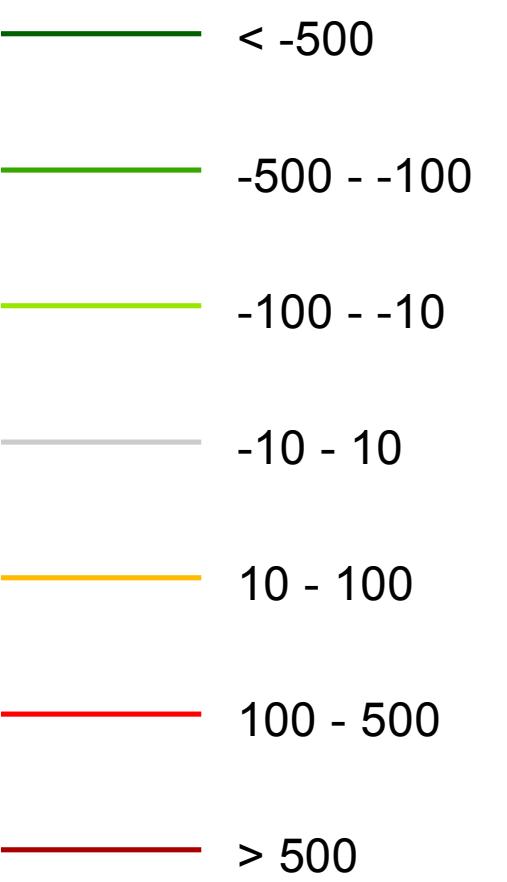










**Key****J1a vs D1 (PM Peak)****Actual Flow Difference (Veh)**

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Tel: +44 (0)xxx
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CLIENT:

ARCHITECT:

PROJECT:

NORTHAMPTON M1 GATEWAY

TITLE:

WIDER AREA

SCALE @ A:

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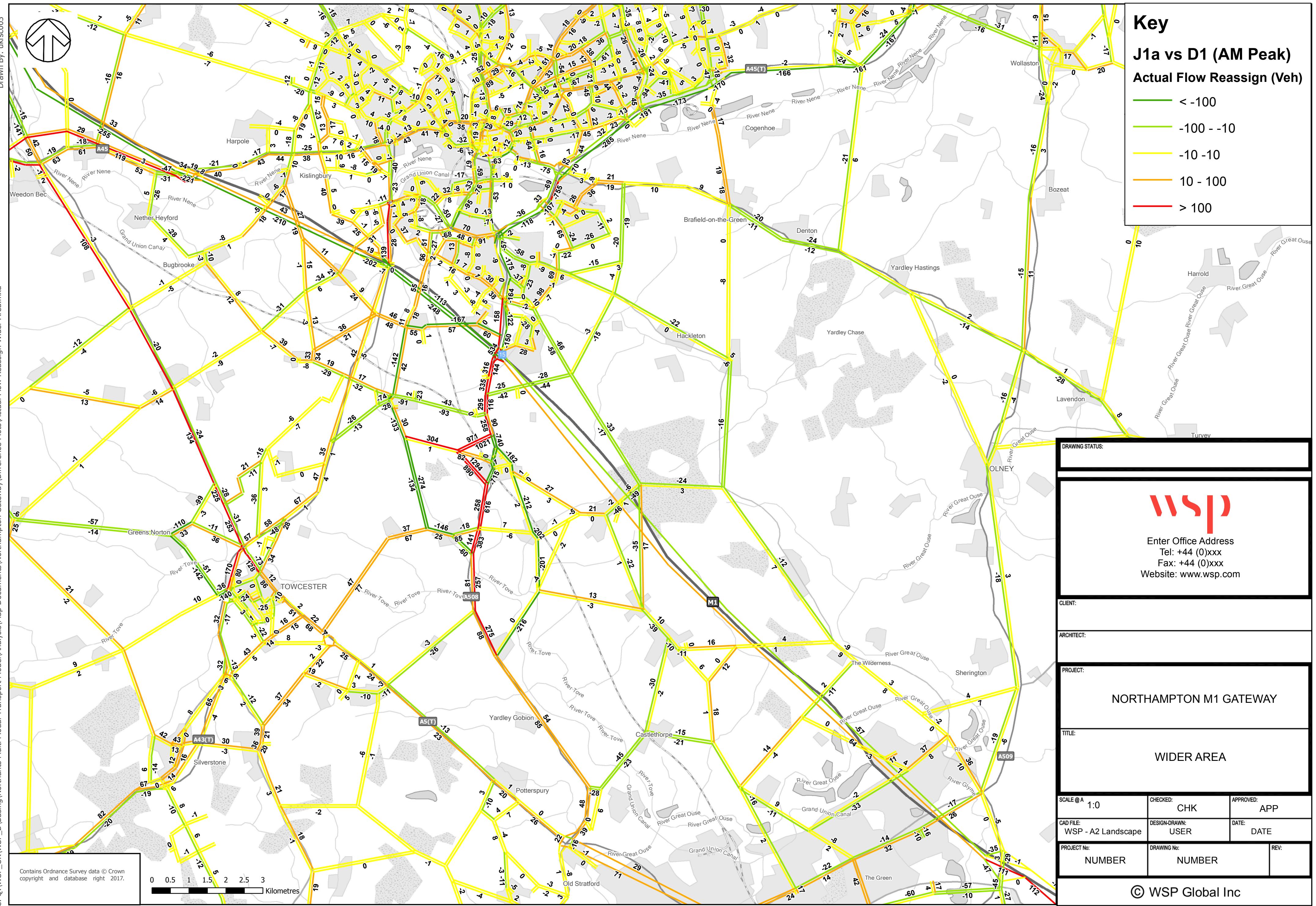
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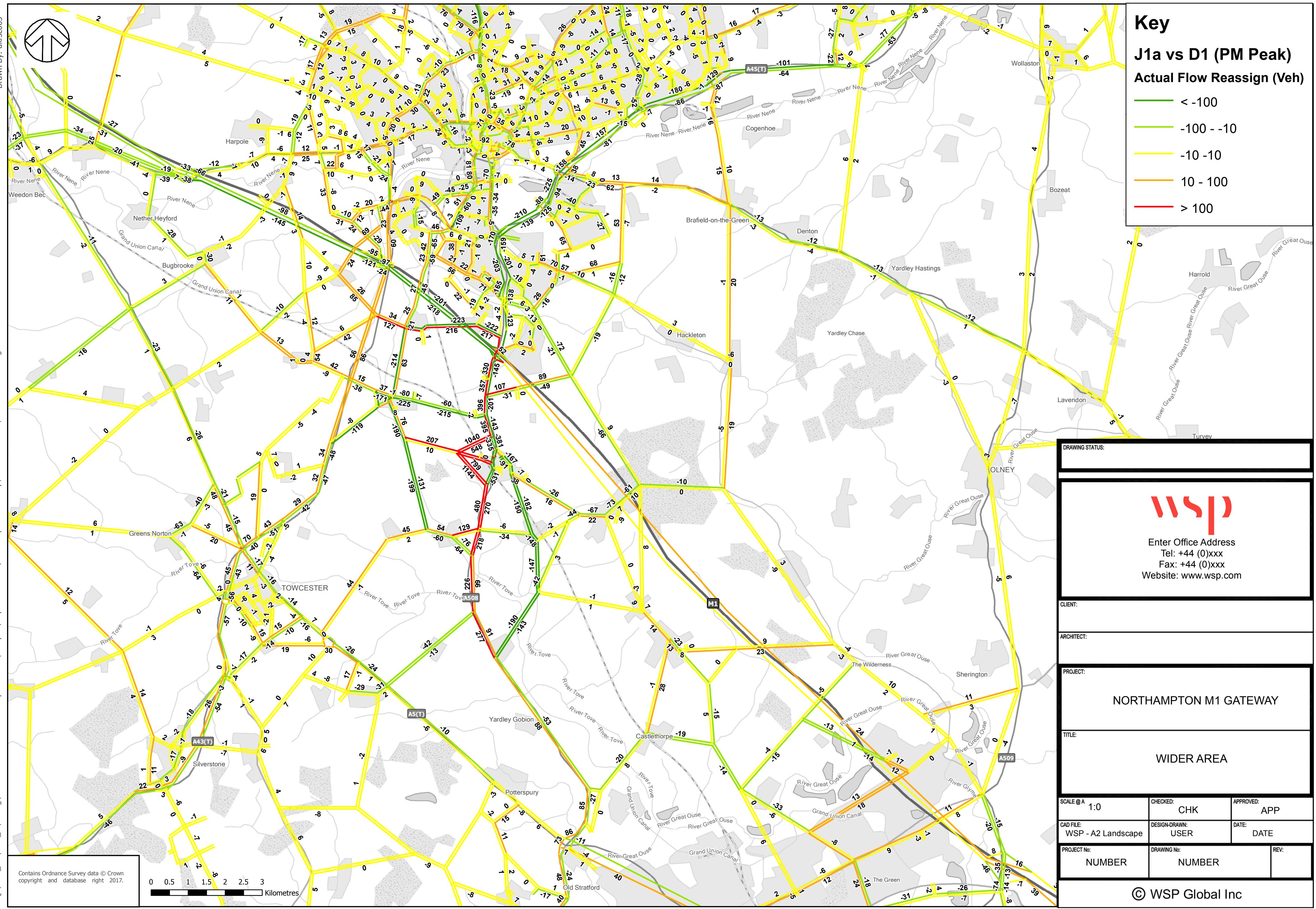
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PROJECT No:

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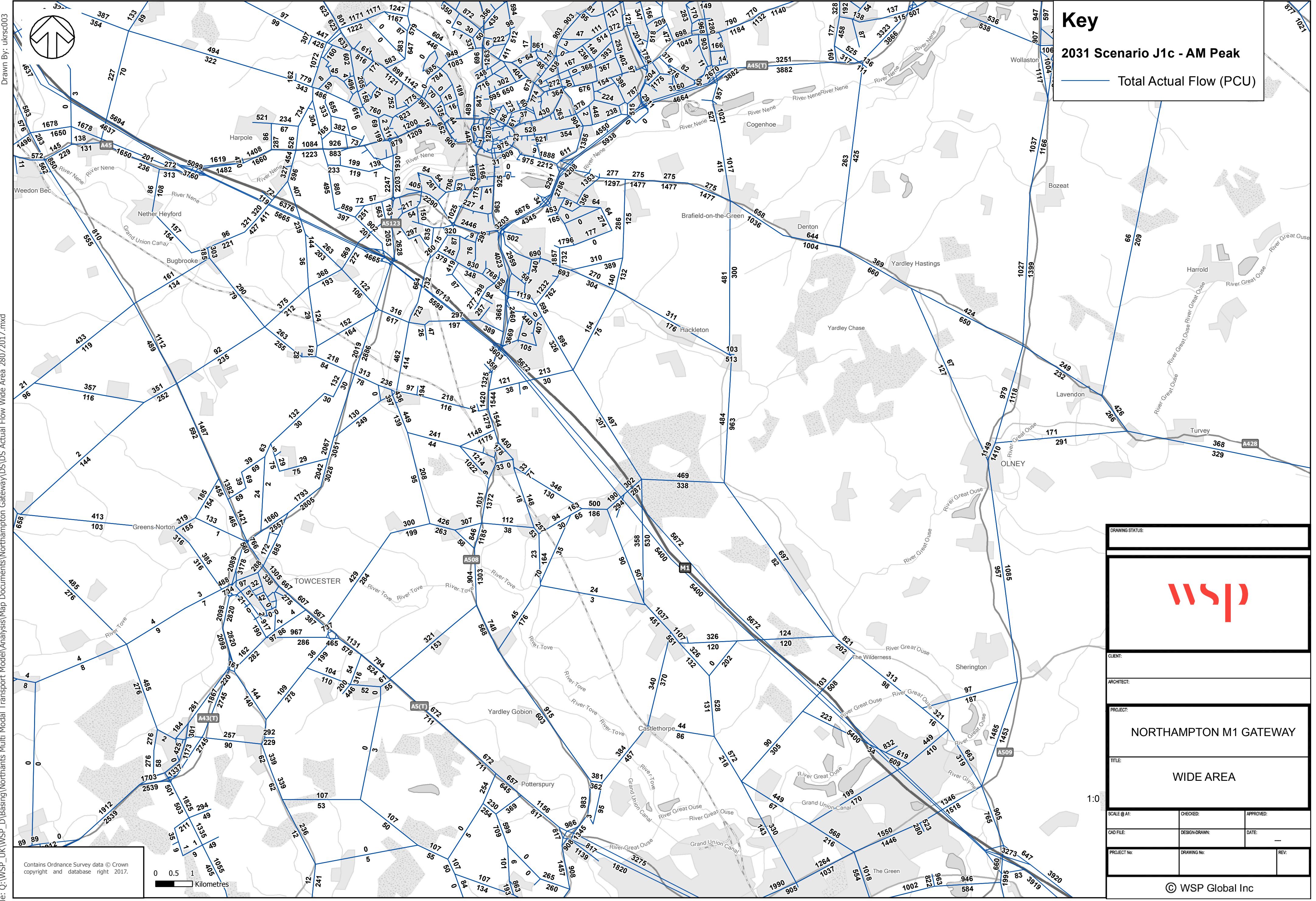


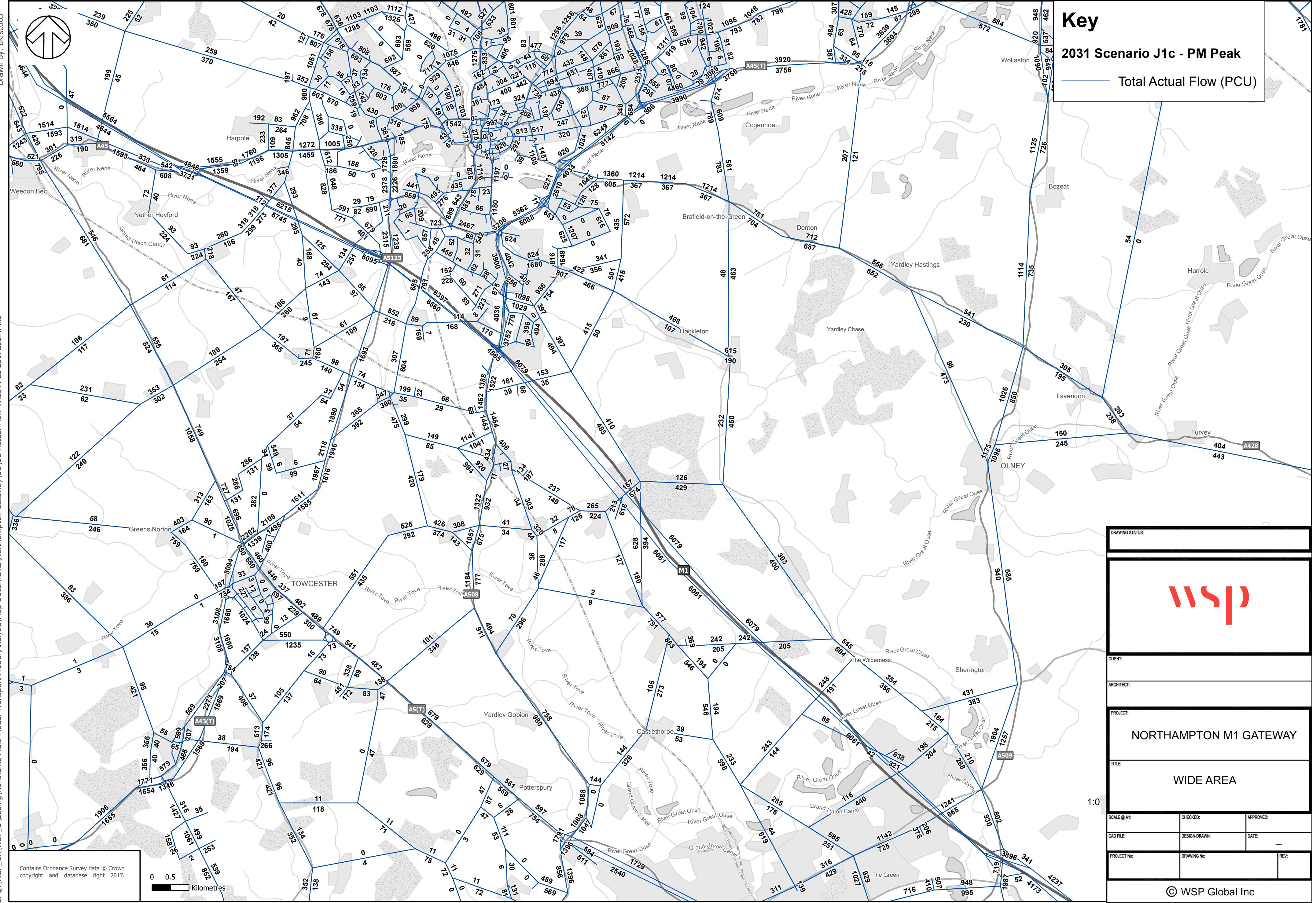


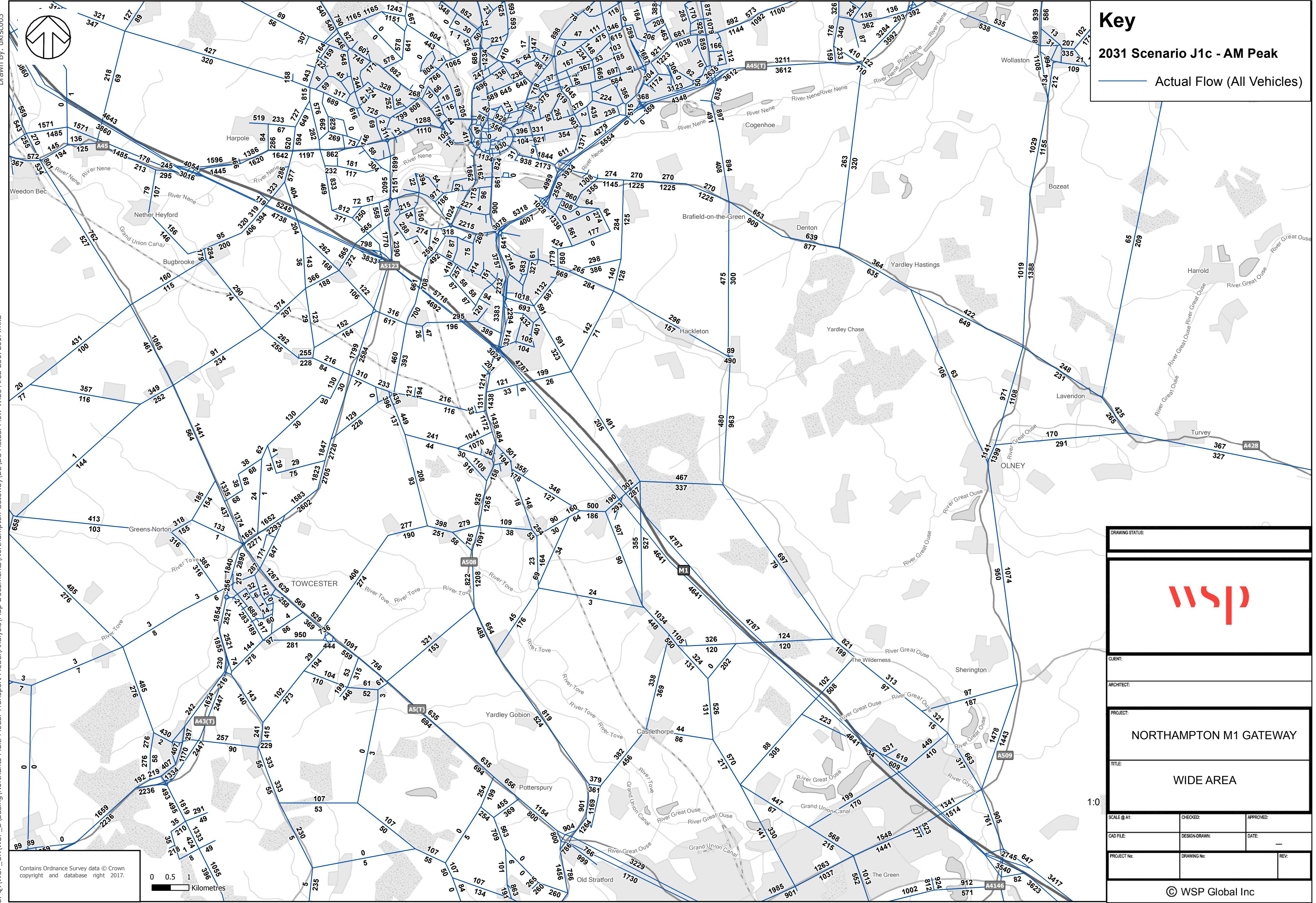
J1c - 2031 DEVELOPMENT CASE NSTM2 OUTPUTS

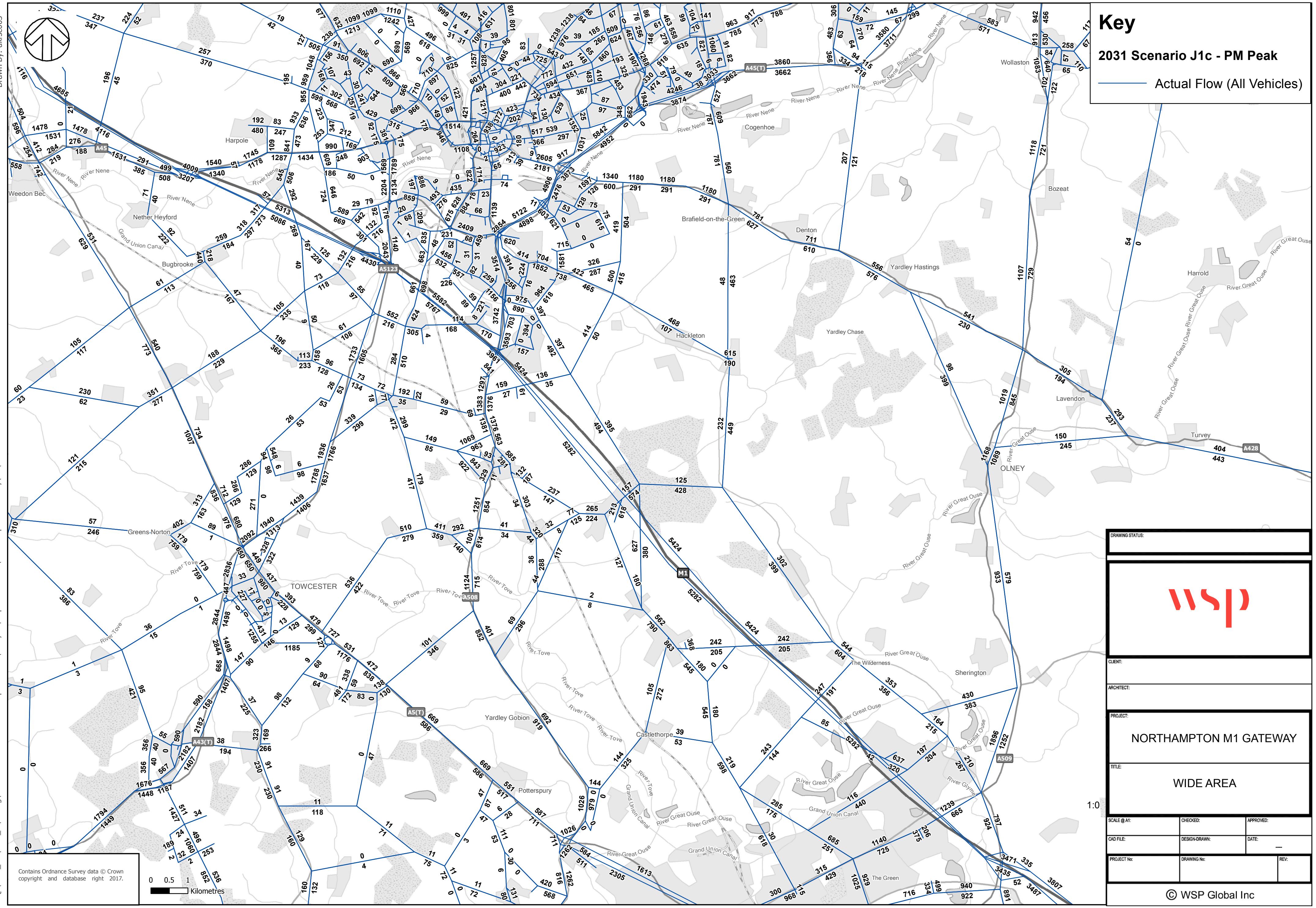
ACTUAL FLOWS IN PCUS
ACTUAL FLOW IN VEHICLES
DELAYS
V/C PLOTS

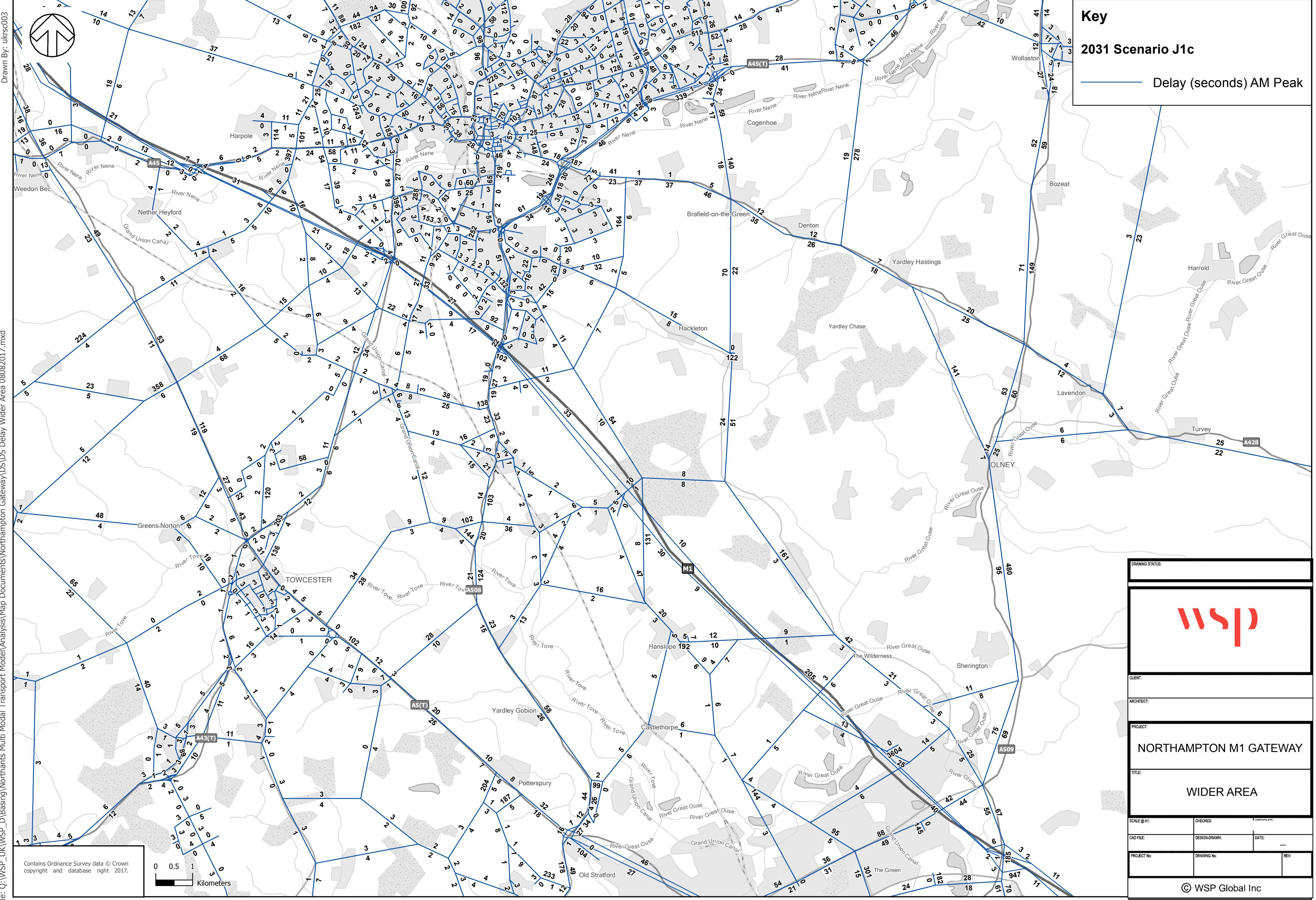
FLOW DIFFERENCE PLOTS (COMPARED TO D1)
REASSIGNMENT PLOTS (COMPARED TO D1)



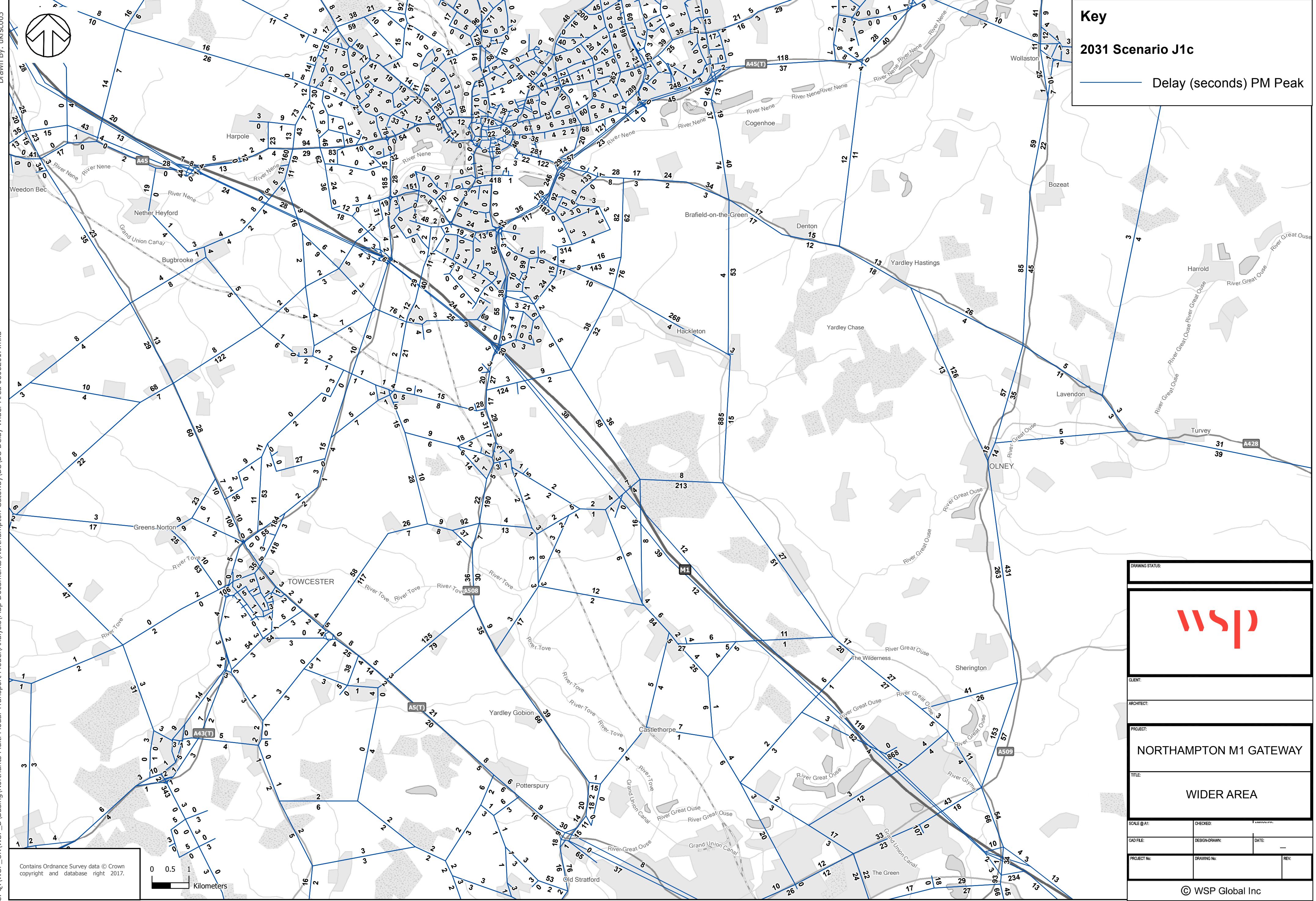


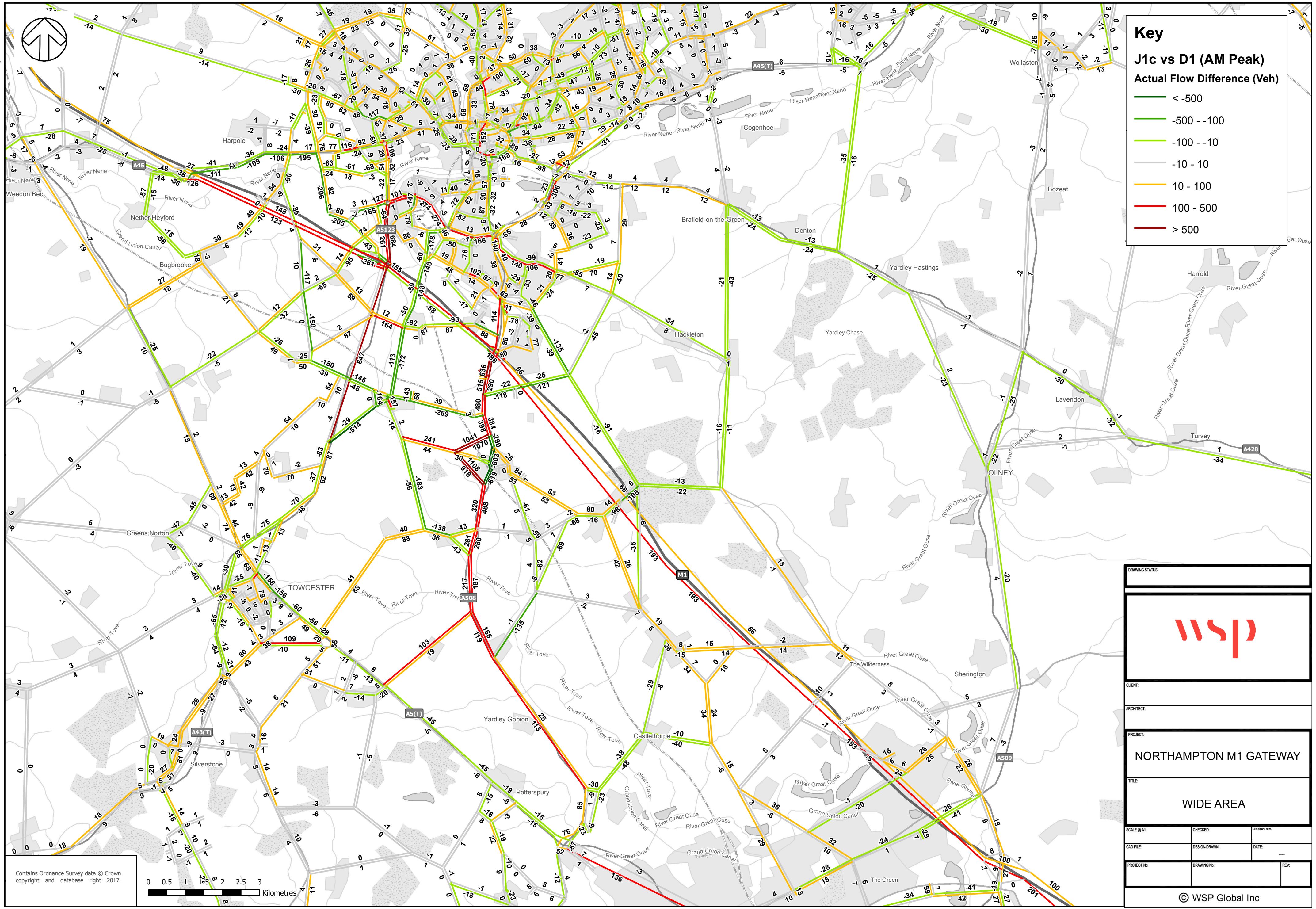


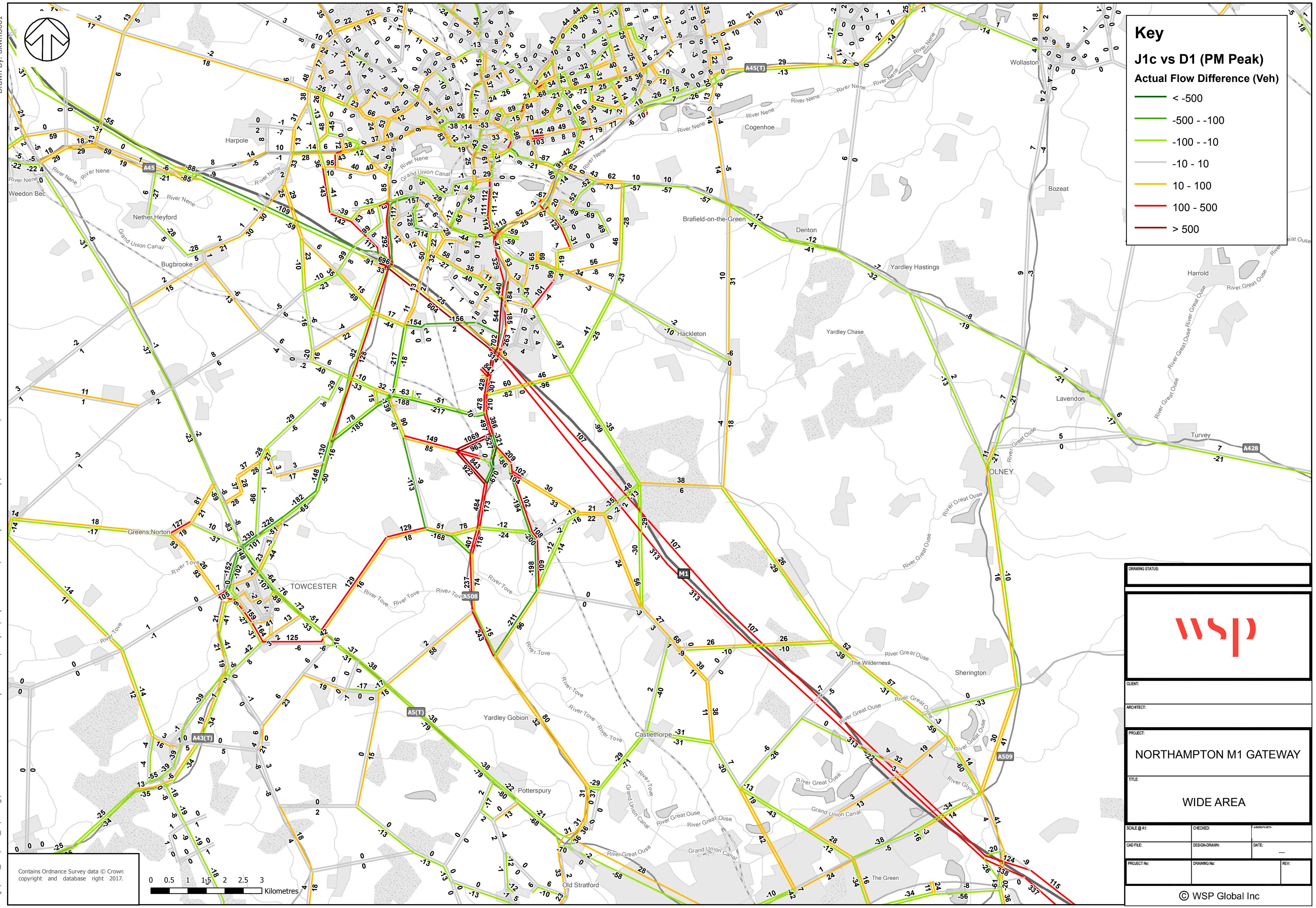


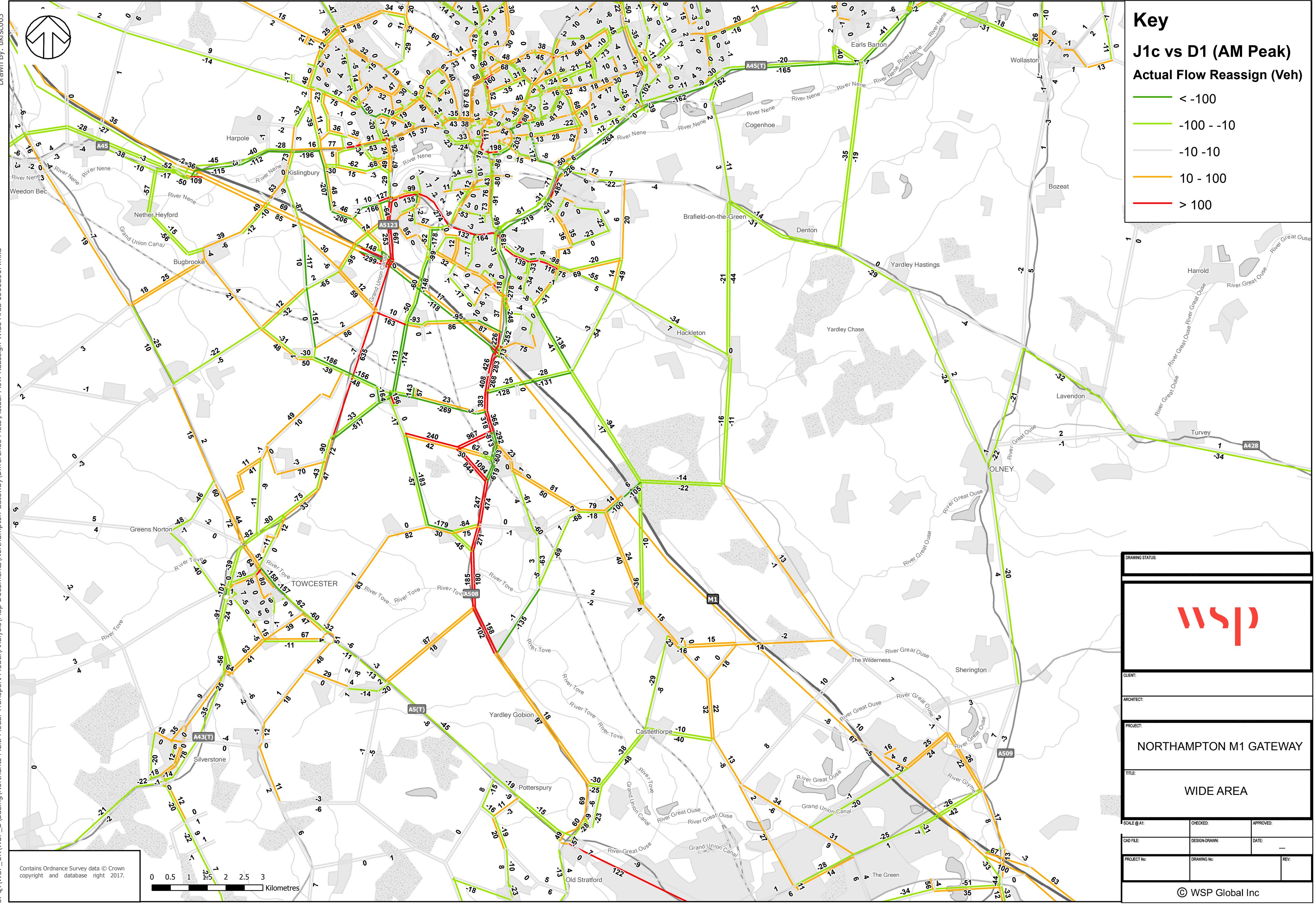


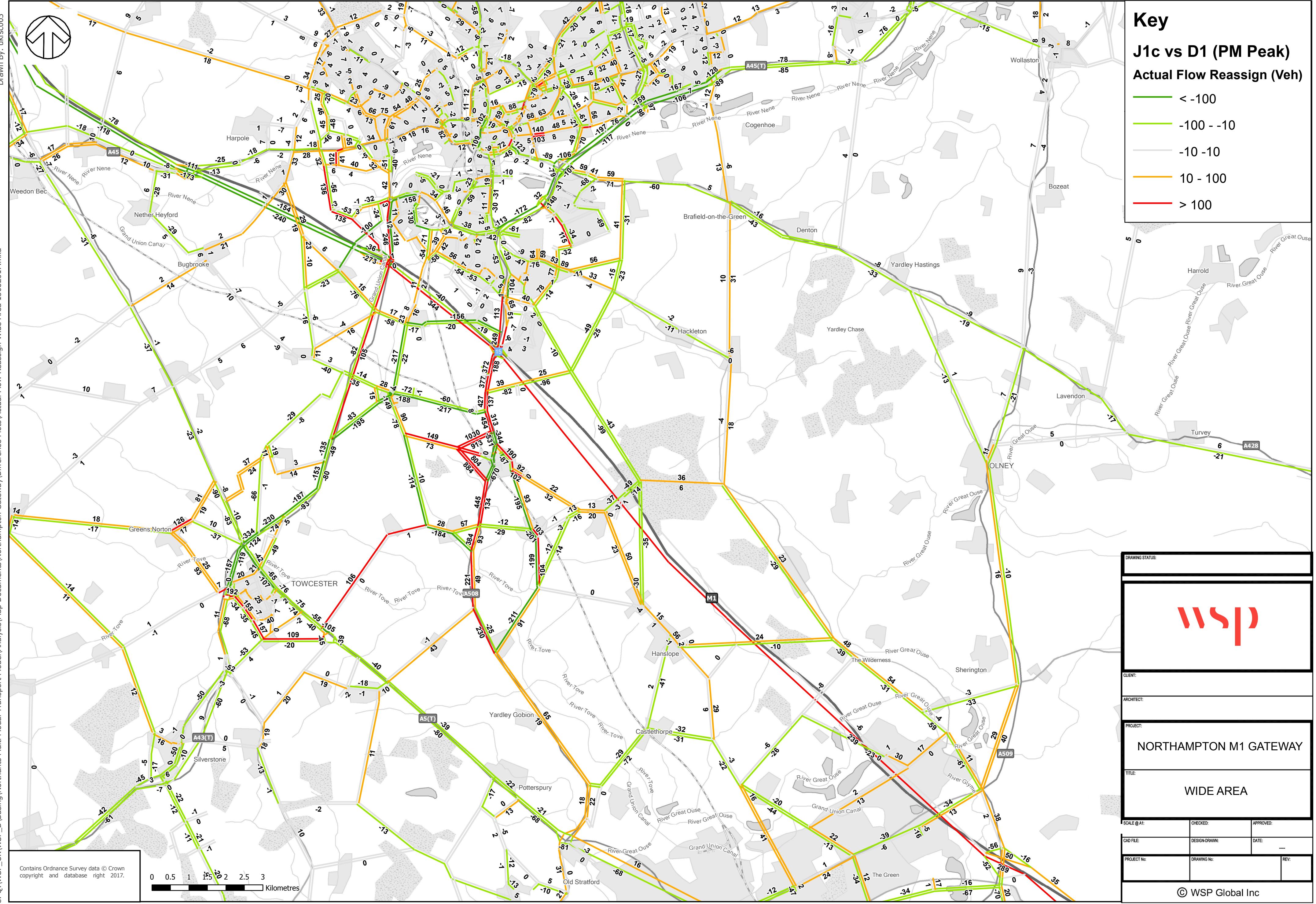
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WSP		
CLIENT:		
ARCHITECT:		
PROJECT:		
NORTHAMPTON M1 GATEWAY		
TITLE:		
WIDER AREA		
SCALE @ A1:	CHECKED:	1 mm = 1 km
CAD FILE:	DESIGN-DRAWN:	DATE: -
PROJECT No:	DRAWING No:	REV:
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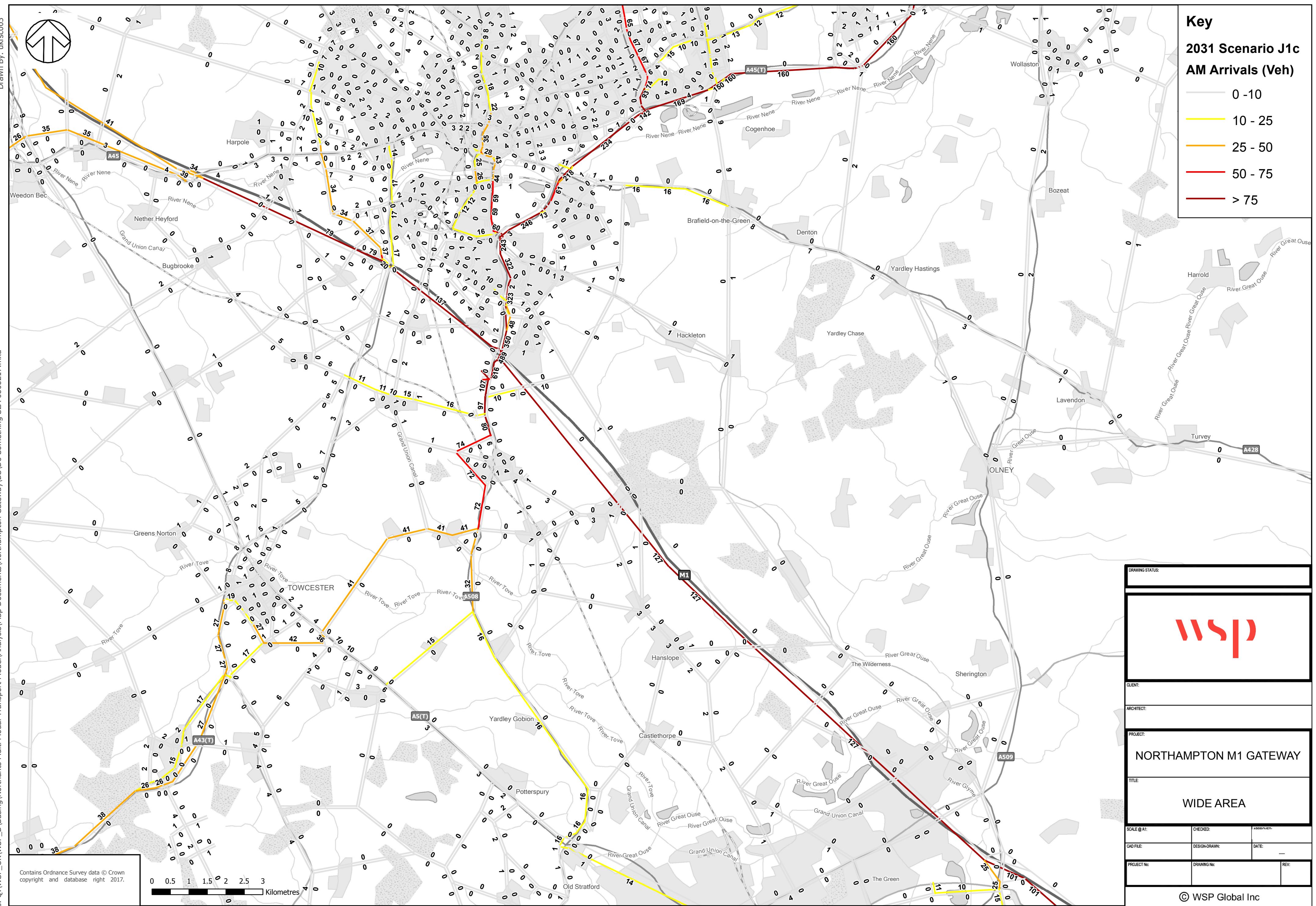




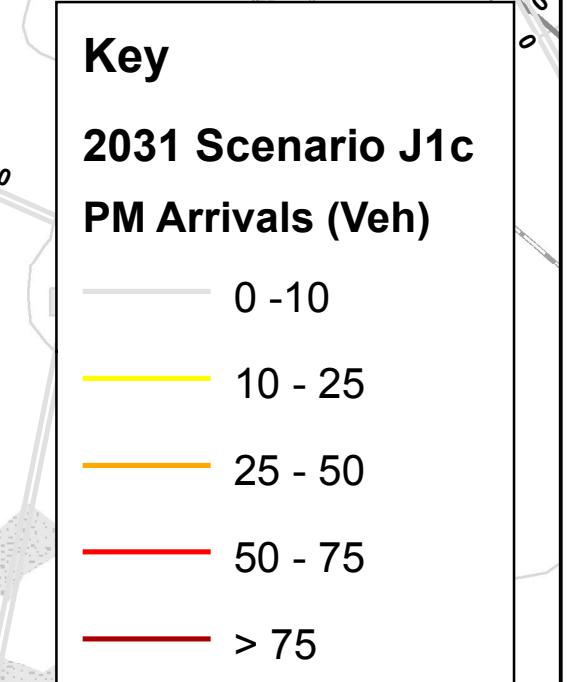
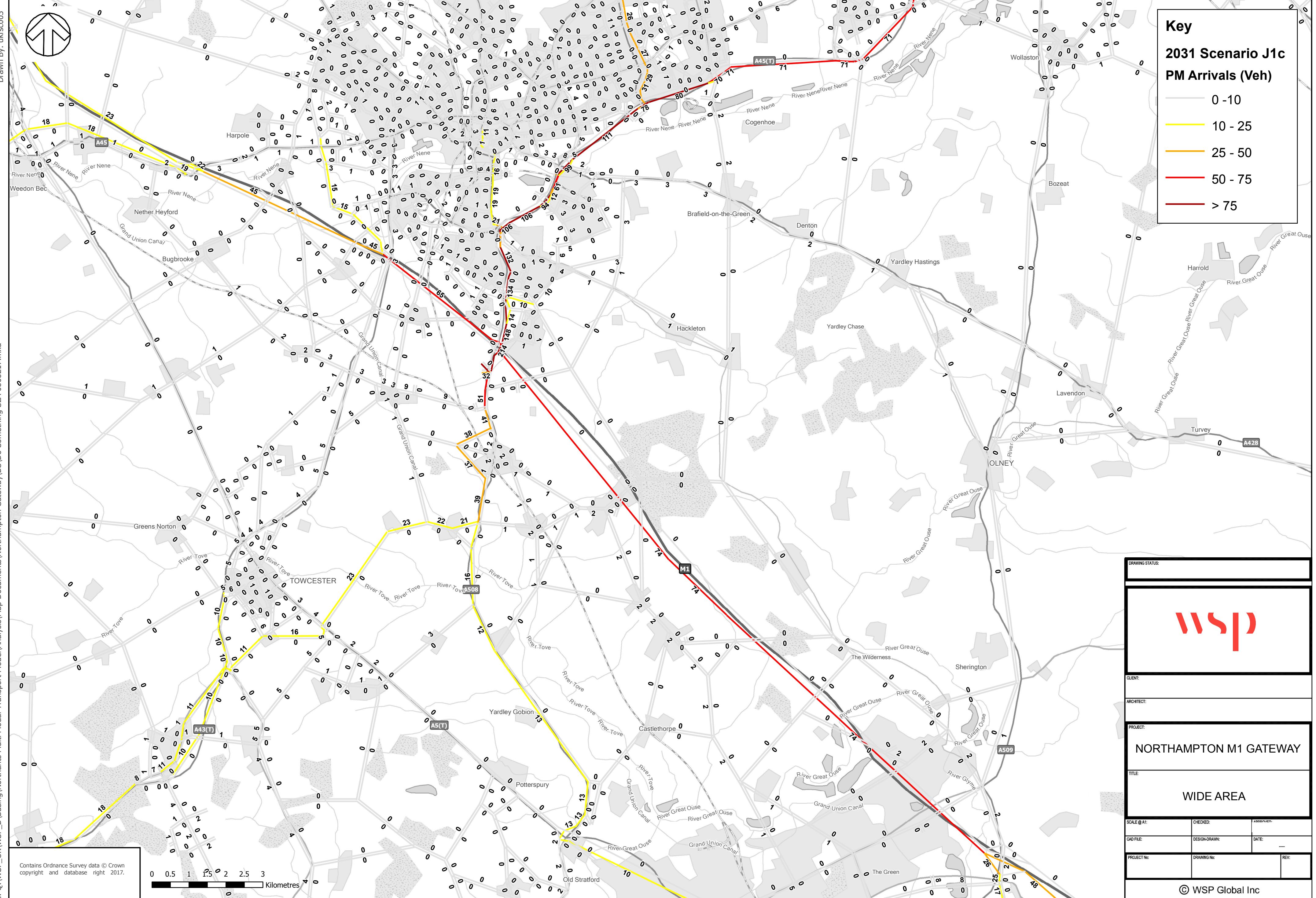


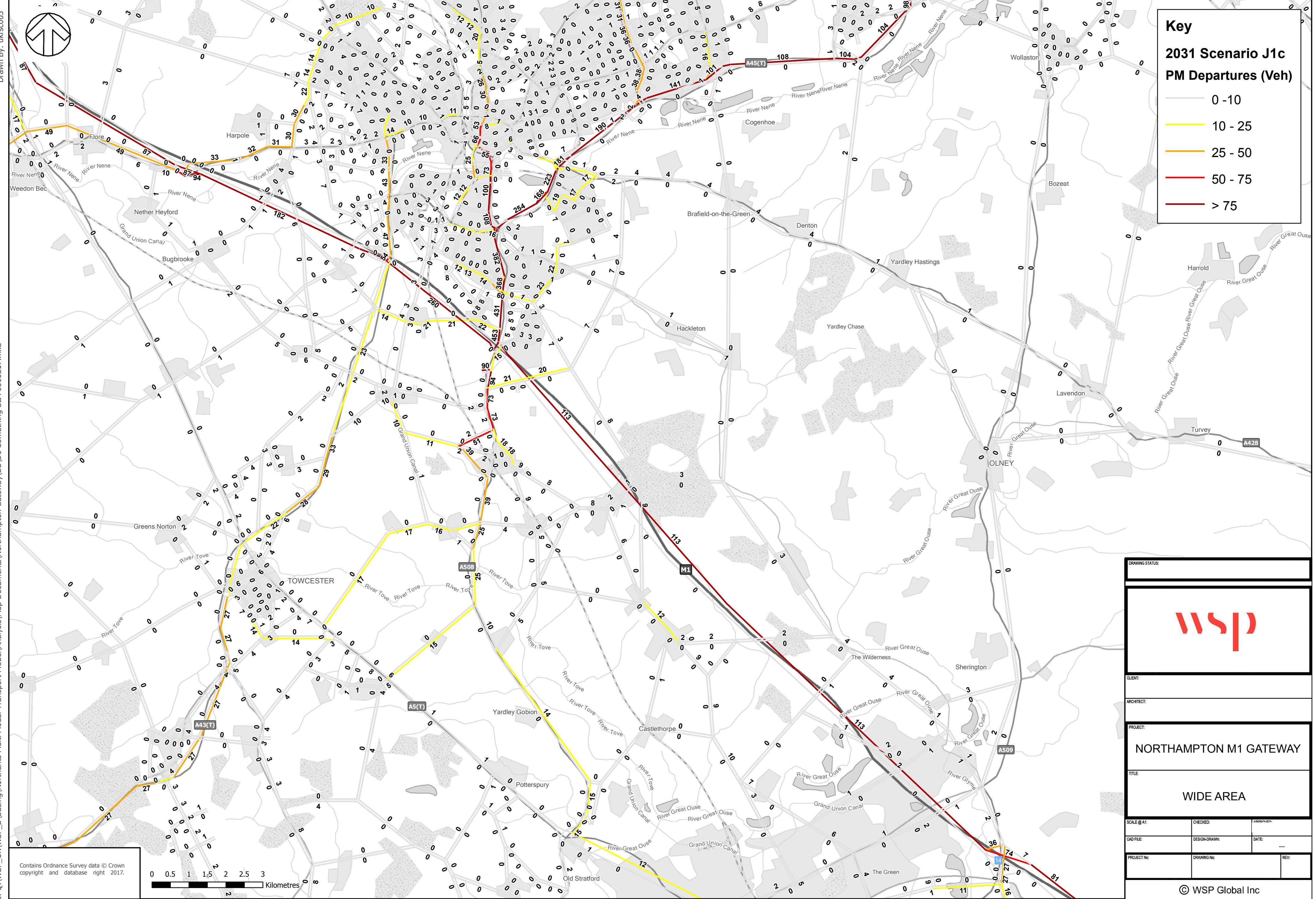
DEVELOPMENT TRAFFIC (J1c)

ACTUAL FLOWS







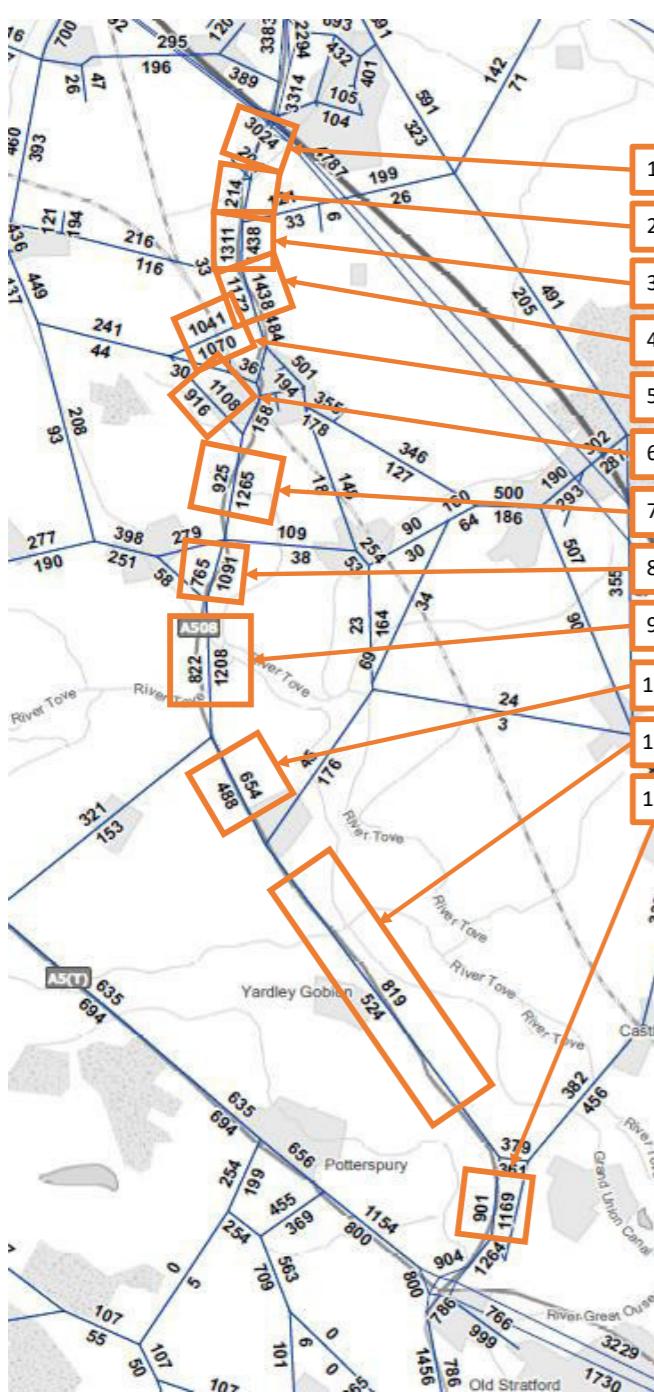


APPENDIX B

ASSESSMENT OF A508 LINK CAPACITY

A508 Link Capacity Assessment

J1c AM Actual Flow Total Veh



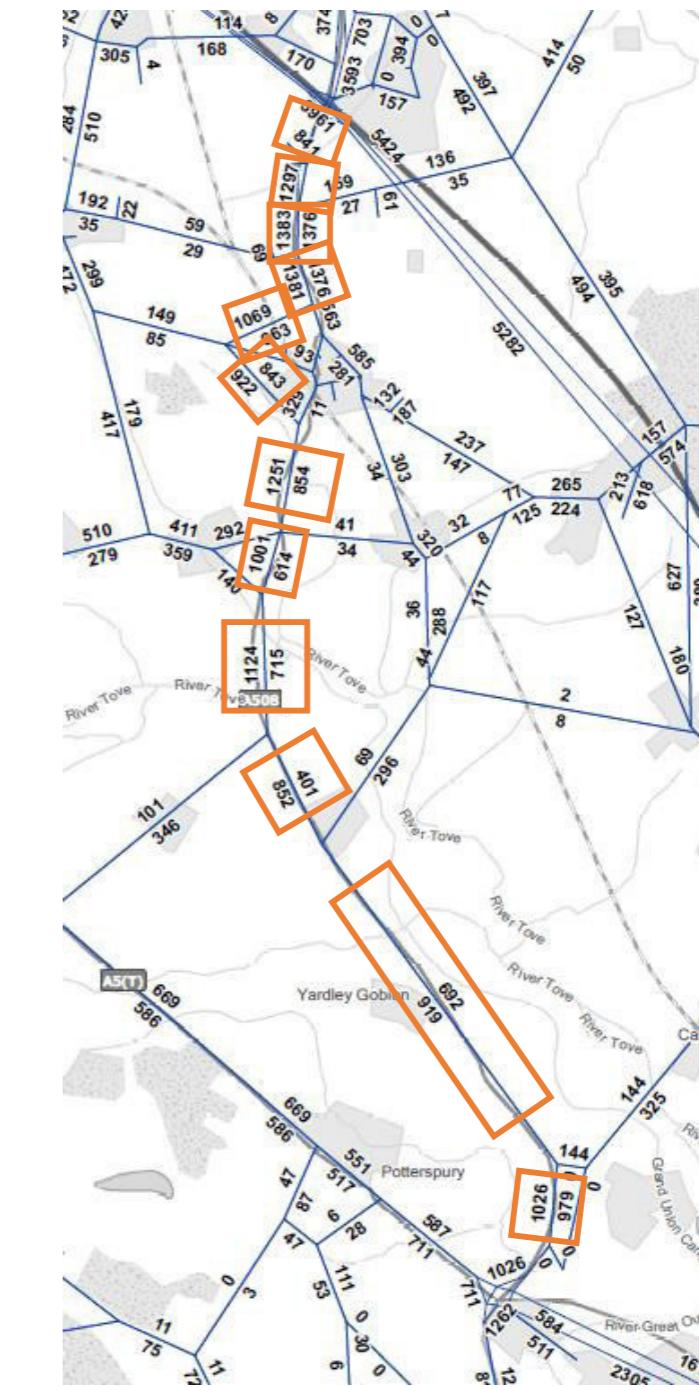
AM PEAK

No.	Width	Type	Link Capacity (veh)		Actual traffic flow (veh)			
			One-Way	Two-Way	Northbound		Southbound	
					Total	Total	Total	Total
1	7.3m	Dual Carriageway	3600	6000	1335	2051	3386	3386
2	7.3m	Single Carriageway	1600	3200	1214	1428	2642	2642
3	6.75m	Single Carriageway	1600	3200	1311	1438	2749	2749
4	6.75m	Single Carriageway	1600	3200	1172	1438	2610	2610
5	7.3m	Single Carriageway	1600	3200	1041	1070	2111	2111
6	7.3m	Single Carriageway	1600	3200	1022	1108	2130	2130
7	6.75m	Single Carriageway	1600	3200	925	1265	2190	2190
8	6.75m	Single Carriageway	1600	3200	765	1091	1856	1856
9	6.75m	Single Carriageway	1600	3200	822	1208	2030	2030
10	6.75m	Single Carriageway	1600	3200	488	654	1142	1142
11	6.75m	Single Carriageway	1600	3200	524	819	1343	1343
12	6.75m	Single Carriageway	1600	3200	901	1169	2070	2070

PM PEAK

No.	Width	Type	Link Capacity (veh)		Actual traffic flow (veh)			
			One-Way	Two-Way	Northbound		Southbound	
					Total	Total	Total	Total
1	7.3m	Dual Carriageway	3600	6000	2096	1613	3709	3709
2	7.3m	Single Carriageway	1600	3200	1297	1423	2720	2720
3	6.75m	Single Carriageway	1600	3200	1383	1376	2759	2759
4	6.75m	Single Carriageway	1600	3200	1381	1376	2757	2757
5	7.3m	Single Carriageway	1600	3200	1069	963	2032	2032
6	7.3m	Single Carriageway	1600	3200	922	843	1765	1765
7	6.75m	Single Carriageway	1600	3200	1251	854	2105	2105
8	6.75m	Single Carriageway	1600	3200	1001	614	1615	1615
9	6.75m	Single Carriageway	1600	3200	1124	715	1839	1839
10	6.75m	Single Carriageway	1600	3200	852	401	1253	1253
11	6.75m	Single Carriageway	1600	3200	919	692	1611	1611
12	6.75m	Single Carriageway	1600	3200	1026	979	2005	2005

J1c PM Actual Flow Total Veh

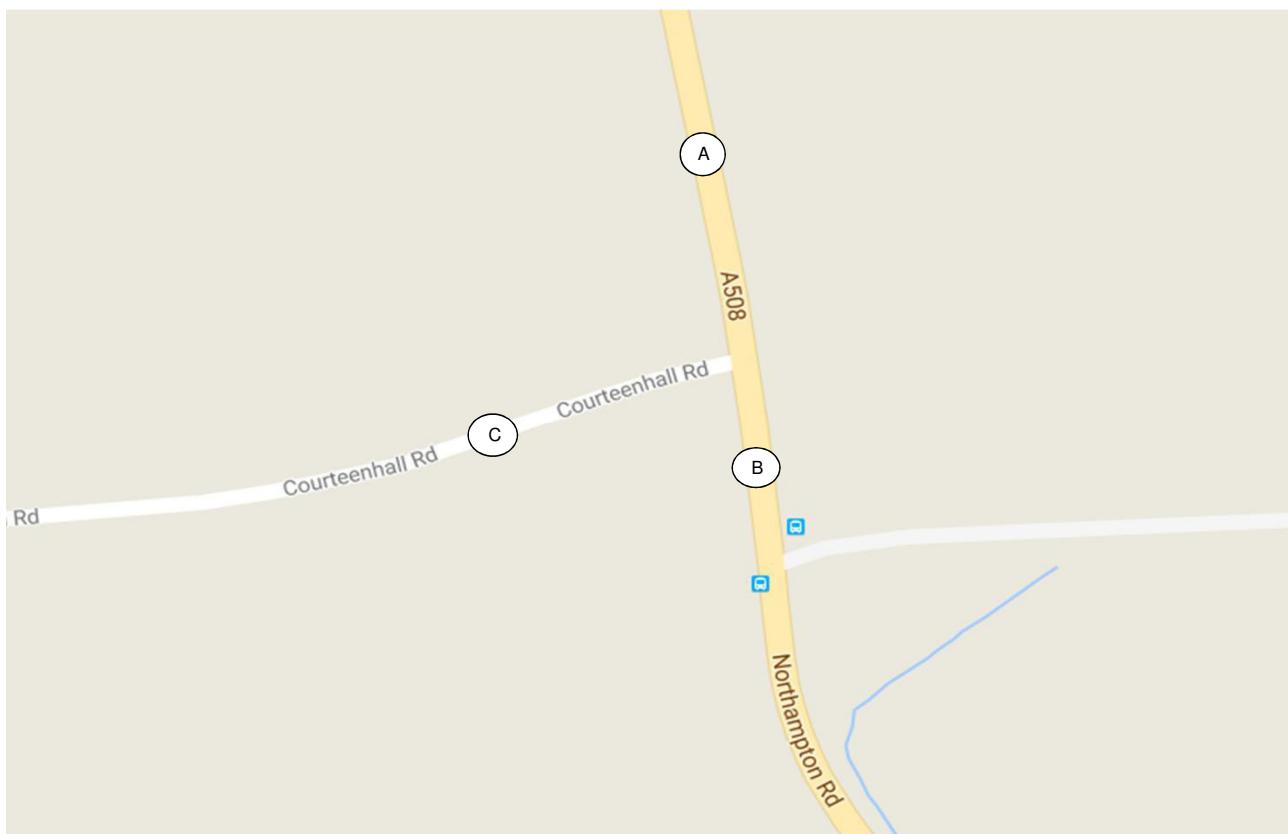


APPENDIX C

NSTM2 JUNCTION TURNING COUNTS

D1 2031 REFERENCE CASE

Junction: (5) A508/ Courteenhall Road



AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1066	300					1366
	B	A508 (NB)	765	0	87					852
	C	Courteenhall Rd	152	80	0					233
	D									
	E									
	F									
	G									
	Total		918	1146	387					2451

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	956	329					1285
	B	A508 (NB)	914	0	17					930
	C	Courteenhall Rd	38	98	0					136
	D									
	E									
	F									
	G									
	Total		951	1055	346					2352

Junction: (9) A508/ Rookery Lane/ Ashton Road



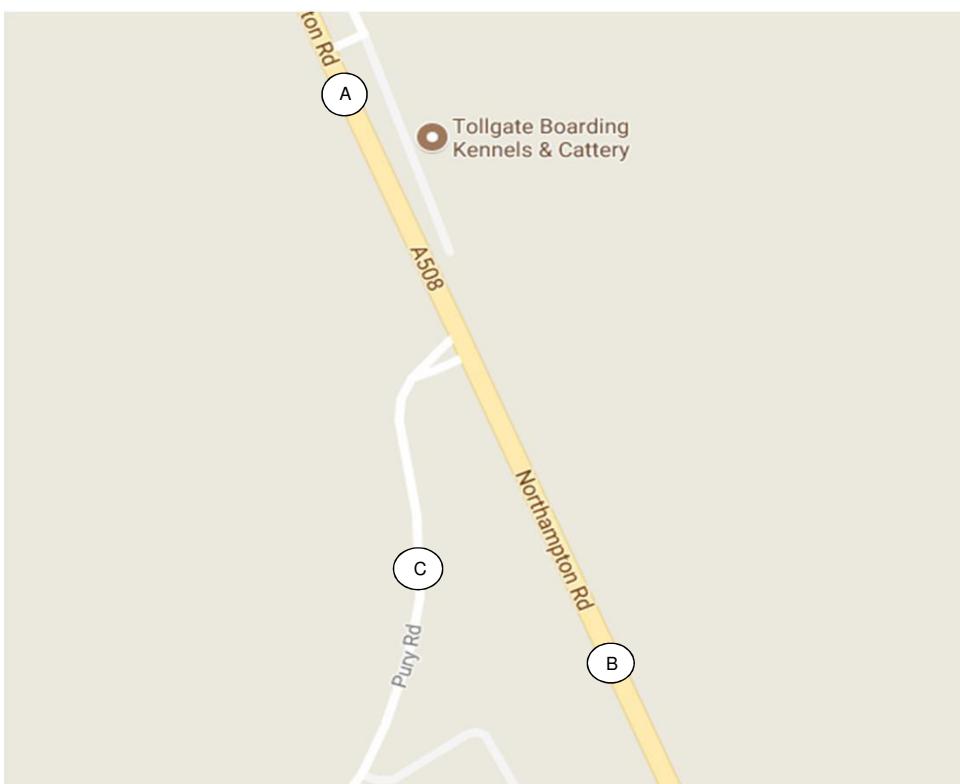
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	2	786	85				873
	B	Ashton Rd	1	0	6	39				46
	C	A508 (NB)	501	80	0	0				580
	D	Rookery Lane	182	31	112	0				324
	E									
	F									
	G									
	Total		683	113	904	124				1823

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1	521	228				750
	B	Ashton Rd	4	0	35	19				58
	C	A508 (NB)	619	34	0	0				653
	D	Rookery Lane	189	19	0	0				208
	E									
	F									
	G									
	Total		812	54	555	247				1669

Junction: (10) A508/ Pury Road



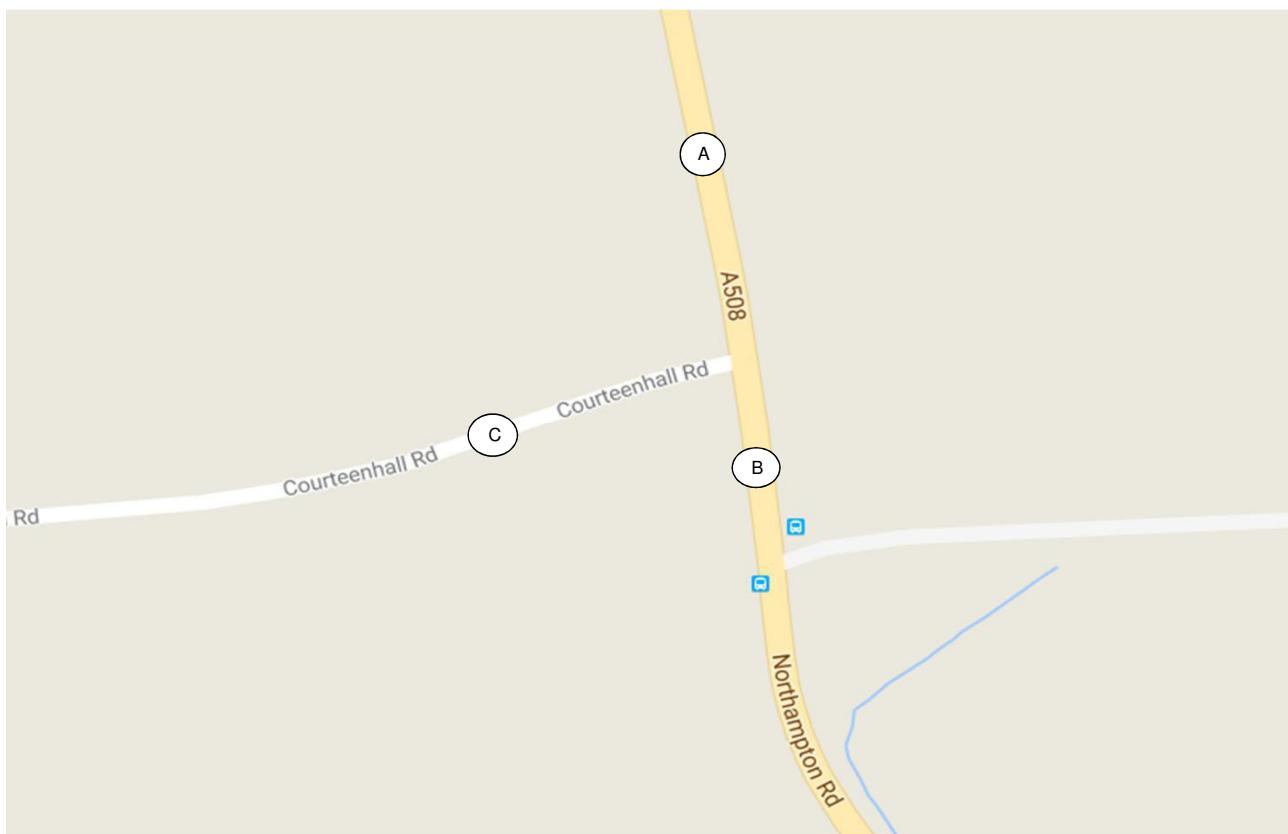
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	540	572					1112
	B	A508 (NB)	429	0	3					432
	C	Pury Rd	248	2	0					251
	D									
	E									
	F									
	G									
	Total		678	542	575					1795

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	404	301					705
	B	A508 (NB)	657	0	1					658
	C	Pury Rd	285	72	0					357
	D									
	E									
	F									
	G									
	Total		943	476	302					1720

Junction: (5) A508/ Courteenhall Road



AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	148	3					152
	B	A508 (NB)	124	0	0					124
	C	Courteenhall Rd	0	0	0					0
	D									
	E									
	F									
	G									
	Total		124	148	3					276

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	101	83					184
	B	A508 (NB)	77	0	0					77
	C	Courteenhall Rd	0	0	0					0
	D									
	E									
	F									
	G									
	Total		77	101	83					261

Junction: (9) A508/ Rookery Lane/ Ashton Road



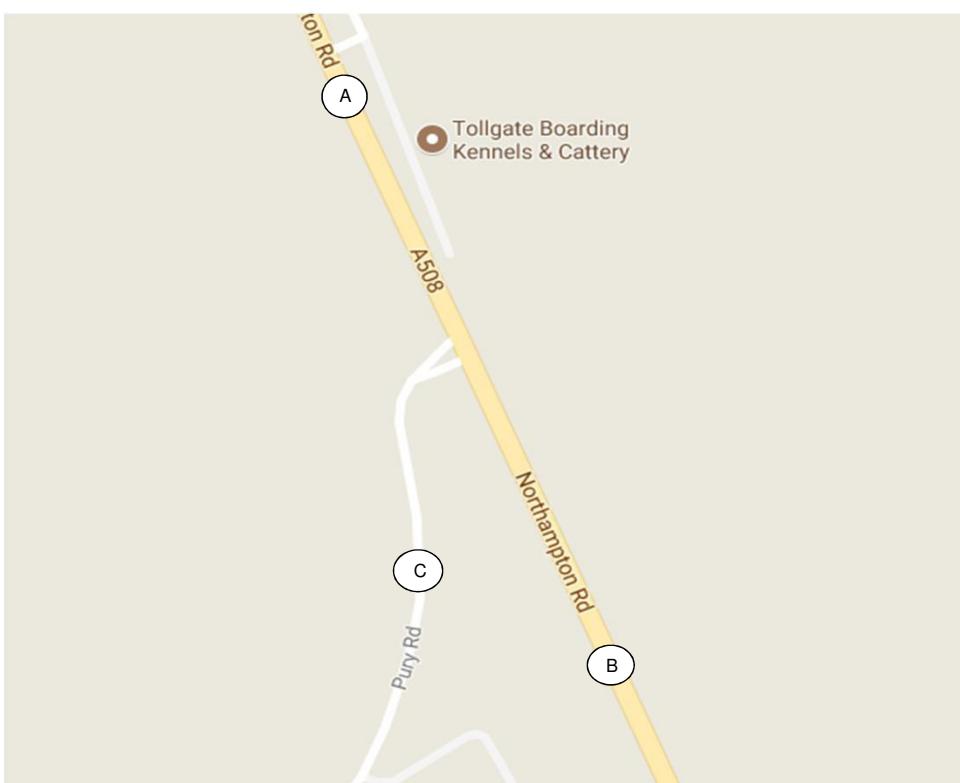
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	147	6				153
	B	Ashton Rd	0	0	0	0				0
	C	A508 (NB)	119	0	0	0				119
	D	Rookery Lane	2	6	0	0				8
	E									
	F									
	G									
	Total		121	6	147	6				281

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	100	2				102
	B	Ashton Rd	0	0	0	0				0
	C	A508 (NB)	81	0	0	0				81
	D	Rookery Lane	0	0	0	0				0
	E									
	F									
	G									
	Total		81	0	100	2				183

Junction: (10) A508/ Pury Road



AM (0800-0900)

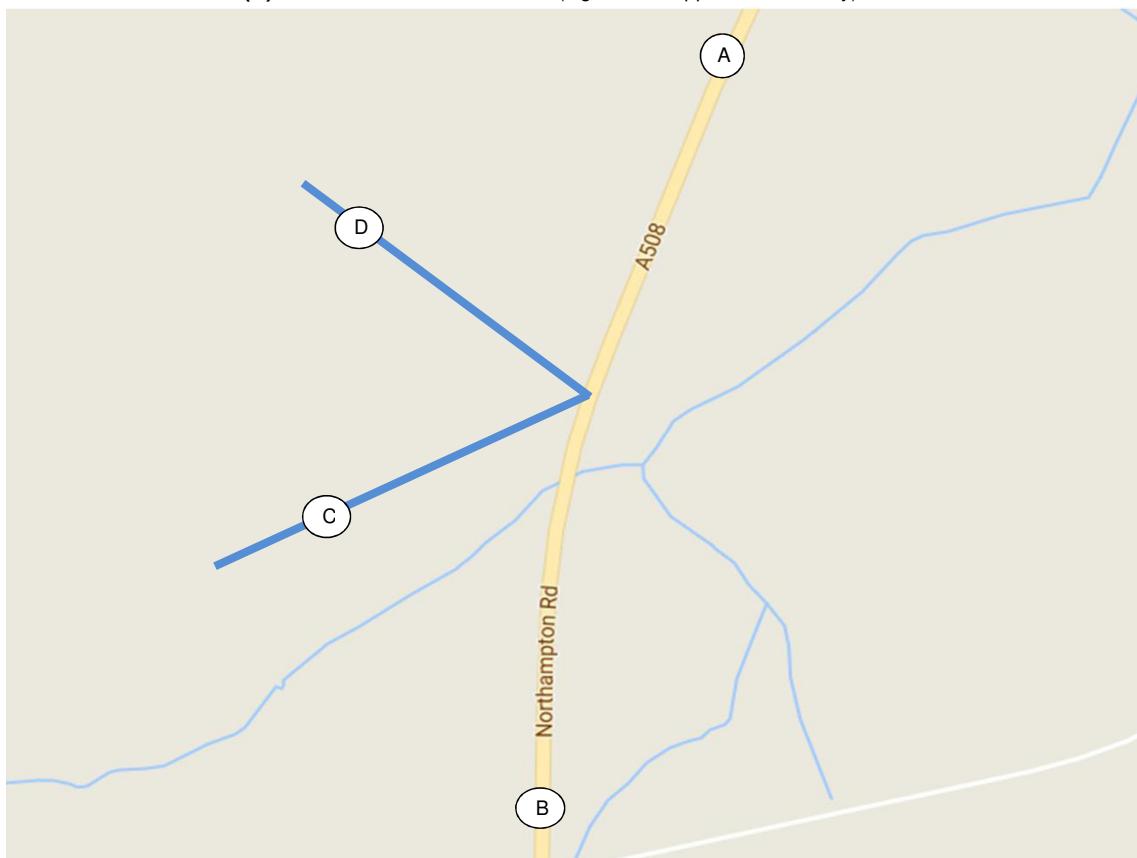
FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	90	61					151
	B	A508 (NB)	114	0	0					114
	C	Pury Rd	4	0	0					4
	Total		118	90	61					269

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	102	0					102
	B	A508 (NB)	83	0	0					83
	C	Pury Rd	3	0	0					3
	Total		86	102	0					188

J1a 2031 DEVELOPMENT CASE

Junction: (3) A508/ Site Access (Figure is an approximation only)



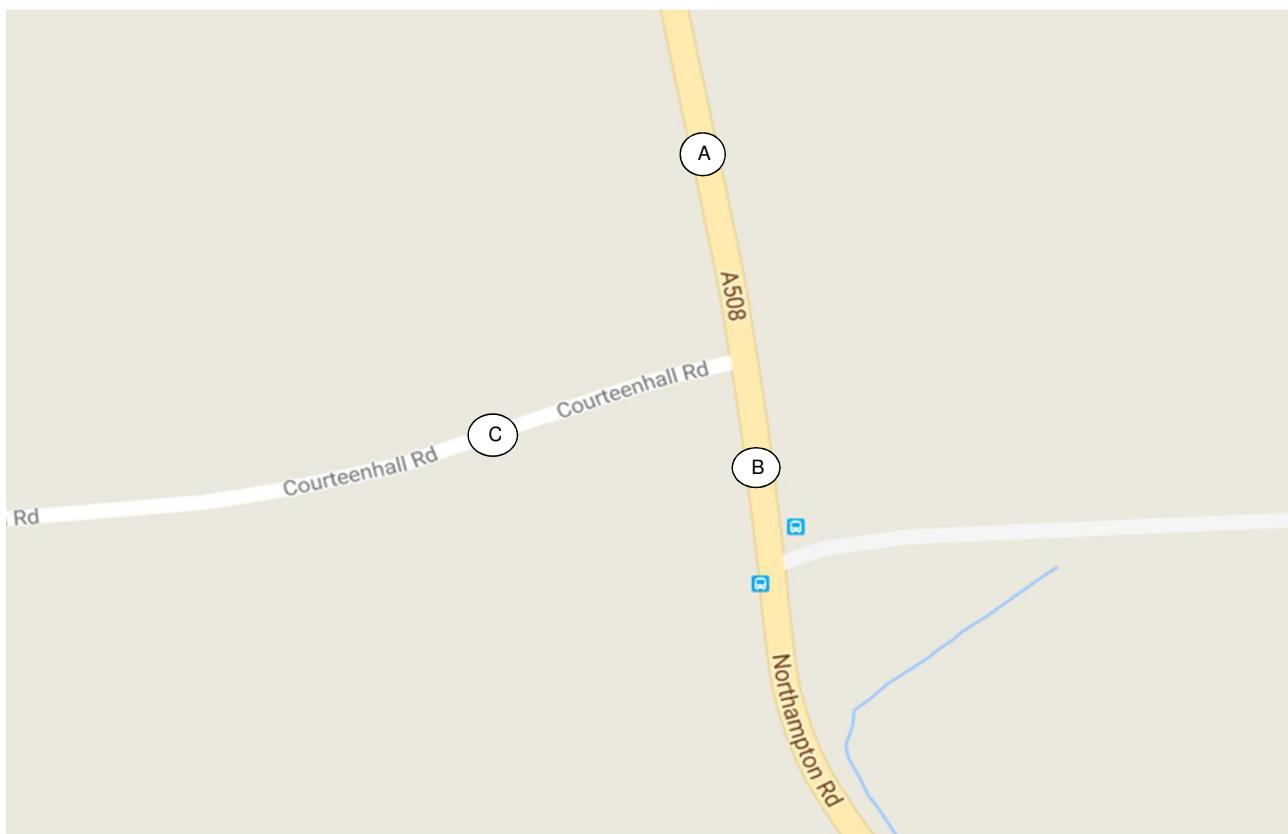
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1504	72	659				2234
	B	A508 (NB)	1123	0	12	122				1258
	C	Site Access	29	1	0	0				30
	D	Site Access	351	8	0	0				358
	E									
	F									
	G									
	Total		1502	1512	84	782				3880

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1071	36	359				1466
	B	A508 (NB)	1259	0	7	77				1343
	C	Site Access	94	9	0	0				103
	D	Site Access	920	79	0	0				999
	E									
	F									
	G									
	Total		2273	1158	43	436				3911

Junction: (5) A508/ Courteenhall Road



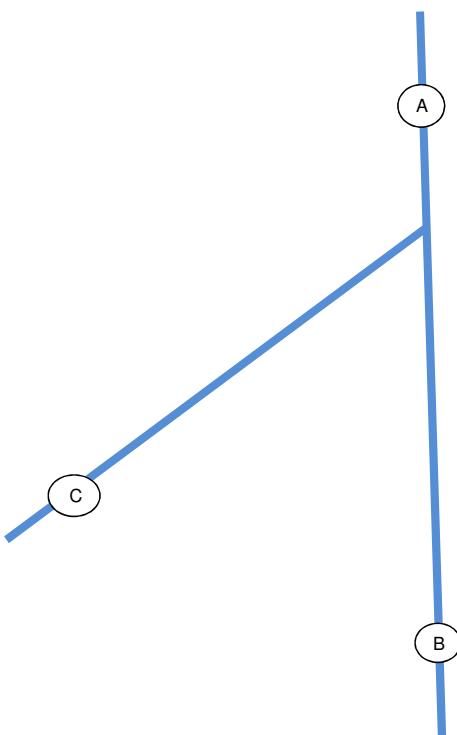
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1272	270					1542
	B	A508 (NB)	1135	0	92					1228
	C	Courteenhall Rd	229	11	0					240
D										
E										
F										
G										
Total			1364	1283	363					3010

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	855	224					1078
	B	A508 (NB)	1370	0	27					1397
	C	Courteenhall Rd	46	48	0					94
D										
E										
F										
G										
Total			1416	903	251					2570

Junction: (6) A508/ Roade Bypass northern roundabout



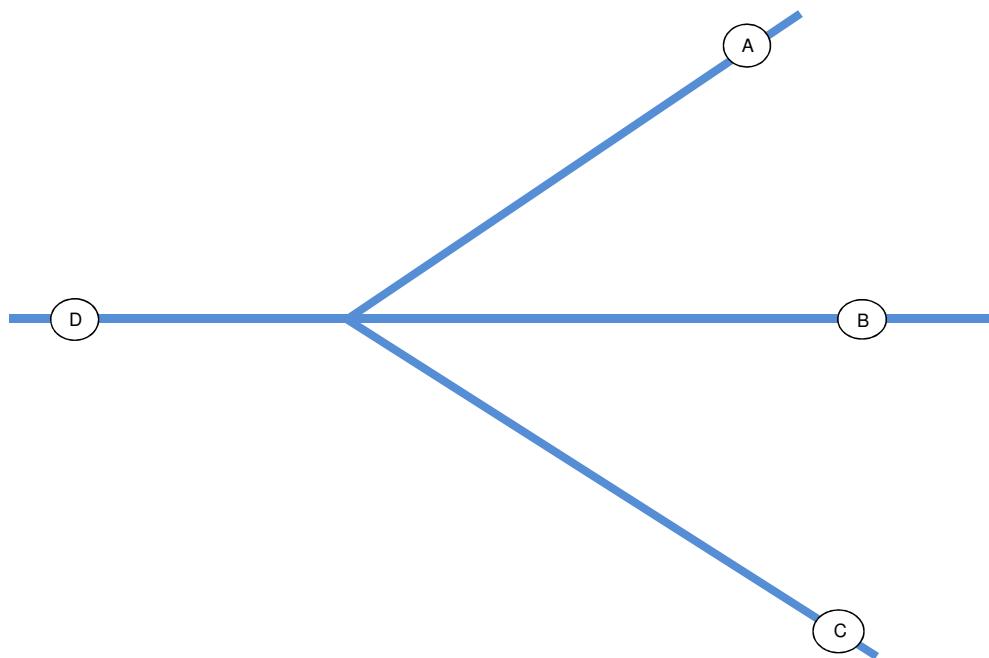
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	253	1023					1277
	B	A508 (NB)	216	0	83					299
	C	Roade Bypass	1012	103	0					1115
	D									
	E									
	F									
	G									
	Total		1228	356	1107					2691

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	192	624					816
	B	A508 (NB)	458	0	24					482
	C	Roade Bypass	939	199	0					1138
	D									
	E									
	F									
	G									
	Total		1397	392	647					2436

Junction: (7) Roade Bypass/ Knock Lane roundabout



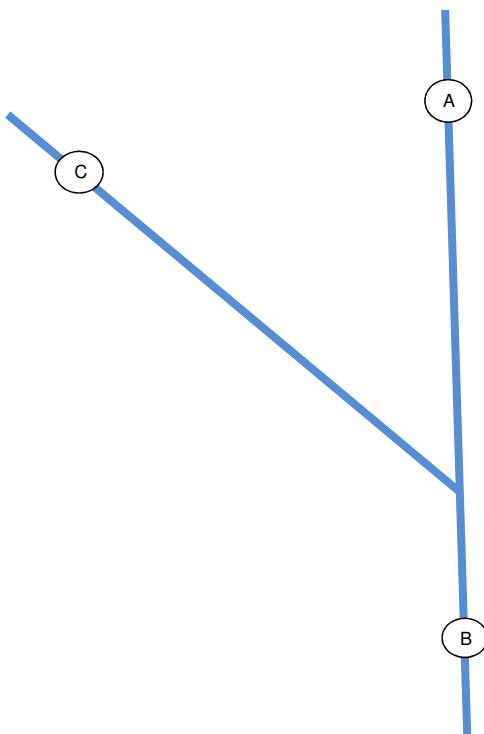
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	Road Bypass	0	21	1084	1				1107
	B	Knock Ln	13	0	87	1				102
	C	Road Bypass	998	13	0	3				1013
	D	Knock Ln	103	19	201	0				323
	E									
	F									
	G									
	Total		1114	53	1372	6				2544

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	Road Bypass	0	34	613	1				647
	B	Knock Ln	80	0	175	7				262
	C	Road Bypass	964	250	0	34				1248
	D	Knock Ln	94	25	106	0				225
	E									
	F									
	G									
	Total		1138	308	895	42				2383

Junction: (8) A508/ Roade Bypass southern roundabout



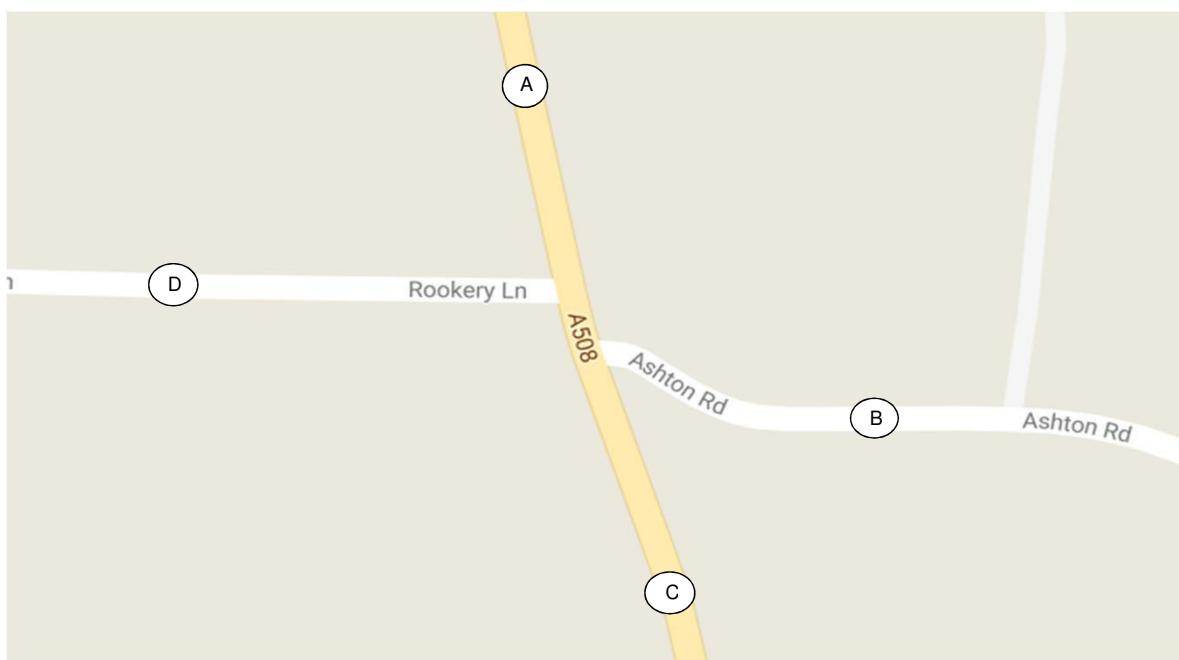
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	12	0					12
	B	A508 (NB)	7	0	1014					1020
	C	Roade Bypass	0	1375	0					1375
	D									
	E									
	F									
	G									
	Total		7	1387	1014					2408

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	11	0					11
	B	A508 (NB)	80	0	1248					1327
	C	Roade Bypass	0	895	0					895
	D									
	E									
	F									
	G									
	Total		80	906	1248					2233

Junction: (9) A508/ Rookery Lane/ Ashton Road



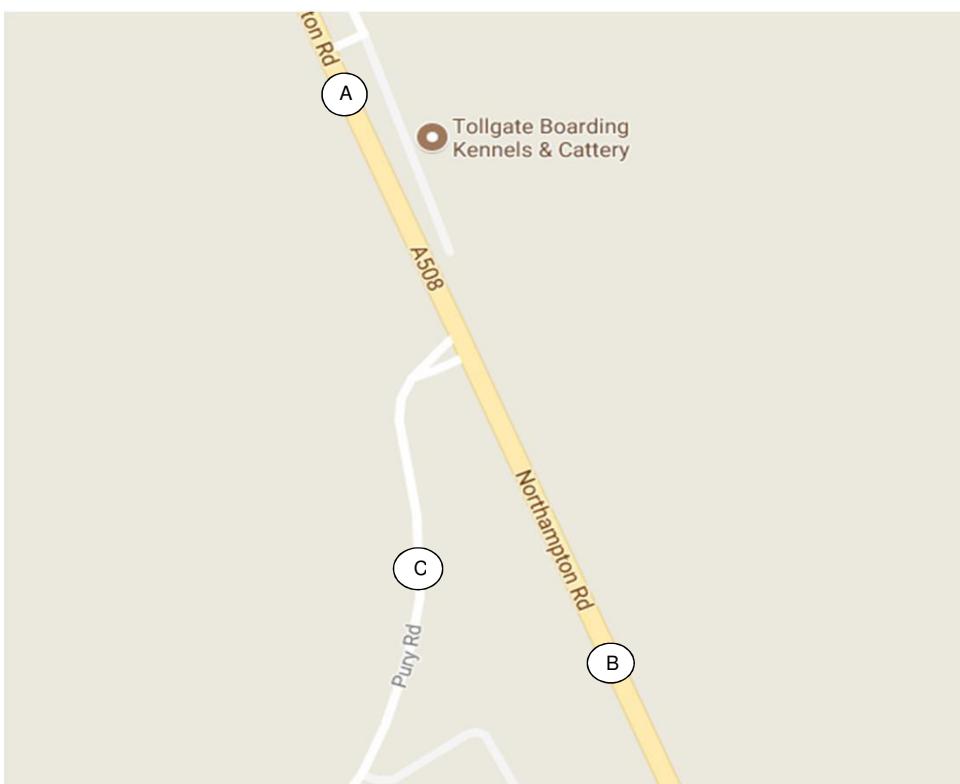
AM (0800-0900)

Jct Node Number	Road name	TO ARM							Total
		A	B	C	D	E	F	G	
A	A508 (SB)	0	1	1201	185				1387
B	Ashton Rd	4	0	0	43				47
C	A508 (NB)	725	80	0	0				805
D	Rookery Lane	293	33	6	0				332
E									
F									
G									
Total		1022	114	1207	227				2571

PM (1700-1800)

Jct Node Number	Road name	TO ARM							Total
		A	B	C	D	E	F	G	
A	A508 (SB)	0	13	734	159				906
B	Ashton Rd	8	0	5	7				21
C	A508 (NB)	1005	33	0	0				1038
D	Rookery Lane	315	3	0	0				318
E									
F									
G									
Total		1328	49	740	166				2283

Junction: (10) A508/ Pury Road



AM (0800-0900)

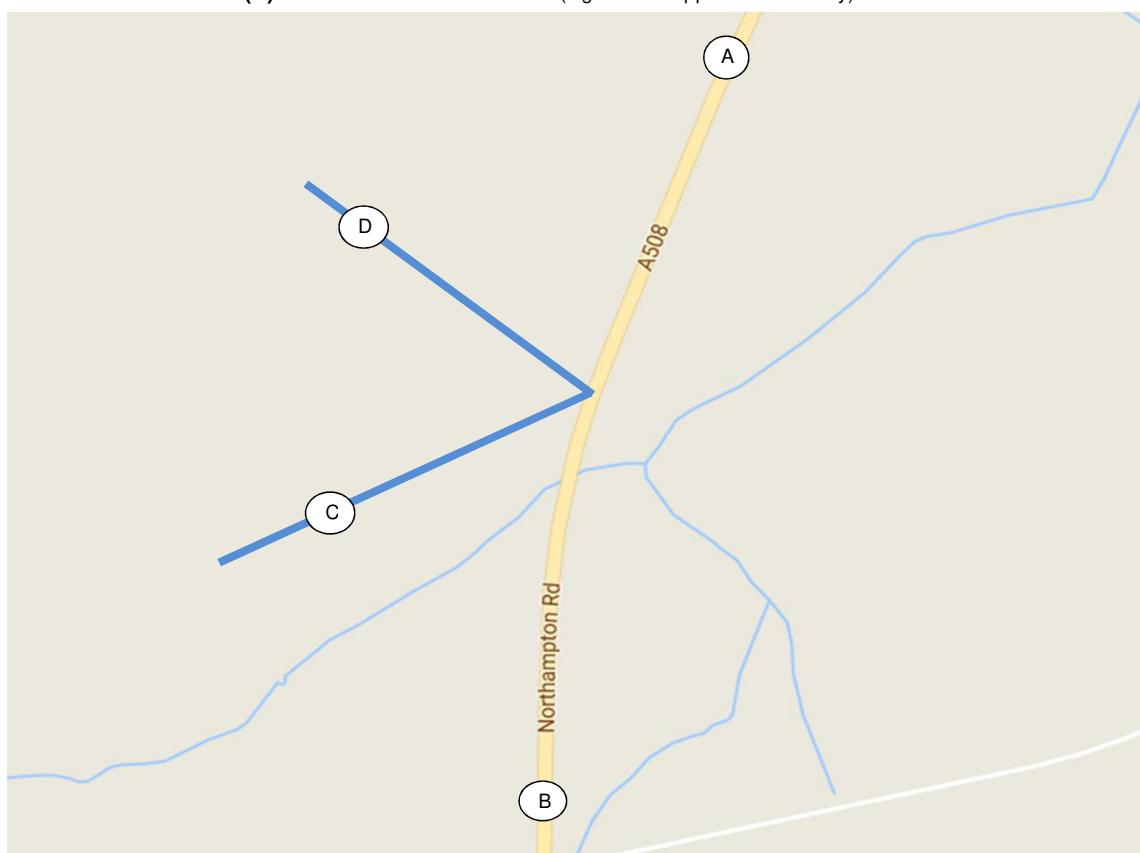
FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	746	554					1300
	B	A508 (NB)	550	0	11					561
	C	Pury Rd	315	2	0					317
	D									
	E									
	F									
	G									
	Total		865	748	566					2178

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	525	244					768
	B	A508 (NB)	946	0	1					947
	C	Pury Rd	234	61	0					296
	D									
	E									
	F									
	G									
	Total		1180	586	245					2011

Junction:**(3) A508/ Site Access**

(Figure is an approximation only)

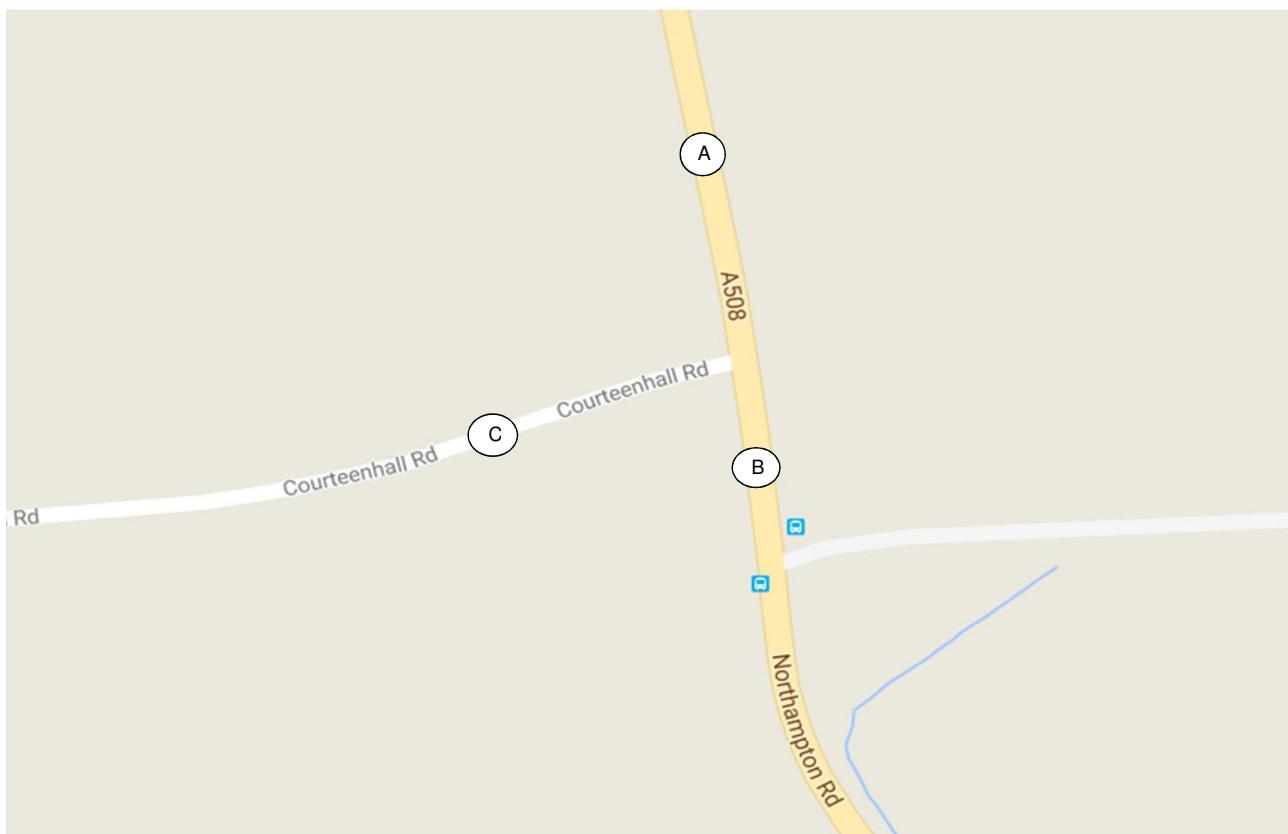
**HGV Flow****AM (0800-0900)**

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	16	187				203
	B	A508 (NB)	128	0	6	64				197
	C	Site Access	23	0	0	0				23
	D	Site Access	278	0	0	0				278
	E									
	F									
	G									
	Total		429	0	22	251				702

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	17	197				214
	B	A508 (NB)	101	0	5	58				164
	C	Site Access	23	0	0	0				23
	D	Site Access	278	0	0	0				278
	E									
	F									
	G									
	Total		402	0	22	255				679

Junction: (5) A508/ Courteenhall Road



HGV Flow

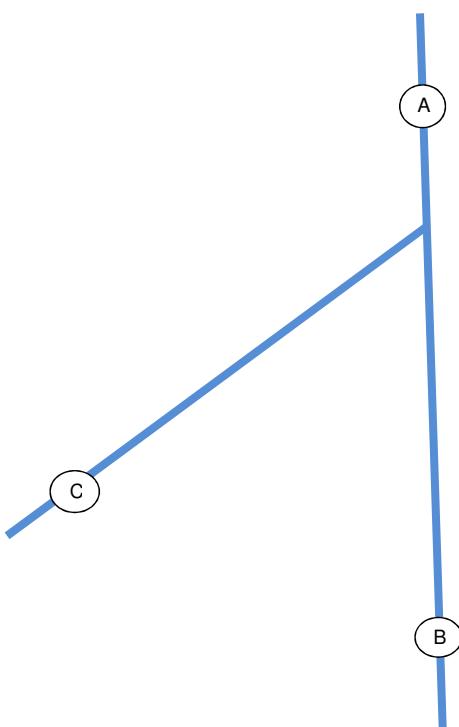
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	6	2					7
	B	A508 (NB)	189	0	0					189
	C	Courteenhall Rd	3	0	0					3
	D									
	E									
	F									
	G									
Total			192	6	2					199

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	0					1
	B	A508 (NB)	138	0	0					138
	C	Courteenhall Rd	3	0	0					3
	D									
	E									
	F									
	G									
Total			141	0	1					142

Junction: (6) A508/ Roade Bypass northern roundabout



HGV Flow

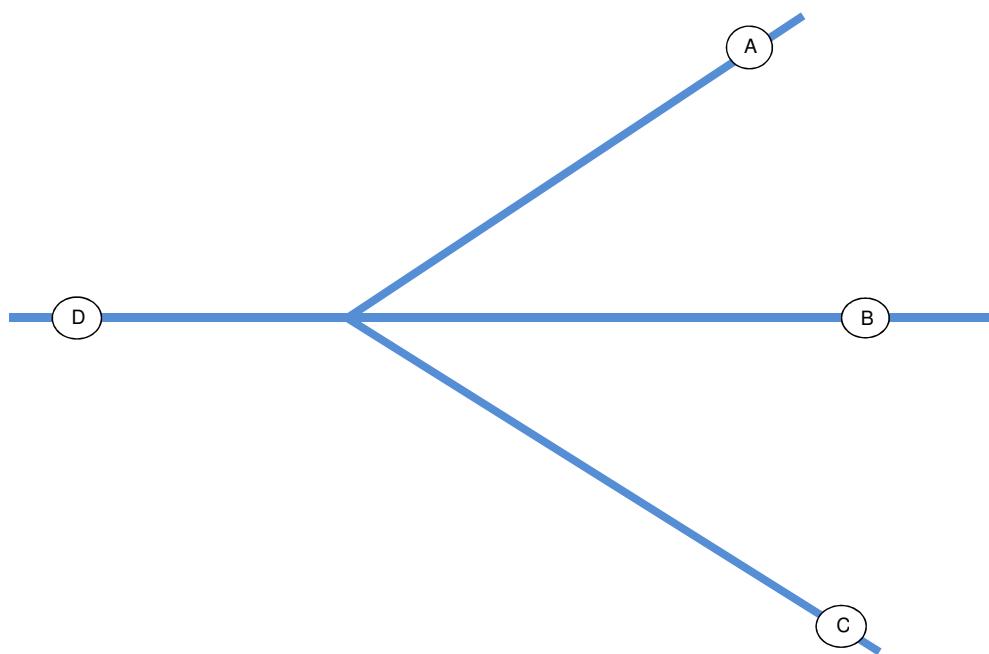
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1	5					6
	B	A508 (NB)	0	0	0					0
	C	Roade Bypass	187	0	0					187
	D									
	E									
	F									
	G									
	Total		187	1	5					193

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	0					0
	B	A508 (NB)	0	0	0					0
	C	Roade Bypass	136	0	0					136
	D									
	E									
	F									
	G									
	Total		136	0	0					137

Junction: (7) Roade Bypass/ Knock Lane roundabout



HGV Flow

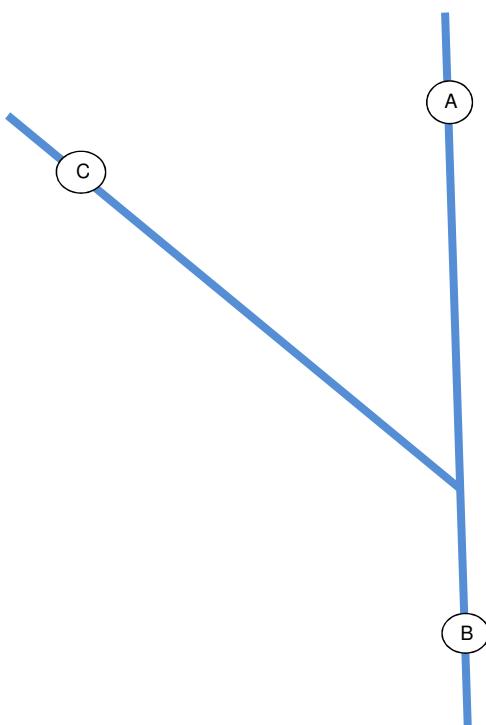
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	Road Bypass	0	0	5	0				5
	B	Knock Ln	0	0	0	0				0
	C	Road Bypass	187	0	0	0				187
	D	Knock Ln	0	0	4	0				4
	E									
	F									
	G									
Total			187	1	9	0				197

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	Road Bypass	0	0	0	0				0
	B	Knock Ln	0	0	0	0				0
	C	Road Bypass	137	0	0	0				137
	D	Knock Ln	0	0	0	0				0
	E									
	F									
	G									
Total			137	0	0	0				138

Junction: (8) A508/ Roade Bypass southern roundabout



HGV Flow

AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	0					0
	B	A508 (NB)	0	0	187					187
	C	Roade Bypass	0	9	0					9
	D									
	E									
	F									
	G									
Total			0	9	187					196

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	0					0
	B	A508 (NB)	0	0	137					138
	C	Roade Bypass	0	0	0					0
	D									
	E									
	F									
	G									
Total			0	0	137					138

Junction: (9) A508/ Rookery Lane/ Ashton Road



HGV Flow

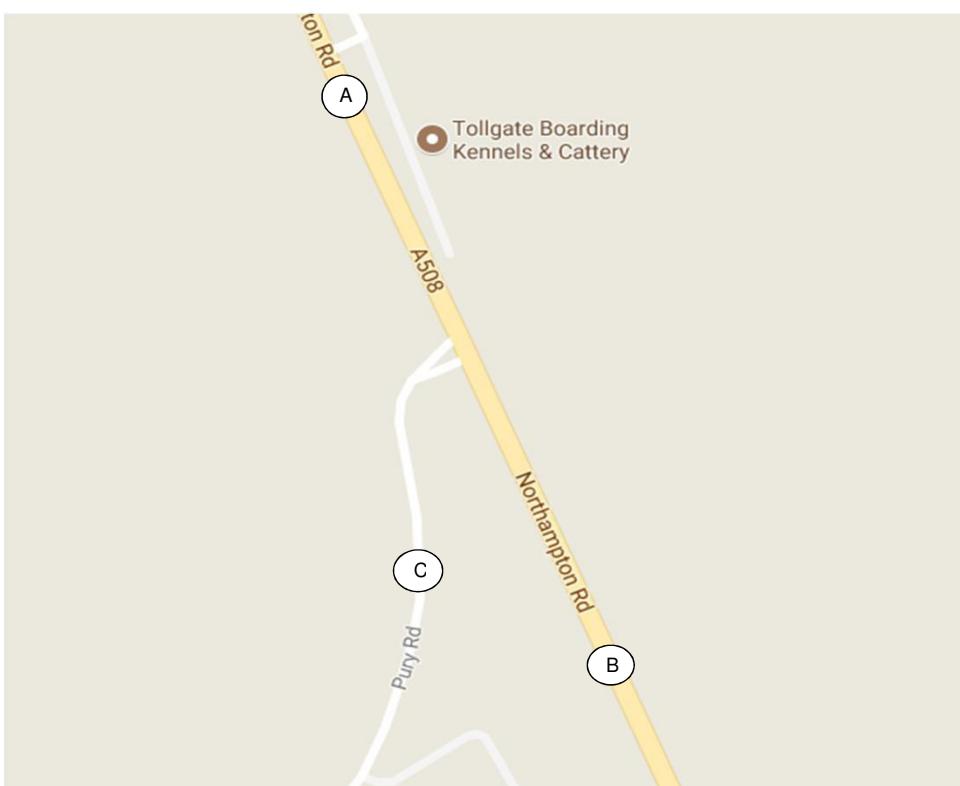
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	4	5				9
	B	Ashton Rd	1	0	0	0				1
	C	A508 (NB)	143	0	0	0				143
	D	Rookery Lane	43	6	0	0				49
	E									
	F									
	G									
	Total		187	6	4	6				202

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	0	0				0
	B	Ashton Rd	0	0	0	0				0
	C	A508 (NB)	100	0	0	0				100
	D	Rookery Lane	37	0	0	0				37
	E									
	F									
	G									
	Total		137	0	0	0				138

Junction: (10) A508/ Pury Road



HGV Flow

AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	81	0					81
	B	A508 (NB)	140	0	0					140
	C	Pury Rd	0	0	0					0
	Total		140	81	0					222

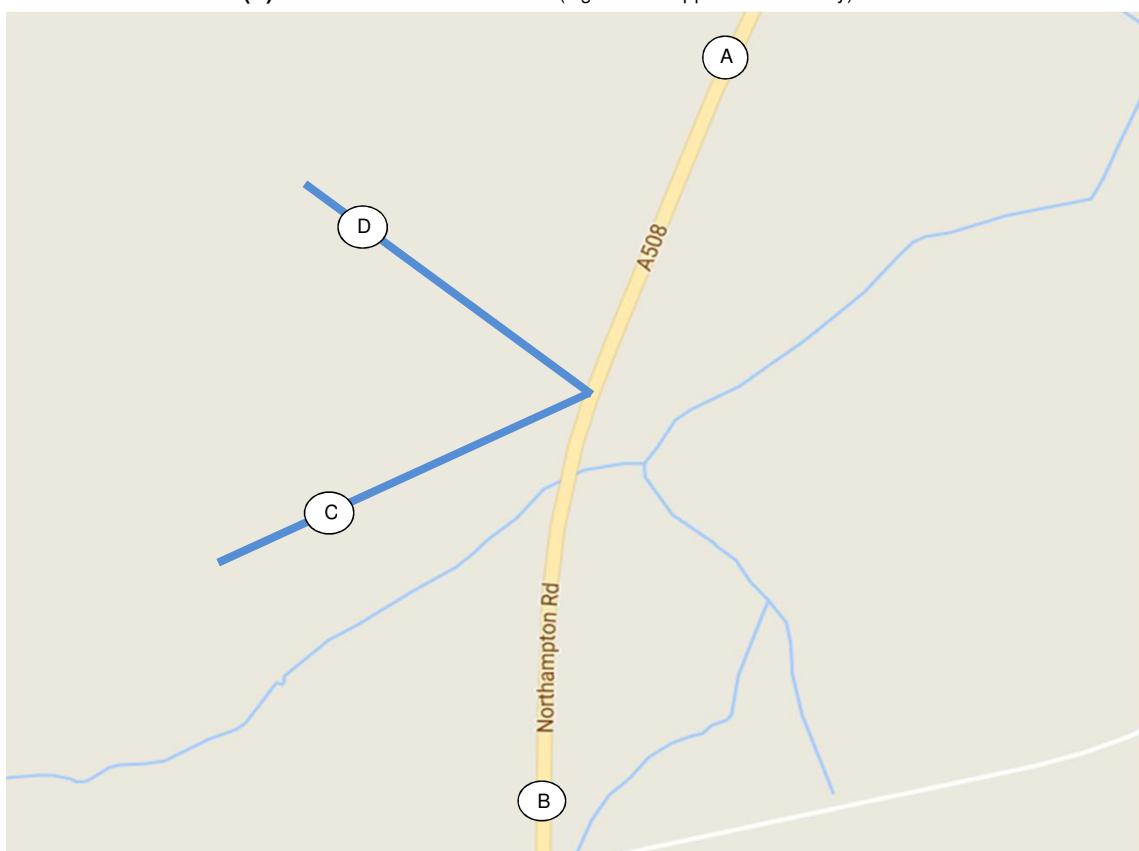
PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	14	0					14
	B	A508 (NB)	106	0	0					106
	C	Pury Rd	0	0	0					0
	Total		106	14	0					120

J1c 2031 DEVELOPMENT CASE

Junction:**(3) A508/ Site Access**

(Figure is an approximation only)

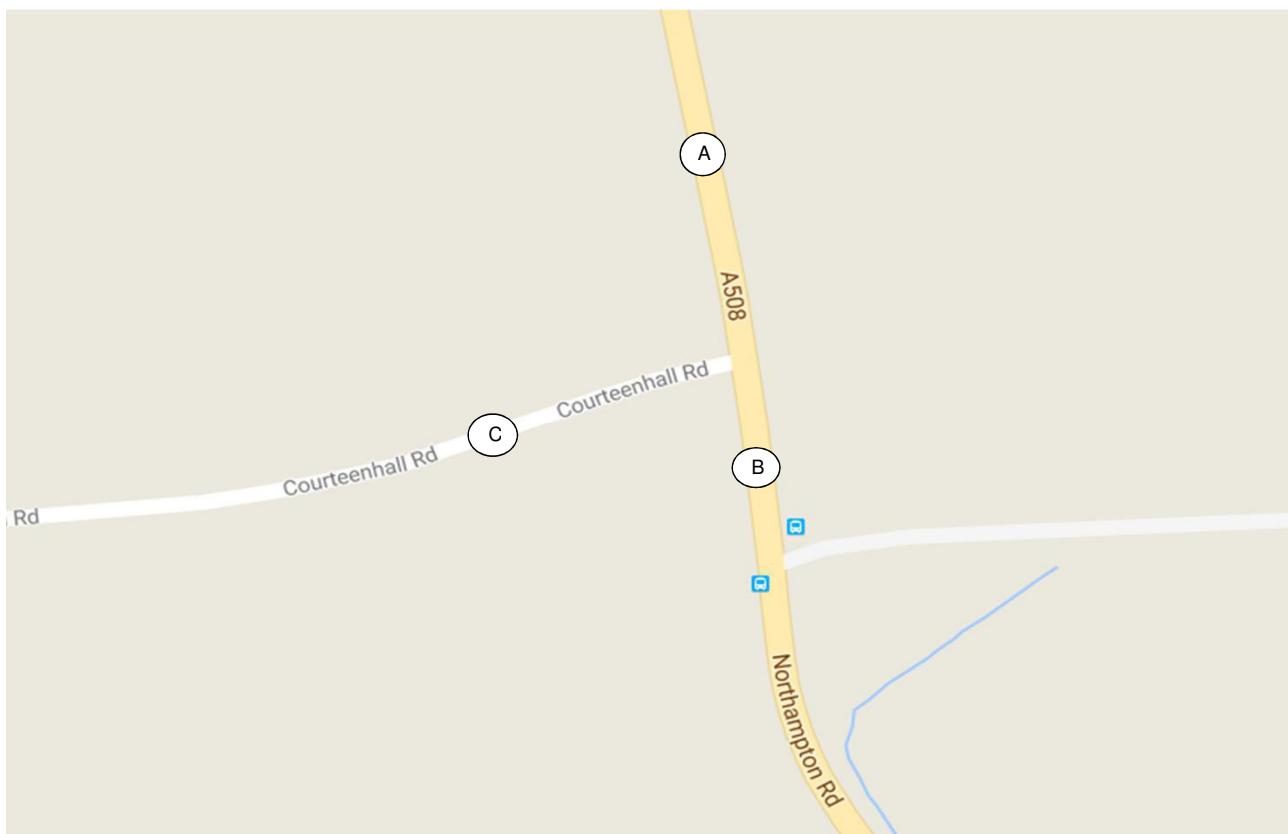
**AM (0800-0900)**

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1528	73	675				2277
	B	A508 (NB)	1195	0	12	123				1331
	C	Site Access	29	1	0	0				30
	D	Site Access	351	7	0	0				358
	E									
	F									
	G									
	Total		1575	1536	86	798				3995

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1441	36	361				1838
	B	A508 (NB)	1310	0	7	77				1394
	C	Site Access	94	8	0	0				103
	D	Site Access	921	78	0	0				999
	E									
	F									
	G									
	Total		2325	1527	43	438				4333

Junction: (5) A508/ Courteenhall Road



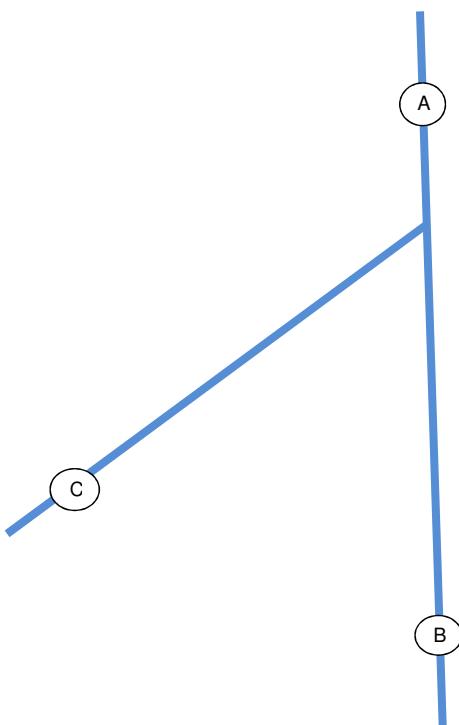
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1549	0					1549
	B	A508 (NB)	1160	0	125					1285
	C	Courteenhall Rd	274	0	0					274
	D									
	E									
	F									
	G									
	Total		1434	1549	125					3107

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1459	0					1459
	B	A508 (NB)	1389	0	70					1459
	C	Courteenhall Rd	78	0	0					78
	D									
	E									
	F									
	G									
	Total		1468	1459	70					2996

Junction: (6) A508/ Roade Bypass northern roundabout



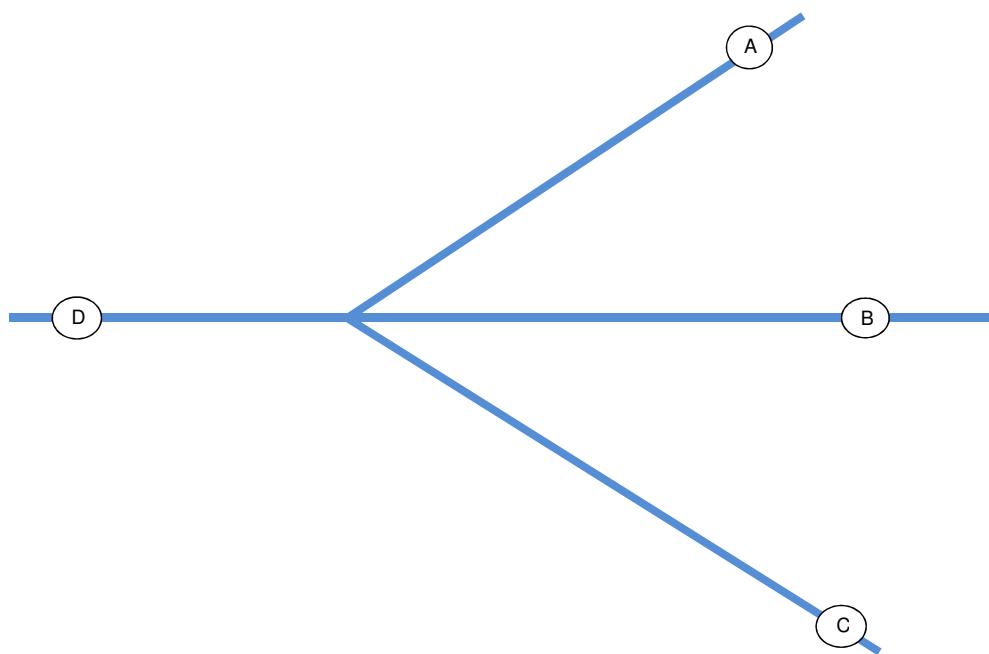
AM (0800-0900)

Jct Node Number	Road name	TO ARM							Total
		A	B	C	D	E	F	G	
A	A508 (SB)	0	373	1175					1549
B	A508 (NB)	253	0	0					253
C	Roade Bypass	1031	116	0					1147
D									
E									
F									
G									
Total		1285	489	1175					2949

PM (1700-1800)

Jct Node Number	Road name	TO ARM							Total
		A	B	C	D	E	F	G	
A	A508 (SB)	0	418	1041					1459
B	A508 (NB)	469	0	0					469
C	Roade Bypass	991	151	0					1141
D									
E									
F									
G									
Total		1459	569	1041					3069

Junction: (7) Roade Bypass/ Knock Lane roundabout



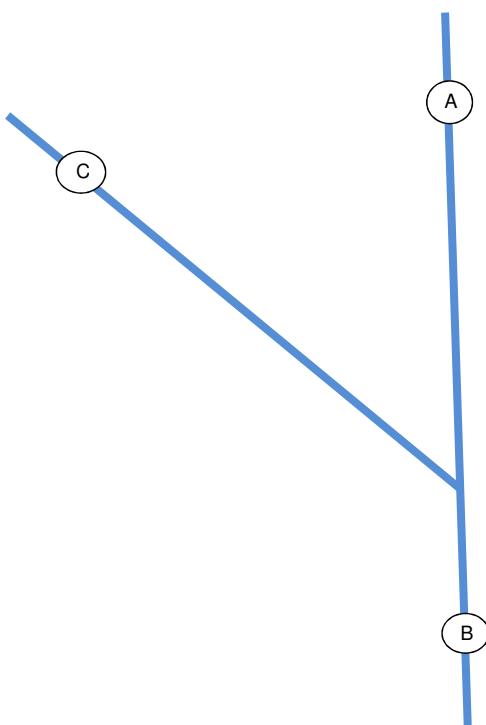
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	Road Bypass	0	39	1095	41				1175
	B	Knock Ln	14	0	16	1				30
	C	Road Bypass	1014	5	0	3				1022
	D	Knock Ln	120	19	103	0				241
	E									
	F									
	G									
	Total		1148	63	1214	44				2469

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	Road Bypass	0	48	913	79				1041
	B	Knock Ln	118	0	7	5				130
	C	Road Bypass	885	108	0	1				994
	D	Knock Ln	138	11	0	0				149
	E									
	F									
	G									
	Total		1141	168	920	85				2314

Junction: (8) A508/ Roade Bypass southern roundabout



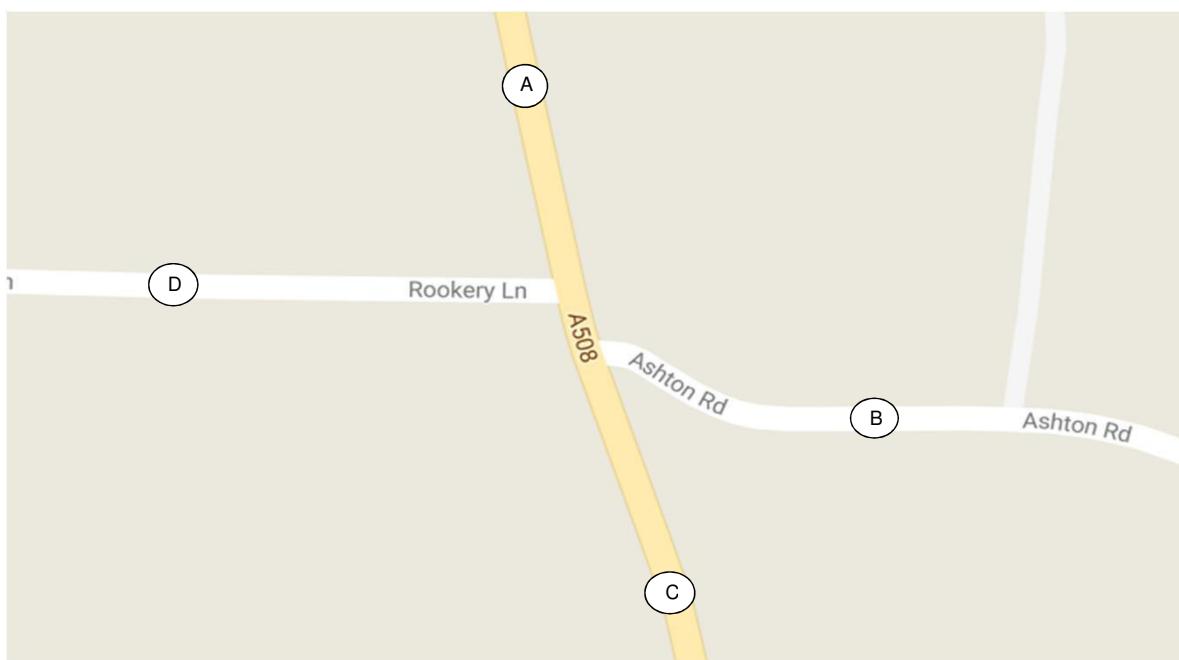
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	164	0					164
	B	A508 (NB)	15	0	1022					1036
	C	Roade Bypass	0	1214	0					1214
	D									
	E									
	F									
	G									
Total			15	1378	1022					2414

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	17	0					17
	B	A508 (NB)	335	0	994					1328
	C	Roade Bypass	0	920	0					920
	D									
	E									
	F									
	G									
Total			335	937	994					2265

Junction: (9) A508/ Rookery Lane/ Ashton Road



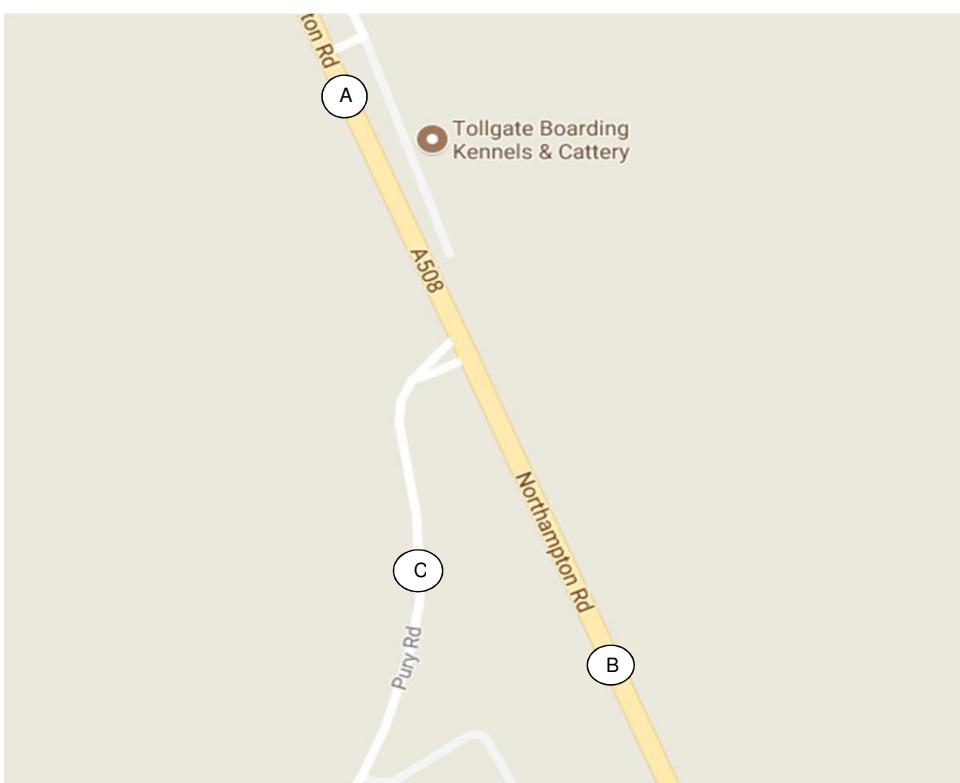
AM (0800-0900)

Jct Node Number	Road name	TO ARM							Total
		A	B	C	D	E	F	G	
A	A508 (SB)	0	2	1201	175				1378
B	Ashton Rd	3	0	1	34				38
C	A508 (NB)	771	81	0	0				852
D	Rookery Lane	265	30	12	0				307
E									
F									
G									
Total		1039	113	1214	208				2574

PM (1700-1800)

Jct Node Number	Road name	TO ARM							Total
		A	B	C	D	E	F	G	
A	A508 (SB)	0	0	703	234				937
B	Ashton Rd	2	0	20	12				34
C	A508 (NB)	1030	33	0	0				1063
D	Rookery Lane	300	8	0	0				308
E									
F									
G									
Total		1332	41	724	246				2342

Junction: (10) A508/ Pury Road



AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	753	556					1310
	B	A508 (NB)	566	0	8					574
	C	Pury Rd	343	2	0					345
	D									
	E									
	F									
	G									
	Total		909	755	564					2228

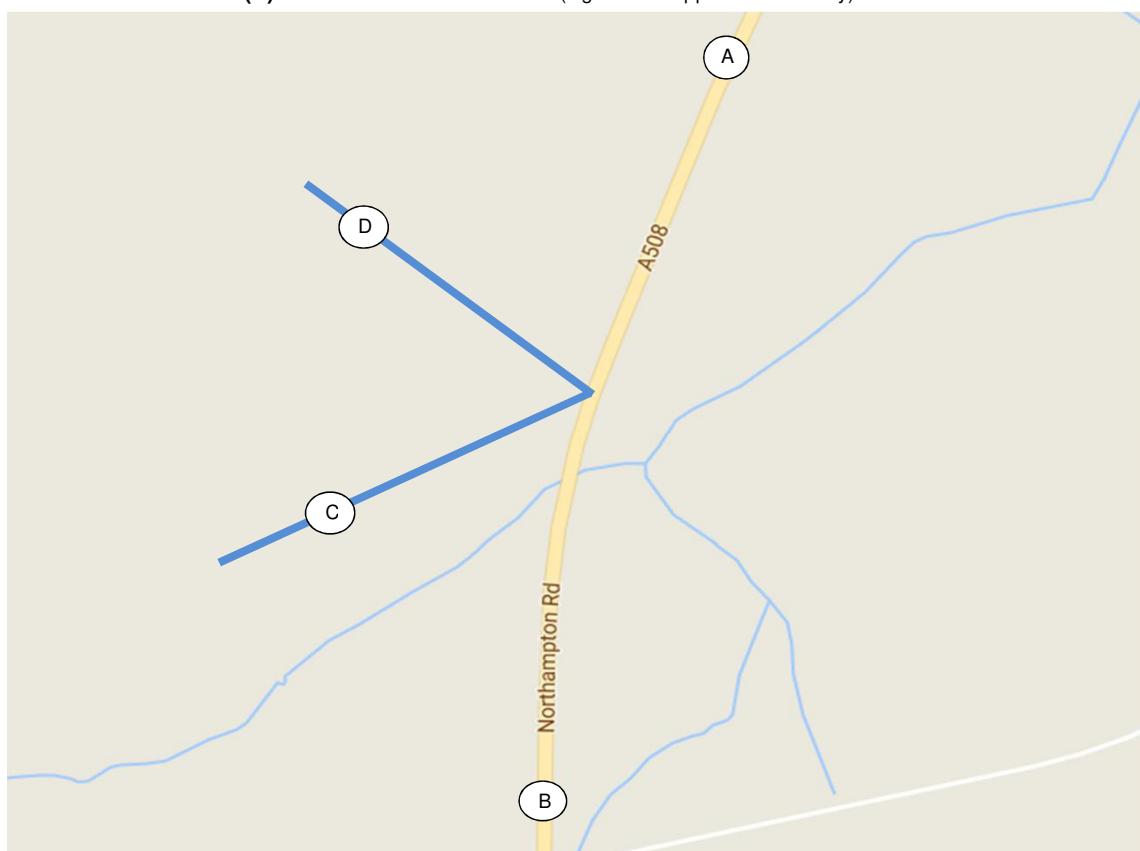
PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	430	353					784
	B	A508 (NB)	916	0	1					917
	C	Pury Rd	281	41	0					323
	D									
	E									
	F									
	G									
	Total		1198	472	354					2024

Junction:

(3) A508/ Site Access

(Figure is an approximation only)



HGV Flow

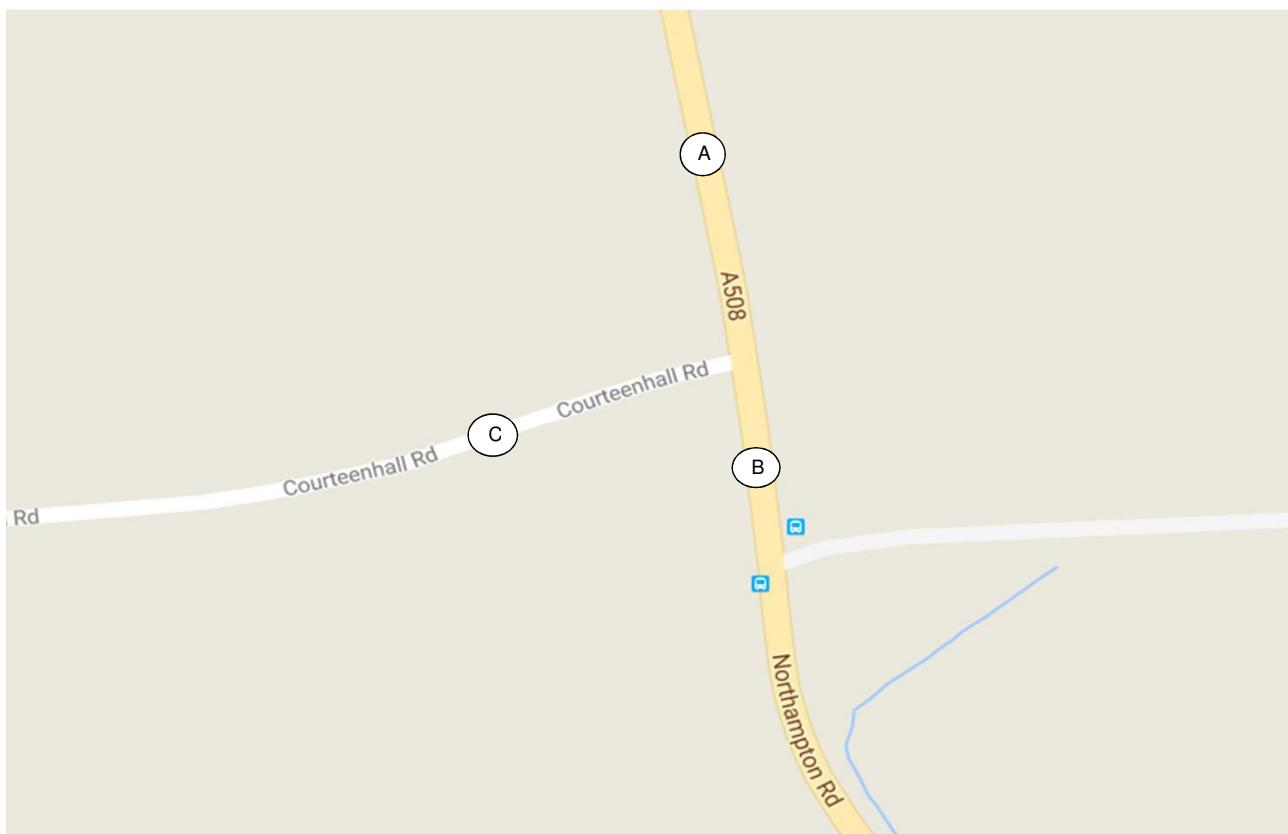
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	182	17	192				390
	B	A508 (NB)	127	0	6	64				196
	C	Site Access	23	0	0	0				23
	D	Site Access	278	0	0	0				278
	E									
	F									
	G									
	Total		429	182	22	255				888

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	173	17	198				389
	B	A508 (NB)	99	0	5	57				161
	C	Site Access	23	0	0	0				23
	D	Site Access	278	0	0	0				278
	E									
	F									
	G									
	Total		400	173	22	256				851

Junction: (5) A508/ Courteenhall Road



HGV Flow

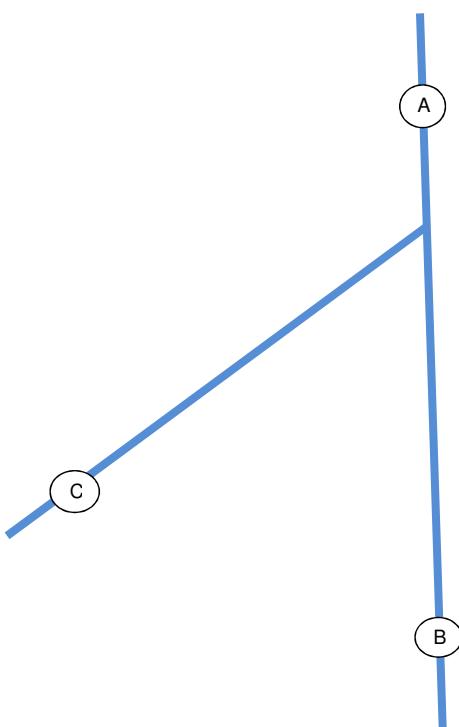
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	187	0					187
	B	A508 (NB)	189	0	1					190
	C	Courteenhall Rd	3	0	0					3
	D									
	E									
	F									
	G									
	Total		192	187	1					380

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	138	0					138
	B	A508 (NB)	128	0	1					128
	C	Courteenhall Rd	13	0	0					13
	D									
	E									
	F									
	G									
	Total		141	138	1					279

Junction: (6) A508/ Roade Bypass northern roundabout



HGV Flow

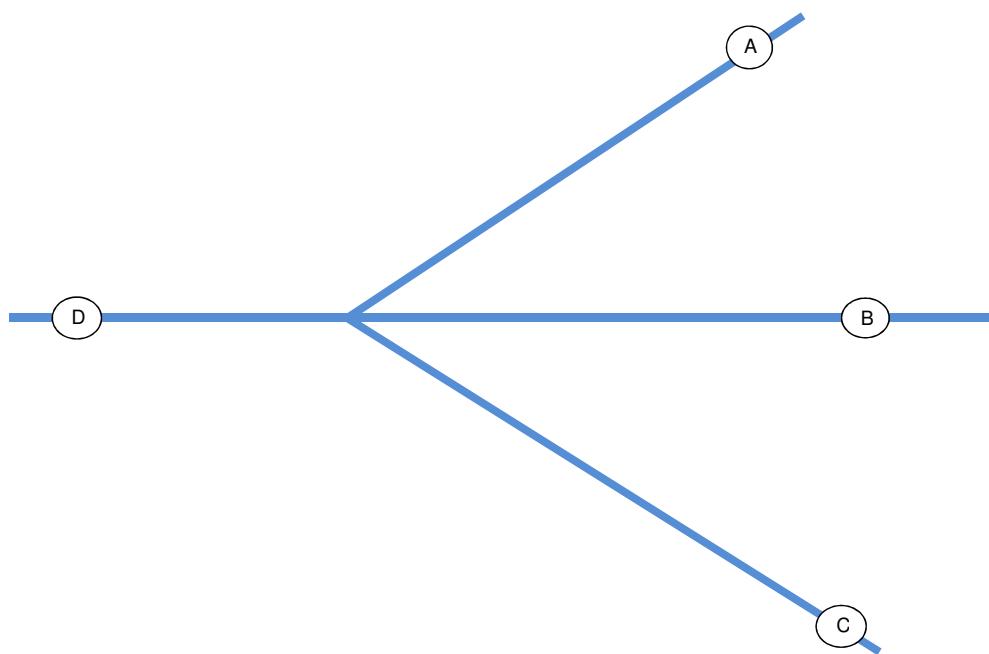
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1	186					187
	B	A508 (NB)	2	0	0					2
	C	Roade Bypass	188	0	0					188
	D									
	E									
	F									
	G									
	Total		190	1	186					376

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	1	137					138
	B	A508 (NB)	0	0	0					0
	C	Roade Bypass	126	0	0					126
	D									
	E									
	F									
	G									
	Total		126	1	137					264

Junction: (7) Roade Bypass/ Knock Lane roundabout



HGV Flow

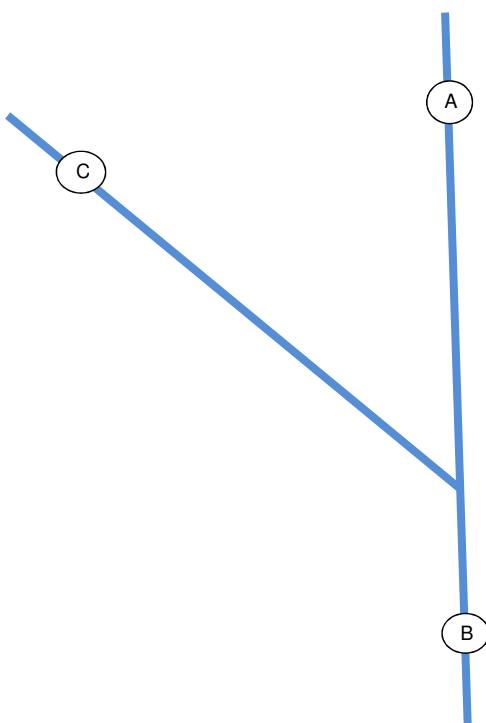
AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM						Total
			A	B	C	D	E	F	
	A	Road Bypass	0	1	185	0			186
	B	Knock Ln	0	0	0	0			0
	C	Road Bypass	187	0	0	0			187
	D	Knock Ln	0	0	0	0			0
	E								
	F								
	G								
Total			187	1	185	0			373

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM						Total
			A	B	C	D	E	F	
	A	Road Bypass	0	0	137	0			137
	B	Knock Ln	0	0	0	0			0
	C	Road Bypass	127	0	0	0			127
	D	Knock Ln	0	0	0	0			0
	E								
	F								
	G								
Total			127	0	137	0			264

Junction: (8) A508/ Roade Bypass southern roundabout



HGV Flow

AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	0					0
	B	A508 (NB)	0	0	187					187
	C	Roade Bypass	0	186	0					186
	D									
	E									
	F									
	G									
	Total		0	186	187					374

PM (1700-1800)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	0	0					0
	B	A508 (NB)	0	0	127					127
	C	Roade Bypass	0	137	0					137
	D									
	E									
	F									
	G									
	Total		0	137	127					264

Junction: (9) A508/ Rookery Lane/ Ashton Road



HGV Flow

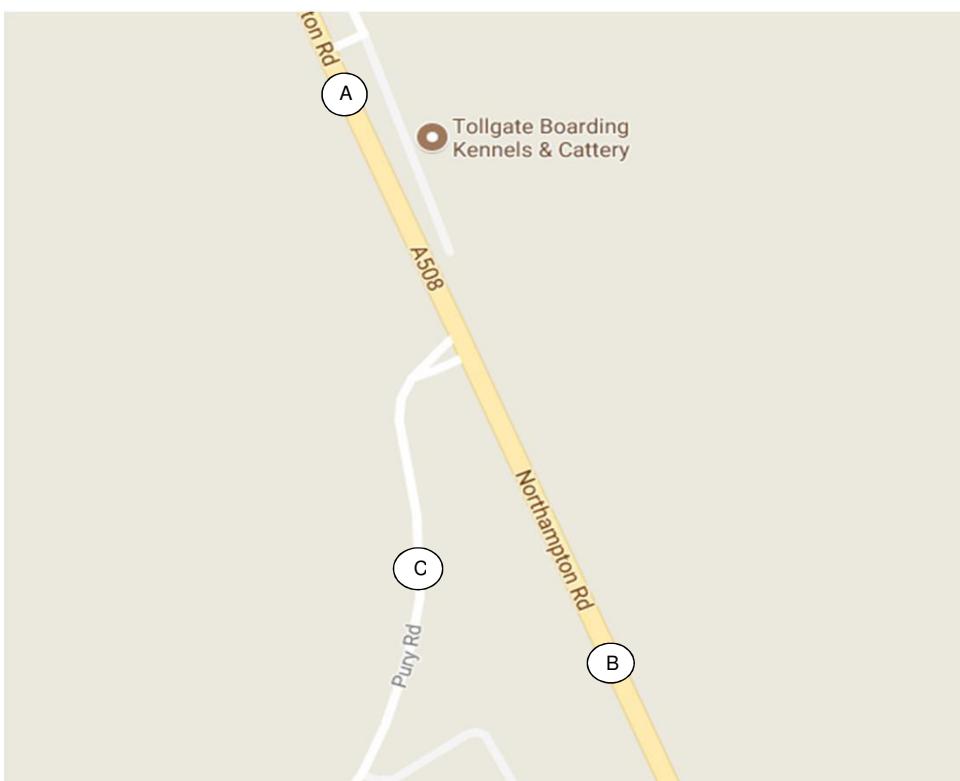
AM (0800-0900)

Jct Node Number	Road name	TO ARM						Total
		A	B	C	D	E	F	
A	A508 (SB)	0	0	169	20			189
B	Ashton Rd	0	0	0	0			1
C	A508 (NB)	144	0	0	0			144
D	Rookery Lane	43	6	0	0			49
E								
F								
G								
Total		188	6	169	20			383

PM (1700-1800)

Jct Node Number	Road name	TO ARM						Total
		A	B	C	D	E	F	
A	A508 (SB)	0	0	115	22			137
B	Ashton Rd	0	0	0	0			0
C	A508 (NB)	100	0	0	0			100
D	Rookery Lane	27	0	0	0			27
E								
F								
G								
Total		127	0	115	22			265

Junction: (10) A508/ Pury Road



HGV Flow

AM (0800-0900)

FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	167	0					167
	B	A508 (NB)	141	0	0					141
	C	Pury Rd	0	0	0					0
	Total		141	167	0					309

PM (1700-1800)

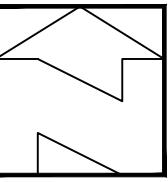
FROM ARM	Jct Node Number	Road name	TO ARM							Total
			A	B	C	D	E	F	G	
	A	A508 (SB)	0	110	0					110
	B	A508 (NB)	106	0	0					106
	C	Pury Rd	0	0	0					0
	Total		106	110	0					216

APPENDIX D

A508/COURTEENHALL ROAD PICADY OUTPUT

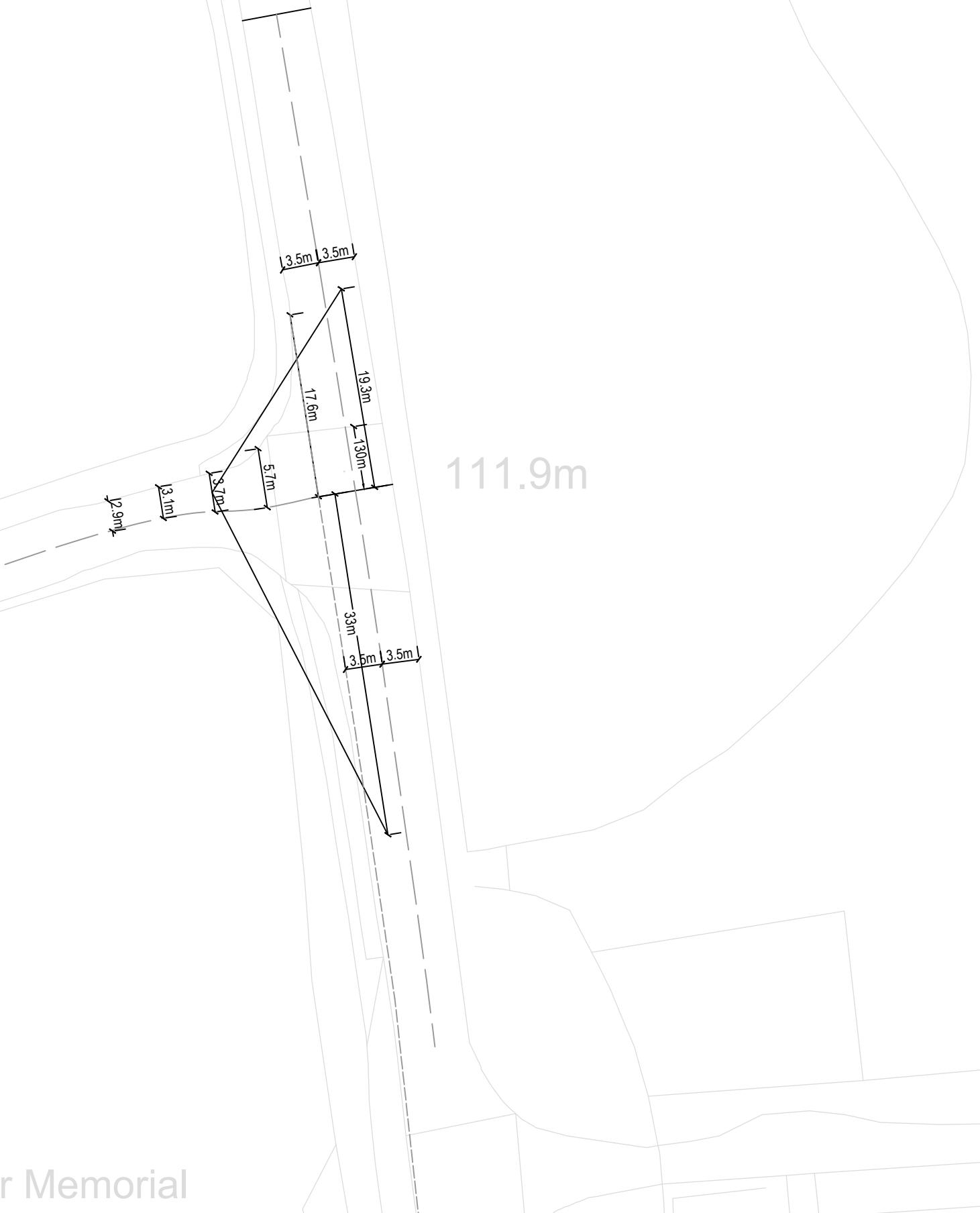
EXISTING JUNCTION ARRANGEMENT

Knot



War Memorial

111.9m



Junctions 8
PICADY 8 - Priority Intersection Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2017
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The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: A508 Couteenhall Road Picady (Existing Layout NSTM).arc8

Path: C:\Users\ADCteam\Dropbox\~ JN8 TEMP\ADC1475\A508 - Couteenhall Road picady

Report generation date: 25/08/2017 16:27:54

- » (Default Analysis Set) - D1, AM
- » (Default Analysis Set) - D1, PM
- » (Default Analysis Set) - J1A, AM
- » (Default Analysis Set) - J1A, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A1 - D1						
Stream B-C	52.03	2333.11	2.71	20.14	4425.53	325.40
Stream B-A	27.91	2414.59	2.66	53.05	4165.67	316.31
Stream C-AB	10.26	140.19	1.19	27.11	286.23	1.39
Stream C-A	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-
A1 - J1A						
Stream B-C	138.41	1709.17	9999999999.00	25.80	1423.97	9999999999.00
Stream B-A	7.03	1920.23	9999999999.00	28.02	1425.04	9999999999.00
Stream C-AB	33.37	392.30	1.57	20.87	236.58	1.29
Stream C-A	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

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

"D1 - D1, AM" model duration: 07:45 - 09:15

"D2 - D1, PM" model duration: 16:45 - 18:15

"D3 - J1A, AM" model duration: 07:45 - 09:15

"D4 - J1A, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 25/08/2017 16:27:48

File summary

Title	A508/Courteenhall Road
Location	
Site Number	
Date	20/07/2017
Version	
Status	(new file)
Identifier	
Client	Roxhill (Junciton 15) Ltd
Jobnumber	ADC1475
Enumerator	ADCTeam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - D1, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
D1, AM	D1	AM	2031 Reference Case	ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		670.63	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Coutenahall Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	130.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.70	3.70	3.10	2.90	✓	1.00	19	33

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	524.112	0.091	0.231	0.145	0.330
1	B-C	689.048	0.101	0.255	-	-
1	C-B	649.248	0.241	0.241	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	852.00	100.000
B	ONE HOUR	✓	232.00	100.000
C	ONE HOUR	✓	1366.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	87.000	765.000	
B	80.000	0.000	152.000	
C	1066.000	300.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.10	0.90	
B	0.34	0.00	0.66	
C	0.78	0.22	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.211	
B	1.000	1.000	1.000	
C	1.181	1.013	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	16.2	
B	0.0	0.0	0.0	
C	13.9	1.0	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	2.71	2333.11	52.03	F	139.48	209.22	1832.99	525.67	20.37	1836.63	526.72
B-A	2.66	2414.59	27.91	F	73.41	110.11	1019.02	555.26	11.32	1021.95	556.85
C-AB	1.19	140.19	10.26	F	678.49	1017.74	430.98	25.41	4.79	431.08	25.41
C-A	-	-	-	-	574.97	862.46	-	-	-	-	-
A-B	-	-	-	-	79.83	119.75	-	-	-	-	-
A-C	-	-	-	-	701.98	1052.97	-	-	-	-	-

(Default Analysis Set) - D1, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
D1, PM	D1	PM	2031 Reference Case	ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		815.59	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Coutenah Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	130.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.70	3.70	3.10	2.90	✓	1.00	19	33

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	538.062	0.094	0.237	0.149	0.338
1	B-C	663.838	0.097	0.246	-	-
1	C-B	649.248	0.241	0.241	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	931.00	100.000
B	ONE HOUR	✓	136.00	100.000
C	ONE HOUR	✓	1285.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	17.000	914.000	
B	98.000	0.000	38.000	
C	956.000	329.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.02	0.98	
B	0.72	0.00	0.28	
C	0.74	0.26	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.109	
B	1.000	1.000	1.000	
C	1.137	1.328	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	8.4	
B	0.0	0.0	0.0	
C	10.6	25.2	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	325.40	4425.53	20.14	F	34.87	52.30	838.99	962.43	9.32	900.53	1033.03
B-A	316.31	4165.67	53.05	F	89.93	134.89	2252.05	1001.73	25.02	2399.69	1067.40
C-AB	1.39	286.23	27.11	F	806.89	1210.34	969.20	48.05	10.77	969.54	48.06
C-A	-	-	-	-	372.25	558.37	-	-	-	-	-
A-B	-	-	-	-	15.60	23.40	-	-	-	-	-
A-C	-	-	-	-	838.70	1258.05	-	-	-	-	-

(Default Analysis Set) - J1A, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1A, AM	J1A	AM	2031 Development Case	ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		661.12	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Coutenahall Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	130.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.70	3.70	3.10	2.90	✓	1.00	19	33

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	492.440	0.086	0.217	0.136	0.310
1	B-C	705.385	0.103	0.261	-	-
1	C-B	649.248	0.241	0.241	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	1227.00	100.000
B	ONE HOUR	✓	240.00	100.000
C	ONE HOUR	✓	1542.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	92.000	1135.000	
B	11.000	0.000	229.000	
C	1272.000	270.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.07	0.93	
B	0.05	0.00	0.95	
C	0.82	0.18	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.216	
B	1.000	1.000	1.017	
C	1.006	1.010	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	16.7	
B	0.0	0.0	1.3	
C	0.5	0.7	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	9999999999.00	1709.17	138.41	F	210.13	315.20	5566.55	1059.62	61.85	6003.40	1142.77
B-A	9999999999.00	1920.23	7.03	F	10.09	15.14	298.29	1182.07	3.31	327.61	1298.26
C-AB	1.57	392.30	33.37	F	866.54	1299.81	1044.50	48.21	11.61	1044.68	48.22
C-A	-	-	-	-	548.43	822.64	-	-	-	-	-
A-B	-	-	-	-	84.42	126.63	-	-	-	-	-
A-C	-	-	-	-	1041.50	1562.24	-	-	-	-	-

(Default Analysis Set) - J1A, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1A, PM	J1A	PM	2031 Development Case	ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		391.40	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Coutenahall Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00		2.20	130.00	✓	1.00

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.70	3.70	3.10	2.90	✓	1.00	19	33

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	547.765	0.095	0.241	0.152	0.345
1	B-C	702.460	0.103	0.260	-	-
1	C-B	649.248	0.241	0.241	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	1397.00	100.000
B	ONE HOUR	✓	94.00	100.000
C	ONE HOUR	✓	1079.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	27.000	1370.000	
B	48.000	0.000	46.000	
C	855.000	224.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.02	0.98	
B	0.51	0.00	0.49	
C	0.79	0.21	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.130	
B	1.000	1.000	1.085	
C	1.000	1.000	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	10.0	
B	0.0	0.0	6.5	
C	0.0	0.0	0.0	

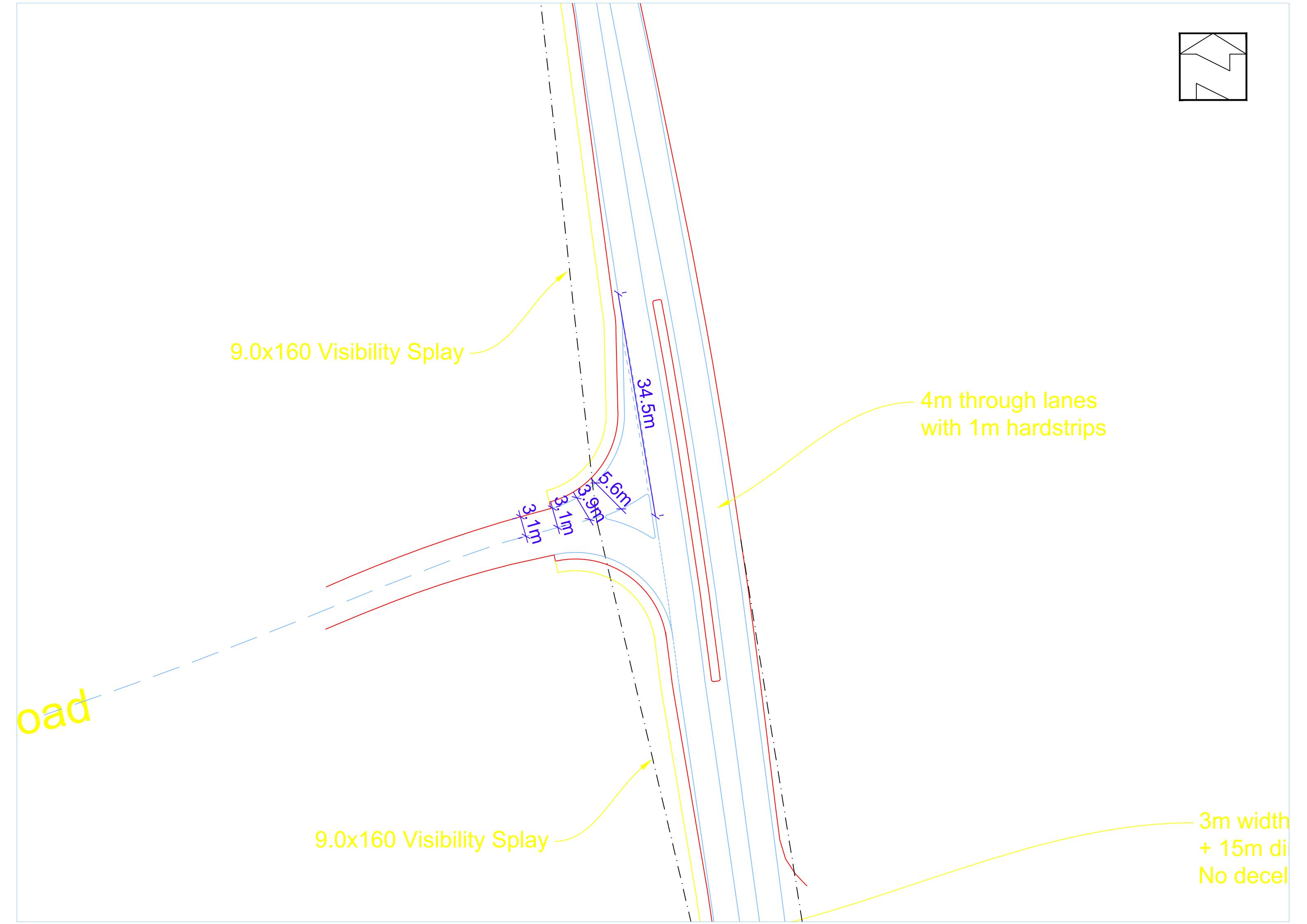
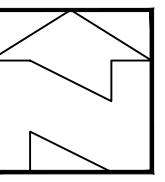
Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	9999999999.00	1423.97	25.80	F	42.21	63.32	1024.75	971.09	11.39	1037.58	983.25
B-A	9999999999.00	1425.04	28.02	F	44.05	66.07	1151.87	1046.07	12.80	1165.01	1058.00
C-AB	1.29	236.58	20.87	F	575.58	863.38	668.39	46.45	7.43	668.48	46.46
C-A	-	-	-	-	414.53	621.79	-	-	-	-	-
A-B	-	-	-	-	24.78	37.16	-	-	-	-	-
A-C	-	-	-	-	1257.14	1885.70	-	-	-	-	-



PROPOSED JUNCTION ARRANGEMENT



Junctions 8
PICADY 8 - Priority Intersection Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2017
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Filename: A508 Couteenhall Road Picady (Proposed LILO).arc8

Path: C:\Users\ADCteam\Dropbox\~ JN8 TEMPADC1475\A508 - Couteenhall Road picady

Report generation date: 25/08/2017 17:55:27

» (Default Analysis Set) - J1C, AM

» (Default Analysis Set) - J1C, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
A1 - J1 C						
Stream B-C	8.83	110.01	0.95	0.56	23.95	0.32
Stream B-A	0.00	0.00	0.00	0.00	0.00	0.00
Stream C-A	-	-	-	-	-	-
Stream C-B	0.00	0.00	0.00	0.00	0.00	0.00
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

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

"D5 - J1C, AM " model duration: 07:45 - 09:15

"D6 - J1C, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 25/08/2017 17:55:26

File summary

Title	A508/Courteenhall Road
Location	
Site Number	
Date	20/07/2017
Version	
Status	(new file)
Identifier	
Client	Roxhill (Junciton 15) Ltd
Jobnumber	ADC1475
Enumerator	ADCteam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - J1C, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1C, AM	J1C	AM	2031 Development Case	ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		110.01	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Coutteenhall Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.00		0.00		2.20	130.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.60	3.90	3.10	3.10	✓	1.00	160	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	601.257	0.100	0.253	0.159	0.361
1	B-C	798.664	0.112	0.283	-	-
1	C-B	649.248	0.230	0.230	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	1285.00	100.000
B	ONE HOUR	✓	274.00	100.000
C	ONE HOUR	✓	1549.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To		
From	A	B	C
	0.000	125.000	1160.000
	0.000	0.000	274.000
	1549.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To		
From	A	B	C
	0.00	0.10	0.90
	0.00	0.00	1.00
	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To		
From	A	B	C
	1.000	1.010	1.211
	1.000	1.000	1.013
	1.157	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To		
From	A	B	C
	0.0	0.8	16.2
	0.0	0.0	1.0
	12.1	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.95	110.01	8.83	F	251.43	377.14	247.70	39.41	2.75	247.72	39.41
B-A	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C-A	-	-	-	-	1421.39	2132.08	-	-	-	-	-
C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	114.70	172.05	-	-	-	-	-
A-C	-	-	-	-	1064.44	1596.65	-	-	-	-	-

(Default Analysis Set) - J1C, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1C, PM	J1C	PM	2031 Development Case	ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		23.95	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Couteenhall Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	8.00		0.00		2.20	130.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	5.60	3.90	3.10	3.10	✓	1.00	160	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	601.257	0.100	0.253	0.159	0.361
1	B-C	798.664	0.112	0.283	-	-
1	C-B	649.248	0.230	0.230	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	1459.00	100.000
B	ONE HOUR	✓	78.00	100.000
C	ONE HOUR	✓	1459.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To		
	A	B	C
A	0.000	70.000	1389.000
B	0.000	0.000	78.000
C	1459.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To		
	A	B	C
A	0.00	0.05	0.95
B	0.00	0.00	1.00
C	1.00	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To		
	A	B	C
A	1.000	1.018	1.120
B	1.000	1.000	1.216
C	1.122	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To		
	A	B	C
A	0.0	1.4	9.2
B	0.0	0.0	16.6
C	9.4	0.0	0.0

Results

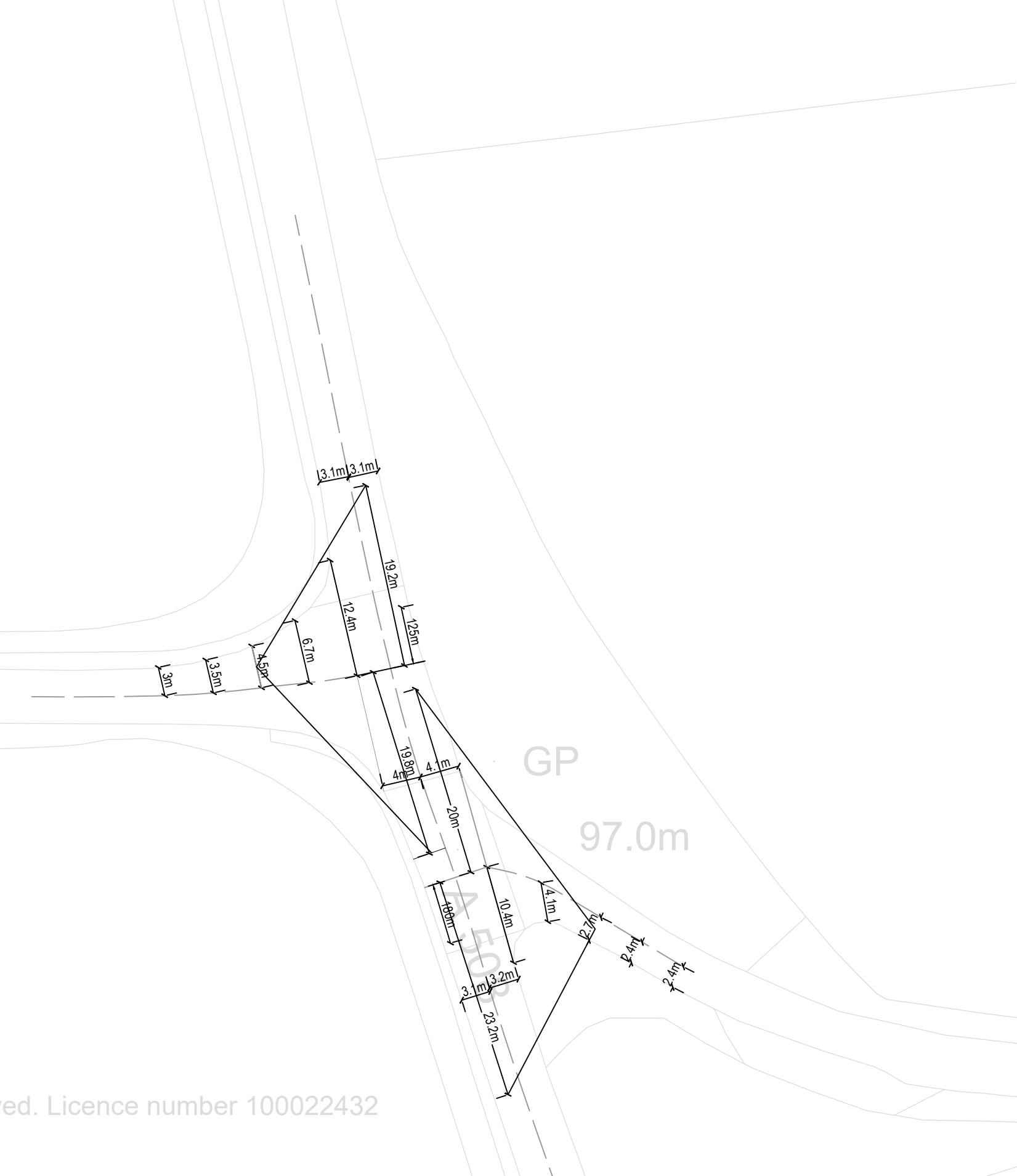
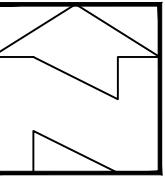
Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.32	23.95	0.56	C	71.57	107.36	27.89	15.59	0.31	27.89	15.59
B-A	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C-A	-	-	-	-	1338.80	2008.21	-	-	-	-	-
C-B	0.00	0.00	0.00	A	0.00	0.00	0.00	0.00	0.00	0.00	0.00
A-B	-	-	-	-	64.23	96.35	-	-	-	-	-
A-C	-	-	-	-	1274.57	1911.86	-	-	-	-	-

APPENDIX E
**A508/ROOKERY LANE/ASHTON ROAD
PICADY OUTPUT**

EXISTING JUNCTION ARRANGEMENT

Picady Assessment
A508 Rookey Lane Junction
Scale 1:500@A3



Junctions 8								
PICADY 8 - Priority Intersection Module								
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2017								
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Filename: A508_Rookery Lane_Ashton Rd (Existing) D1 and J1c Stagger.arc8

Path: C:\Users\ADCteam\Dropbox\~ JN8 TEMP\ADC1475\A508 Rookery Lane Cross roads picady

Report generation date: 04/08/2017 16:06:41

- » (Default Analysis Set) - J1c, AM
- » (Default Analysis Set) - J1c, PM
- » (Default Analysis Set) - D1, AM
- » (Default Analysis Set) - D1, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - D1							
Stream B-C	0.02	8.27	0.01	A	0.08	7.76	0.08	A
Stream B-AD	0.32	26.77	0.25	D	0.09	12.43	0.08	B
Stream A-BCD	1.61	6.05	0.36	A	6.33	21.86	0.78	C
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-A	2.46	47.09	0.74	E	0.69	12.00	0.41	B
Stream D-BC	3.54	88.32	0.81	F	0.15	25.48	0.13	D
Stream C-ABD	1.10	7.30	0.30	A	0.27	4.68	0.11	A
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
A1 - J1c								
Stream B-C	0.43	8248.99	705.50	F	0.05	8.87	0.05	A
Stream B-AD	12.89	426505.17	618.14	F	0.10	24.69	0.10	C
Stream A-BCD	135.93	354.12	1.18	F	72.68	232.13	1.12	F
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream D-A	76.34	1129.37	3.35	F	9.50	102.86	0.98	F
Stream D-BC	13.05	2292.91	3.06	F	1.12	465.18	0.87	F
Stream C-ABD	6.19	12.28	0.64	B	0.80	4.11	0.21	A
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-

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

"D1 - J1c, AM " model duration: 07:45 - 09:15

"D2 - J1c, PM" model duration: 17:45 - 19:15

"D3 - D1, AM" model duration: 07:45 - 09:15

"D4 - D1, PM" model duration: 17:45 - 19:15

Run using Junctions 8.0.4.487 at 04/08/2017 16:06:34

File summary

Title	A508/Rookery Lane/Ashton Rd
Location	Northamptonshire
Site Number	
Date	04/08/2017
Version	
Status	(new file)
Identifier	
Client	Roxhill (Junciton 15) Ltd
Jobnumber	
Enumerator	ADCteam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - J1c, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1c, AM	J1c	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		8244.92	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 N		Major
B	B	Ashton Rd		Minor
C	C	A508 S		Major
D	D	Rookery Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.20		0.00		2.20	125.00	✓	0.00
C	7.25		0.00		2.20	180.00	✓	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

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	4.10	2.70	2.40	2.40	✓	1.00	23	20
D	One lane plus flare				10.00	6.70	4.50	3.50	3.00	✓	1.00	19	20

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-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	646.352	-	-	-	0.237	0.237	0.237	-	0.237	-	-
1	B-AD	510.742	0.088	0.222	-	-	-	0.140	0.318	0.140	0.088	0.222
1	B-C	763.982	0.111	0.280	-	-	-	-	-	-	0.111	0.280
1	C-B	678.203	0.248	0.248	-	-	-	-	-	-	0.248	0.248
1	D-A	705.153	-	-	-	0.259	0.102	0.259	-	0.102	-	-
1	D-BC	465.856	0.128	0.128	0.290	0.203	0.080	0.203	-	0.080	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	1378.00	100.000
B	ONE HOUR	✓	38.00	100.000
C	ONE HOUR	✓	852.00	100.000
D	ONE HOUR	✓	307.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	0.000	2.000	1201.000	175.000
	B	3.000	0.000	1.000	34.000
	C	771.000	81.000	0.000	0.000
	D	265.000	30.000	12.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	0.00	0.00	0.87	0.13
	B	0.08	0.00	0.03	0.89
	C	0.90	0.10	0.00	0.00
	D	0.86	0.10	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	1.000	1.000	1.183	1.148
	B	1.000	1.000	1.000	1.000
	C	1.243	1.000	1.000	1.000
	D	1.211	1.260	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To				
	A	B	C	D	
A	0.0	0.0	14.1	11.4	
B	0.0	0.0	0.0	0.0	
C	18.7	0.0	0.0	0.0	
D	16.2	20.0	0.0	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	705.50	8248.99	0.43	F	0.92	1.38	7.86	342.62	0.09	7.86	342.62
B-AD	618.14	426505.17	12.89	F	33.95	50.93	391.57	461.33	4.35	391.64	461.41
A-BCD	1.18	354.12	135.93	F	1162.73	1744.10	5881.93	202.35	65.35	5950.23	204.70
A-B	-	-	-	-	0.17	0.25	-	-	-	-	-
A-C	-	-	-	-	101.58	152.36	-	-	-	-	-
D-A	3.35	1129.37	76.34	F	243.17	364.75	2839.55	467.09	31.55	3002.14	493.84
D-BC	3.06	2292.91	13.05	F	38.54	57.81	521.84	541.61	5.80	556.45	577.53
C-ABD	0.64	12.28	6.19	B	372.44	558.66	247.20	26.55	2.75	247.27	26.56
C-D	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	409.37	614.05	-	-	-	-	-

(Default Analysis Set) - J1c, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1c, PM	J1c	PM		ONE HOUR	17:45	19:15	90	15			✓			

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		170.64	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 N		Major
B	B	Ashton Rd		Minor
C	C	A508 S		Major
D	D	Rookery Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.20		0.00		2.20	125.00	✓	0.00
C	7.25		0.00		2.20	180.00	✓	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

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	4.10	2.70	2.40	2.40	✓	1.00	23	20
D	One lane plus flare				10.00	6.70	4.50	3.50	3.00	✓	1.00	19	20

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-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	646.352	-	-	-	0.237	0.237	0.237	-	0.237	-	-
1	B-AD	593.981	0.102	0.259	-	-	-	0.163	0.369	0.163	0.102	0.259
1	B-C	656.920	0.095	0.241	-	-	-	-	-	-	0.095	0.241
1	C-B	678.203	0.248	0.248	-	-	-	-	-	-	0.248	0.248
1	D-A	711.510	-	-	-	0.261	0.103	0.261	-	0.103	-	-
1	D-BC	457.640	0.126	0.126	0.285	0.200	0.079	0.200	-	0.079	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	937.00	100.000
B	ONE HOUR	✓	34.00	100.000
C	ONE HOUR	✓	1063.00	100.000
D	ONE HOUR	✓	308.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
	A	B	C	D
From	A	0.000	0.000	703.000
	B	2.000	0.000	20.000
	C	1030.000	33.000	0.000
	D	300.000	8.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	0.00	0.00	0.75	0.25
	B	0.06	0.00	0.59	0.35
	C	0.97	0.03	0.00	0.00
	D	0.97	0.03	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	1.000	1.000	1.213	1.122
	B	1.000	1.000	1.000	1.000
	C	1.126	1.000	1.000	1.000
	D	1.117	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	0.0	0.0	16.4	9.4
	B	0.0	0.0	0.0	0.0
	C	9.7	0.0	0.0	0.0
	D	9.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.05	8.87	0.05	A	18.35	27.53	3.65	7.95	0.04	3.65	7.95
B-AD	0.10	24.69	0.10	C	12.85	19.27	5.53	17.22	0.06	5.53	17.22
A-BCD	1.12	232.13	72.68	F	772.06	1158.09	2549.59	132.09	28.33	2549.95	132.11
A-B	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	87.75	131.62	-	-	-	-	-
D-A	0.98	102.86	9.50	F	275.29	412.93	259.86	37.76	2.89	259.91	37.77
D-BC	0.87	465.18	1.12	F	7.34	11.01	23.14	126.07	0.26	23.14	126.07
C-ABD	0.21	4.11	0.80	A	156.89	235.33	36.48	9.30	0.41	36.48	9.30
C-D	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	818.54	1227.81	-	-	-	-	-

(Default Analysis Set) - D1, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
D1, AM	D1	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		29.71	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 N		Major
B	B	Ashton Rd		Minor
C	C	A508 S		Major
D	D	Rookery Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.20		0.00		2.20	125.00	✓	0.00
C	7.25		0.00		2.20	180.00	✓	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

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	4.10	2.70	2.40	2.40	✓	1.00	23	20
D	One lane plus flare				10.00	6.70	4.50	3.50	3.00	✓	1.00	19	20

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-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	646.352	-	-	-	0.237	0.237	0.237	-	0.237	-	-
1	B-AD	510.742	0.088	0.222	-	-	-	0.140	0.318	0.140	0.088	0.222
1	B-C	763.982	0.111	0.280	-	-	-	-	-	-	0.111	0.280
1	C-B	678.203	0.248	0.248	-	-	-	-	-	-	0.248	0.248
1	D-A	684.790	-	-	-	0.251	0.099	0.251	-	0.099	-	-
1	D-BC	508.888	0.140	0.140	0.317	0.222	0.088	0.222	-	0.088	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	873.00	100.000
B	ONE HOUR	✓	46.00	100.000
C	ONE HOUR	✓	581.00	100.000
D	ONE HOUR	✓	325.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	0.000	2.000	786.000	85.000
B	1.000	0.000	6.000	39.000	
C	501.000	80.000	0.000	0.000	
D	182.000	31.000	112.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	0.00	0.00	0.90	0.10
B	0.02	0.00	0.13	0.85	
C	0.86	0.14	0.00	0.00	
D	0.56	0.10	0.34	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	1.000	1.000	1.243	1.092
B	1.000	1.000	1.000	1.000	
C	1.309	1.000	1.000	1.000	
D	1.014	1.252	1.000	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
From		A	B	C	D
	A	0.0	0.0	18.7	7.1
B	0.0	0.0	0.0	0.0	
C	23.8	0.0	0.0	0.0	
D	1.1	19.4	0.0	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.01	8.27	0.02	A	5.51	8.26	1.01	7.34	0.01	1.01	7.34
B-AD	0.25	26.77	0.32	D	36.70	55.06	17.97	19.58	0.20	17.97	19.59
A-BCD	0.36	6.05	1.61	A	269.47	404.21	89.78	13.33	1.00	89.79	13.33
A-B	-	-	-	-	1.35	2.02	-	-	-	-	-
A-C	-	-	-	-	530.26	795.39	-	-	-	-	-
D-A	0.74	47.09	2.46	E	167.01	250.51	87.68	21.00	0.97	87.69	21.00
D-BC	0.81	88.32	3.54	F	131.22	196.83	132.95	40.53	1.48	132.98	40.54
C-ABD	0.30	7.30	1.10	A	178.12	267.18	61.75	13.87	0.69	61.75	13.87
C-D	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	355.02	532.53	-	-	-	-	-

(Default Analysis Set) - D1, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor Arm Geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
D1, PM	D1	PM		ONE HOUR	17:45	19:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		17.47	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 N		Major
B	B	Ashton Rd		Minor
C	C	A508 S		Major
D	D	Rookery Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.20		0.00		2.20	125.00	✓	0.00
C	7.25		0.00		2.20	180.00	✓	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

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	4.10	2.70	2.40	2.40	✓	1.00	23	20
D	One lane plus flare				10.00	6.70	4.50	3.50	3.00	✓	1.00	19	20

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-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	646.352	-	-	-	0.237	0.237	0.237	-	0.237	-	-
1	B-AD	593.981	0.102	0.259	-	-	-	0.163	0.369	0.163	0.102	0.259
1	B-C	656.920	0.095	0.241	-	-	-	-	-	-	0.095	0.241
1	C-B	678.203	0.248	0.248	-	-	-	-	-	-	0.248	0.248
1	D-A	707.761	-	-	-	0.260	0.103	0.260	-	0.103	-	-
1	D-BC	462.486	0.127	0.127	0.288	0.202	0.080	0.202	-	0.080	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	749.00	100.000
B	ONE HOUR	✓	58.00	100.000
C	ONE HOUR	✓	652.00	100.000
D	ONE HOUR	✓	208.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	0.000	0.000	521.000	228.000
	B	4.000	0.000	35.000	19.000
	C	619.000	33.000	0.000	0.000
	D	189.000	19.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	0.00	0.00	0.70	0.30
	B	0.07	0.00	0.60	0.33
	C	0.95	0.05	0.00	0.00
	D	0.91	0.09	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	1.000	1.000	1.250	1.012
	B	1.000	1.000	1.000	1.000
	C	1.170	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	0.0	0.0	19.2	0.9
	B	0.0	0.0	0.0	0.0
	C	13.1	0.0	0.0	0.0
	D	0.0	0.0	0.0	0.0

Results

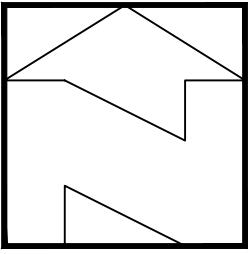
Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.08	7.76	0.08	A	32.12	48.17	5.81	7.24	0.06	5.81	7.24
B-AD	0.08	12.43	0.09	B	21.11	31.66	5.66	10.73	0.06	5.66	10.73
A-BCD	0.78	21.86	6.33	C	501.39	752.09	290.66	23.19	3.23	290.72	23.19
A-B	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	185.90	278.85	-	-	-	-	-
D-A	0.41	12.00	0.69	B	173.43	260.14	43.29	9.99	0.48	43.30	9.99
D-BC	0.13	25.48	0.15	D	17.43	26.15	8.41	19.30	0.09	8.41	19.30
C-ABD	0.11	4.68	0.27	A	76.11	114.16	15.25	8.01	0.17	15.25	8.01
C-D	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	522.18	783.27	-	-	-	-	-



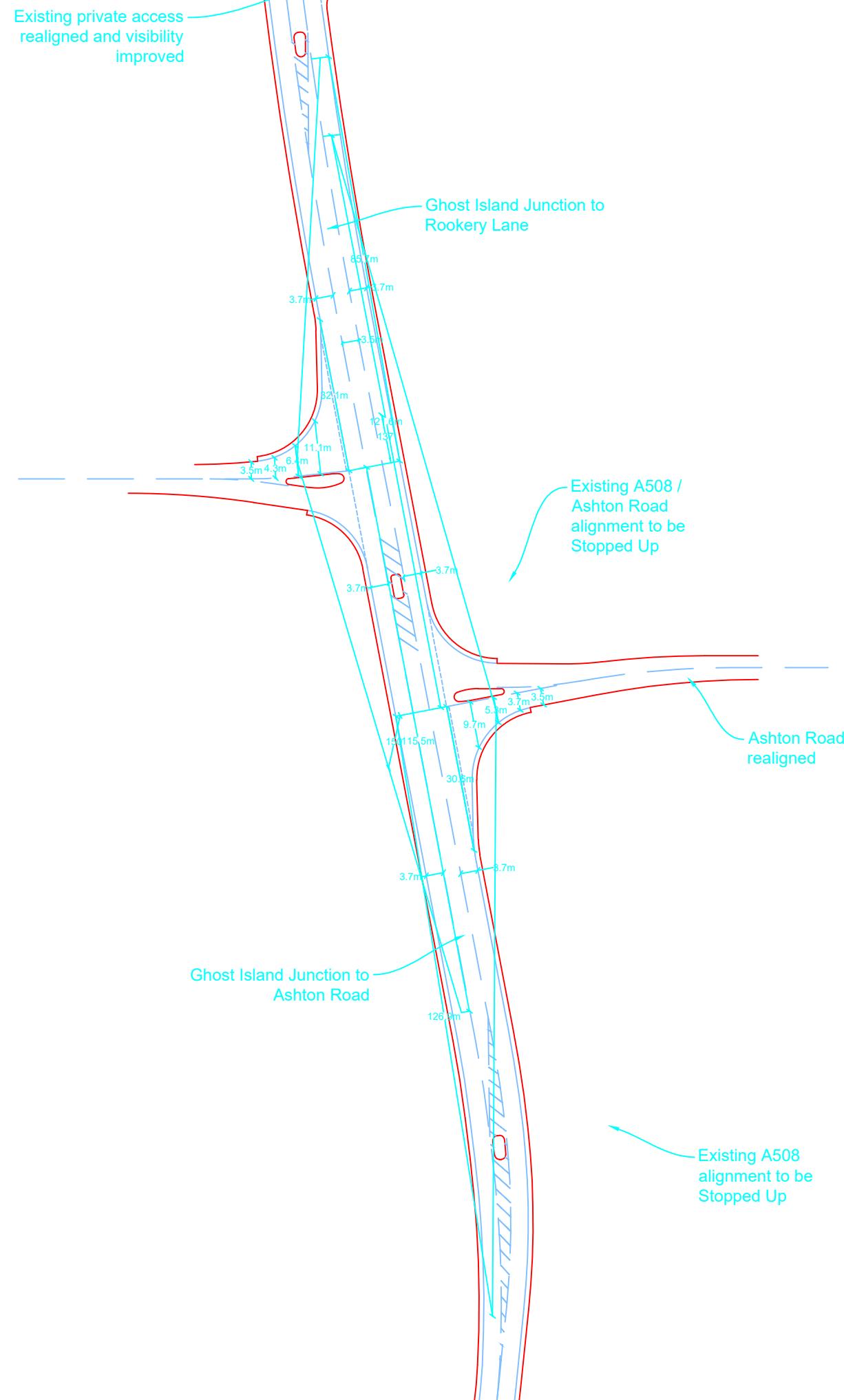
PROPOSED JUNCTION ARRANGEMENT

is preliminary only and is subject to
development of strategy for
non-motorised users including Audits
detailed tracking assessment
detailed geometrical design
road safety Audits
bus stop review



Rookery Lane

Ashton Road



Junctions 8								
PICADY 8 - Priority Intersection Module								
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2017								
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk								

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Filename: A508_Rookery Lane_Ashton Rd (Option 2) J1c Stagger.arc8

Path: C:\Users\ADCteam\Dropbox\~ JN8 TEMP\ADC1475\A508 Rookery Lane Cross roads picady

Report generation date: 04/08/2017 16:04:28

» (Default Analysis Set) - J1c, AM

» (Default Analysis Set) - J1c, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
A1 - J1 c								
Stream B-C	0.00	12.43	0.00	B	0.04	6.71	0.04	A
Stream B-AD	0.89	84.33	0.49	F	0.08	18.56	0.07	C
Stream A-B	-	-	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-	-	-
Stream A-D	0.72	13.58	0.39	B	1.65	23.66	0.60	C
Stream D-A	3.08	40.40	0.74	E	2.81	32.02	0.73	D
Stream D-BC	1.80	157.27	0.66	F	0.18	76.34	0.16	F
Stream C-D	-	-	-	-	-	-	-	-
Stream C-A	-	-	-	-	-	-	-	-
Stream C-B	0.30	12.19	0.23	B	0.07	6.97	0.07	A

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

"D1 - J1c, AM " model duration: 07:45 - 09:15

"D2 - J1c, PM" model duration: 17:45 - 19:15

Run using Junctions 8.0.4.487 at 04/08/2017 16:04:25

File summary

Title	A508/Rookery Lane/Ashton Rd
Location	Northamptonshire
Site Number	
Date	04/08/2017
Version	
Status	(new file)
Identifier	
Client	Roxhill (Junciton 15) Ltd
Jobnumber	
Enumerator	ADCteam
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - J1c, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1c, AM	J1c	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		39.61	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 N		Major
B	B	Ashton Rd		Minor
C	C	A508 S		Major
D	D	Rookery Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.30		0.00	✓	3.50	125.00		
C	7.30		0.00	✓	3.50	180.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	9.65	5.30	3.65	3.50	✓	2.00	126	120
D	One lane plus flare				10.00	10.00	6.40	4.25	3.50	✓	2.00	85	115

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-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	737.801	-	-	-	0.270	0.270	0.270	-	0.270	-	-
1	B-AD	663.281	0.114	0.288	-	-	-	0.181	0.412	0.181	0.114	0.288
1	B-C	721.657	0.104	0.264	-	-	-	-	-	-	0.104	0.264
1	C-B	774.158	0.283	0.283	-	-	-	-	-	-	0.283	0.283
1	D-A	804.391	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	608.293	0.166	0.166	0.377	0.264	0.105	0.264	-	0.105	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	1378.00	100.000
B	ONE HOUR	✓	38.00	100.000
C	ONE HOUR	✓	852.00	100.000
D	ONE HOUR	✓	307.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

	To				
	A	B	C	D	
From	A	0.000	2.000	1201.000	175.000
	B	3.000	0.000	1.000	34.000
	C	771.000	81.000	0.000	0.000
	D	265.000	30.000	12.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To				
	A	B	C	D	
From	A	0.00	0.00	0.87	0.13
	B	0.08	0.00	0.03	0.89
	C	0.90	0.10	0.00	0.00
	D	0.86	0.10	0.04	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To				
	A	B	C	D	
From	A	1.000	1.000	1.183	1.148
	B	1.000	1.000	1.000	1.000
	C	1.243	1.000	1.000	1.000
	D	1.211	1.260	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To				
	A	B	C	D	
From	A	0.0	0.0	14.1	11.4
	B	0.0	0.0	0.0	0.0
	C	18.7	0.0	0.0	0.0
	D	16.2	20.0	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.00	12.43	0.00	B	0.92	1.38	0.22	9.73	0.00	0.22	9.73
B-AD	0.49	84.33	0.89	F	33.95	50.93	33.32	39.26	0.37	33.32	39.26
A-B	-	-	-	-	1.84	2.75	-	-	-	-	-
A-C	-	-	-	-	1102.06	1653.09	-	-	-	-	-
A-D	0.39	13.58	0.72	B	160.58	240.87	45.26	11.27	0.50	45.27	11.28
D-A	0.74	40.40	3.08	E	243.17	364.75	120.89	19.89	1.34	120.90	19.89
D-BC	0.66	157.27	1.80	F	38.54	57.81	57.96	60.16	0.64	57.96	60.16
C-D	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	707.48	1061.22	-	-	-	-	-
C-B	0.23	12.19	0.30	B	74.33	111.49	18.52	9.97	0.21	18.52	9.97

(Default Analysis Set) - J1c, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1c, PM	J1c	PM		ONE HOUR	17:45	19:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	OS-NS Stagger (UK RL Stagger)	Two-way	A,B,C,D		26.89	D

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 N		Major
B	B	Ashton Rd		Minor
C	C	A508 S		Major
D	D	Rookery Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
A	7.30		0.00	✓	3.50	125.00		
C	7.30		0.00	✓	3.50	180.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	9.65	5.30	3.65	3.50	✓	2.00	126	120
D	One lane plus flare				10.00	10.00	6.40	4.25	3.50	✓	2.00	85	115

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-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
1	A-D	737.801	-	-	-	0.270	0.270	0.270	-	0.270	-	-
1	B-AD	635.056	0.109	0.276	-	-	-	0.174	0.394	0.174	0.109	0.276
1	B-C	795.600	0.115	0.291	-	-	-	-	-	-	0.115	0.291
1	C-B	774.158	0.283	0.283	-	-	-	-	-	-	0.283	0.283
1	D-A	804.391	-	-	-	0.294	0.116	0.294	-	0.116	-	-
1	D-BC	608.293	0.166	0.166	0.377	0.264	0.105	0.264	-	0.105	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	937.00	100.000
B	ONE HOUR	✓	34.00	100.000
C	ONE HOUR	✓	1063.00	100.000
D	ONE HOUR	✓	308.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	0.000	0.000	703.000	234.000
	B	2.000	0.000	20.000	12.000
	C	1030.000	33.000	0.000	0.000
	D	300.000	8.000	0.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	0.00	0.00	0.75	0.25
	B	0.06	0.00	0.59	0.35
	C	0.97	0.03	0.00	0.00
	D	0.97	0.03	0.00	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	1.000	1.000	1.213	1.122
	B	1.000	1.000	1.000	1.000
	C	1.126	1.000	1.000	1.000
	D	1.117	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

From		To			
		A	B	C	D
	A	0.0	0.0	16.4	9.4
	B	0.0	0.0	0.0	0.0
	C	9.7	0.0	0.0	0.0
	D	9.0	0.0	0.0	0.0

Results

Results Summary for whole modelled period

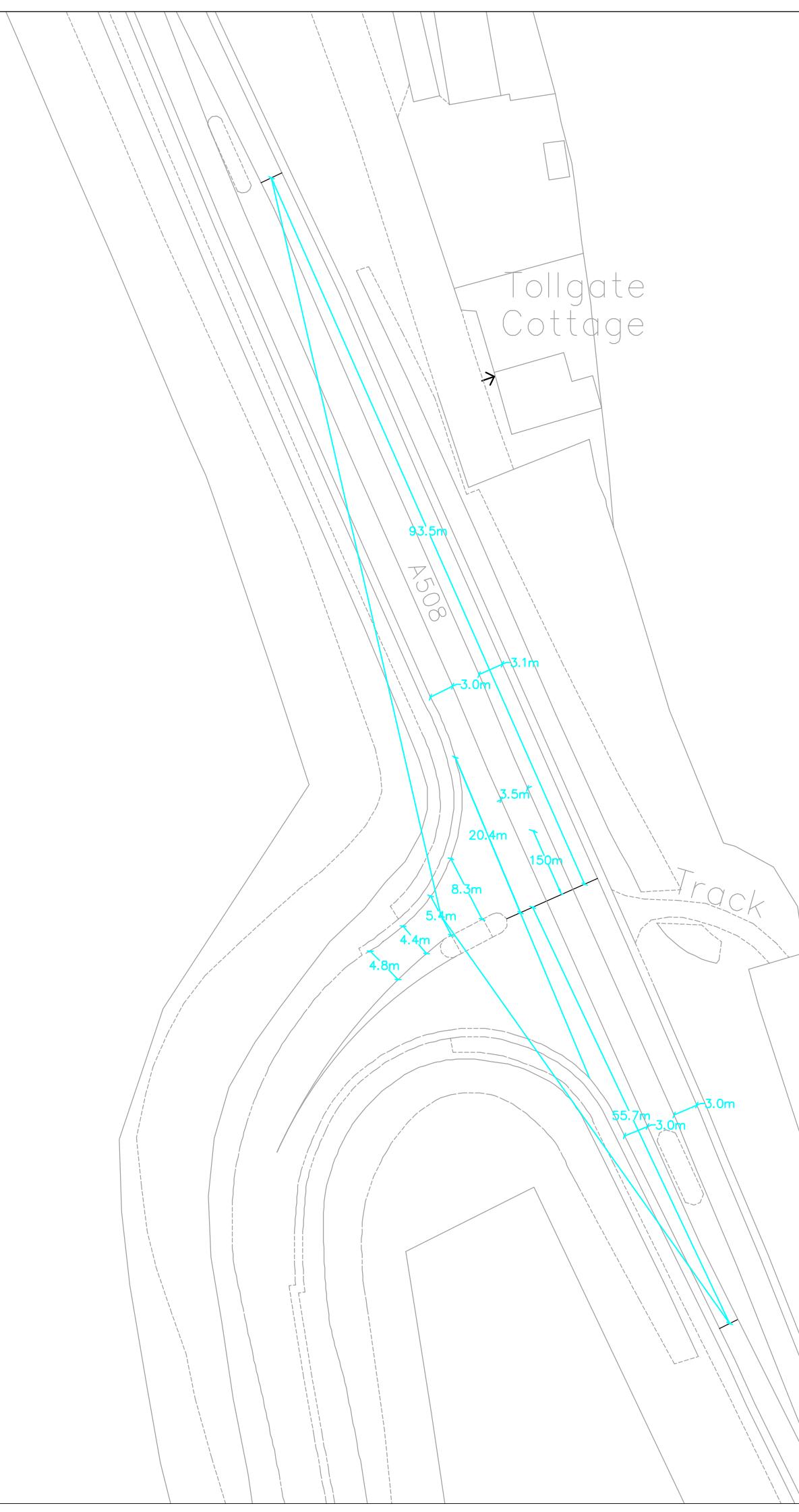
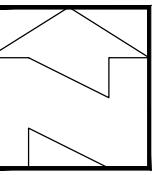
Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.04	6.71	0.04	A	18.35	27.53	2.86	6.23	0.03	2.86	6.23
B-AD	0.07	18.56	0.08	C	12.85	19.27	4.61	14.36	0.05	4.61	14.36
A-B	-	-	-	-	0.00	0.00	-	-	-	-	-
A-C	-	-	-	-	645.09	967.63	-	-	-	-	-
A-D	0.60	23.66	1.65	C	214.72	322.08	89.38	16.65	0.99	89.40	16.65
D-A	0.73	32.02	2.81	D	275.29	412.93	134.15	19.49	1.49	134.18	19.50
D-BC	0.16	76.34	0.18	F	7.34	11.01	6.92	37.70	0.08	6.92	37.70
C-D	-	-	-	-	0.00	0.00	-	-	-	-	-
C-A	-	-	-	-	945.15	1417.72	-	-	-	-	-
C-B	0.07	6.97	0.07	A	30.28	45.42	4.90	6.47	0.05	4.90	6.47



APPENDIX F

A508/PURY ROAD PICADY OUTPUT

EXISTING JUNCTION ARRANGEMENT



Junctions 8
PICADY 8 - Priority Intersection Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2017
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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Filename: A508-Pury Road PICADY model (D1 and J1c) (170829).arc8

Path: C:\Users\ADCteam\Dropbox\~JN8 TEMP\ADC1475\A508-Pury Road

Report generation date: 29/08/2017 13:43:19

- » Traffic Flows - D1 2031 Base, AM
- » Traffic Flows - D1 2031 Base, PM
- » Traffic Flows - J1c 2031 WD, AM
- » Traffic Flows - J1c 2031 WD, PM

Summary of junction performance

	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
	Traffic Flows - D1 2031 Base					
Stream B-C	0.79	10.51	0.44	2.16	25.78	0.69
Stream B-A	0.03	46.28	0.03	1.09	52.11	0.54
Stream C-A	-	-	-	-	-	-
Stream C-B	22.85	130.35	1.02	1.53	16.97	0.61
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-
Traffic Flows - J1c 2031 WD						
Stream B-C	2.16	21.37	0.70	10.92	122.10	1.02
Stream B-A	0.21	493.17	0.25	3.25	266.98	0.91
Stream C-A	-	-	-	-	-	-
Stream C-B	31.43	176.59	1.07	4.72	46.79	0.85
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

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

"D1 - D1 2031 Base, AM" model duration: 07:45 - 09:15

"D2 - D1 2031 Base, PM" model duration: 16:45 - 18:15

"D3 - J1c 2031 WD, AM" model duration: 07:45 - 09:15

"D4 - J1c 2031 WD, PM" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 29/08/2017 13:43:15

File summary

Title	Pury Road/A508
Location	Outside Roade
Site Number	
Date	09/08/2017
Version	
Status	(new file)
Identifier	KG
Client	
Jobnumber	ADC1475
Enumerator	KG
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

Traffic Flows - D1 2031 Base, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
D1 2031 Base, AM	D1 2031 Base	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		93.99	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Pury Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.05		0.00	✓	3.50	150.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.30	5.40	4.10	4.10	✓	2.00	94	56

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	530.773	0.096	0.244	0.153	0.348
1	B-C	767.424	0.117	0.297	-	-
1	C-B	754.327	0.292	0.292	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	432.00	100.000
B	ONE HOUR	✓	250.00	100.000
C	ONE HOUR	✓	1112.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	3.000	429.000	
B	2.000	0.000	248.000	
C	540.000	572.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.01	0.99	
B	0.01	0.00	0.99	
C	0.49	0.51	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.345	
B	1.000	1.000	1.021	
C	1.217	1.139	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	26.6	
B	0.0	0.0	1.6	
C	16.7	10.7	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.44	10.51	0.79	B	227.57	341.35	50.80	8.93	0.56	50.81	8.93
B-A	0.03	46.28	0.03	E	1.84	2.75	1.24	27.10	0.01	1.24	27.10
C-A	-	-	-	-	495.51	743.27	-	-	-	-	-
C-B	1.02	130.35	22.85	F	524.88	787.32	746.68	56.90	8.30	746.91	56.92
A-B	-	-	-	-	2.75	4.13	-	-	-	-	-
A-C	-	-	-	-	393.66	590.49	-	-	-	-	-

Traffic Flows - D1 2031 Base, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
D1 2031 Base, RM	D1 2031 Base	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		24.63	C

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Pury Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.05		0.00	✓	3.50	150.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.30	5.40	4.10	4.10	✓	2.00	94	56

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	543.103	0.099	0.249	0.157	0.356
1	B-C	758.329	0.116	0.293	-	-
1	C-B	754.327	0.292	0.292	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	658.00	100.000
B	ONE HOUR	✓	357.00	100.000
C	ONE HOUR	✓	705.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	1.000	657.000	
B	72.000	0.000	285.000	
C	404.000	301.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.00	1.00	
B	0.20	0.00	0.80	
C	0.57	0.43	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.164	
B	1.000	1.000	1.014	
C	1.328	1.000	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	12.6	
B	0.0	0.0	1.1	
C	25.2	0.0	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.69	25.78	2.16	D	261.52	392.28	104.42	15.97	1.16	104.44	15.97
B-A	0.54	52.11	1.09	F	66.07	99.10	48.02	29.07	0.53	48.03	29.08
C-A	-	-	-	-	370.72	556.08	-	-	-	-	-
C-B	0.61	16.97	1.53	C	276.20	414.30	87.60	12.69	0.97	87.61	12.69
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	602.87	904.31	-	-	-	-	-

Traffic Flows - J1c 2031 WD, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1c 2031 WD, AM	J1c 2031 WD	AM		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		118.20	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Pury Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.05		0.00	✓	3.50	150.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.30	5.40	4.10	4.10	✓	2.00	94	56

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	530.773	0.096	0.244	0.153	0.348
1	B-C	767.424	0.117	0.297	-	-
1	C-B	754.327	0.292	0.292	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	574.00	100.000
B	ONE HOUR	✓	345.00	100.000
C	ONE HOUR	✓	1309.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	8.000	566.000	
B	2.000	0.000	343.000	
C	753.000	556.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.01	0.99	
B	0.01	0.00	0.99	
C	0.58	0.42	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.324	
B	1.000	1.000	1.000	
C	1.288	1.000	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	24.9	
B	0.0	0.0	0.0	
C	22.2	0.0	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.70	21.37	2.16	C	314.74	472.11	107.52	13.66	1.19	107.54	13.67
B-A	0.25	493.17	0.21	F	1.84	2.75	4.31	94.02	0.05	4.31	94.02
C-A	-	-	-	-	690.97	1036.45	-	-	-	-	-
C-B	1.07	176.59	31.43	F	510.20	765.29	1003.78	78.70	11.15	1004.00	78.71
A-B	-	-	-	-	7.34	11.01	-	-	-	-	-
A-C	-	-	-	-	519.37	779.06	-	-	-	-	-

Traffic Flows - J1c 2031 WD, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
J1c 2031 WD, PM	J1c 2031 WD	PM		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		91.52	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Pury Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	6.05		0.00	✓	3.50	150.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.30	5.40	4.10	4.10	✓	2.00	94	56

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	535.919	0.097	0.246	0.155	0.352
1	B-C	763.629	0.117	0.295	-	-
1	C-B	754.327	0.292	0.292	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	917.00	100.000
B	ONE HOUR	✓	322.00	100.000
C	ONE HOUR	✓	783.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	1.000	916.000	
B	41.000	0.000	281.000	
C	430.000	353.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.00	1.00	
B	0.13	0.00	0.87	
C	0.55	0.45	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.150	
B	1.000	1.000	1.000	
C	1.333	1.000	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	11.6	
B	0.0	0.0	0.0	
C	25.6	0.0	0.0	

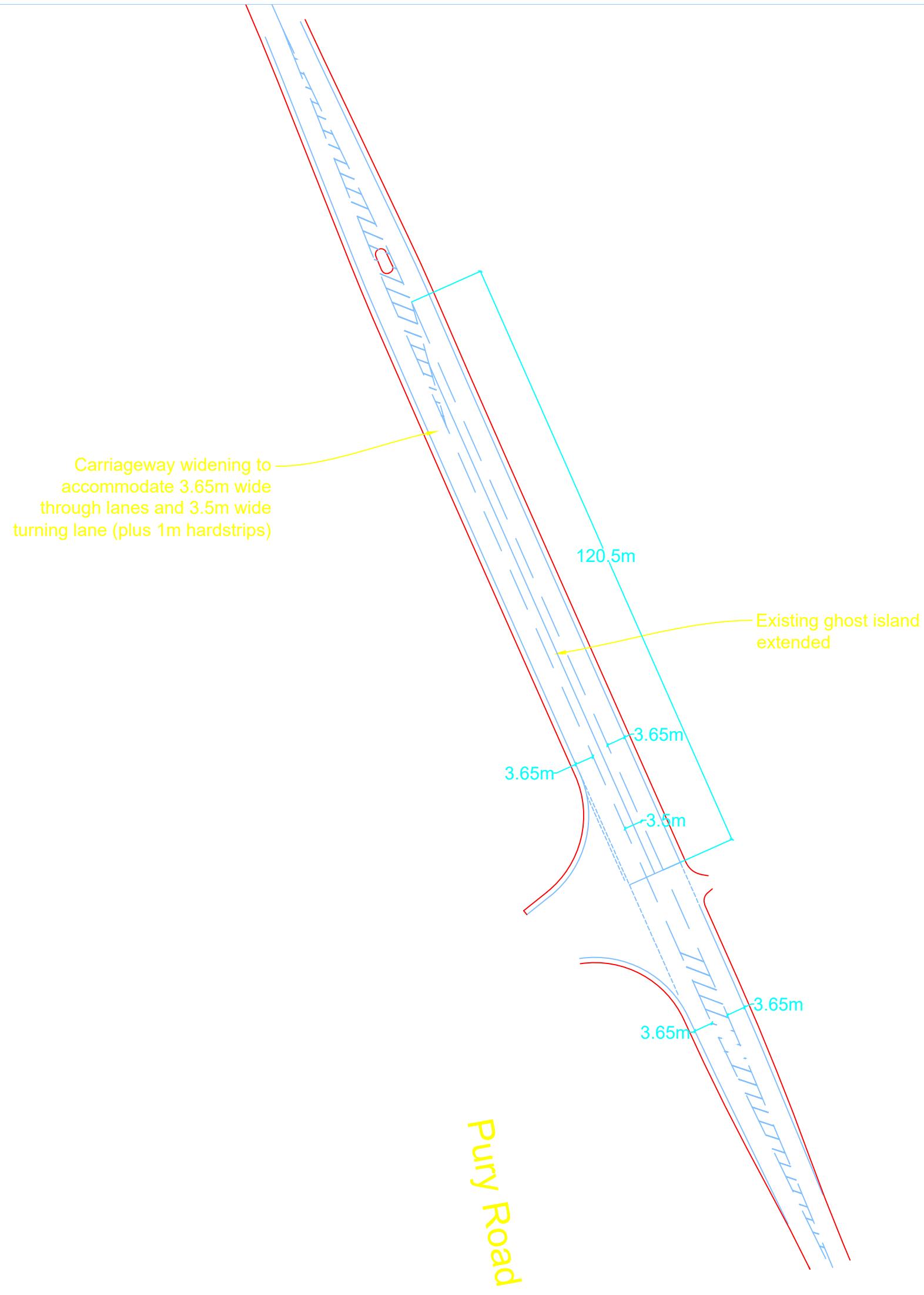
Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	1.02	122.10	10.92	F	257.85	386.78	255.52	39.64	2.84	255.55	39.64
B-A	0.91	266.98	3.25	F	37.62	56.43	83.13	88.39	0.92	83.14	88.39
C-A	-	-	-	-	394.58	591.86	-	-	-	-	-
C-B	0.85	46.79	4.72	E	323.92	485.88	199.09	24.59	2.21	199.14	24.59
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	840.54	1260.81	-	-	-	-	-



PROPOSED JUNCTION ARRANGEMENT



Junctions 8
PICADY 8 - Priority Intersection Module
Version: 8.0.4.487 [15039,24/03/2014] © Copyright TRL Limited, 2017
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Filename: A508-Pury Road PICADY model - Proposed Mitigation (J1c) (170929).arc8

Path: C:\Users\ADCteam\Dropbox\~ JN8 TEMP\ADC1475\A508-Pury Road

Report generation date: 29/08/2017 13:45:38

- » Traffic Flows - 2031 WD, AM (J1c)
- » Traffic Flows - 2031 WD, PM (J1c)

Summary of junction performance

	AM (J1c)			PM (J1c)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Traffic Flows - 2031 WD						
Stream B-C	1.78	17.45	0.65	3.30	41.00	0.79
Stream B-A	0.06	111.71	0.06	1.28	113.18	0.61
Stream C-A	-	-	-	-	-	-
Stream C-B	27.54	156.37	1.06	4.01	39.40	0.82
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

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

"D3 - 2031 WD, AM (J1c)" model duration: 07:45 - 09:15

"D4 - 2031 WD, PM (J1c)" model duration: 16:45 - 18:15

Run using Junctions 8.0.4.487 at 29/08/2017 13:45:36

File summary

Title	Pury Road/A508
Location	Outside Roade
Site Number	
Date	09/08/2017
Version	
Status	(new file)
Identifier	KG
Client	
Jobnumber	ADC1475
Enumerator	KG
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

Traffic Flows - 2031 WD, AM (J1c)

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 WD, AM (J1c)	2031 WD	AM (J1c)		ONE HOUR	07:45	09:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		103.39	F

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Pury Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00	✓	3.50	150.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.30	5.40	4.10	4.10	✓	2.00	94	56

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	530.773	0.091	0.231	0.145	0.329
1	B-C	767.424	0.111	0.281	-	-
1	C-B	754.327	0.276	0.276	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	574.00	100.000
B	ONE HOUR	✓	345.00	100.000
C	ONE HOUR	✓	1309.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.000	8.000	566.000	
B	2.000	0.000	343.000	
C	753.000	556.000	0.000	

Turning Proportions (PCU) - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.00	0.01	0.99	
B	0.01	0.00	0.99	
C	0.58	0.42	0.00	

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

From	To			
		A	B	C
A	1.000	1.000	1.324	
B	1.000	1.000	1.000	
C	1.288	1.000	1.000	

Heavy Vehicle Percentages - Junction 1 (for whole period)

From	To			
		A	B	C
A	0.0	0.0	24.9	
B	0.0	0.0	0.0	
C	22.2	0.0	0.0	

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.65	17.45	1.78	C	314.74	472.11	100.08	12.72	1.11	100.10	12.72
B-A	0.06	111.71	0.06	F	1.84	2.75	2.12	46.19	0.02	2.12	46.19
C-A	-	-	-	-	690.97	1036.45	-	-	-	-	-
C-B	1.06	156.37	27.54	F	510.20	765.29	864.63	67.79	9.61	864.83	67.80
A-B	-	-	-	-	7.34	11.01	-	-	-	-	-
A-C	-	-	-	-	519.37	779.06	-	-	-	-	-

Traffic Flows - 2031 WD, PM (J1c)

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
Traffic Flows	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
2031 WD, PM (J1c)	2031 WD	PM (J1c)		ONE HOUR	16:45	18:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	T-Junction	Two-way	A,B,C		44.55	E

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description	Arm Type
A	A	A508 (S)		Major
B	B	Pury Road		Minor
C	C	A508 (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.30		0.00	✓	3.50	150.00		

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

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	8.30	5.40	4.10	4.10	✓	2.00	94	56

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	535.919	0.092	0.233	0.146	0.333
1	B-C	763.629	0.110	0.279	-	-
1	C-B	754.327	0.276	0.276	-	-

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 Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.30				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	917.00	100.000
B	ONE HOUR	✓	322.00	100.000
C	ONE HOUR	✓	783.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

From	To		
	A	B	C
A	0.000	1.000	916.000
B	41.000	0.000	281.000
C	430.000	353.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

	To			
From		A	B	C
	A	0.00	0.00	1.00
	B	0.13	0.00	0.87
	C	0.55	0.45	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

	To			
From		A	B	C
	A	1.000	1.000	1.150
	B	1.000	1.000	1.000
	C	1.333	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

	To			
From		A	B	C
	A	0.0	0.0	11.6
	B	0.0	0.0	0.0
	C	25.6	0.0	0.0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.79	41.00	3.30	E	257.85	386.78	132.81	20.60	1.48	132.83	20.61
B-A	0.61	113.18	1.28	F	37.62	56.43	44.20	46.99	0.49	44.20	47.00
C-A	-	-	-	-	394.58	591.86	-	-	-	-	-
C-B	0.82	39.40	4.01	E	323.92	485.88	178.63	22.06	1.98	178.67	22.06
A-B	-	-	-	-	0.92	1.38	-	-	-	-	-
A-C	-	-	-	-	840.54	1260.81	-	-	-	-	-