HIGHWAYS TECHNICAL NOTE

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Toton West, Broxtowe

EMGM Scenario Four – Bramcote Roundabout

Client:	Bloor Homes Ltd	File Reference:	260911_328827_TN009
Date:	11 September 2026	Job Number:	328827
Prepared by:	PM	Approved by:	JFN

1. Introduction

1.1 Overview

1.1.1 mode transport planning (mode) has been commissioned by Bloor Homes Ltd, to provide transport and highways advice in relation to the Outline Planning Application (Ref: 25/00371/OUT) for a new residential development at Toton West in Broxtowe, Nottinghamshire. The proposals comprise the following:

> *"Outline Planning Application for the construction of a residential development of up to 420 residential dwellings and associated open space and infrastructure."*

1.1.2 The application has been lodged as an appeal, which commenced in August 2026 and will be considered by the Planning Inspectorate following a period of adjournment in October 2026.

1.2 Background

1.2.1 In accordance with the timescales agreed as part of the adjourned inquiry, a Technical Note 008 (TN) (file reference: 260902_328827_TN008) was submitted to Nottinghamshire County Council (NCC) and National Highways (NH) on Wednesday 2nd September 2026, outlining the results of localised capacity assessment for junctions identified as requiring further assessment from Scenario 4 of the East Midlands Gateway Mode (EMGM).

1.2.2 Scenario 4 comprises the cumulative assessment of the entire Toton allocation together with Chetwynd Barracks, and the complete Toton Link Road. Localised capacity assessments have been undertaken at those junctions flagged as experiencing an increase in congestion between the relevant EMGM Reference Case and Do Something scenarios.

1.2.3 On account of the timescales agreed at the adjourned inquiry, it was agreed that an initial TN (TN008) would present the initial results of the localised capacity assessments, and that further discussion and review of any potential mitigation schemes (where required), would be set out as part of a subsequent follow-on Technical Note.

1.2.4 The results of TN008 confirm the expected conclusion that the Toton Link Road operates as intended. The capacity assessment does indicate, however, that the Bramcote Roundabout experiences a slight deterioration in capacity in the 2041 Do Something Scenario when compared with the 2041 Reference Case. As outlined in TN008, it was therefore agreed that the impact at this location would be subject to a further review, which is set out in this TN.

1.2.5 At this stage it should once again be stated that it is the Appellant's position that Toton West should be considered on its own merits, and that the Appeal ought to be allowed based on the updated Transport Assessment and the results presented in the EMGM, which demonstrated that Toton West will not have a severe impact on the operation of the local highway network.

1.2.6 The cumulative assessment undertaken within TN008 and considered in this TN herein, has been completed to demonstrate the appellant's willingness to engage and work proactively with NCC and NH. The assessments and the subsequent findings do not alter this position.

2. Existing Junction Capacity Assessment

2.1 Overview

2.1.1 The Bramcote island is a significant five-arm junction, with a main A52 route through the central reservation, providing access along the key arterial route of the A52 corridor towards Nottingham City Centre to the east and Junction 25 of the M1 to the west. The junction is located on the Strategic Road Network (SRN), which is managed by NH. A LinSig assessment of this junction was undertaken within TN008, utilising furnessed turning flows derived from the Scenario 4 EMGM model run.

2.1.2 As identified within TN008, during the AM peak period, the results of the LinSig assessment demonstrate that the junction will operate within its theoretical capacity on all approaches during the 2041 Reference Case Scenario, with a maximum DoS of 94.7% recorded on the A52 (W) approach, along with a MMQ of 23 PCU and a delay of 42 seconds per PCU. Following the introduction of Scenario 4 associated traffic and infrastructure in the 2041 Do Something Scenario, the results of the LinSig assessment demonstrate that the maximum DoS will increase to 102.6% on the A52 (W) approach, accompanied by a MMQ of 45 PCU and a delay of 107 seconds per PCU.

2.1.3 During the PM peak period, the junction is forecast to operate within its theoretical capacity on all approaches, with a maximum DoS of 86.3% recorded on the A52 (W) approach during the 2041 Reference Case Scenario, which increases to 90% in the 2041 Do Something Scenario. The increase in DoS on the A52 (W) approach is accompanied by a minor increase in MMQ; from 15 to 17 PCU, and a minor increase in delay; from 27 to 29 seconds per PCU.

2.1.4 Overall, the junction is forecast to experience a slight deterioration in capacity in the 2041 Do Something Scenario when compared with the 2041 Reference Case and as such, mode have reviewed mitigation options at this location, to offset the impact of the Scenario 4 associated traffic in the 2041 Do Something Scenario.

2.1.5 As previously noted, a limitation of LinSig software is that model runs cannot accurately consider the effect of MOVA (Microprocessor Optimised Vehicle Actuation), which is in place at this junction. In this regard, the junction will have capability to run more efficiently than is demonstrated in the submitted modelling results to date. However, for the purposes of robustness, this has not been accounted for within the modelling presented.

3. Proposed Amendments

3.1 Overview

3.1.1 A signalised pedestrian crossing is currently provided the A52 Derby Road (NE) approach to the junction, and the A52 Derby Road (NE) through lane and circulatory egress arms from the Bramcote Island.

3.1.2 The existing crossing facility is provided in three stages (linked with two central refuge facilities), connecting the footway on the northern side of the junction with the southern footway of the A52 Derby Road (NE) approach. The facility effectively crosses 9 lanes of traffic; comprised of three lanes on the Derby Road A52 Derby Road (NE) approach to the first refuge facility, a further three lanes (inclusive of a bus lane) across the A52 Derby Road (NE) through lane egress to the second refuge facility, and a further two lane on the circulatory egress arms from the Bramcote Island, before connecting with the pedestrian facilities on the opposite side of the junction.

3.1.3 As part of the proposed mitigation scheme at the junction, it is proposed that the pedestrian crossing facility across this this section of the A52 is relocated, so this is more closely aligned with the primary north / south pedestrian desire line at this location, which is considered to be between the Leisure Centre to the north and the surrounding residential area to the south.

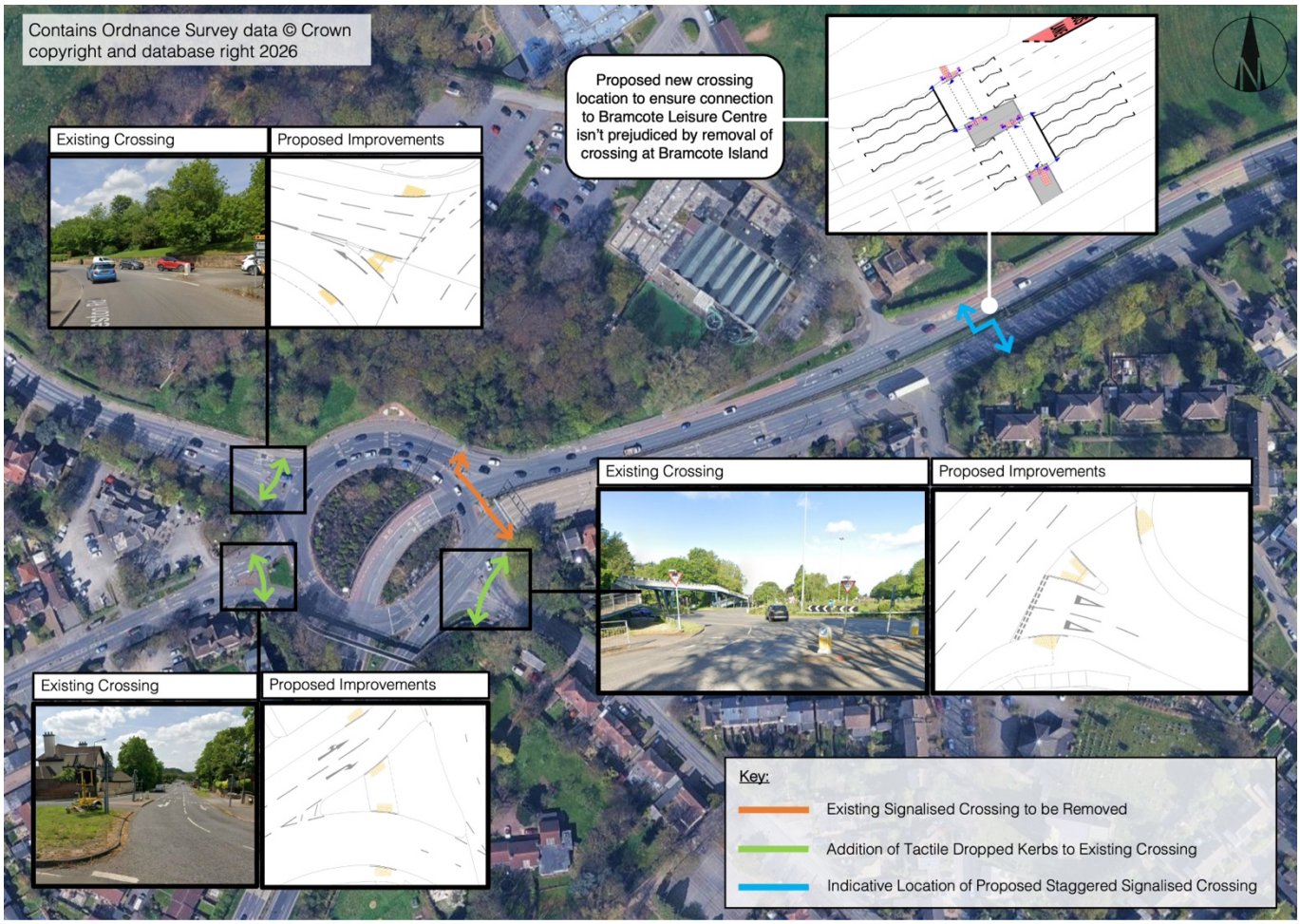
3.1.4 Recognising that the existing crossing provides an established pedestrian connection across the A52 Derby Road (NE) approach, it is proposed that the signalised crossing is relocated approximately 200m downstream (NE), immediately to the east of the Bramcote Leisure Centre access. This caters for the primary pedestrian desire line between the Leisure Centre and surrounding residential areas, while also retaining a direct connection between the footways on either side of the A52. It is proposed that a staggered signalised crossing is installed, utilising the exiting central reservation as the refuge island.

3.1.5 On account of the length and scale of this crossing point, removal of the existing pedestrian crossing stage from the signal cycle releases a significant amount of associated pedestrian green time and intergreen period, thereby increasing the effective green time available to the oversaturated through movements between the A52 (S) and A52 (NE) approaches.

3.1.6 Further improvements at the junction are proposed on the Town Street, Derby Road (W) and Ilkeston Road approaches to the roundabout. To improve pedestrian permeability across these approaches , the existing dropped-kerb crossing points will be enhanced through the implementation of tactile paving.

3.1.7 An illustration of the proposed amendments to the Bramcote Island and the location of the relocated signalised crossing is illustrated in **Figure 3.1** below, with a formal general arrangement drawing (**Drawing J32-8827-PS-008 A**) attached at **Appendix B**, for reference.

Figure 3.1 Proposed Amendments



3.2 Proposed Mitigation - Junction Capacity Assessment Results

3.2.1 A summary of the results of the LinSig assessment for the proposed mitigation scheme is provided in **Table 2.2**, below, with the full model outputs provided at **Appendix A**. Reference has also been made to the 2041 Reference Case for the existing arrangement at the junction (as presented in TN008) as this provides the key comparative position to assess the impact against.

Table 3.1 Proposed Mitigation Capacity Results

	AM Peak Period (08:00-09:00)			PM Peak Period (17:00-18:00)		
	DoS (%)	MMQ (PCU)	Delay /PCU (s)	DoS (%)	MMQ (PCU)	Delay /PCU (s)
2041 Reference Case (Existing Arrangement)						
A6007 Ilkeston Road	91.5	6	62	78.5	4	13
A52 Derby Road East	65.1	11	18	49.6	7	17
Town Street	86.0	7	31	62.6	3	17
A52 Derby Road South West	94.7	23	42	86.3	15	27
B5010 Derby Road	73.6	5	6	44.1	2	3
Junction PRC		-7.4%			4.2%	
2041 Do Something (Proposed Mitigation)						
A6007 Ilkeston Road	90.2	7	55	85.2	4	16
A52 Derby Road East	62.1	13	22	67.5	10	28
Town Street	87.9	8	36	69.0	4	18
A52 Derby Road South West	80.6	19	19	72.0	13	18
B5010 Derby Road	66.2	6	5	47.3	2	3
Junction PRC		-0.3%			5.8%	

3.2.2 **Table 2.2** demonstrates that the proposed amendments mitigate the impact of Scenario 4 associated traffic in the 2041 Do Something Scenario, whilst also providing a wider material improvement in overall junction operation in comparison to the 2041 Reference Case assessment scenario.

3.2.3 The Junction PRC improves from -7.4% to -0.3% in the AM Peak and from 4.2% to 5.8% in the PM peak. In addition, on the most constrained approach during the 2041 Reference Case scenario (A52 Derby Road South West), the proposed amendments to the junction result in an improvement in the operation of this approach, with a reduction in the DoS from 94.7% to 80.6% in the AM peak and from 86.3% to 72.0% in the PM peak. Whilst the redistribution of available green time results in minor increases in DoS on individual movements, the overall junction performance is clearly improved.

3.3 Pedestrian Connectivity and Justification for Relocation of Crossing

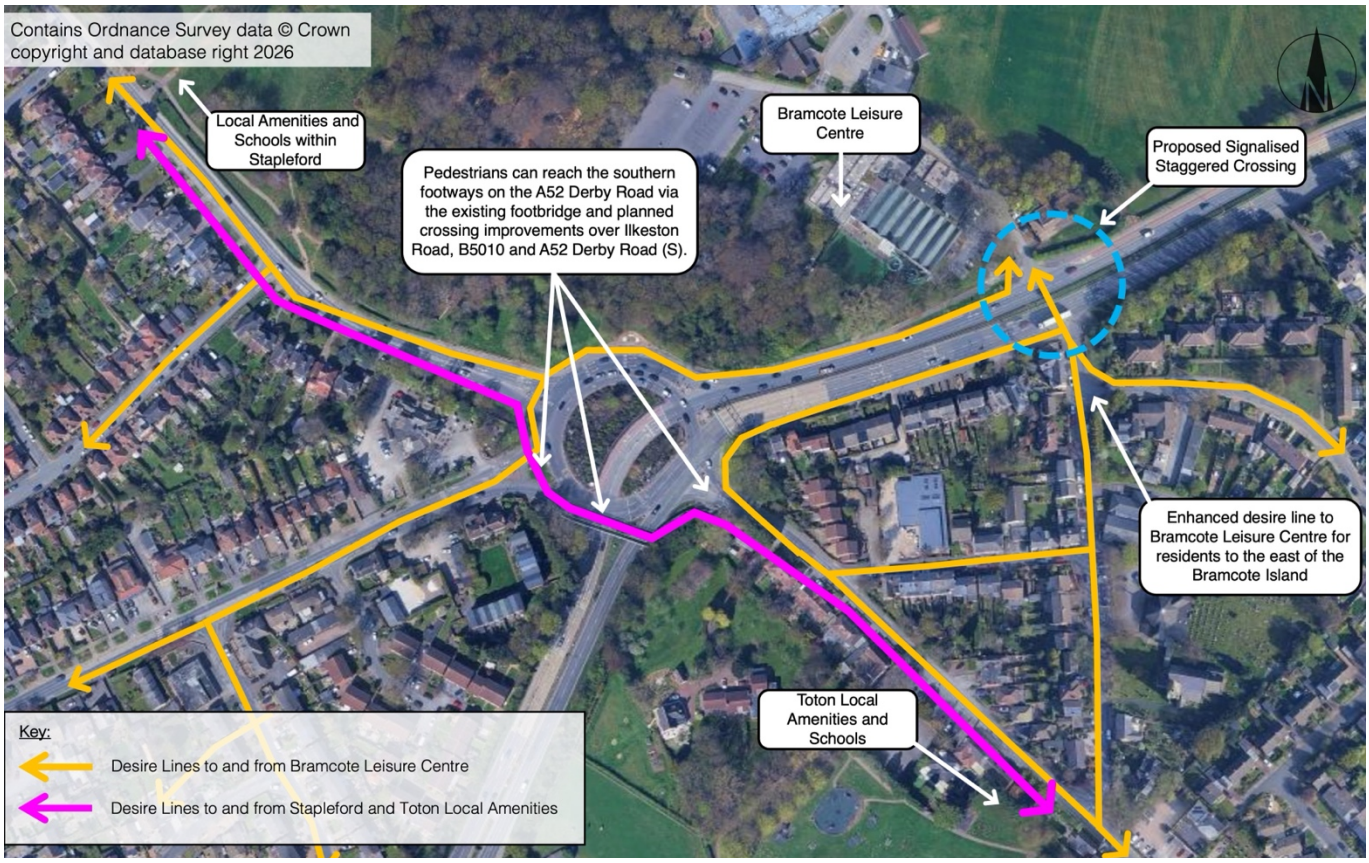
3.3.1 The existing signal-controlled pedestrian crossing provides a connection across the A52 Derby Road (E) approach and its relocation has therefore been considered in the context of maintaining pedestrian connectivity and accessibility across the A52 Derby Road. A review has therefore been undertaken to assess the principal pedestrian desire lines associated with the surrounding residential areas, Bramcote Leisure Centre, Town Street and the footway network serving the A52 corridor.

3.3.2 It has been concluded that the existing crossing is not optimally located in relation to the principal pedestrian destinations served by the northern side of the A52, notably Bramcote Leisure Centre and the pedestrian routes continuing eastwards. The existing arrangement requires pedestrians travelling between the nearby residential area of Bramcote (accessed via Town Street) and the Leisure Centre, to divert westwards towards the Bramcote Island before crossing the A52 and subsequently travelling eastwards along the northern side of the A52 Derby Road (E).

3.3.3 The proposed relocation of the crossing facility, approximately 200m downstream (NE) of the existing facility and immediately east of the Bramcote Leisure Centre access, provides a controlled crossing facility closer to the principal pedestrian desire line. The proposed arrangement therefore maintains pedestrian connectivity across the A52 while providing a more direct connection between the Leisure Centre and the residential area to the south of the A52 Derby Road (E). The new crossing facility also incorporates two stages, rather than the three stages at the current crossing facility adjacent to Bramcote Island.

3.3.4 The proposals are therefore considered to be a rationalisation of the existing pedestrian crossing facilities at this location. The existing crossing stage is removed from the Bramcote Island signal operation to release capacity at the junction, whilst a replacement signal-controlled crossing is provided at a location that more closely corresponds with the pedestrian movements it is intended to serve. **Figure 3.2** demonstrates the benefits of the proposed crossing location in relation to the desire lines.

Figure 3.2 Pedestrian Desire Lines Across A52 Derby Road



3.3.5 The following section of this TN provides a further assessment of the impacts of relocating the signalised crossing on pedestrians, with **Table 2.3** summarising the affected pedestrian movements.

Pedestrian Desire Line from Derby Road (B5010)

3.3.6 The most direct place to cross from this approach will be over Ilkeston Road (A6007), before proceeding to the northeast utilising the shared use footway on the northern side of the Bramcote Island and beyond on the northern side of the A52 Derby Road (E).

3.3.7 No other journey across this junction would be altered due to the relocation of the signalised crossing facility.

Pedestrian Desire Line from Ilkeston Road (A6007)

3.3.8 Pedestrians approaching the Bramcote Island from this approach can proceed on the shared use footway on the northern side of the Island should their destination be the Bramcote Leisure Centre or amenities beyond to the east.

3.3.9 For pedestrians routing towards Town Street, an alternative route is available via the existing grade-separated pedestrian footbridge over the A52 (W) approach. This route remains available as an alternative crossing facility.

3.3.10 No other journey across this junction would be altered due to the relocation of the signalised crossing facility.

Pedestrian Desire Line from Town Street

3.3.11 Pedestrians seeking access to Bramcote Leisure Centre or amenities to the northeast will now benefit from a more direct desire line, utilising footway provision on Church Street to access the proposed signalised crossing in proximity to Bramcote Leisure Centre. This is in lieu of deviating from the most direct path (as in the extant scenario) and having to travel northwest to the Bramcote Island to cross prior to then travelling east along the northern side of the A52 Derby Road.

Pedestrian Desire Line from A52 Derby Road (E)

3.3.12 Pedestrians who have utilised the Bramcote Leisure Centre and are seeking to travel westbound and across the Bramcote Island can now cross at the proposed signalised crossing, subsequently continuing their journey on the southern side of the A52 Derby Road. Alternatively, they could proceed to the Bramcote Island and utilise the proposed enhanced tactile dropped kerb crossings on the Ilkeston Road (A6007) and Derby Road (B010) approach arms.

Table 3.2 Summary of Affected Pedestrian Movements

Origin / Destination	Existing Arrangement	Proposed Arrangement	Effect on Pedestrians
B5010 Derby Road – Bramcote Leisure Centre of A52 Derby Road (E) Northern Footway	Signalised crossing at Bramcote Island	Proposed Staggered Signalised Crossing at access to Bramcote Leisure Centre	No material impact to journey
A6007 Ilkeston Road – Bramcote Leisure Centre	Existing shared foot/cycle way on northern side of Bramcote Island	Existing arrangement remains	No impact on existing journey
A6007 Ilkeston Road – Town Street	Option of signalised crossing at Bramcote Island or crossing the B5010 and footbridge over the A52 Derby Road (S)	Use of the proposed tactile dropped kerb crossing of the B5010 prior to the footbridge across the A52 Derby Road (S)	Alternative route retained on the more direct desire line.
Town Street – Bramcote Leisure Centre and A52 Derby Road (E) Northern Footway	Deviation of desire line from residential area of Bramcote to use signalised crossing at Bramcote Island	Proposed Staggered Signalised Crossing at access to Bramcote Leisure Centre	Improved desire line and reduction in journey time.

Bramcote Leisure Centre – B5010 Derby Road	Option of signalised crossing over A6007 Ilkeston Road	Proposed Staggered Signalised Crossing at access to Bramcote Leisure Centre	No material additional diversion from crossing at the site access to the Leisure Centre in lieu of crossing at the Bramcote Island.
Bramcote Leisure Centre – Town Street	Deviation of desire line from Bramcote Leisure Centre to the west, to cross at the Bramcote Island prior to proceeding back eastbound along Town Street into Bramcote	Proposed Staggered Signalised Crossing at access to Bramcote Leisure Centre	Improved desire line and reduction in journey time.

3.3.13 The assessment undertaken above demonstrates that the relocation of the signalised crossing and associated improvements on other approaches at Bramcote Island retains crossing opportunities whilst repositioning and rationalising the principal controlled crossing on the identified key desire lines.

4. Summary and Conclusion

4.1 Summary

4.1.1 This TN has been prepared as a direct follow-on from the TN008 which identified the operational performance of junctions requiring further assessment, following the outputs of the Scenario 4 model run for the EMGM.

4.1.2 The assessment undertaken within TN008 identified that the Bramcote Island experienced a deterioration in operational performance when the 2041 Do Something scenario was compared to the 2041 Reference Case. Further investigation and mitigation measures have therefore been explored by the appellant.

4.1.3 mode have devised a scheme which relocates the existing signalised pedestrian crossing from the Bramcote Island to a position c.200m downstream (NE) on the A52 Derby Road (NE) approach, in close proximity to the Bramcote Leisure Centre.

4.1.4 This amendment reduces the signal stages of the junction and essentially provides further green time to the constrained traffic movements between the A52 Derby Road (S) and the A52 Derby Road (E). The LinSig assessment demonstrates that this results in a material improvement in overall junction performance relative to the 2041 Reference Case, with junction PRC improving from -7.4% to -0.3% in the AM peak and from 4.2% to 5.8% in the PM peak.

4.1.5 The proposed relocation has been considered in the context of maintaining pedestrian connectivity and accessibility. The information presented within this TN demonstrates that the principal pedestrian movements affected by the relocation can continue to be accommodated through the proposed relocated crossing, the existing pedestrian footbridge over the A52 Derby Road (S) and the enhanced dropped kerb crossing facilities which are proposed as part of the mitigation scheme on the other approach arms to the junction. The proposed relocated crossing is also more closely aligned with the identified key pedestrian desire line associated with the Bramcote Leisure Centre.

4.1.6 The analysis presented within this TN has demonstrated that active travel movements will not be prejudiced by this relocation. The existing crossing is in a sub-optimal location; the proposals seek to relocate and rationalise pedestrian movements, locating the crossing in a location better aligned with key pedestrian desire lines in the locality.

4.2 Conclusion

4.2.1 Notwithstanding the appellant's position that Toton West should be considered on its own merits, this TN has been prepared to demonstrate the appellant's willingness to engage and work proactively with NCC and NH to assess the cumulative assessment of the entire Toton allocation, together with Chetwynd Barracks.

4.2.2 Based on the cumulative assessment presented within this TN, subject to the relocation of the signalised crossing as discussed above, the Bramcote Island is forecast to experience a material improvement in junction performance in the 2041 Do Something scenario, when compared with the existing arrangement in the 2041 Reference Case Scenario.

4.2.3 The findings set out above, along with the accompanying analysis presented in TN008, provide empirical evidence, utilising the EMGM, as advised and advocated by NCC and NH, demonstrating that the cumulative assessment of the entire Toton allocation, together with Chetwynd Barracks, can be accommodated on the local highway network following implementation of the Toton Link Road.

4.2.4 The Toton West proposals are now supported by two evidence bases both drawing the same conclusion that Toton West will not result in a severe impact on the operation of the local and strategic road networks.

4.2.5 It is important to note that in both NH and NCC within their primary evidence separately acknowledge that Toton West will not have a severe impact on the local highway network, their concerns relate more to the cumulative impacts.

4.2.6 However, the evidence in this TN, and accompanying TN008, having considered the cumulative impacts of Toton West, Toton North, Toton East and Chetwynd Barracks, and including the complete Toton Link Road are that there will be not severe residual impacts.

4.2.7 As such, the proposals therefore accord with Policy TR6.4 of the revised NPPF (August 2026), and should be considered acceptable on highways and transportation grounds.

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APPENDICES

APPENDIX A

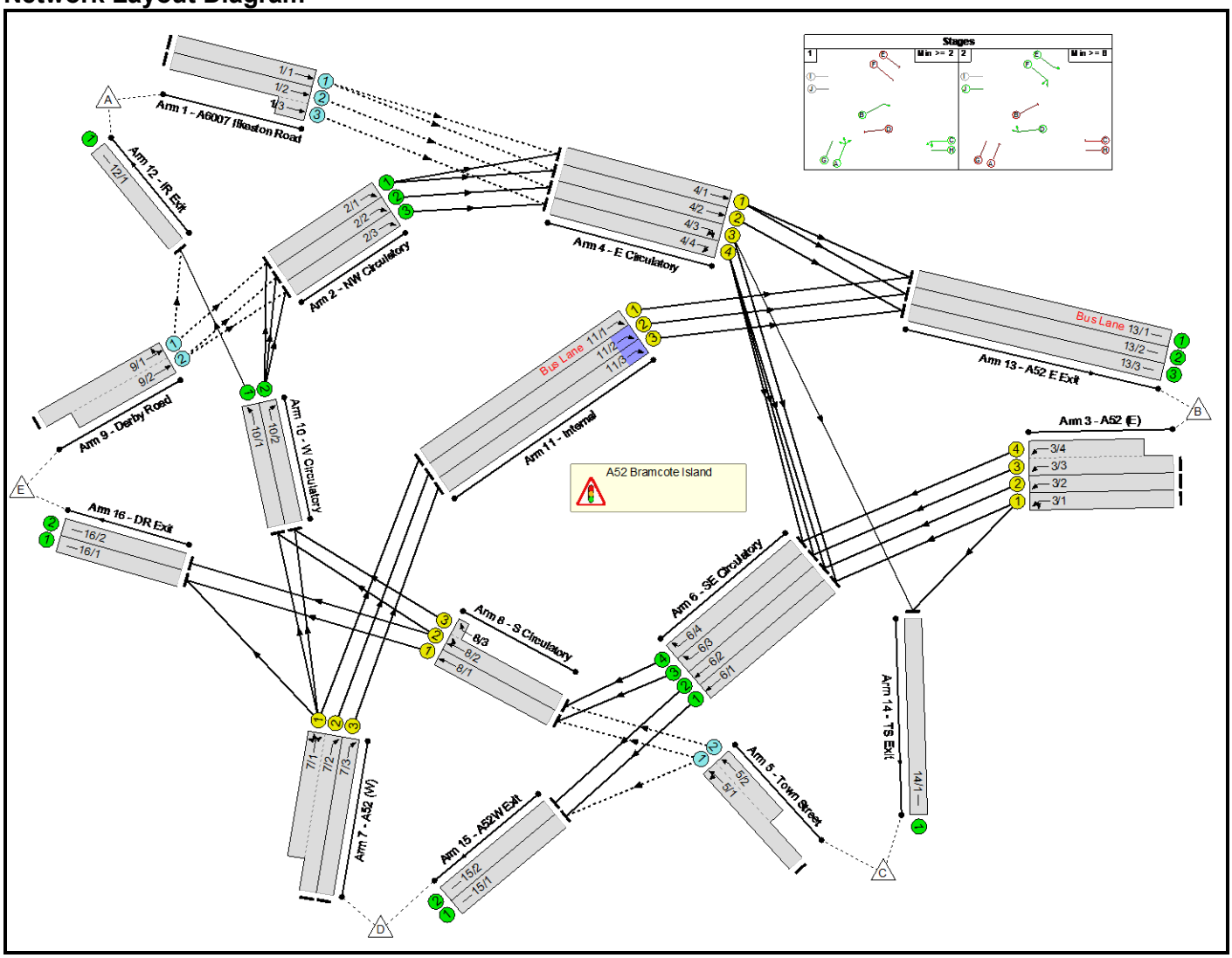
Mitigation Model Output Report

Detailed Input Data And Results

User and Project Details

Project:	
Title:	**A52 Bramcote Island**
Location:	
Additional detail:	
File name:	260901_S4 A52 Bramcote Island No Ped X.lsg3x
Author:	al
Company:	
Address:	
Linsig Version:	3, 2, 44, 1

Network Layout Diagram



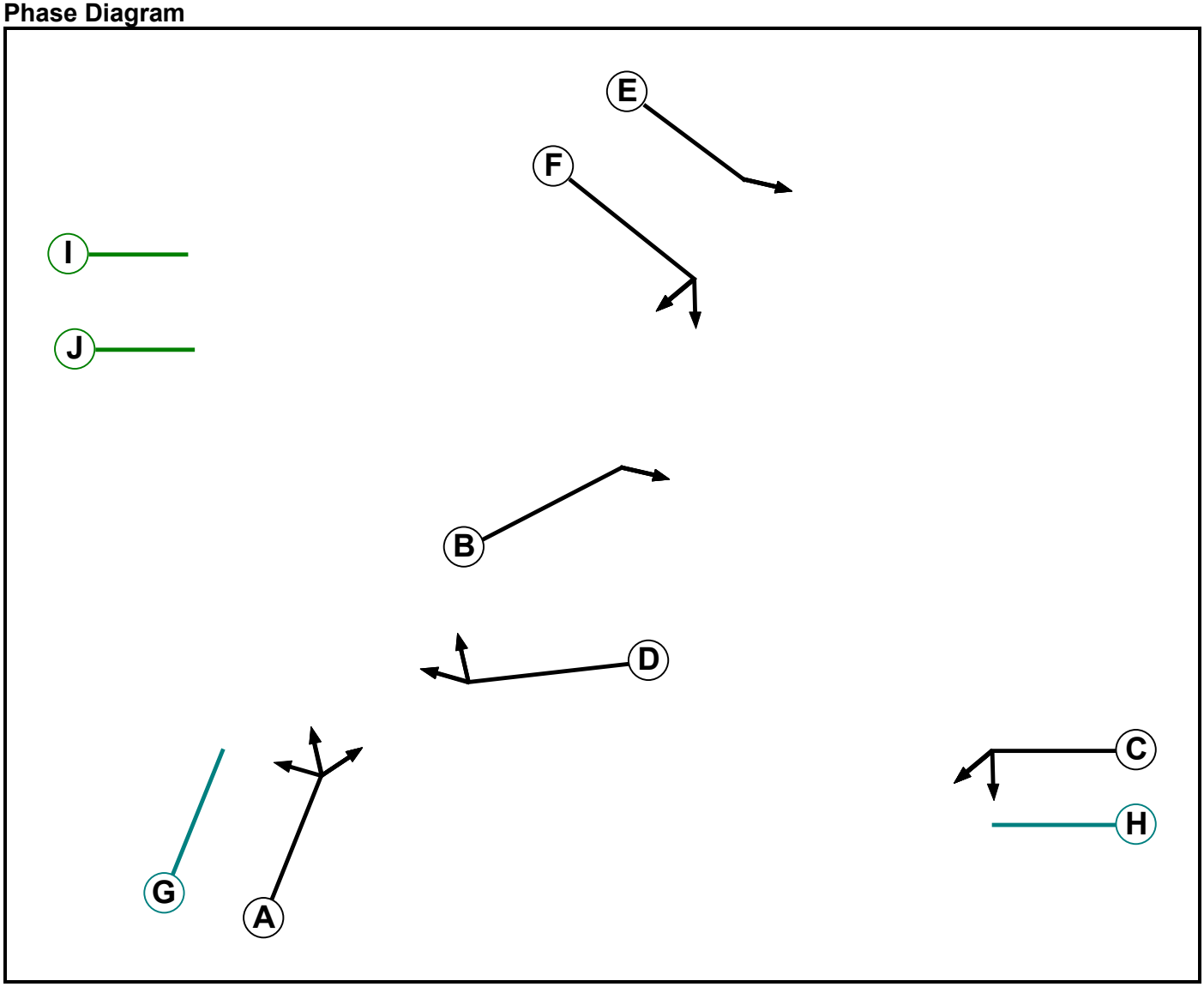
Scenarios

Number	Scenario Name	Flow Group	Network Control Plan	Time	Cycle Time (s)	PRC (%)	Delay (pcuHr)
1	Scenario 4	2041 Do Something AM	Network Control Plan 1	08:00 - 09:00	97	-0.3	53.68
2	Scenario 4	2041 Do Something PM	Network Control Plan 1	17:00 - 18:00	80	5.6	42.31

Controller Summary

Controller	Type	SCN	Stage Stream	Num Phases	Num Stages	Controls Junctions	Controller Notes
C1 - A52 Bramcote Island	Sms	J20821	Stage Stream 1	10	2	A52 Bramcote Island	

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		13	13
B	Traffic		4	4
C	Traffic		2	2
D	Traffic		6	6
E	Traffic		2	0
F	Traffic		2	0
G	Dummy		13	13
H	Dummy		2	2
I	Dummy R/A		2	2
J	Dummy R/A		2	2

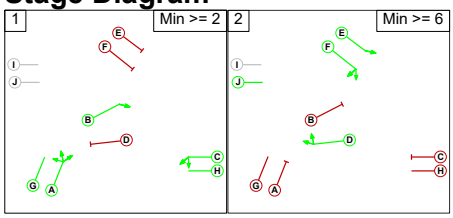
Phase Intergreens Matrix

		Starting Phase									
		A	B	C	D	E	F	G	H	I	J
Terminating Phase	A		-	-	9	-	-	-	-	-	-
	B	-		-	-	6	6	-	-	-	-
	C	-	-		-	-	7	-	-	-	-
	D	5	-	-		-	-	5	-	-	-
	E	-	6	-	-		-	-	-	-	-
	F	-	6	8	-	-		-	8	-	-
	G	-	-	-	5	-	-		-	-	-
	H	-	-	-	-	-	7	-		-	-
	I	-	-	-	-	-	-	-	-		-
	J	-	-	-	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	1	E	Losing	8	8
2	1	F	Losing	8	8

Prohibited Stage Change

	To Stage		
		1	2
From Stage	1		9
	2	16	

Lane Input Data

Junction: A52 Bramcote Island

Lane	Lane Type	Phases	Start Disp.	End Disp.	Physical Length (PCU)	Sat Flow Type	Def User Saturation Flow (PCU/Hr)	Lane Width (m)	Gradient	Nearside Lane	Turns	Turning Radius (m)
1/1 (A6007 Ilkeston Road)	O		2	3	60.0	Inf	-	-	-	-	-	-
1/2 (A6007 Ilkeston Road)	O		2	3	60.0	Inf	-	-	-	-	-	-
1/3 (A6007 Ilkeston Road)	O		2	3	2.6	Inf	-	-	-	-	-	-
2/1 (NW Circulatory)	U		2	3	4.3	Inf	-	-	-	-	-	-
2/2 (NW Circulatory)	U		2	3	4.3	Inf	-	-	-	-	-	-
2/3 (NW Circulatory)	U		2	3	4.3	Inf	-	-	-	-	-	-
3/1 (A52 (E))	U	C	2	3	108.7	User	1900	-	-	-	-	-
3/2 (A52 (E))	U	C	2	3	108.7	User	1900	-	-	-	-	-
3/3 (A52 (E))	U	C	2	3	108.7	User	1900	-	-	-	-	-
3/4 (A52 (E))	U	C	2	3	20.9	User	1900	-	-	-	-	-
4/1 (E Circulatory)	U	E	2	3	10.6	User	1900	-	-	-	-	-
4/2 (E Circulatory)	U	E	2	3	10.6	User	1900	-	-	-	-	-
4/3 (E Circulatory)	U	F	2	3	10.6	User	1900	-	-	-	-	-
4/4 (E Circulatory)	U	F	2	3	10.6	User	1900	-	-	-	-	-
5/1 (Town Street)	O		2	3	60.0	Inf	-	-	-	-	-	-
5/2 (Town Street)	O		2	3	7.0	Inf	-	-	-	-	-	-
6/1 (SE Circulatory)	U		2	3	7.0	Inf	-	-	-	-	-	-
6/2 (SE Circulatory)	U		2	3	7.0	Inf	-	-	-	-	-	-
6/3 (SE Circulatory)	U		2	3	7.0	Inf	-	-	-	-	-	-
6/4 (SE Circulatory)	U		2	3	7.0	Inf	-	-	-	-	-	-

7/1 (A52 (W))	U	A	2	3	20.9	User	1900	-	-	-	-	-
7/2 (A52 (W))	U	A	2	3	60.0	User	1900	-	-	-	-	-
7/3 (A52 (W))	U	A	2	3	60.0	User	1900	-	-	-	-	-
8/1 (S Circulatory)	U	D	2	3	4.3	User	1900	-	-	-	-	-
8/2 (S Circulatory)	U	D	2	3	4.3	User	1900	-	-	-	-	-
8/3 (S Circulatory)	U	D	2	3	1.0	User	1900	-	-	-	-	-
9/1 (Derby Road)	O		2	3	60.0	Inf	-	-	-	-	-	-
9/2 (Derby Road)	O		2	3	10.4	Inf	-	-	-	-	-	-
10/1 (W Circulatory)	U		2	3	9.2	Inf	-	-	-	-	-	-
10/2 (W Circulatory)	U		2	3	9.2	Inf	-	-	-	-	-	-
11/1 (Internal)	U	B	0	3	12.7	User	1900	-	-	-	-	-
11/2 (Internal)	U	B	0	3	12.2	User	1900	-	-	-	-	-
11/3 (Internal)	U	B	0	3	11.7	User	1900	-	-	-	-	-
12/1 (IR Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/1 (A52 E Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/2 (A52 E Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
13/3 (A52 E Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
14/1 (TS Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/1 (A52W Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
15/2 (A52W Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
16/1 (DR Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-
16/2 (DR Exit)	U		2	3	60.0	Inf	-	-	-	-	-	-

Give-Way Lane Input Data

Junction: A52 Bramcote Island

Lane	Movement	Max Flow when Giving Way (PCU/Hr)	Min Flow when Giving Way (PCU/Hr)	Opposing Lane	Opp. Lane Coeff.	Opp. Mvmnts.	Right Turn Storage (PCU)	Non-Blocking Storage (PCU)	RTF	Right Turn Move up (s)	Max Turns in Intergreen (PCU)
1/1 (A6007 Ilkeston Road)	4/1 (Ahead)	639	0	2/1	0.49	All	-	-	-	-	-
	4/2 (Ahead)	639	0	2/1	0.49	All					
1/2 (A6007 Ilkeston Road)	4/3 (Ahead)	639	0	2/1	0.49	All	-	-	-	-	-
				2/2	0.49	All					
1/3 (A6007 Ilkeston Road)	4/4 (Ahead)	639	0	2/1	0.49	All	-	-	-	-	-
				2/2	0.49	All					
				2/3	0.49	All					
5/1 (Town Street)	8/1 (Ahead)	716	0	6/1	0.41	All	-	-	-	-	-
				6/2	0.41	All					
				6/3	0.41	All					
	15/1 (Left)	716	0	6/1	0.41	All					
5/2 (Town Street)	8/2 (Ahead)	716	0	6/1	0.41	All	-	-	-	-	-
				6/2	0.41	All					
				6/3	0.41	All					
				6/4	0.41	All					
9/1 (Derby Road)	2/1 (Ahead)	1034	0	10/1	0.52	All	-	-	-	-	-
				10/2	0.52	All					
	12/1 (Left)	1034	0	10/1	0.52	All					
9/2 (Derby Road)	2/2 (Ahead)	1034	0	10/1	0.52	All	-	-	-	-	-
				10/2	0.52	All					
	2/3 (Ahead)	1034	0	10/1	0.52	All					
				10/2	0.52	All					

Lane Connector Input Data

Junction: A52 Bramcote Island				
Org Lane	Dest Lane	Junction	Mean Cruise Time	Platoon Dispersion
1/1	4/1	Internal	6	35
1/1	4/2	Internal	6	35
1/2	4/3	Internal	6	35
1/3	4/4	Internal	6	35
2/1	4/1	Internal	6	35
2/1	4/2	Internal	6	35
2/2	4/3	Internal	6	35
2/3	4/4	Internal	6	35
3/1	6/1	Internal	4	35
3/1	14/1	Internal	30	35
3/2	6/2	Internal	4	35
3/3	6/3	Internal	4	35
3/4	6/4	Internal	4	35
4/1	13/1	Internal	30	35
4/1	13/2	Internal	30	35
4/2	13/3	Internal	30	35
4/3	6/1	Internal	5	35
4/3	14/1	Internal	30	35
4/4	6/2	Internal	5	35
4/4	6/3	Internal	5	35
4/4	6/4	Internal	5	35
5/1	8/1	Internal	3	35
5/1	15/1	Internal	30	35
5/2	8/2	Internal	3	35
6/1	15/1	Internal	30	35
6/2	15/2	Internal	30	35
6/3	8/1	Internal	2	35
6/4	8/2	Internal	2	35
7/1	10/1	Internal	5	35
7/1	10/2	Internal	5	35
7/1	11/1	Internal	7	35
7/1	16/1	Internal	30	35
7/2	11/2	Internal	6	35
7/3	11/3	Internal	6	35
8/1	16/1	Internal	30	35
8/2	10/1	Internal	6	35
8/2	16/2	Internal	30	35

8/3	10/2	Internal	6	35
9/1	2/1	Internal	3	35
9/1	12/1	Internal	30	35
9/2	2/2	Internal	3	35
9/2	2/3	Internal	3	35
10/1	12/1	Internal	30	35
10/2	2/1	Internal	3	35
10/2	2/2	Internal	3	35
10/2	2/3	Internal	3	35
11/1	13/1	Internal	30	35
11/2	13/2	Internal	30	35
11/3	13/3	Internal	30	35

Scenario 1: 'Scenario 4' (FG1: '2041 Do Something AM', Plan 1: 'Network Control Plan 1')

Lane Saturation Flows

Junction: A52 Bramcote Island								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A6007 Ilkeston Road Lane 1)	Infinite Saturation Flow						Inf	Inf
1/2 (A6007 Ilkeston Road Lane 2)	Infinite Saturation Flow						Inf	Inf
1/3 (A6007 Ilkeston Road Lane 3)	Infinite Saturation Flow						Inf	Inf
2/1 (NW Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (NW Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
2/3 (NW Circulatory Lane 3)	Infinite Saturation Flow						Inf	Inf
3/1 (A52 (E) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A52 (E) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A52 (E) Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
3/4 (A52 (E) Lane 4)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (E Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (E Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
4/3 (E Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
4/4 (E Circulatory Lane 4)	This lane uses a directly entered Saturation Flow						1900	1900
5/1 (Town Street Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Town Street Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (SE Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (SE Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
6/3 (SE Circulatory Lane 3)	Infinite Saturation Flow						Inf	Inf
6/4 (SE Circulatory Lane 4)	Infinite Saturation Flow						Inf	Inf
7/1 (A52 (W) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
7/2 (A52 (W) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900

7/3 (A52 (W) Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
8/1 (S Circulatory Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (S Circulatory Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
8/3 (S Circulatory Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Derby Road Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (Derby Road Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (W Circulatory Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (W Circulatory Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Internal Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Internal Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Internal Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (IR Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A52 E Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A52 E Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
13/3 (A52 E Exit Lane 3)	Infinite Saturation Flow	Inf	Inf
14/1 (TS Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/1 (A52W Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/2 (A52W Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
16/1 (DR Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
16/2 (DR Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Bonus Green Times

No Bonus Green Data For This Scenario

Scenario 2: 'Scenario 4' (FG2: '2041 Do Something PM', Plan 1: 'Network Control Plan 1')

Lane Saturation Flows

Junction: A52 Bramcote Island								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A6007 Ilkeston Road Lane 1)	Infinite Saturation Flow						Inf	Inf
1/2 (A6007 Ilkeston Road Lane 2)	Infinite Saturation Flow						Inf	Inf
1/3 (A6007 Ilkeston Road Lane 3)	Infinite Saturation Flow						Inf	Inf
2/1 (NW Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
2/2 (NW Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
2/3 (NW Circulatory Lane 3)	Infinite Saturation Flow						Inf	Inf
3/1 (A52 (E) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
3/2 (A52 (E) Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
3/3 (A52 (E) Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
3/4 (A52 (E) Lane 4)	This lane uses a directly entered Saturation Flow						1900	1900
4/1 (E Circulatory Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900
4/2 (E Circulatory Lane 2)	This lane uses a directly entered Saturation Flow						1900	1900
4/3 (E Circulatory Lane 3)	This lane uses a directly entered Saturation Flow						1900	1900
4/4 (E Circulatory Lane 4)	This lane uses a directly entered Saturation Flow						1900	1900
5/1 (Town Street Lane 1)	Infinite Saturation Flow						Inf	Inf
5/2 (Town Street Lane 2)	Infinite Saturation Flow						Inf	Inf
6/1 (SE Circulatory Lane 1)	Infinite Saturation Flow						Inf	Inf
6/2 (SE Circulatory Lane 2)	Infinite Saturation Flow						Inf	Inf
6/3 (SE Circulatory Lane 3)	Infinite Saturation Flow						Inf	Inf
6/4 (SE Circulatory Lane 4)	Infinite Saturation Flow						Inf	Inf
7/1 (A52 (W) Lane 1)	This lane uses a directly entered Saturation Flow						1900	1900

7/2 (A52 (W) Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
7/3 (A52 (W) Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
8/1 (S Circulatory Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
8/2 (S Circulatory Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
8/3 (S Circulatory Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
9/1 (Derby Road Lane 1)	Infinite Saturation Flow	Inf	Inf
9/2 (Derby Road Lane 2)	Infinite Saturation Flow	Inf	Inf
10/1 (W Circulatory Lane 1)	Infinite Saturation Flow	Inf	Inf
10/2 (W Circulatory Lane 2)	Infinite Saturation Flow	Inf	Inf
11/1 (Internal Lane 1)	This lane uses a directly entered Saturation Flow	1900	1900
11/2 (Internal Lane 2)	This lane uses a directly entered Saturation Flow	1900	1900
11/3 (Internal Lane 3)	This lane uses a directly entered Saturation Flow	1900	1900
12/1 (IR Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/1 (A52 E Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
13/2 (A52 E Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
13/3 (A52 E Exit Lane 3)	Infinite Saturation Flow	Inf	Inf
14/1 (TS Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/1 (A52W Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
15/2 (A52W Exit Lane 2)	Infinite Saturation Flow	Inf	Inf
16/1 (DR Exit Lane 1)	Infinite Saturation Flow	Inf	Inf
16/2 (DR Exit Lane 2)	Infinite Saturation Flow	Inf	Inf

Bonus Green Times

No Bonus Green Data For This Scenario

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2041 Do Something AM'	08:00	09:00	01:00	
2: '2041 Do Something PM'	17:00	18:00	01:00	

Traffic Flows, Desired

FG1: '2041 Do Something AM'

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	161	99	157	3	420
	B	153	42	3	1212	275	1685
	C	88	37	0	196	54	375
	D	75	1785	155	0	57	2072
	E	28	455	210	285	0	978
	Tot.	344	2480	467	1850	389	5530

FG2: '2041 Do Something PM'

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	261	113	375	42	791
	B	134	59	25	968	385	1571
	C	122	42	0	125	72	361
	D	372	1342	129	0	71	1914
	E	34	249	88	131	0	502
	Tot.	662	1953	355	1599	570	5139

Scenario 1: 'Scenario 4' (FG1: '2041 Do Something AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	161	99	157	3	420
	B	153	42	3	1212	275	1685
	C	88	37	0	196	54	375
	D	75	1785	155	0	57	2072
	E	28	455	210	285	0	978
	Tot.	344	2480	467	1850	389	5530

Traffic Flows, Difference

Difference :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	0	0	0	0	0
	B	0	0	0	0	0	0
	C	0	0	0	0	0	0
	D	0	0	0	0	0	0
	E	0	0	0	0	0	0
	Tot.	0	0	0	0	0	0

Scenario 2: 'Scenario 4' (FG2: '2041 Do Something PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Actual

Actual Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	261	113	375	42	791
	B	134	59	25	968	385	1571
	C	122	42	0	125	72	361
	D	372	1342	129	0	71	1914
	E	34	249	88	131	0	502
	Tot.	662	1953	355	1599	570	5139

Traffic Flows, Difference

Difference :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	0	0	0	0	0
	B	0	0	0	0	0	0
	C	0	0	0	0	0	0
	D	0	0	0	0	0	0
	E	0	0	0	0	0	0
	Tot.	0	0	0	0	0	0

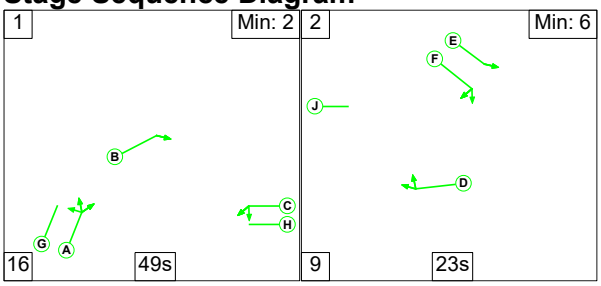
Traffic Lane Flows

Lane	Scenario 1: Scenario 4	Scenario 2: Scenario 4
Junction: A52 Bramcote Island		
1/1	161	261
1/2 (with short)	259(In) 174(Out)	530(In) 277(Out)
1/3 (short)	85	253
2/1	534	350
2/2	380	256
2/3	270	92
3/1	607	497
3/2	608	496
3/3 (with short)	470(In) 168(Out)	578(In) 254(Out)
3/4 (short)	302	324
4/1	351	298
4/2	344	313
4/3	554	533
4/4	355	345
5/1 (with short)	375(In) 250(Out)	361(In) 197(Out)
5/2 (short)	125	164
6/1	694	675
6/2	960	799
6/3	169	255
6/4	304	365
7/1 (short)	307	592
7/2 (with short)	1191(In) 884(Out)	1299(In) 707(Out)
7/3	881	615
8/1	223	327
8/2 (with short)	429(In) 350(Out)	529(In) 428(Out)
8/3 (short)	79	101
9/1 (with short)	978(In) 483(Out)	502(In) 283(Out)
9/2 (short)	495	219
10/1	316	628
10/2	234	230
11/1	20	20
11/2	884	707

11/3	881	615
12/1	344	662
13/1	34	30
13/2	1221	995
13/3	1225	928
14/1	467	355
15/1	890	800
15/2	960	799
16/1	280	398
16/2	109	172

Scenario 1: 'Scenario 4' (FG1: '2041 Do Something AM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



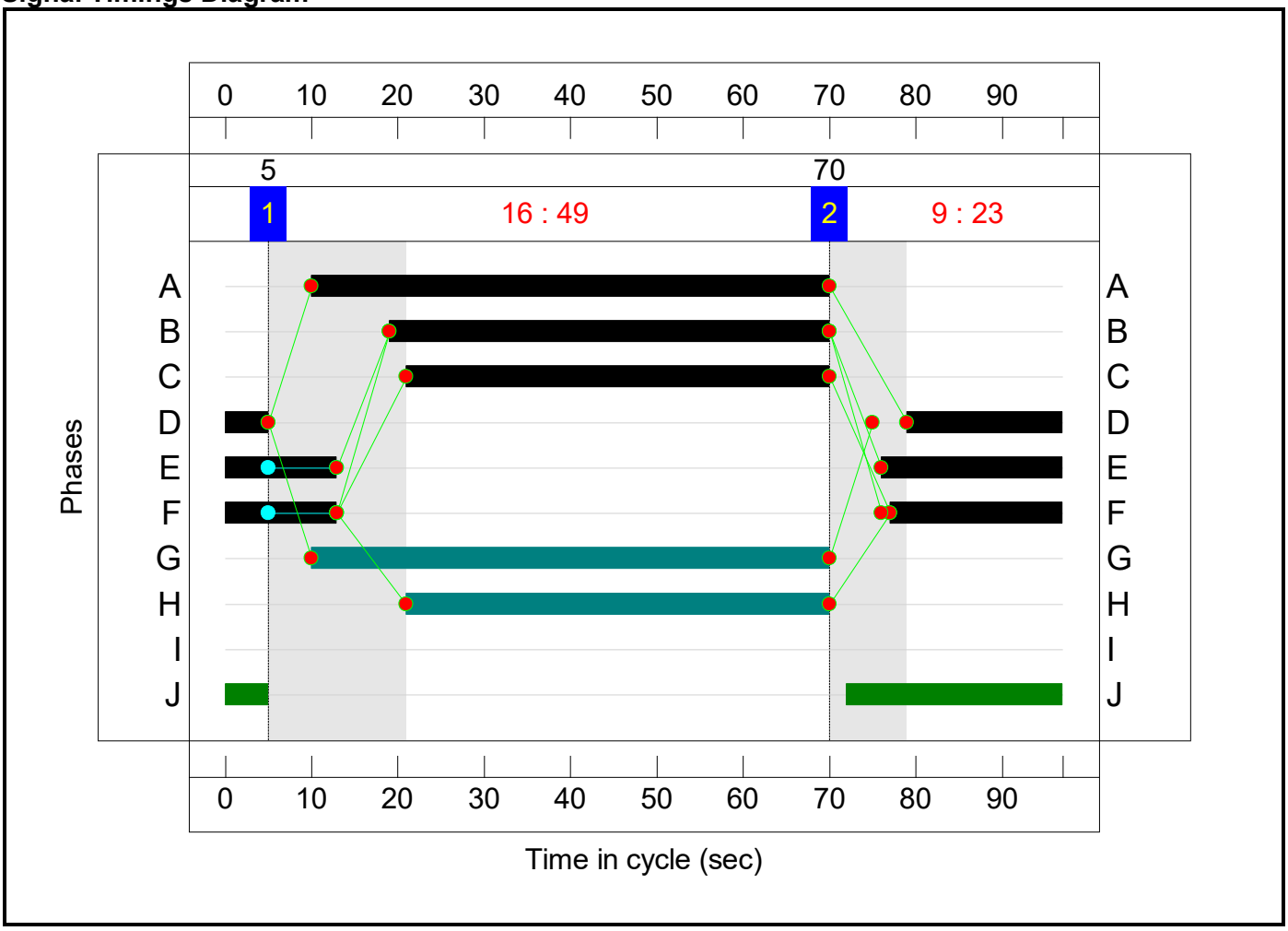
Stage Timings

Stage	1	2
Duration	49	23
Change Point	5	70

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	A52 (W) Ahead Right Left	Traffic	60	10	70
B	Internal Right	Traffic	51	19	70
C	A52 (E) Ahead Left	Traffic	49	21	70
D	S Circulatory Right Ahead	Traffic	23	79	5
E	E Circulatory Ahead	Traffic	34	76	13
F	E Circulatory Right Right2	Traffic	33	77	13
G	Dummy	Dummy	60	10	70
H	Dummy	Dummy	49	21	70
I	Dummy with R/A	Dummy R/A			
J	Dummy with R/A	Dummy R/A	30	72	5

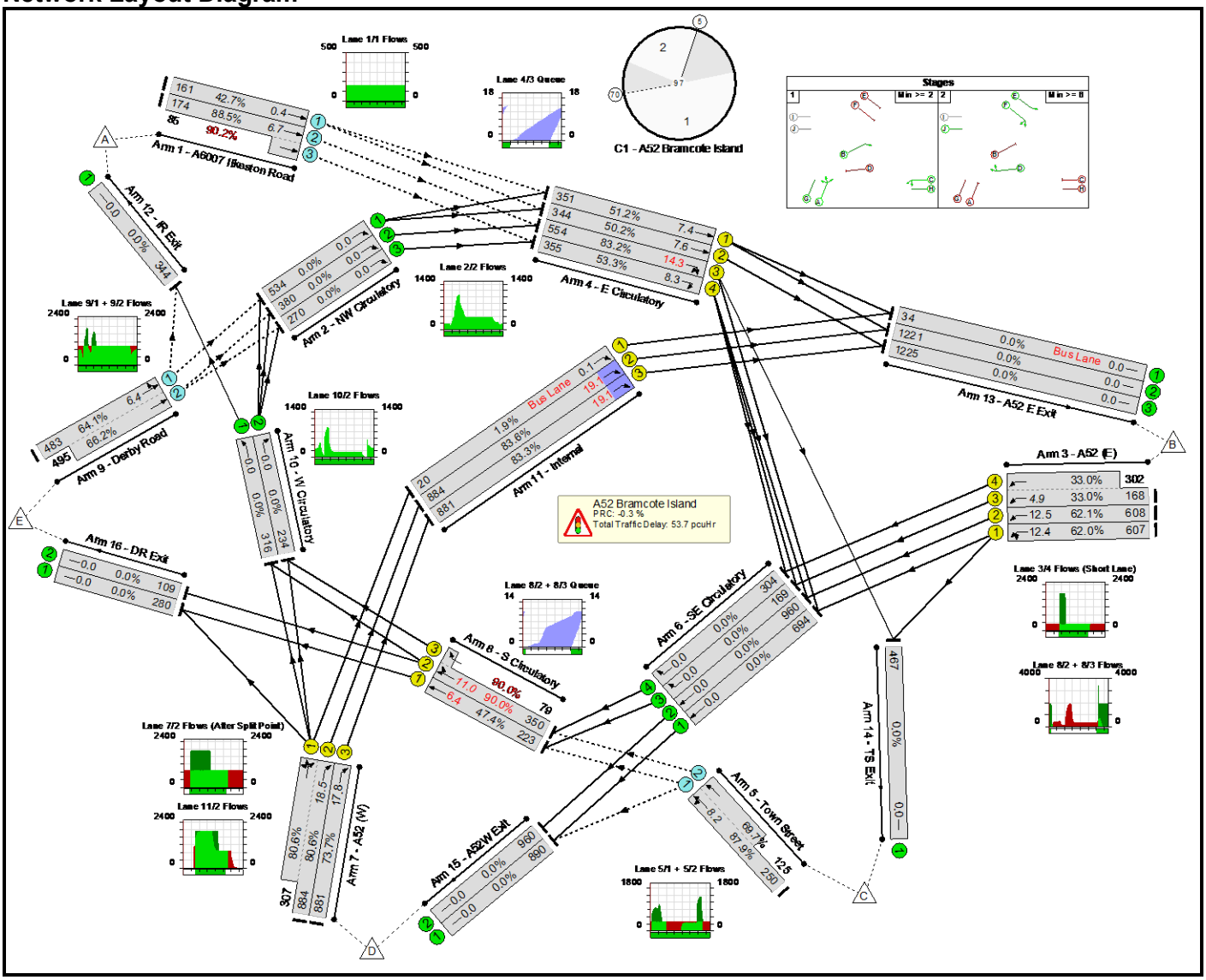
Signal Timings Diagram



Lane Green Times

Junction: A52 Bramcote Island					
Lane	**Description**	**Type**	**Phases**	**Start Green**	**End Green**
3/1	A52 (E) Ahead Left	U	C	21	70
3/2	A52 (E) Ahead	U	C	21	70
3/3	A52 (E) Ahead	U	C	21	70
3/4	A52 (E) Ahead	U	C	21	70
4/1	E Circulatory Ahead	U	E	76	13
4/2	E Circulatory Ahead	U	E	76	13
4/3	E Circulatory Right Right2	U	F	77	13
4/4	E Circulatory Right	U	F	77	13
7/1	A52 (W) Ahead Right Left	U	A	10	70
7/2	A52 (W) Right	U	A	10	70
7/3	A52 (W) Right	U	A	10	70
8/1	S Circulatory Ahead	U	D	79	5
8/2	S Circulatory Right Ahead	U	D	79	5
8/3	S Circulatory Right	U	D	79	5
11/1	Internal Right	U	B	19	70
11/2	Internal Right	U	B	19	70
11/3	Internal Right	U	B	19	70

Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A52 Bramcote Island	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**90.2%**
A52 Bramcote Island	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**90.2%**
1/1	A6007 Ilkeston Road Ahead	O	N/A	N/A	-		-	-	-	-	161	Inf	377	42.7%
1/2+1/3	A6007 Ilkeston Road Ahead	O	N/A	N/A	-		-	-	-	-	259	Inf : Inf	197+94	88.5 : 90.2%
2/1	NW Circulatory Right	U	N/A	N/A	-		-	-	-	-	534	Inf	Inf	0.0%
2/2	NW Circulatory Right	U	N/A	N/A	-		-	-	-	-	380	Inf	Inf	0.0%
2/3	NW Circulatory Right	U	N/A	N/A	-		-	-	-	-	270	Inf	Inf	0.0%
3/1	A52 (E) Ahead Left	U	N/A	N/A	C		1	49	-	-	607	1900	979	62.0%
3/2	A52 (E) Ahead	U	N/A	N/A	C		1	49	-	-	608	1900	979	62.1%
3/3+3/4	A52 (E) Ahead	U	N/A	N/A	C		1	49	-	-	470	1900:1900	510+916	33.0 : 33.0%
4/1	E Circulatory Ahead	U	N/A	N/A	E		1	34	-	-	351	1900	686	51.2%
4/2	E Circulatory Ahead	U	N/A	N/A	E		1	34	-	-	344	1900	686	50.2%
4/3	E Circulatory Right Right2	U	N/A	N/A	F		1	33	-	-	554	1900	666	83.2%

4/4	E Circulatory Right	U	N/A	N/A	F		1	33	-	-	355	1900	666	53.3%
5/1+5/2	Town Street Ahead Left	O	N/A	N/A	-		-	-	-	-	375	Inf : Inf	284+179	87.9 : 69.7%
6/1	SE Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	694	Inf	Inf	0.0%
6/2	SE Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	960	Inf	Inf	0.0%
6/3	SE Circulatory Right	U	N/A	N/A	-		-	-	-	-	169	Inf	Inf	0.0%
6/4	SE Circulatory Right	U	N/A	N/A	-		-	-	-	-	304	Inf	Inf	0.0%
7/2+7/1	A52 (W) Ahead Right Left	U	N/A	N/A	A		1	60	-	-	1191	1900:1900	1097+381	80.6 : 80.6%
7/3	A52 (W) Right	U	N/A	N/A	A		1	60	-	-	881	1900	1195	73.7%
8/1	S Circulatory Ahead	U	N/A	N/A	D		1	23	-	-	223	1900	470	47.4%
8/2+8/3	S Circulatory Right Ahead	U	N/A	N/A	D		1	23	-	-	429	1900:1900	389+88	90.0 : 90.0%
9/1+9/2	Derby Road Ahead Left	O	N/A	N/A	-		-	-	-	-	978	Inf : Inf	753+748	64.1 : 66.2%
10/1	W Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	316	Inf	Inf	0.0%
10/2	W Circulatory Right	U	N/A	N/A	-		-	-	-	-	234	Inf	Inf	0.0%
11/1	Internal Right	U	N/A	N/A	B		1	51	-	-	20	1900	1058	1.9%
11/2	Internal Right	U	N/A	N/A	B		1	51	-	-	884	1900	1058	83.6%
11/3	Internal Right	U	N/A	N/A	B		1	51	-	-	881	1900	1058	83.3%
12/1	IR Exit	U	N/A	N/A	-		-	-	-	-	344	Inf	Inf	0.0%
13/1	A52 E Exit	U	N/A	N/A	-		-	-	-	-	34	Inf	Inf	0.0%
13/2	A52 E Exit	U	N/A	N/A	-		-	-	-	-	1221	Inf	Inf	0.0%

13/3	A52 E Exit	U	N/A	N/A	-		-	-	-	-	1225	Inf	Inf	0.0%
14/1	TS Exit	U	N/A	N/A	-		-	-	-	-	467	Inf	Inf	0.0%
15/1	A52W Exit	U	N/A	N/A	-		-	-	-	-	890	Inf	Inf	0.0%
15/2	A52W Exit	U	N/A	N/A	-		-	-	-	-	960	Inf	Inf	0.0%
16/1	DR Exit	U	N/A	N/A	-		-	-	-	-	280	Inf	Inf	0.0%
16/2	DR Exit	U	N/A	N/A	-		-	-	-	-	109	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	Item
Network: A52 Bramcote Island	**-**	**-**	**3385**	**0**	**0**	**39.6**	**14.0**	**0.0**	**53.7**	**-**	**-**	**-**	**-**	**Network: A52 Bramcote Island**
A52 Bramcote Island	**-**	**-**	**3385**	**0**	**0**	**39.6**	**14.0**	**0.0**	**53.7**	**-**	**-**	**-**	**-**	**A52 Bramcote Island**
1/1	161	161	161	0	0	0.0	0.4	-	0.4	8.3	0.0	0.4	0.4	1/1
1/2+1/3	259	259	518	0	0	0.6	3.4	-	4.0 (2.6+1.4)	55.0 (53.1:58.9)	3.4	3.4	6.7	1/2+1/3
2/1	534	534	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	2/1
2/2	380	380	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	2/2
2/3	270	270	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	2/3
3/1	607	607	-	-	-	2.8	0.8	-	3.6	21.5	11.6	0.8	12.4	3/1
3/2	608	608	-	-	-	2.8	0.8	-	3.6	21.6	11.7	0.8	12.5	3/2
3/3+3/4	470	470	-	-	-	1.7	0.2	-	2.0 (0.7+1.3)	15.1 (14.4:15.4)	4.6	0.2	4.9	3/3+3/4
4/1	351	351	-	-	-	2.4	0.5	-	2.9	29.5	6.9	0.5	7.4	4/1
4/2	344	344	-	-	-	2.5	0.5	-	3.0	31.1	7.1	0.5	7.6	4/2
4/3	554	554	-	-	-	5.1	0.0	-	5.1	33.2	14.3	0.0	14.3	4/3
4/4	355	355	-	-	-	2.4	0.6	-	3.0	30.4	7.7	0.6	8.3	4/4
5/1+5/2	375	375	750	0	0	1.7	2.0	-	3.7 (2.3+1.4)	35.5 (33.0:40.5)	6.2	2.0	8.2	5/1+5/2
6/1	694	694	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/1
6/2	960	960	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/2
6/3	169	169	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/3
6/4	304	304	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/4
7/2+7/1	1191	1191	-	-	-	3.7	2.0	-	5.8 (4.6+1.2)	17.5 (18.7:14.1)	16.5	2.0	18.5	7/2+7/1

7/3	881	881	-	-	-	3.0	1.4	-	4.4	18.1	16.4	1.4	17.8	7/3
8/1	223	223	-	-	-	2.5	0.4	-	3.0	47.8	5.9	0.4	6.4	8/1
8/2+8/3	429	429	-	-	-	5.4	0.0	-	5.4 (4.4+1.0)	45.2 (45.4:44.4)	11.0	0.0	11.0	8/2+8/3
9/1+9/2	978	978	1956	0	0	0.3	0.9	-	1.3 (0.6+0.7)	4.6 (4.5:4.8)	5.5	0.9	6.4	9/1+9/2
10/1	316	316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	10/1
10/2	234	234	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	10/2
11/1	20	20	-	-	-	0.0	0.0	-	0.0	3.3	0.1	0.0	0.1	11/1
11/2	884	884	-	-	-	1.3	0.0	-	1.3	5.3	19.1	0.0	19.1	11/2
11/3	881	881	-	-	-	1.3	0.0	-	1.3	5.3	19.1	0.0	19.1	11/3
12/1	344	344	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	12/1
13/1	34	34	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	13/1
13/2	1221	1221	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	13/2
13/3	1225	1225	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	13/3
14/1	467	467	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	14/1
15/1	890	890	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	15/1
15/2	960	960	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	15/2
16/1	280	280	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	16/1
16/2	109	109	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	16/2

C1 - A52 Bramcote Island

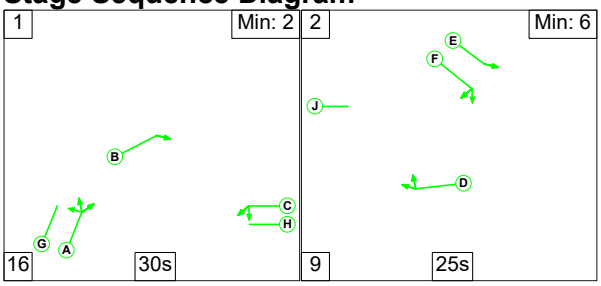
PRC for Signalled Lanes (%): -0.1
PRC Over All Lanes (%): -0.3

Total Delay for Signalled Lanes (pcuHr): 44.40
Total Delay Over All Lanes(pcuHr): 53.68

Cycle Time (s): 97

Scenario 2: 'Scenario 4' (FG2: '2041 Do Something PM', Plan 1: 'Network Control Plan 1')

Stage Sequence Diagram



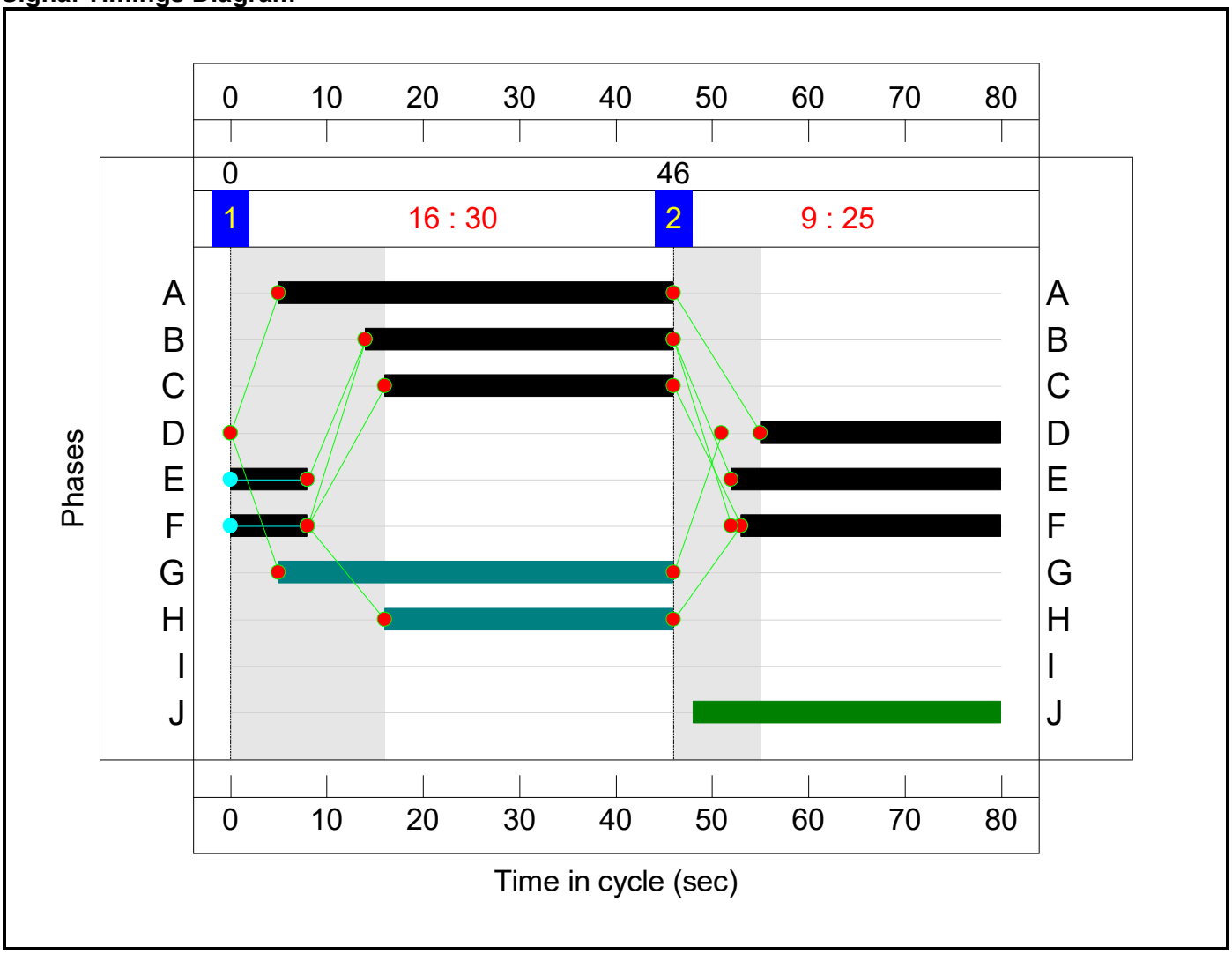
Stage Timings

Stage	1	2
Duration	30	25
Change Point	0	46

Phase Timings

Phase Name	Description	Phase	Green Period 1		
			Total Green	Start Time	End Time
A	A52 (W) Ahead Right Left	Traffic	41	5	46
B	Internal Right	Traffic	32	14	46
C	A52 (E) Ahead Left	Traffic	30	16	46
D	S Circulatory Right Ahead	Traffic	25	55	0
E	E Circulatory Ahead	Traffic	36	52	8
F	E Circulatory Right Right2	Traffic	35	53	8
G	Dummy	Dummy	41	5	46
H	Dummy	Dummy	30	16	46
I	Dummy with R/A	Dummy R/A			
J	Dummy with R/A	Dummy R/A	32	48	0

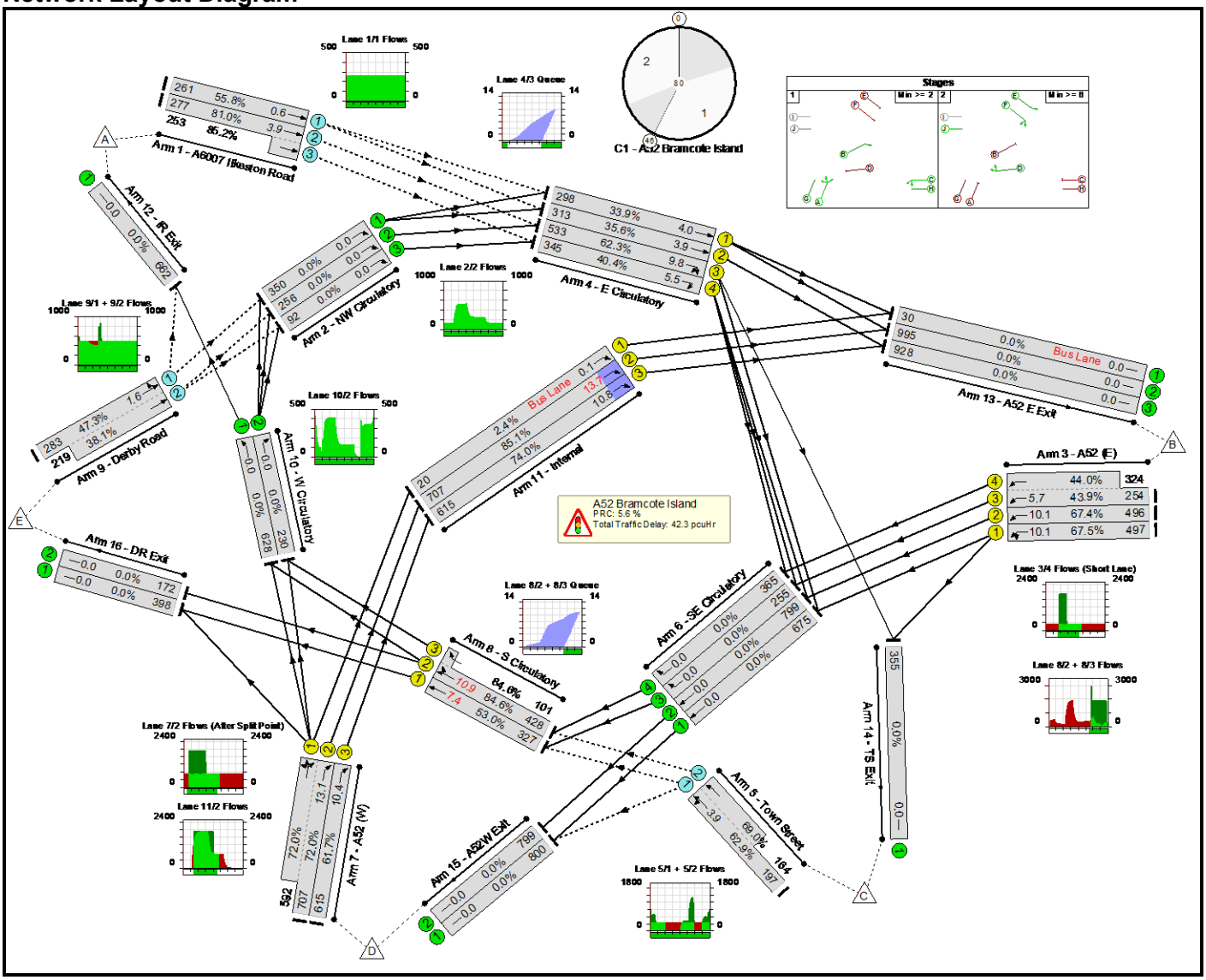
Signal Timings Diagram



Lane Green Times

Junction: A52 Bramcote Island					
Lane	**Description**	**Type**	**Phases**	**Start Green**	**End Green**
3/1	A52 (E) Ahead Left	U	C	16	46
3/2	A52 (E) Ahead	U	C	16	46
3/3	A52 (E) Ahead	U	C	16	46
3/4	A52 (E) Ahead	U	C	16	46
4/1	E Circulatory Ahead	U	E	52	8
4/2	E Circulatory Ahead	U	E	52	8
4/3	E Circulatory Right Right2	U	F	53	8
4/4	E Circulatory Right	U	F	53	8
7/1	A52 (W) Ahead Right Left	U	A	5	46
7/2	A52 (W) Right	U	A	5	46
7/3	A52 (W) Right	U	A	5	46
8/1	S Circulatory Ahead	U	D	55	0
8/2	S Circulatory Right Ahead	U	D	55	0
8/3	S Circulatory Right	U	D	55	0
11/1	Internal Right	U	B	14	46
11/2	Internal Right	U	B	14	46
11/3	Internal Right	U	B	14	46

Network Layout Diagram



Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Bonus Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A52 Bramcote Island	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**85.2%**
A52 Bramcote Island	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**-**	**85.2%**
1/1	A6007 Ilkeston Road Ahead	O	N/A	N/A	-		-	-	-	-	261	Inf	467	55.8%
1/2+1/3	A6007 Ilkeston Road Ahead	O	N/A	N/A	-		-	-	-	-	530	Inf : Inf	342+297	81.0 : 85.2%
2/1	NW Circulatory Right	U	N/A	N/A	-		-	-	-	-	350	Inf	Inf	0.0%
2/2	NW Circulatory Right	U	N/A	N/A	-		-	-	-	-	256	Inf	Inf	0.0%
2/3	NW Circulatory Right	U	N/A	N/A	-		-	-	-	-	92	Inf	Inf	0.0%
3/1	A52 (E) Ahead Left	U	N/A	N/A	C		1	30	-	-	497	1900	736	67.5%
3/2	A52 (E) Ahead	U	N/A	N/A	C		1	30	-	-	496	1900	736	67.4%
3/3+3/4	A52 (E) Ahead	U	N/A	N/A	C		1	30	-	-	578	1900:1900	578+736	43.9 : 44.0%
4/1	E Circulatory Ahead	U	N/A	N/A	E		1	36	-	-	298	1900	879	33.9%
4/2	E Circulatory Ahead	U	N/A	N/A	E		1	36	-	-	313	1900	879	35.6%
4/3	E Circulatory Right Right2	U	N/A	N/A	F		1	35	-	-	533	1900	855	62.3%
4/4	E Circulatory Right	U	N/A	N/A	F		1	35	-	-	345	1900	855	40.4%

5/1+5/2	Town Street Ahead Left	O	N/A	N/A	-		-	-	-	-	361	Inf : Inf	313+238	62.9 : 69.0%
6/1	SE Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	675	Inf	Inf	0.0%
6/2	SE Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	799	Inf	Inf	0.0%
6/3	SE Circulatory Right	U	N/A	N/A	-		-	-	-	-	255	Inf	Inf	0.0%
6/4	SE Circulatory Right	U	N/A	N/A	-		-	-	-	-	365	Inf	Inf	0.0%
7/2+7/1	A52 (W) Ahead Right Left	U	N/A	N/A	A		1	41	-	-	1299	1900:1900	981+822	72.0 : 72.0%
7/3	A52 (W) Right	U	N/A	N/A	A		1	41	-	-	615	1900	997	61.7%
8/1	S Circulatory Ahead	U	N/A	N/A	D		1	25	-	-	327	1900	618	53.0%
8/2+8/3	S Circulatory Right Ahead	U	N/A	N/A	D		1	25	-	-	529	1900:1900	506+119	84.6 : 84.6%
9/1+9/2	Derby Road Ahead Left	O	N/A	N/A	-		-	-	-	-	502	Inf : Inf	598+575	47.3 : 38.1%
10/1	W Circulatory Ahead	U	N/A	N/A	-		-	-	-	-	628	Inf	Inf	0.0%
10/2	W Circulatory Right	U	N/A	N/A	-		-	-	-	-	230	Inf	Inf	0.0%
11/1	Internal Right	U	N/A	N/A	B		1	32	-	-	20	1900	831	2.4%
11/2	Internal Right	U	N/A	N/A	B		1	32	-	-	707	1900	831	85.1%
11/3	Internal Right	U	N/A	N/A	B		1	32	-	-	615	1900	831	74.0%
12/1	IR Exit	U	N/A	N/A	-		-	-	-	-	662	Inf	Inf	0.0%
13/1	A52 E Exit	U	N/A	N/A	-		-	-	-	-	30	Inf	Inf	0.0%
13/2	A52 E Exit	U	N/A	N/A	-		-	-	-	-	995	Inf	Inf	0.0%
13/3	A52 E Exit	U	N/A	N/A	-		-	-	-	-	928	Inf	Inf	0.0%
14/1	TS Exit	U	N/A	N/A	-		-	-	-	-	355	Inf	Inf	0.0%
15/1	A52W Exit	U	N/A	N/A	-		-	-	-	-	800	Inf	Inf	0.0%
15/2	A52W Exit	U	N/A	N/A	-		-	-	-	-	799	Inf	Inf	0.0%

16/1	DR Exit	U	N/A	N/A	-		-	-	-	-	398	Inf	Inf	0.0%
16/2	DR Exit	U	N/A	N/A	-		-	-	-	-	172	Inf	Inf	0.0%

Detailed Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)	Item
Network: A52 Bramcote Island	**-**	**-**	**3047**	**0**	**0**	**32.1**	**10.2**	**0.0**	**42.3**	**-**	**-**	**-**	**-**	**Network: A52 Bramcote Island**
A52 Bramcote Island	**-**	**-**	**3047**	**0**	**0**	**32.1**	**10.2**	**0.0**	**42.3**	**-**	**-**	**-**	**-**	**A52 Bramcote Island**
1/1	261	261	261	0	0	0.0	0.6	-	0.6	8.7	0.0	0.6	0.6	1/1
1/2+1/3	530	530	1060	0	0	0.0	2.3	-	2.4 (1.2+1.1)	16.0 (15.9:16.1)	1.6	2.3	3.9	1/2+1/3
2/1	350	350	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	2/1
2/2	256	256	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	2/2
2/3	92	92	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	2/3
3/1	497	497	-	-	-	2.8	1.0	-	3.8	27.8	9.1	1.0	10.1	3/1
3/2	496	496	-	-	-	2.8	1.0	-	3.8	27.7	9.1	1.0	10.1	3/2
3/3+3/4	578	578	-	-	-	2.9	0.4	-	3.2 (1.4+1.8)	20.2 (19.8:20.5)	5.3	0.4	5.7	3/3+3/4
4/1	298	298	-	-	-	1.0	0.3	-	1.3	15.8	3.8	0.3	4.0	4/1
4/2	313	313	-	-	-	1.0	0.3	-	1.3	15.2	3.6	0.3	3.9	4/2
4/3	533	533	-	-	-	2.9	0.0	-	2.9	19.7	9.8	0.0	9.8	4/3
4/4	345	345	-	-	-	1.4	0.3	-	1.8	18.6	5.1	0.3	5.5	4/4
5/1+5/2	361	361	722	0	0	0.9	0.9	-	1.8 (0.9+0.9)	18.1 (16.0:20.7)	3.0	0.9	3.9	5/1+5/2
6/1	675	675	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/1
6/2	799	799	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/2
6/3	255	255	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/3
6/4	365	365	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	6/4
7/2+7/1	1299	1299	-	-	-	5.0	1.3	-	6.3 (3.5+2.7)	17.4 (17.9:16.7)	11.8	1.3	13.1	7/2+7/1

7/3	615	615	-	-	-	2.3	0.8	-	3.1	18.0	9.6	0.8	10.4	7/3
8/1	327	327	-	-	-	2.5	0.6	-	3.1	33.9	6.9	0.6	7.4	8/1
8/2+8/3	529	529	-	-	-	4.4	0.0	-	4.4 (3.5+0.9)	29.8 (29.7:30.5)	10.9	0.0	10.9	8/2+8/3
9/1+9/2	502	502	1004	0	0	0.0	0.4	-	0.4 (0.2+0.2)	2.9 (3.0:2.7)	1.3	0.4	1.6	9/1+9/2
10/1	628	628	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	10/1
10/2	230	230	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	10/2
11/1	20	20	-	-	-	0.0	0.0	-	0.0	4.2	0.1	0.0	0.1	11/1
11/2	707	707	-	-	-	1.1	0.0	-	1.1	5.8	13.7	0.0	13.7	11/2
11/3	615	615	-	-	-	0.9	0.0	-	0.9	5.4	10.8	0.0	10.8	11/3
12/1	662	662	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	12/1
13/1	30	30	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	13/1
13/2	995	995	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	13/2
13/3	928	928	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	13/3
14/1	355	355	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	14/1
15/1	800	800	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	15/1
15/2	799	799	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	15/2
16/1	398	398	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	16/1
16/2	172	172	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	16/2

C1 - A52 Bramcote Island

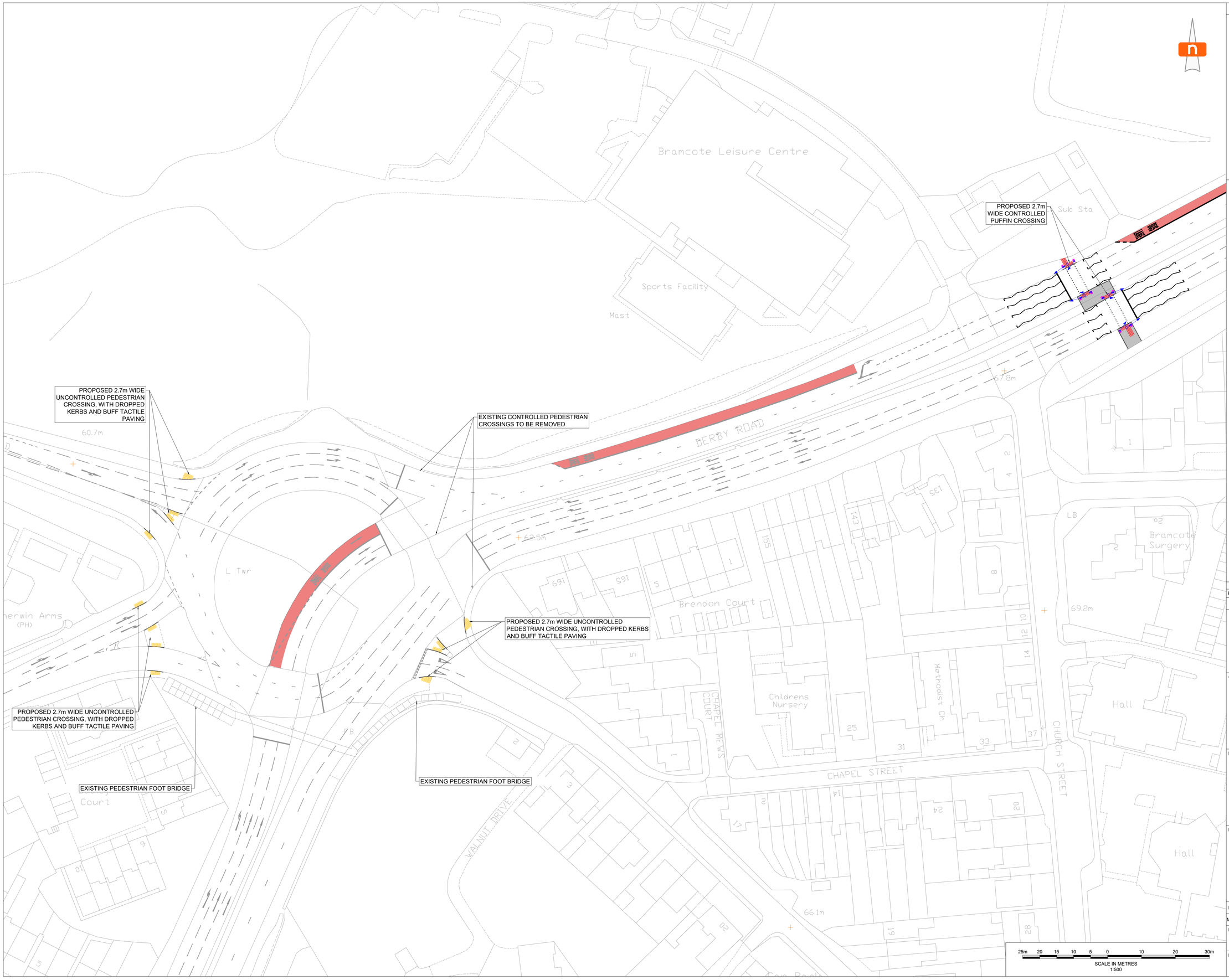
PRC for Signalled Lanes (%): 5.8
PRC Over All Lanes (%): 5.6

Total Delay for Signalled Lanes (pcuHr): 37.11
Total Delay Over All Lanes(pcuHr): 42.31

Cycle Time (s): 80

APPENDIX B

Drawings



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KEY

- OS SURVEY
- PROPOSED KERB LINE
- RED COLOURED BLISTER TACTILES
- PROPOSED TRAFFIC SIGNALS
- ROAD MARKINGS TO BE RETAINED
- PROPOSED ROAD MARKING WHITE
- PROPOSED FOOTWAY
- BUS LANE

REV	DATE	DETAILS OF ISSUE / REVISION	DRW	REV
A	11.09.26	FIRST ISSUE	P.G	J.N

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CLIENT

BLOOR HOMES

PROJECT TITLE

TOTON WEST
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DRAWING TITLE

BRAMCOTE ISLAND GENERAL ARRANGEMENT

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MODE REF:	J32-8827	SCALE@A1:	1:500

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