

Basic Results Summary

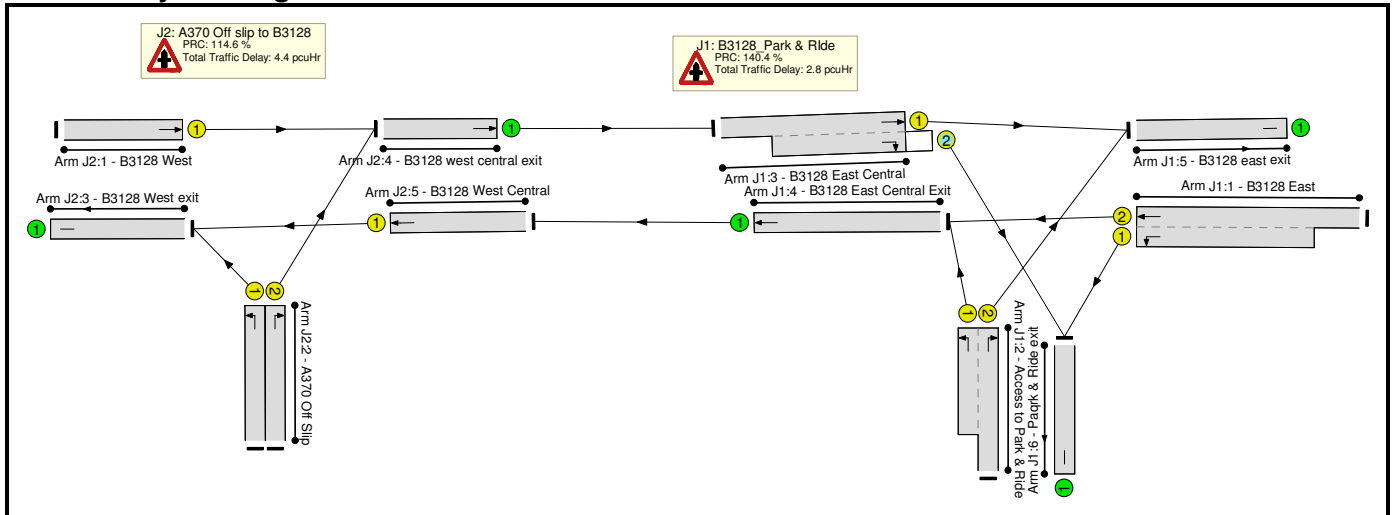
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)																				
Network	-	-	-	-	-	-	-	-	-	-	88.8%	30	0	0	22.9	-	-																				
J1: B3128_Park & Ride	-	-	-	-	-	-	-	-	-	-	88.8%	30	0	0	18.6	-	-																				
1/2+1/1	B3128 East Ahead Left	U	A		1	84		1342	2105:1786	1512	88.8%	-	-	-	8.4	22.6	36.6																				
2/2+2/1	Access to Park & Ride Left Right	U	C		1	26		548	1919:2015	620	88.4%	-	-	-	10.0	65.5	15.1																				
3/1+3/2	B3128 East Central Ahead Right	U+O	B		1	84		32	1965:1958	1002	3.2%	30	0	0	0.2	16.9	0.6																				
J2: A370 Off slip to B3128	-	-	-	-	-	-	-	-	-	-	85.3%	0	0	0	4.3	-	-																				
1/1	B3128 West Ahead	U	D		1	103	-	18	2115	1833	1.0%	-	-	-	0.0	2.1	0.1																				
2/1	A370 Off Slip Left	U	E		1	7	-	7	1786	119	5.9%	-	-	-	0.1	68.8	0.2																				
2/2	A370 Off Slip Right	U	E		1	7	-	14	1828	122	11.5%	-	-	-	0.3	69.4	0.5																				
5/1	B3128 West Central Ahead	U	F		1	102	-	1549	2115	1815	85.3%	-	-	-	3.9	9.0	20.5																				
<table style="width:100%; border:none;"> <tr> <td style="width:15%;"></td> <td style="width:15%;">C1 Stream: 1 PRC for Signalled Lanes (%):</td> <td style="width:15%;">1.4</td> <td style="width:15%;">Total Delay for Signalled Lanes (pcuHr):</td> <td style="width:15%;">18.55</td> <td style="width:15%;"></td> <td style="width:15%;"></td> </tr> <tr> <td></td> <td>C1 Stream: 2 PRC for Signalled Lanes (%):</td> <td>5.5</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>4.30</td> <td></td> <td></td> </tr> <tr> <td></td> <td>PRC Over All Lanes (%):</td> <td>1.4</td> <td>Total Delay Over All Lanes(pcuHr):</td> <td>22.85</td> <td>Cycle Time (s):</td> <td>120</td> </tr> </table>																		C1 Stream: 1 PRC for Signalled Lanes (%):	1.4	Total Delay for Signalled Lanes (pcuHr):	18.55				C1 Stream: 2 PRC for Signalled Lanes (%):	5.5	Total Delay for Signalled Lanes (pcuHr):	4.30				PRC Over All Lanes (%):	1.4	Total Delay Over All Lanes(pcuHr):	22.85	Cycle Time (s):	120
	C1 Stream: 1 PRC for Signalled Lanes (%):	1.4	Total Delay for Signalled Lanes (pcuHr):	18.55																																	
	C1 Stream: 2 PRC for Signalled Lanes (%):	5.5	Total Delay for Signalled Lanes (pcuHr):	4.30																																	
	PRC Over All Lanes (%):	1.4	Total Delay Over All Lanes(pcuHr):	22.85	Cycle Time (s):	120																															

Basic Results Summary

Scenario 3: 'AM 2016 DoMin' (FG1: '2016 AM DoMin - No BRT', Plan 1: 'Single Cycle')

Network Layout Diagram



Basic Results Summary

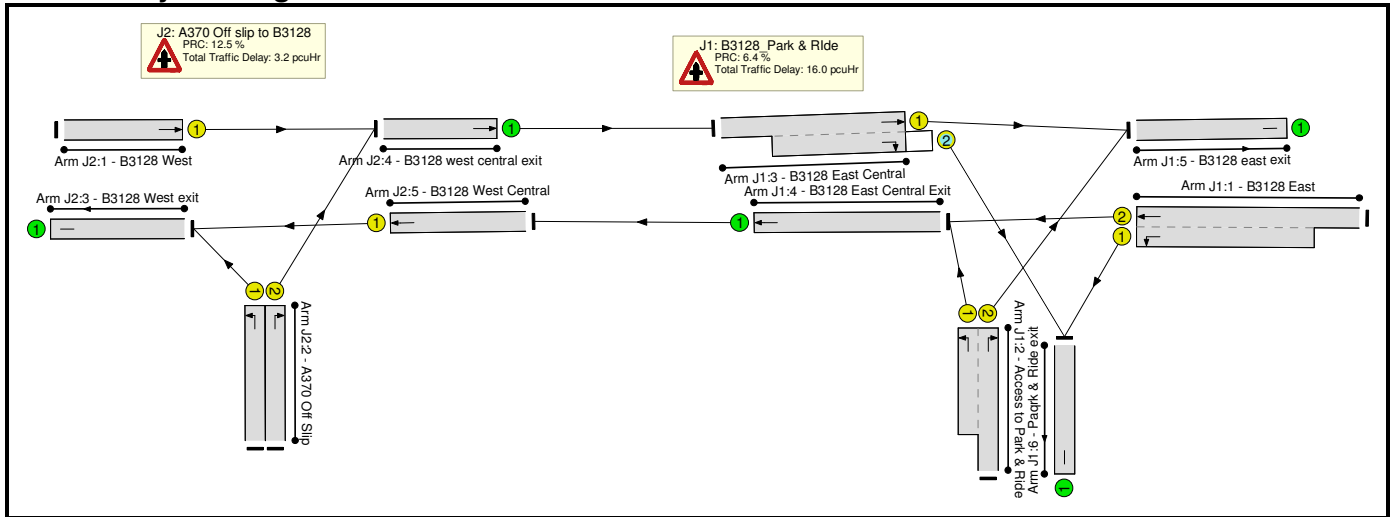
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)																				
Network	-	-	-	-	-	-	-	-	-	-	41.9%	379	0	0	7.2	-	-																				
J1: B3128_Park & Ride	-	-	-	-	-	-	-	-	-	-	37.4%	379	0	0	2.8	-	-																				
1/2+1/1	B3128 East Ahead Left	U	A		1	97		614	2105:1786	1762	34.8%	-	-	-	0.7	4.2	4.4																				
2/2+2/1	Access to Park & Ride Left Right	U	C		1	13		97	1919:2015	259	37.4%	-	-	-	1.6	59.9	3.0																				
3/1+3/2	B3128 East Central Ahead Right	U+O	B		1	97		388	1965:1958	1140	34.0%	379	0	0	0.5	4.2	1.6																				
J2: A370 Off slip to B3128	-	-	-	-	-	-	-	-	-	-	41.9%	0	0	0	4.4	-	-																				
1/1	B3128 West Ahead	U	D		1	82	-	206	2115	1463	14.1%	-	-	-	0.4	7.8	2.4																				
2/1	A370 Off Slip Left	U	E		1	28	-	13	1786	432	3.0%	-	-	-	0.1	39.2	0.3																				
2/2	A370 Off Slip Right	U	E		1	28	-	182	1828	442	41.2%	-	-	-	2.3	45.2	5.5																				
5/1	B3128 West Central Ahead	U	F		1	81	-	606	2115	1445	41.9%	-	-	-	1.5	9.0	7.6																				
<table style="width:100%; border:none;"> <tr> <td style="width:30%;"></td> <td style="width:30%;">C1 Stream: 1 PRC for Signalled Lanes (%):</td> <td style="width:15%;">140.4</td> <td style="width:25%;">Total Delay for Signalled Lanes (pcuHr):</td> <td style="width:10%;">2.78</td> </tr> <tr> <td></td> <td>C1 Stream: 2 PRC for Signalled Lanes (%):</td> <td>114.6</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>4.38</td> </tr> <tr> <td></td> <td style="padding-left:20px;">PRC Over All Lanes (%):</td> <td>114.6</td> <td>Total Delay Over All Lanes(pcuHr):</td> <td>7.16</td> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align:right;">Cycle Time (s):</td> <td>120</td> </tr> </table>																			C1 Stream: 1 PRC for Signalled Lanes (%):	140.4	Total Delay for Signalled Lanes (pcuHr):	2.78		C1 Stream: 2 PRC for Signalled Lanes (%):	114.6	Total Delay for Signalled Lanes (pcuHr):	4.38		PRC Over All Lanes (%):	114.6	Total Delay Over All Lanes(pcuHr):	7.16				Cycle Time (s):	120
	C1 Stream: 1 PRC for Signalled Lanes (%):	140.4	Total Delay for Signalled Lanes (pcuHr):	2.78																																	
	C1 Stream: 2 PRC for Signalled Lanes (%):	114.6	Total Delay for Signalled Lanes (pcuHr):	4.38																																	
	PRC Over All Lanes (%):	114.6	Total Delay Over All Lanes(pcuHr):	7.16																																	
			Cycle Time (s):	120																																	

Basic Results Summary

Scenario 4: 'PM 2016 DoMin' (FG2: '2016 PM DoMin - No BRT', Plan 1: 'Single Cycle')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)																					
Network	-	-	-	-	-	-	-	-	-	-	84.6%	30	0	0	19.1	-	-																					
J1: B3128_Park & Ride	-	-	-	-	-	-	-	-	-	-	84.6%	30	0	0	16.0	-	-																					
1/2+1/1	B3128 East Ahead Left	U	A		1	81		1237	2105:1786	1463	84.6%	-	-	-	7.1	20.7	31.0																					
2/2+2/1	Access to Park & Ride Left Right	U	C		1	29		559	1919:2015	669	83.6%	-	-	-	8.7	55.8	14.0																					
3/1+3/2	B3128 East Central Ahead Right	U+O	B		1	81		32	1965:1958	964	3.3%	30	0	0	0.2	19.4	0.6																					
J2: A370 Off slip to B3128	-	-	-	-	-	-	-	-	-	-	80.0%	0	0	0	3.2	-	-																					
1/1	B3128 West Ahead	U	D		1	103	-	19	2115	1833	1.0%	-	-	-	0.0	2.1	0.1																					
2/1	A370 Off Slip Left	U	E		1	7	-	7	1786	119	5.9%	-	-	-	0.1	68.8	0.2																					
2/2	A370 Off Slip Right	U	E		1	7	-	13	1828	122	10.7%	-	-	-	0.3	69.3	0.5																					
5/1	B3128 West Central Ahead	U	F		1	102	-	1452	2115	1815	80.0%	-	-	-	2.8	6.8	16.1																					
<table style="width:100%; border:none;"> <tr> <td style="width:15%;"></td> <td style="width:15%;">C1</td> <td style="width:30%;">Stream: 1 PRC for Signalled Lanes (%):</td> <td style="width:10%;">6.4</td> <td style="width:15%;">Total Delay for Signalled Lanes (pcuHr):</td> <td style="width:15%;">15.95</td> <td style="width:10%;"></td> </tr> <tr> <td></td> <td>C1</td> <td>Stream: 2 PRC for Signalled Lanes (%):</td> <td>12.5</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>3.16</td> <td></td> </tr> <tr> <td></td> <td></td> <td>PRC Over All Lanes (%):</td> <td>6.4</td> <td>Total Delay Over All Lanes(pcuHr):</td> <td>19.11</td> <td>Cycle Time (s): 120</td> </tr> </table>																			C1	Stream: 1 PRC for Signalled Lanes (%):	6.4	Total Delay for Signalled Lanes (pcuHr):	15.95			C1	Stream: 2 PRC for Signalled Lanes (%):	12.5	Total Delay for Signalled Lanes (pcuHr):	3.16				PRC Over All Lanes (%):	6.4	Total Delay Over All Lanes(pcuHr):	19.11	Cycle Time (s): 120
	C1	Stream: 1 PRC for Signalled Lanes (%):	6.4	Total Delay for Signalled Lanes (pcuHr):	15.95																																	
	C1	Stream: 2 PRC for Signalled Lanes (%):	12.5	Total Delay for Signalled Lanes (pcuHr):	3.16																																	
		PRC Over All Lanes (%):	6.4	Total Delay Over All Lanes(pcuHr):	19.11	Cycle Time (s): 120																																

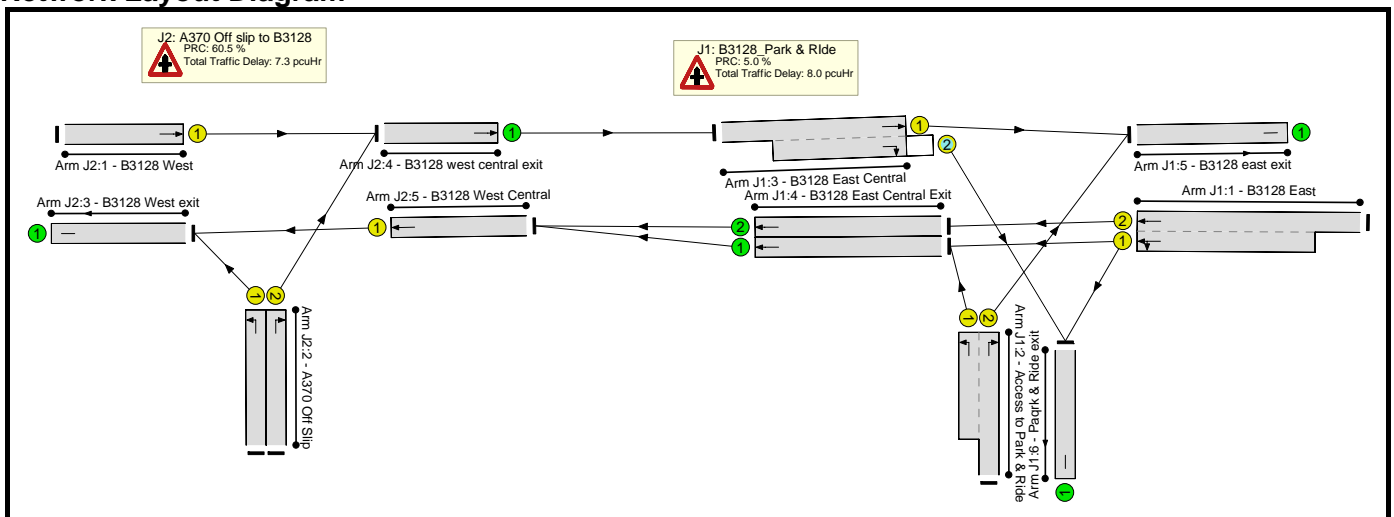
Basic Results Summary
Basic Results Summary

User and Project Details

Project:	
Title:	
Location:	
File name:	B3128, A370 and Park & Ride Access Do Something.lsg3x
Author:	
Company:	
Address:	
Notes:	

Scenario 5: 'AM 2031 DoSomething' (FG5: '2031 AM DoSomething - With BRT No CALA Relocation', Plan 1: 'Single Cycle')

Network Layout Diagram



Basic Results Summary

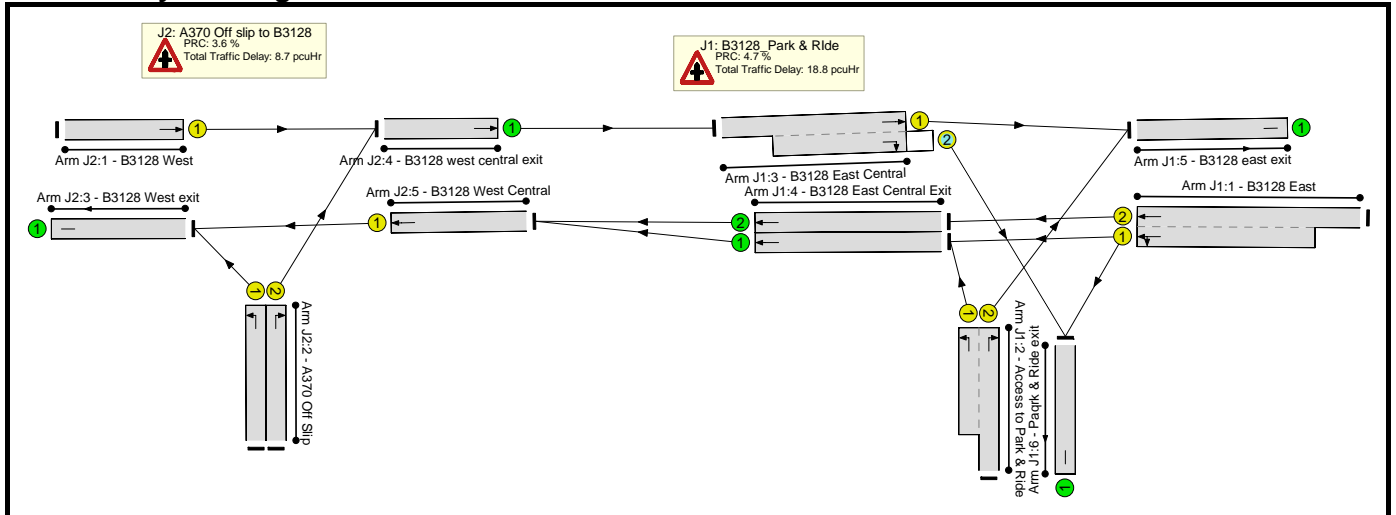
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)																								
Network	-	-	-	-	-	-	-	-	-	-	85.7%	616	0	43	15.4	-	-																								
J1: B3128_Park & Ride	-	-	-	-	-	-	-	-	-	-	85.7%	616	0	43	8.0	-	-																								
1/2+1/1	B3128 East Ahead Left	U	A		1	102		832	2105:1902	1978	42.1%	-	-	-	0.7	3.1	3.6																								
2/2+2/1	Access to Park & Ride Left Right	U	C		1	8		116	1919:1832	152	76.4%	-	-	-	3.2	100.6	4.9																								
3/1+3/2	B3128 East Central Ahead Right	U+O	B		1	102		670	1965:1958	782	85.7%	616	0	43	4.1	22.0	16.3																								
J2: A370 Off slip to B3128	-	-	-	-	-	-	-	-	-	-	56.1%	0	0	0	7.3	-	-																								
1/1	B3128 West Ahead	U	D		1	78	-	401	2115	1392	28.8%	-	-	-	1.2	10.5	5.8																								
2/1	A370 Off Slip Left	U	E		1	32	-	17	1786	491	3.5%	-	-	-	0.2	35.7	0.4																								
2/2	A370 Off Slip Right	U	E		1	32	-	269	1828	503	53.5%	-	-	-	3.3	44.6	8.2																								
5/1	B3128 West Central Ahead	U	F		1	77	-	771	2115	1375	56.1%	-	-	-	2.6	12.4	12.0																								
<table style="width:100%; border:none;"> <tr> <td style="width:15%;"></td> <td style="width:15%;">C1</td> <td style="width:30%;">Stream: 1 PRC for Signalled Lanes (%):</td> <td style="width:10%;">5.0</td> <td style="width:15%;">Total Delay for Signalled Lanes (pcuHr):</td> <td style="width:10%;">8.05</td> <td colspan="2"></td> </tr> <tr> <td></td> <td>C1</td> <td>Stream: 2 PRC for Signalled Lanes (%):</td> <td>60.5</td> <td>Total Delay for Signalled Lanes (pcuHr):</td> <td>7.32</td> <td colspan="2"></td> </tr> <tr> <td></td> <td></td> <td>PRC Over All Lanes (%):</td> <td>5.0</td> <td>Total Delay Over All Lanes(pcuHr):</td> <td>15.37</td> <td>Cycle Time (s):</td> <td>120</td> </tr> </table>																			C1	Stream: 1 PRC for Signalled Lanes (%):	5.0	Total Delay for Signalled Lanes (pcuHr):	8.05				C1	Stream: 2 PRC for Signalled Lanes (%):	60.5	Total Delay for Signalled Lanes (pcuHr):	7.32					PRC Over All Lanes (%):	5.0	Total Delay Over All Lanes(pcuHr):	15.37	Cycle Time (s):	120
	C1	Stream: 1 PRC for Signalled Lanes (%):	5.0	Total Delay for Signalled Lanes (pcuHr):	8.05																																				
	C1	Stream: 2 PRC for Signalled Lanes (%):	60.5	Total Delay for Signalled Lanes (pcuHr):	7.32																																				
		PRC Over All Lanes (%):	5.0	Total Delay Over All Lanes(pcuHr):	15.37	Cycle Time (s):	120																																		

Basic Results Summary

Scenario 6: 'PM 2031 DoSomething' (FG6: '2031 PM DoSomething - With BRT No CALA Relocation', Plan 1: 'Single Cycle')

Network Layout Diagram



Basic Results Summary

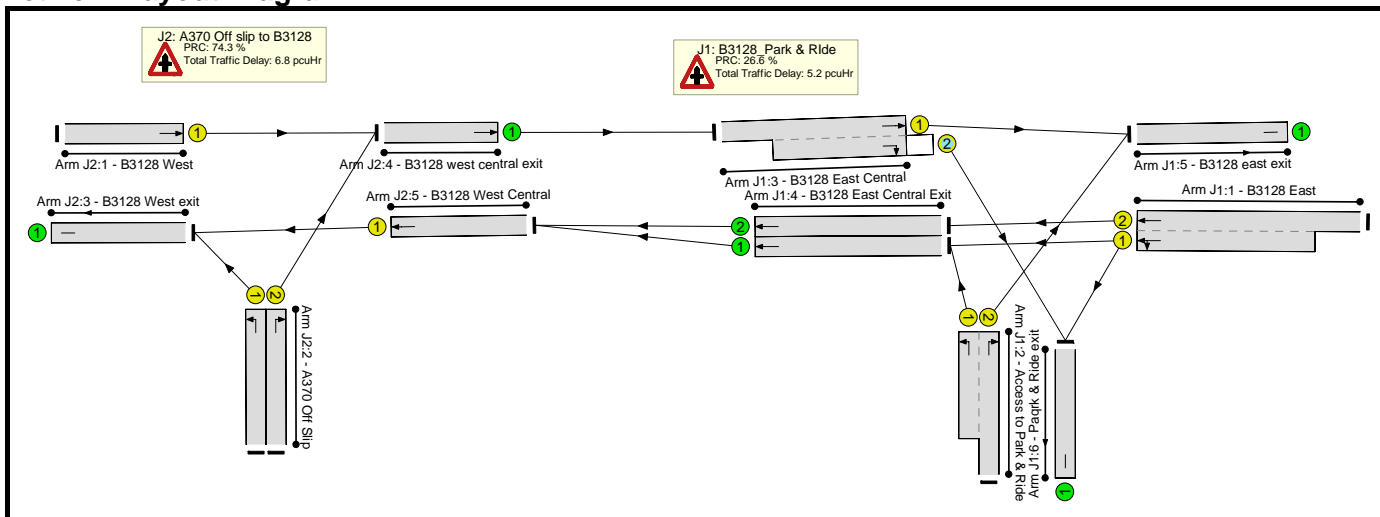
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	-	-	-	-	-	86.8%	29	0	0	27.5	-	-
J1: B3128_Park & Ride	-	-	-	-	-	-	-	-	-	-	86.0%	29	0	0	18.8	-	-
1/2+1/1	B3128 East Ahead Left	U	A		1	67		1341	2105:1930	1573	85.3%	-	-	-	9.1	24.5	18.2
2/2+2/1	Access to Park & Ride Left Right	U	C		1	43		723	1919:1832	841	86.0%	-	-	-	9.3	46.2	18.9
3/1+3/2	B3128 East Central Ahead Right	U+O	B		1	67		31	1965:1958	325	9.5%	29	0	0	0.5	52.8	0.7
J2: A370 Off slip to B3128	-	-	-	-	-	-	-	-	-	-	86.8%	0	0	0	8.7	-	-
1/1	B3128 West Ahead	U	D		1	108	-	19	2115	1921	1.0%	-	-	-	0.0	1.5	0.1
2/1	A370 Off Slip Left	U	E		1	2	-	7	1786	45	15.7%	-	-	-	0.2	105.1	0.3
2/2	A370 Off Slip Right	U	E		1	2	-	12	1828	46	26.3%	-	-	-	0.4	110.4	0.6
5/1	B3128 West Central Ahead	U	F		1	107	-	1653	2115	1904	86.8%	-	-	-	8.1	17.6	32.3
		C1	Stream: 1 PRC for Signalled Lanes (%):				4.7	Total Delay for Signalled Lanes (pcuHr):				18.84					
		C1	Stream: 2 PRC for Signalled Lanes (%):				3.6	Total Delay for Signalled Lanes (pcuHr):				8.68					
			PRC Over All Lanes (%):				3.6	Total Delay Over All Lanes(pcuHr):				27.52		Cycle Time (s):		120	

Basic Results Summary

Scenario 7: 'AM 2016 DoSomething' (FG7: '2016 AM DoSomething - With BRT No CALA Relocation', Plan 1: 'Single Cycle')

Network Layout Diagram



Basic Results Summary

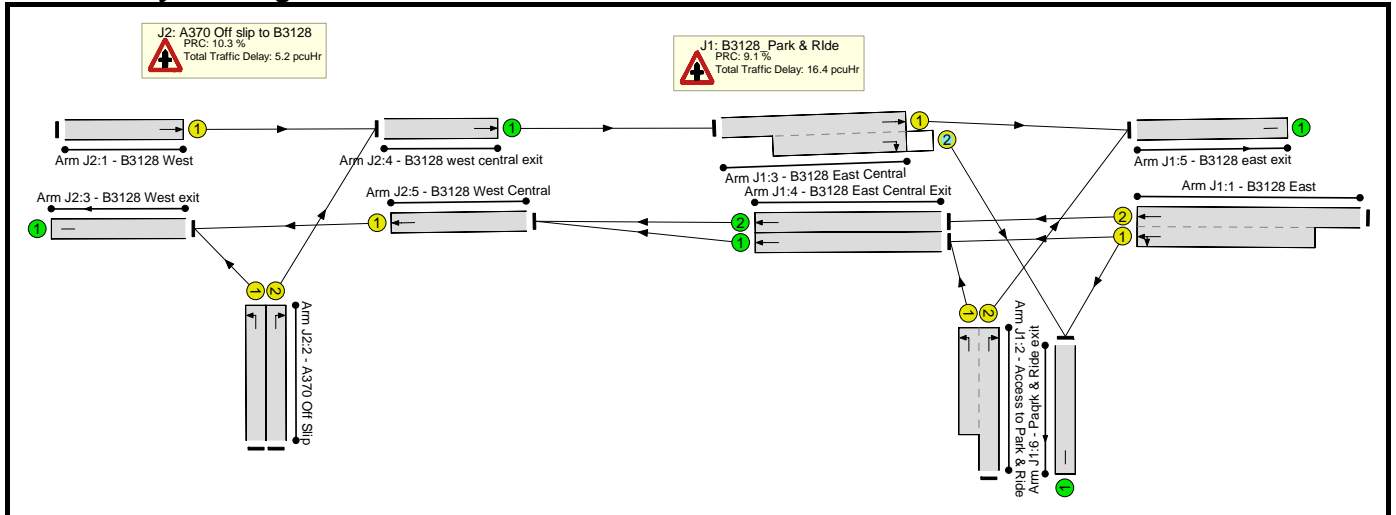
Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
Network	-	-	-	-	-	-	-	-	-	-	71.1%	558	0	43	12.0	-	-	
J1: B3128_Park & Ride	-	-	-	-	-	-	-	-	-	-	71.1%	558	0	43	5.2	-	-	
1/2+1/1	B3128 East Ahead Left	U	A		1	101		670	2105:1895	1950	34.4%	-	-	-	0.6	3.1	2.8	
2/2+2/1	Access to Park & Ride Left Right	U	C		1	9		111	1919:1832	168	66.2%	-	-	-	2.6	83.8	4.2	
3/1+3/2	B3128 East Central Ahead Right	U+O	B		1	101		610	1965:1958	858	71.1%	558	0	43	2.1	12.2	15.2	
J2: A370 Off slip to B3128	-	-	-	-	-	-	-	-	-	-	51.6%	0	0	0	6.8	-	-	
1/1	B3128 West Ahead	U	D		1	68	-	359	2115	1216	29.5%	-	-	-	1.5	15.2	6.3	
2/1	A370 Off Slip Left	U	E		1	42	-	13	1786	640	2.0%	-	-	-	0.1	27.9	0.3	
2/2	A370 Off Slip Right	U	E		1	42	-	251	1828	655	38.3%	-	-	-	2.3	33.1	6.5	
5/1	B3128 West Central Ahead	U	F		1	67	-	619	2115	1199	51.6%	-	-	-	2.9	16.6	14.4	
							C1 Stream: 1 PRC for Signalled Lanes (%):	26.6				Total Delay for Signalled Lanes (pcuHr):	5.22					
							C1 Stream: 2 PRC for Signalled Lanes (%):	74.3				Total Delay for Signalled Lanes (pcuHr):	6.78					
							PRC Over All Lanes (%):	26.6				Total Delay Over All Lanes(pcuHr):	12.00	Cycle Time (s): 120				

Basic Results Summary

Scenario 8: 'PM 2016 DoSomething' (FG8: '2016 PM DoSomething - With BRT No CALA Relocation', Plan 1: 'Single Cycle')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per Veh (s/pcu)	Mean Max Queue (pcu)	
Network	-	-	-	-	-	-	-	-	-	-	82.5%	30	0	0	21.6	-	-	
J1: B3128_Park & Ride	-	-	-	-	-	-	-	-	-	-	82.5%	30	0	0	16.4	-	-	
1/2+1/1	B3128 East Ahead Left	U	A		1	68		1237	2105:1932	1508	82.0%	-	-	-	7.7	22.4	16.9	
2/2+2/1	Access to Park & Ride Left Right	U	C		1	42		681	1919:1832	826	82.5%	-	-	-	8.3	43.7	16.6	
3/1+3/2	B3128 East Central Ahead Right	U+O	B		1	68		32	1965:1958	307	10.4%	30	0	0	0.4	50.2	0.8	
J2: A370 Off slip to B3128	-	-	-	-	-	-	-	-	-	-	81.6%	0	0	0	5.2	-	-	
1/1	B3128 West Ahead	U	D		1	106	-	18	2115	1886	1.0%	-	-	-	0.0	1.7	0.1	
2/1	A370 Off Slip Left	U	E		1	4	-	7	1786	74	9.4%	-	-	-	0.2	82.2	0.3	
2/2	A370 Off Slip Right	U	E		1	4	-	14	1828	76	18.4%	-	-	-	0.3	84.4	0.6	
5/1	B3128 West Central Ahead	U	F		1	105	-	1524	2115	1868	81.6%	-	-	-	4.7	11.0	32.2	
							C1 Stream: 1 PRC for Signalled Lanes (%):	9.1	Total Delay for Signalled Lanes (pcuHr):			16.39						
							C1 Stream: 2 PRC for Signalled Lanes (%):	10.3	Total Delay for Signalled Lanes (pcuHr):			5.16						
							PRC Over All Lanes (%):	9.1	Total Delay Over All Lanes(pcuHr):			21.55	Cycle Time (s): 120					

Appendix H – TRANSYT Diagrams and Analyses

This appendix is only available electronically

Appendix I – Prince Street Bridge Assessment

Technical Report

Project: Bristol Rapid Transit: Ashton Vale to Temple Meads and City Centre	To: Bristol City Council
Subject: Prince Street Bridge Sensitivity	From: Atkins Ltd
Date: 28 th October 2009	cc: Steer Davies Gleave

1. Background

The proposed Bus Rapid Transit (BRT) scheme between Ashton Vale and the City Centre includes the closure to general traffic of Prince Street Bridge. The bridge currently operates (under a temporary traffic regulation order) as two-way shuttle working for vehicles on its eastern side, with pedestrians and cyclist segregated from traffic on its western side: the below figure looks northwards across Prince Street Bridge towards the City Centre

Figure 1 – Prince Street Bridge from South



The bridge current has a weight restriction of 3 tonnes and is narrowed to 7'6" to help physically enforce this restriction. The proposed scheme will structurally strengthen the bridge to enable the Rapid Transit as well as other bus services to use the bridge.

As the closure to general traffic may be perceived to be detrimental to traffic conditions in the surrounding area, transport modelling was undertaken using the G-BATS model to simulate the operation of the highway and public transport networks with and without the closure to general traffic of Prince Street Bridge.

2. Methodology

Time Periods Assessed

The AM and PM peak period scenarios for 2026 were assessed both with and without the closure to general traffic of Prince Street Bridge (PSB). These would show the worst case impact as traffic flows include all the proposed developments in the surrounding area.

Fixed Demand Comparion

The matrices, or highway demand was fixed between the two scenarios (of with and without closure), so a like for like comparison could be made. This simplistic approach is considered the clearest and most robust as the worst case impact will be shown, and the results will not be affected by additional modal shifts or other factors.

The alternative would be to run the full GBATS simulation model which allows layers of choice between mode of travel and destination etc. Although removing one of the wharf crossings to vehicular traffic will have a highway impact and *may* persuade some car users to consider alternative travel modes, this modal switch is likely to be small and its inclusion may make the results less clear as several factors are happening.

3. Simulation Results

Select Link Analysis

Figure 2 – 2026 AM Peak Hour: Prince Street Bridge with Traffic

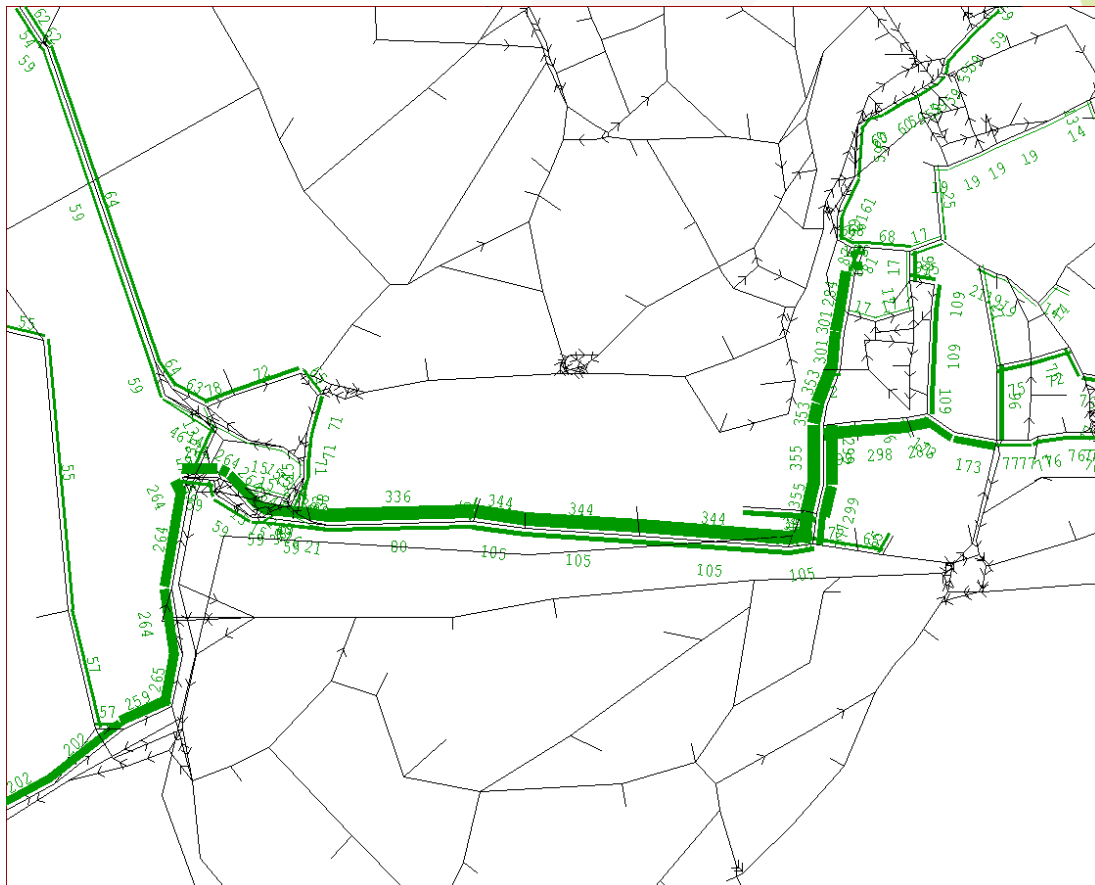
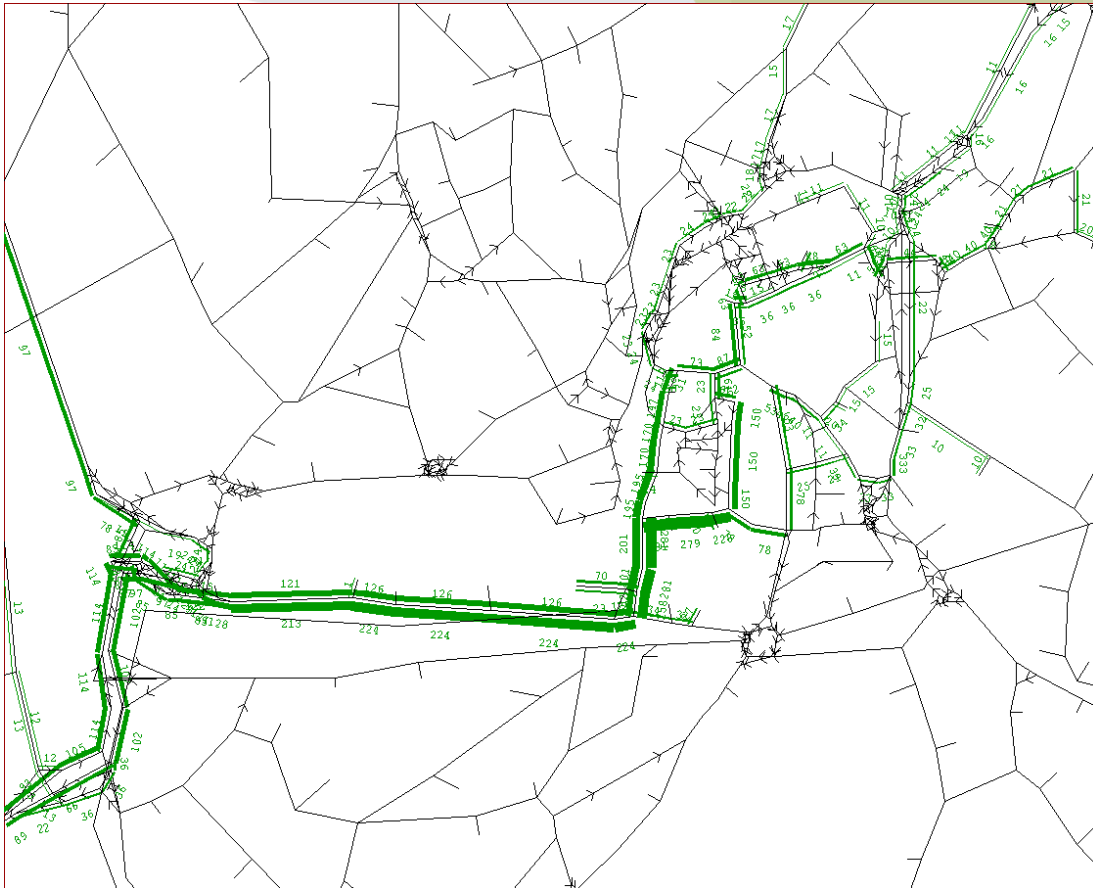


Figure 3 – 2026 PM Peak Hour: Prince Street Bridge with Traffic



Figures 2 and 3 show the predicted use of the bridge should the current shuttle working scheme remain in place, with the green trails showing where the traffic comes from. This shows approximately 650 vehicles using the bridge in the morning peak hour with slightly more (55%) going towards the centre, and just under 500 vehicles in the PM peak with slightly more (58%) coming from the centre.

In both peaks the majority of the traffic using the bridge are shown to link the A370, the A4 and the A369 from the west of the city, funnelling to Cumberland Road with traffic added along Cumberland Road and the developments at Wapping Road and splaying out to Queen Square and the surrounding central area, with a small proportion continuing towards the M32, A38 and A420.

The overall numbers using the bridge are significant though in context of the surrounding strategic road network show the bridge traffic to be a minor link in the network.

“Load Relief” Comparisons

Load Relief diagrams show where the additional traffic goes in terms of total addition to the network. The influence of closing the bridge is shown in Figures 4 and 5 by the blue traffic additions to the highway network. These do not necessarily add up arithmetically to the surrounding highway feeding the roads as as interactions of reduced and additional traffic have to be taken into account. For example Cumberland Road is not reduced by the volume of traffic you may expect following the closure of the bridge as portions of the traffic locally re-route through Bedminster Roundabout instead of further a-field.

Figure 4 – 2026 AM Peak Hour: with (green) and without (blue) PSB

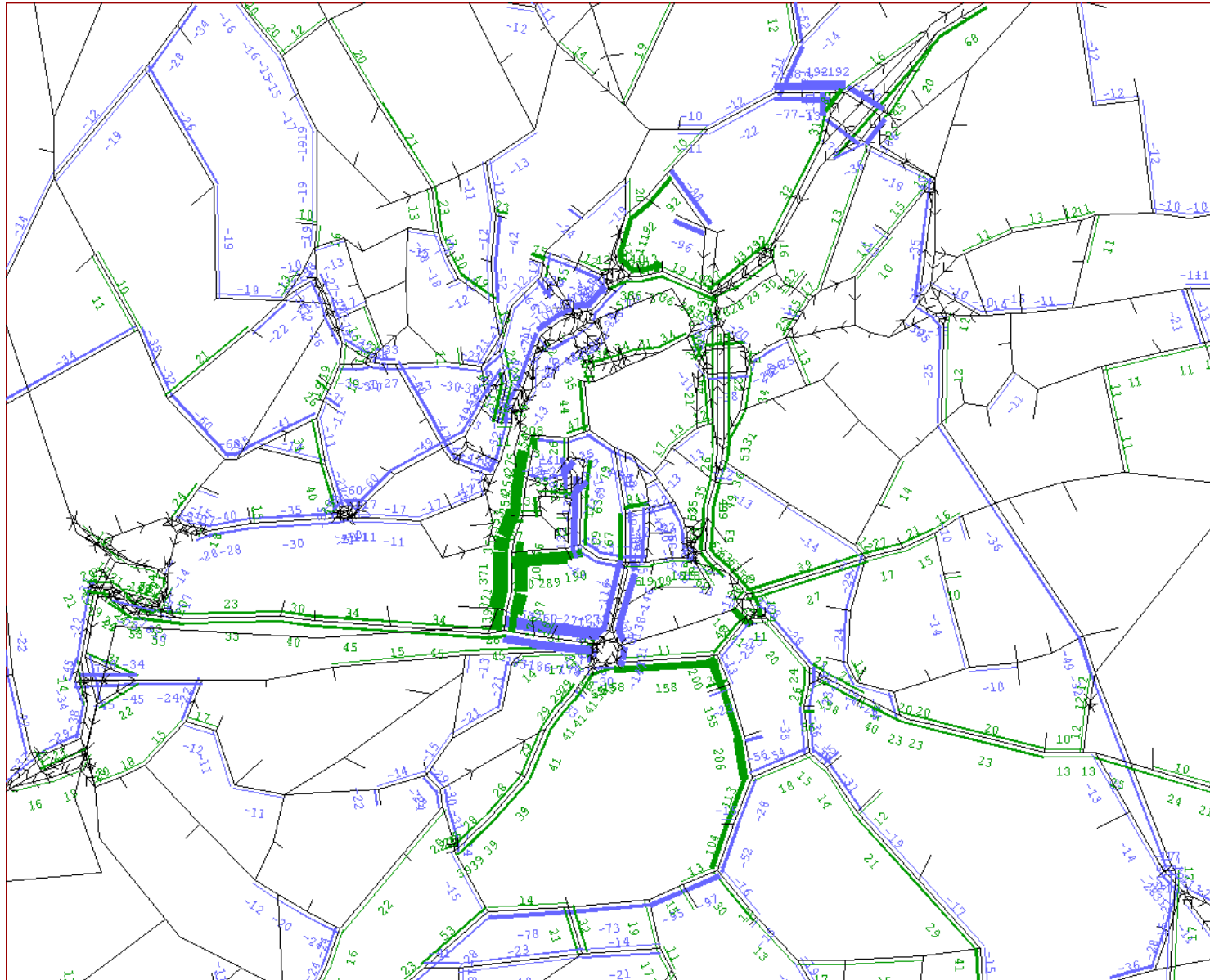
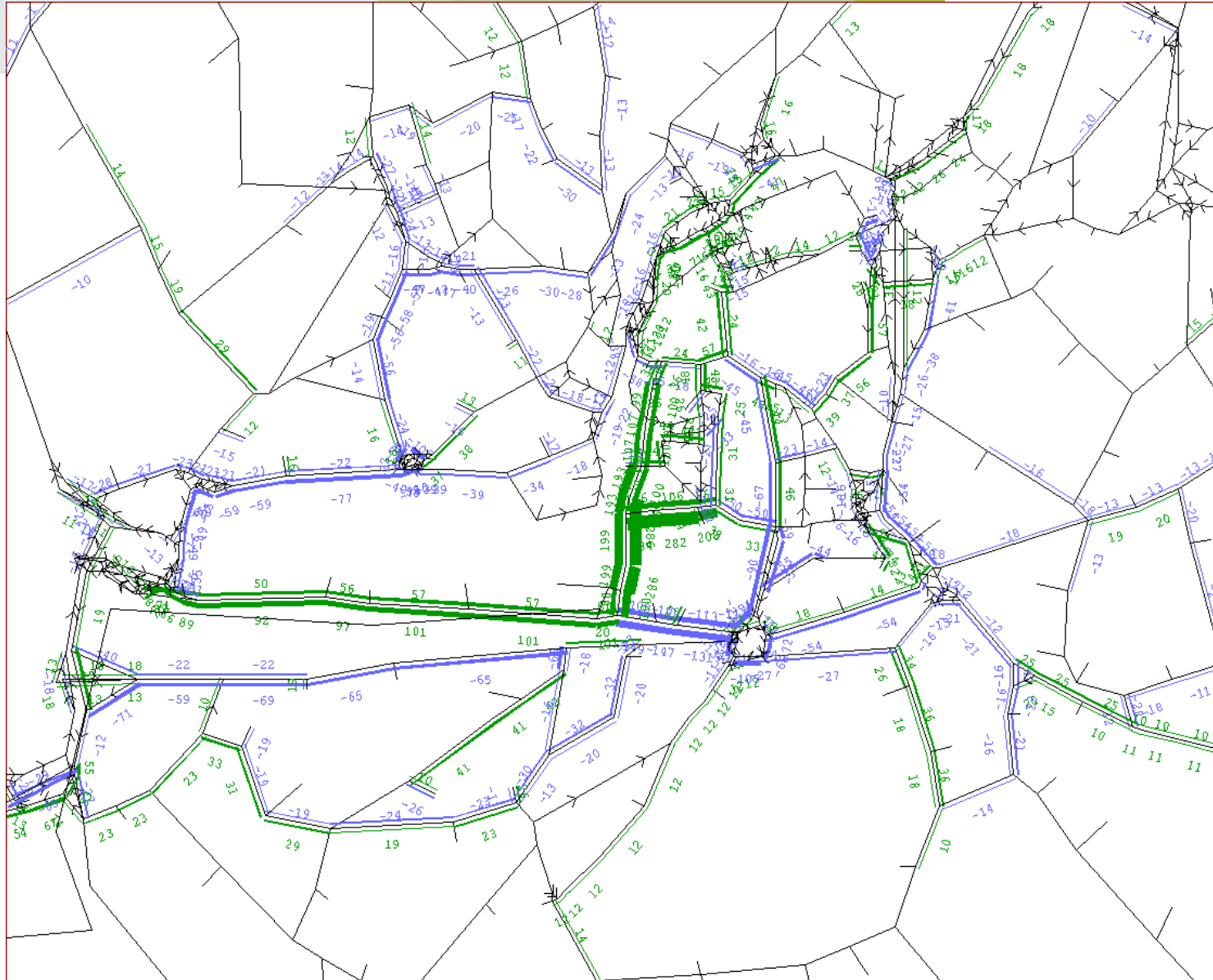


Figure 5 – 2026 PM Peak Hour: with (green) and without (blue) PSB



Main Influences

The main influences of closing the bridge to general traffic, (compared to allowing general traffic as part of the BRT scheme) are:

In the AM Peak Hour:

- to add traffic to some movements at Bedminster Bridge, Redcliff Hill, and Welsh Back whilst reducing traffic numbers on St Johns Lane, St Lukes Road and York Road;
- to add traffic to some movements at St James Barton roundabout whilst reducing other movements; and
- to divert a small amount of traffic from Cumberland Road to Hotwells Road
- The influences further a-field where there are small changes to roads within Bedminster are caused by the ripple effect of the proposal where other traffic re-routes as a result of increased or reduced congestion caused by the scheme.

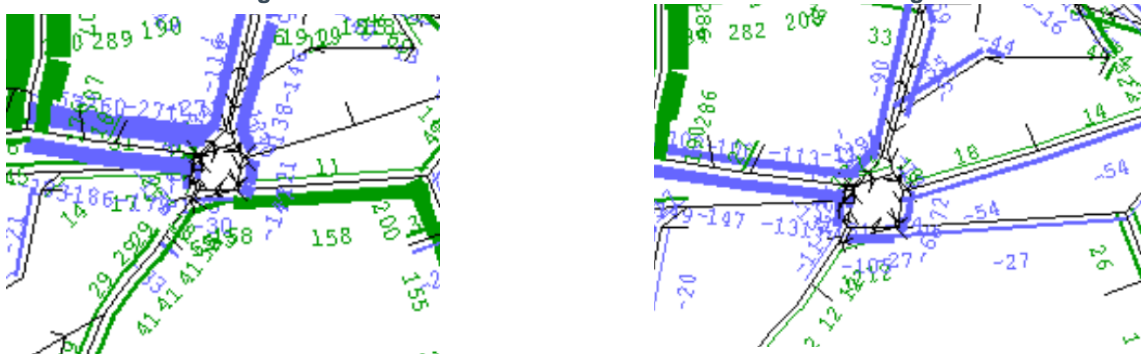
In the PM Peak Hour

- to add traffic to most roads leading to Bedminster Bridge (Commercial Road, Clarence Road, and York Road);
- to add a small amount of traffic at Bath Bridge and Temple Circus;
- to divert a small amount of traffic from Cumberland Road to Hotwells Road and to Coronation Road, including a small increase from Park Row to Jacobs Wells Road to Hotwells Road
- As with the AM peak the influences further a-field where there are small changes to roads within Bedminster are caused by the ripple effect of the proposal where other traffic re-routes as a result of increased or reduced congestion caused by the scheme.

The main influence in both peaks is at Bedminster Bridge where Commercial Road is naturally used as a local diversion from Wapping Road following the closure of Prince Street Bridge.

As shown in Figure 6, the increase in traffic numbers at Bedminster Bridge is a net increase of approximately 210 vehicles entering the bridge in the AM peak (400 combined increase from Commercial Road and Redcliffe Way, with 190 combined reduction from York Road and Bedminster Parade). In the PM peak the increase is less at approximately 200 vehicles (combined increase from Commercial Road, Clarence Road and York Road)

Figure 6 – 2026 AM and PM Load Relief at Bedminster Bridge



Overall Highway Network Performance

The overall network performance in terms of distance travelled and time taken to travel that distance is a comparative measure to see the influence of closing the bridge to traffic

Table 1 – Network Comparison Statistics

	PSB open	PSB closed	difference	%difference
AM Peak Hour				
Total Network Travel Time (pcu hours)	162,645	162,645	- 0	0.0%
Total Network Distance Travelled (pcu km)	8,197,474	8,198,693	- 1,219	0.0%
PM Peak Hour				
Total Network Travel Time (pcu hours)	120,330	120,575	- 245	-0.2%
Total Network Distance Travelled (pcu km)	6,832,752	6,833,910	- 1,158	0.0%

The above table suggests that the closure has had a negligible effect on network performance with no significant increase in travel time or distance travelled. The 1,200 additional vehicle kilometres over the network shows suggests that overall some traffic is travelling a bit further to reach their destinations which would be expected from closing a bridge.

4. Conclusions

The above analyses suggest that closure of Prince Street Bridge to general traffic as part of the BRT scheme (when compared to keeping it open as part of the BRT scheme) will have a significant effect on the immediate roads surrounding the bridge, especially Commercial Road, Redcliff Hill and Welsh Back, and a marginal effect further a-field.

The most significant increase in traffic is at Bedminster Bridge where up to 210 additional vehicles per hour may be diverted, however it is considered that this small increase will not be perceptible in operational terms.