Lancaster Local Plan
Transport Assessment
Part 2 – Identification and Assessment of Mitigation Measures

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Quay West at MediaCityUK, Trafford Wharf Road, Trafford Park, Manchester, M17 1HH
Tel: +44 (0)161 872 3223 Fax: +44 (0)161 872 3193
Email: Website: www.**wyg**.com

Registered Office:

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Primary Contributor	M Smith	**Initialled**	MJS
Contributor	Y Liu/L Baran	**Initialled**	YL/LB
Review By	A Khan	**Initialled**	AK

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1.0 Introduction

1.1 Background

1.1.1 WYG has been commissioned by Lancaster City Council (LCC) to prepare a Transport Assessment (TA) (in two parts) to assess the likely impact on the existing local highway network of committed development and proposed emerging Local Plan (LP) development sites in the Lancaster District. The TA also considers junction mitigation measures at a number of junctions where appropriate.

1.1.2 The study area for the TA covers the whole district of Lancaster, concentrating particularly on the following principal areas. These are shown on **Plan 1**:

- Lancaster city centre;
- The A6 (S) corridor - (which includes the A6 between Junction 33 of the M6 and the edge of Lancaster city centre;
- The A588 corridor (between Ashton with Stodday);
- The A683 Bay Gateway Corridor (between M6 and Heysham);
- The A589 Corridor (between Lancaster and Morecambe);
- Caton Road Corridor (between Lancaster and the M6);
- Carnforth;
- Bolton-le-Sands
- Morecambe; and
- Heysham.

1.1.3 The City Centre Movement Strategy currently being prepared by Lancashire County Council will consider wholescale changes to movement within Lancaster City Centre, with an important focus on modal shift to sustainable transport including bus, cycling and walking. It has not therefore been a focus of this study to consider mitigation to junctions and links within the City Centre.

1.1.4 Further, this assessment seeks to demonstrate the potential localised engineering solutions to the network capacity challenges identified in Part 1. The mitigations proposed identify direct interventions to improve vehicular flow at each junction, but it is recognised that there are many wider development

considerations. These include implications for place, air quality and in particular with regard advancing sustainable travel modes as per the Lancaster District Transport and Highways Masterplan. Hence while this assessment is focused on supply-side measures, emerging development sites will need to consider opportunities for reducing travel demand and to support modal shift.

1.1.5 Part 1 of the TA - Initial Assessment, was originally submitted in draft to LCC in June 2018. Since then, several further drafts have been prepared and submitted to LCC which have incorporated comments made by LCC and the local highway authority (LHA) at Lancashire County Council (LanCC). Highways England (HE) have also been consulted. The final version of the report was issued on 21st December 2018.

1.1.6 Part 1 of the TA assessed in high-level terms the capacity of the existing highway network to accommodate future traffic flows expected to be generated by the proposed emerging LP development sites on key parts of the highway network within the Lancaster District. As agreed with LCC and the LHA, any junction operating at over their absolute capacity (i.e. over 1.0) in the future assessment years should be considered further for potential mitigation measures. The report recommended that 13 junctions should be taken forward to the next part of the study. These junctions are shown in **Plan 2.**

1.1.7 The purpose of this report (Part 2 of the TA), is to consider further the need for mitigation at these 13 junctions, and where appropriate, develop a series of schematic potential localised improvement schemes at the junctions. The scope of this report has been discussed and agreed with LCC and with the LHA and should be read in conjunction with Part 1 of the TA – Initial Assessment.

1.2 Study Limitations

1.2.1 For the reasons set out in Part 1 of the study, it is worth stating again that this study only provides a high-level generalised assessment of the potential impact of the emerging LP allocations on the highway network. The work has been undertaken without the benefit of an up-to-date Strategic Transport Model (STM), and without the precise nature of future development on the emerging LP allocation sites being known. Nevertheless, the approach employed has been agreed with LCC and LanCC as being adequate for the study required for the emerging LP.

1.2.2 It is also worth stating that separate TAs will need to be prepared for each site if and when they are brought forward in the future by the applicant. These TA's will need to prepare their own trip

generation rates, agree with the highway authority which junctions need to be assessed, and where appropriate, develop their own mitigation measures.

1.3 Structure of the Report

1.3.1 Following this introduction, this report is structured as follows:

- **Section 2** – provides a summary and overview of Part 1 of the Study.
- **Section 3** – Provides details of the review undertaken as to whether mitigation measures are likely to be required to accommodate the Local Plan, and where appropriate, provides details of potential schematic junction improvements.
- **Section 4 –** Summarises the report.

2.0 Part 1 – Initial Assessment: Summary and Overview

2.1 Introduction

2.1.1 The scope and methodology for this study has been developed in consultation with LCC and LanCC. We understand that LCC have also consulted with HE.

2.1.2 The aim of the study is to carry out high level capacity assessments at key junctions and links within the district of Lancaster to determine whether they are expected to operate within capacity with the proposed emerging LP developments in place or whether highway mitigation measures are likely to be required. Where required, the study is to identify and assess potential mitigation measures to accommodate the LP sites.

2.2 Summary and Overview of Part 1

2.2.1 The final version of Part 1 of the study was submitted on 21st December 2018 to LCC. For the report, Trafficmaster/Network Analyst was used to provide an indication of which highway links/junctions are currently congested. Using the results of this analysis together with a knowledge of the location of proposed LP sites and likely routing of future development traffic, key junctions/links were identified to be included within the study.

2.2.2 The future traffic generation of the committed and proposed LP allocated sites were determined using the TRICS database and/or trip rates obtained from TAs prepared for the sites, or from similar sites/type of development in the surrounding area. The development traffic was then assigned onto the highway network using 2011 census 'Journey to Work' data at the Middle Super Output Area (MSOA) level with Network Analyst then being used to assign the traffic onto the highway network.

2.2.3 Do Minimum (DM) (i.e. without the LP) and Do Something (DS) (with the LP in place) traffic flow demand scenarios were derived at key junctions for the weekday AM and PM peak periods during an interim year, 2023, and for an assessment year, 2033 (two years after the final year of the LP).

2.2.4 Existing junction layouts at the key junctions identified in the study were then assessed using stand-alone junction modelling software such as LINSIG and JUNCTION 9 to determine the forecast operational performance of the existing junction in the future with the committed and emerging LP allocation sites in place. Based on the premise that any junction operating at over their absolute capacity (i.e. over 1.0) in the future assessment years should be considered further for potential

mitigation measures in Part 2 of the TA, the report recommended that the junctions identified in **Table 2.1** should be considered further in this part of the study. The location of the junctions is identified in **Plan 1.**

Table 2.1: Junctions to be Considered

Jct Ref	Location	Potential Improvements Required By	
		2023	2033
2	A6 Main Rd / Stoney Ln / Salford Rd – A6 (S) Corridor (Galgate)	✓	✓
3	A6 Preston Lancaster Road/Hazelrigg Lane – A6 (S) Corridor		✓
4	A6 Scotforth Rd / Hala Rd / Ashford Rd - A6 (S) Corridor	✓	✓
5	A6 Greaves Rd/Ashton Rd (The Pointer Roundabout) – Lancaster city centre	✓	✓
9	A683 / B5273 – A683 Bay Gateway Corridor		✓
10	Caton Road / Junction 34 – Caton Road Corridor	✓	✓
15	A683 / Middleton Road / A589 – A683 Bay Gateway Corridor		✓
16	A6 Lancaster Rd/Scotland Rd / Market St – Carnforth		✓
17	Kellet Road/Back Lane – Carnforth		✓
18	Kellet Rd / A601M – Carnforth		✓
22	A6 / Barton Road – A6 (S) Corridor		✓
23	A6 / Penny St / Thurnam St – Lancaster city centre	✓	✓
29	A683 / M6 J34 – Caton Road Corridor	✓	✓

3.0 Potential Junction Mitigation

3.1 Introduction

3.1.1 As set out in the previous section, Part 1 of the study recommended that 13 junctions should be considered further as to whether mitigation measures are needed to accommodate the emerging LP allocated sites. As agreed with LCC and the LHA, this recommendation was based on the premise that any junction that was forecast to be operating at over its absolute capacity (i.e. over 1.0) should be considered further.

3.2 Junction Modelling Overview

3.2.1 The junction modelling/assessments undertaken in the following pages were undertaken using the same methodology as used in Part 1 of the TA as described below.

3.2.2 The following traffic flow demand scenarios were derived and assessed for the weekday AM and PM peak periods during an interim year, 2023, and for an assessment year, 2033 (two years after the final year of the LP) as agreed with LCC:

- **Do Minimum (DM)** – i.e. background traffic flows growthed up to the assessment years plus traffic likely to be generated by committed schemes and a number of proposed development schemes that are likely to receive planning permission shortly.
- **Do Something (DS)** – DM traffic flows plus vehicular trips estimated to be generated by the emerging LP allocation sites.

3.2.3 The traffic flows determined for the above scenarios in Part 1 of the TA are attached in the Figures section of this report (i.e. **Figures 1** to **10**).

3.2.4 For the priority and roundabout junctions, JUNCTIONS 9 (Arcady/Picady) modelling software has been used while in the case of the signal junctions, LINSIG modelling software (Version3.2.39.0) has been used, or in the case of Junction 34 of the M6, TRANSYT15. The latest junction layout, staging and phasing, intergreens, and signal timing information has been obtained from LanCC and used to derive the appropriate modelling input parameters.

3.2.5 Junction models set up to assess the capacity and performance of the existing junctions have been validated using queue surveys as far as possible. Details of the validation of individual junctions were

set out in Section 7.1 of Part 1 of the TA. However, it has been difficult to validate a number of junctions, particularly the A6 Main Road/ Stoney Lane/Salford Road junction and to a lesser extent other junctios along the A6 given that queues at and in the vicinity of these junction are not just as a result of the junction itself but are also due to the impact of other multi-factorial constraints along the route. These are identified in Section 3.4 of Part 1 of the TA.

3.2.6 The priority junctions and roundabouts have been assessed using the JUNCTIONS 9 analysis software. The key operational output parameters of JUNCTIONS 9 are:

- The ratio of flow to capacity (RFC), in which RFC values of less than 1.0 indicate the junction is operating within its ultimate capacity;
- End queues in vehicles, which indicates the forecast length of traffic queues; and,
- Average delays in seconds per vehicle.

3.2.7 The signalised junctions have been assessed using the LINSIG software (Version3.2.39.0), or in the case of Junction 34 of the M6, TRANSYT15. The key output operational parameters of LINSIG and TRANSYT are:

- Degree of saturation (DoS), where DoS values less than 100% indicate the junction is operating within its ultimate capacity;
- The maximum mean queue (MMQ) forecast on a link; and,
- Average delays in seconds per vehicle.

3.2.8 To indicate whether a junction is estimated to be operating satisfactory or not and whether junction improvements could be required in the future, Part 1 of the TA adopted the junction operational thresholds and colour coding set out in **Table 3.1**. However, it must be stressed that these thresholds do not correlate with policy guidance in NPPF, in respect of what is a 'severe' impact. Moreover, for a more detailed approach to establishing if a junction has reached its capacity and severe impact levels, RFC/DOS, queue lengths and delay results need to be considered together.

3.2.9 A summary table showing the forecast highest RFC/DOS on any approach to an existing junction during the AM and PM peak periods in the assessment years 2023 and 2033 for both the DM scenario and DS scenarios is attached in **Appendix A**. The summary table has used the colour coding thresholds set out in **Table 3.1** to provide an indication of the operational performance of each existing junction in terms of RFC/DOS.

Table 3.1 Junction Performance Criteria

RFC/DOS Threshold (Where one or more arms are operating at)	Level of Performance	Severity Colour Code
< 0.85 for non-signalised or <0.9 for signalised	Operating Satisfactory	Green
0.85/0.9 – 1.00	Approaching Capacity	Amber
– 1.25	Over Capacity	Red
>1.25	Significantly Over Capacity	Purple

3.3 Potential Mitigation Measures

3.3.1 The following summarises the review undertaken at each junction identified in **Table 2.1** to determine the need for potential junction mitigation measures. If required, the following also identifies junction mitigation measures that could potentially be developed further and provided to improve the performance of the junction.

3.3.2 It should be noted that the drawings developed and set out below are at this stage schematic in nature and have been developed to provide an illustration of improvement options that could potentially be developed in the future to accommodate LP development. The drawings should not be taken and used by future developers in the area as any mitigation needed by individual developers will need to be agreed with the LHA on an individual basis at the time of any application.

3.3.3 It should also be noted that unless otherwise stated, the junction mitigation measures set out in the following pages have been largely developed within the existing adopted highway boundary without the need for third party land. However, in places, the adoption plans received are poor quality and further clarification is required at a number of junctions.

3.3.4 Furthermore, the improvements shown have at this stage been drawn up on OS mapping. OS mapping can be inaccurate and any improvements shown need to be verified by a topographical survey which may require the refinement of the potential mitigation measures shown. This is particularly important at constrained junctions.

3.3.5 Plans and drawings showing the junction's existing layout and any potential improvements described below are attached to the drawings section of this report.

Jct Ref 2 - A6 Main Rd/Stoney Ln/Salford Rd Signal Junction

3.3.6 This junction currently operates as a four-arm signal-controlled cross-roads in the centre of Galgate. The junction is relatively constrained on three corners by existing buildings.

3.3.7 As identified in Part 1 of the TA, it has been difficult to produce a true representation of the way the junction works in practice as the junction modelling does not replicate observed queues at and in the vicinity of the junction. Queueing traffic at and in the vicinity of the junction are not just as a result of the junction itself but are also due to the impact of other multi-factorial constraints along the route which impact on the level of congestion experienced. These are identified in Section 3.4 of Part 1 of the TA but in general include; right turning vehicles turning from the A6 (southern arm) onto Stoney Lane blocking straight ahead traffic; an 'all-red' pedestrian stage at the junction; the location of the northbound bus stop just to the north of the junction which when buses are waiting at the stop, impacts on the through-flow of vehicles heading northwards through the junction; the narrow width of sections of the road; and on-street car parking bays on the northern approach to the junction reducing the carriageway width which impacts on the capacity of the approach especially when HGV's are present.

3.3.8 As shown in **Appendix A**, Part 1 of the TA forecast that the junction was currently operating at above its capacity in peak periods and that the operational performance of the existing junction would significantly deteriorate over time even without the additional traffic generated by the LP. In the 2023 assessment year, the junction modelling undertaken in Part 1 of the TA (summarised in **Appendix A**) forecast that the maximum DOS at the junction would be around 130% and up to 226% in 2033 with the LP in place.

3.3.9 We understand that a number of studies have been undertaken in the past to look at options to increase capacity at the junction and the area in general. However, these have concluded that it is only possible to provide limited measures that will provide some interim relief in the short term at the junction. Wide ranging changes to the junction and area in general such as the demolition of surrounding buildings, the provision of a by-pass around Galgate, which at this stage are not deliverable would be needed to provide long term relief at the junction.

3.3.10 Nevertheless, as set out in Part 1 of the TA, it was noted during site visits that the main contributing factor lowering the capacity of the junction was right turning vehicles turning from the A6 (southern arm) onto Stoney Lane blocking straight ahead traffic, particularly during the AM peak period. The

junction modelling undertaken during Part 1 of the TA confirmed that the capacity of the junction is very sensitive to the number of right turning vehicles.

3.3.11 As a result, two potential options for improving the capacity of the junction in the short term have been reviewed and are shown in **drawing no J02-100-01 Rev P01** (Option A) and **J02-100-02 Rev P01** (Option B).

3.3.12 **Drawing no J02-100-01 Rev P01** (Option A) involves the provision of short narrow right turn lanes on both A6 Main Road approaches to the junction. To provide for similar turning circles to those that exist at the current junction, the signal stop line on the A6 southern approach and on Salford Road have been moved slightly away from the junction and the north western kerb line cut back. This arrangement also requires the existing parking/servicing/waiting area on the south eastern corner of the junction to be reduced slightly.

3.3.13 **Drawing no J02-01-TR001 Rev P01** shows that a refuse vehicle can undertake turning manoeuvres safely. Any larger vehicle than this cannot undertake turning manoeuvres safely under the current junction arrangement as shown in **Drawing no J02-03-TR001 Rev P01** which shows a 16.5m Artic HGV trying to turn at the existing junction. The drawing shows that the 16.5m Artic requires the full width of the carriageway (including the opposite side of the carriageway where there is potential for queueing traffic to be located) when undertaking the left turn from Salford Road and Stoney Lane. This can also add further to the delay and congestion experienced at the junction.

3.3.14 The mitigation shown in **drawing no J02-100-02 Rev P01** (Option B) involves marking out right turn storage lanes for right turning traffic from the north and southern A6 approaches to the junction in the centre of the junction. This is intended to improve lane discipline so that right turning vehicles do not 'block' straight-ahead traffic as much as they do presently. As with Option A, stop lines would need to be moved slightly away from the junction and kerb lines amended. However, a parking area could be retained to the front of the convenience store.

3.3.15 The Junction Capacity Assessment Results Summary Table in **Appendix A** summarises the highest RFC resulting from the junction capacity assessments undertaken for the modified junction options identified above. Full junction capacity summary tables are attached in **Appendix B** along with the output files from the junction capacity assessments. These show that both potential mitigated junction layouts are forecast to operate within capacity in 2023 with the LP in place and within capacity in 2033 without the LP. In 2033 with the LP, the modified junction layouts are still expected to operate at

above capacity during both the AM and PM peak periods with a maximum DoS of 112% during the 2033 AM DS scenario and with a maximum DoS of 116% during the 2033 PM DS scenario.

3.3.16 However, as described above, the results from the junction assessment modelling should be viewed with caution given that it has been difficult to produce a true representation of the way the junction works in practice. There are a number of multi-factorial constraints at the junction and along the approaches to the junction which impact on the level of congestion experienced which cannot be truly modelled.

3.3.17 Nevertheless, the above does show that there are potential junction modifications, which could potentially be implemented to provide some short-term improvement to the operation of the junction.

Jct Ref 3 - A6 Preston Lancaster Road/Hazelrigg Lane Signal Junction

3.3.18 This junction currently operates as a three-arm signal-controlled junction which Part 1 of the TA forecasted to operate at above its capacity in 2033 with the addition of the LP traffic generation. (See **Appendix A**.)

3.3.19 In the future the junction is likely to be proposed as the main site access junction into the LP allocated Bailrigg Garden Village development site to the west of the A6. Access to the Bailrigg development may be achieved by incorporating an additional fourth arm onto the existing junction.

3.3.20 A potential option to improve the performance of the junction and to provide access to the Bailrigg Garden Village development is shown in **drawing no J03-100-01 Rev P01.** For the junction to operate at below its capacity in 2033 with the LP development traffic (i.e. with a DoS of below 1.0), the new site access arm of the junction would need to be at least two lanes wide (left turn and straight ahead plus a right turn lane). The lane configuration on the northern approach to the junction would also need to be amended from the existing arrangement so that the nearside lane caters for left turning and straight-ahead traffic while the off-side lane caters for right turning traffic. Cycle facilities at the junction will be amended and added to where appropriate along the lines shown in the drawing.

3.3.21 The Junction Capacity Assessment Results Summary Table in **Appendix A** summarises the highest RFC resulting from the junction capacity assessments undertaken at the mitigated junction while full junction capacity summary tables are attached in **Appendix C** along with the output files from the junction capacity assessments. These show that the potential mitigated junction layout is forecast to operate at a maximum DoS of 97.4% during the worst case 2033 DS scenario.

3.3.22 It is therefore considered that a junction layout similar to that shown in **drawing no J03-100-01 Rev P01** would mitigate for the LP and provide access to the proposed Bailrigg Garden Village development. The junction layout would also operate at below its absolute capacity in the 2033 assessment year.

Jct Ref 4 - A6 Scotforth Rd/Hala Rd/Ashford Rd Signal Junction

3.3.23 This junction currently operates as a four-arm signal-controlled junction which Part 1 of the TA forecasted to operate at above its capacity in the 2023 PM DS scenario and above its capacity in both peak periods in the 2033 DS scenario's. (See **Appendix A**).

3.3.24 We understand that the potential to improve the operation of the junction has been considered by a number of parties in the past including the LHA. All have concluded that there is limited scope to improve the operation of the junction significantly without acquiring land outside the existing highway boundary. We understand that a number of schemes have been drawn up in the past by the LHA which go beyond the current highway boundary but do not result in the demolition of buildings.

3.3.25 A potential improvement scheme provided within the current adopted highway boundary is shown in **drawing no J04-100-01 Rev P01**. The potential improvements involve marking out right turn lanes in the centre of the junction. This is intended to improve lane discipline so that right turning vehicles do not 'block' straight-ahead traffic as much as occurs at present.

3.3.26 The Junction Capacity Assessment Results Summary Table in **Appendix A** summarises the highest RFC resulting from the junction capacity assessments undertaken at the modified junction while full junction capacity summary tables are attached in **Appendix D** along with the output files from the junction capacity assessments. However, as indicated in the Summary Table, the changes do not improve the operation of the junction significantly and the junction would still operate at above its capacity in in the 2023 PM DS scenario and in both the AM and PM peak periods in the 2033 DS scenarios.

3.3.27 It is therefore considered that the junction will operate at above its capacity with the implementation of the LP in the future and that there is limited scope to improve the performance of the junction without the use of third-party land.

Jct Ref 5 - A6 Greaves Rd/Ashton Rd Junction (The Pointer Roundabout)

3.3.28 This junction currently operates as a five-arm roundabout on the edge of Lancaster city centre. Part 1 of the TA forecast that the existing junction is likely to be operating at above its capacity in 2023 even without the implementation of the LP (see **Appendix A**).

3.3.29 A number of potential schemes have been reviewed to improve the capacity of the junction one of which is shown in **drawing number J05-100-01 Rev P01**. This shows the current roundabout junction converted into a signal-controlled junction. The drawing, whilst only illustrative and conceptual shows where potential pedestrian and cycle facilities could be provided throughout the junction.

3.3.30 The Junction Capacity Assessment Results Summary Table in **Appendix A** summarises the highest DoS resulting from the junction capacity assessments undertaken for the layout shown in **drawing number J05-100-01 Rev P01** while full junction capacity summary tables are attached in **Appendix E** along with the output files from the junction capacity assessments. These show that whilst the potential mitigated junction layout is forecast to operate at just above its capacity in 2023 and 2033, the maximum DoS for the signal junction is much lower than the maximum RFC that would result from the existing roundabout layout. Reference to the full junction capacity assessment summary tables attached in **Appendix E** show that the overall average junction delay (s/pcu) is also generally lower for the junction scheme than the current roundabout layout.

3.3.31 Other potential junction improvement options could involve retaining the principle of the existing roundabout layout whilst providing a second lane for traffic travelling straight ahead from the A6 southern arm to the northern arm in combination with full, or partial signalisation of the roundabout. Junction capacity assessments have not been undertaken for these options at this stage.

3.3.32 Further to the above, we understand that the LHA have been reviewing the operation of this junction as part of network safety reviews and further working with city council officers relating to the wider city centre movement strategy and towards facilitating growth in South Lancaster. This focus includes considering opportunities to promote Bus Rapid Transit and a Cycle Superhighway as part of implementation of the Highways and Transport Masterplan. Further work is underway to develop layout options that consider this wider context and will be subject to a separate review at a later date.

3.3.33 Given these studies, it is highly likely that the layout of the junction will change in the future as part of the above-mentioned strategies irrespective of the LP coming forward.

Jct Ref 9 - A683/B5273 Roundabout

3.3.34 This junction currently operates as a four-arm roundabout which in Part 1 of the TA was forecast to operate at just above its capacity in 2033 with the addition of the LP traffic generation in the 2033 PM peak DS scenario only. **Appendix A** shows that the existing junction is forecast to operate with a maximum RFC of 1.110 in this scenario whilst the junction was forecast to operate within its capacity during all other periods.

3.3.35 On further inspection of the results, the results show that the junction was forecast to operate at above its capacity for only 30 minutes of the 2033 PM peak DS scenario.

3.3.36 Given the relatively short period when the junction is forecast to operate at above its capacity and because it is only expected to operate at above its capacity in 2033, no mitigation is considered to be necessary.

3.3.37 However, whilst not drawn up at this stage, a potential improvement that could be made to the junction layout to improve the junction's operational performance could include reducing the hatching area around the splitter island on the Mellishaw Lane arm of the junction. This could increase the entry width on this approach and increase the flare length. This is likely to result in the junction operating at below its capacity in the 2033 PM DS scenario.

Jct Ref 15 - A683/Middleton Road/A589 Roundabout

3.3.38 This junction currently operates as a four-arm roundabout which in Part 1 of the TA was forecast to operate at just above its capacity in the 2033 PM peak DS scenario with the addition of the LP traffic generation in the 2033 PM peak DS scenario only. **Appendix A** shows that the existing junction is forecast to operate with a maximum RFC of 1.020 in this scenario whilst the junction was forecast to operate within its capacity during all other periods.

3.3.39 On further inspection of the results, the results show that the junction was forecast to operate at above its capacity for only 30 minutes of the 2033 PM peak hour DS scenario. The results also show that on the A589 Trumacar Lane arm of the junction, the only arm that was shown to be operating at above capacity (for 30 minutes only), the increase in delay during this peak period was just 86 seconds per vehicle. This increase in delay is considered to be negligible.

3.3.40 For the above reasons, it is considered that no mitigation is required at this junction as a result of the LP.

Jct Ref 16 - A6 Lancaster Rd/Scotland Rd/Market St Signal Junction

3.3.41 This junction currently operates as a four-arm signal-controlled cross-roads in the centre of Carnforth. The junction is relatively constrained on all four corners by buildings and Part 1 of the TA forecast that the existing junction would operate at above its capacity during the PM peak period in 2033 both without and with the LP in place. (See **Appendix A**).

3.3.42 A potential scheme which will improve the operational performance of the junction so that the junction is forecast to operate at below its capacity in 2033 without and with the LP is shown in **drawing no J16-100-01 Rev P01.** The potential improvements which are within the existing highway boundary involve the provision of right turning lanes on both Market Street arms of the junction. This has resulted in slightly reduced existing lane widths on both Market Street arms of the junction and the relocation of the existing stop line on the Market Street (western arm) away from the junction. This is to enable refuse vehicles to continue to turn left from Lancaster Road into Market Street (west) safely.

3.3.43 Autotracking for a refuse vehicle turning at the junction is shown in **drawing no J16-100-02 Rev P01** which shows that under the modified layout, a refuse vehicle can turn safely. Autotacking of the existing junction layout has shown that for any vehicle larger than the refuse vehicle shown in **drawing no J16-100-02 Rev P01,** the vehicle would require both sides of the carriageway when turning left from Lancaster Road to Market Street. Therefore, the turning radii at the modified junction are not considered to be any more restrictive than at present.

3.3.44 The Junction Capacity Assessment Results Summary Table in **Appendix A** summarises the highest RFC resulting from the junction capacity assessments undertaken at the modified junction while full junction capacity summary tables are attached in **Appendix F** along with the output files from the junction capacity assessments. These show that the potential mitigated junction layout is forecast to operate at a maximum DoS of 93.2% during the worst case 2033 PM peak scenario.

3.3.45 It is therefore considered that a junction layout similar to that shown in **drawing no J16-100-01 Rev P01** would mitigate for the LP and would operate at below its absolute capacity in the 2033 assessment year.

Jct Ref 17 - Kellet Road/Back Lane Priority Junction

3.3.46 This junction currently operates as a three-arm priority-controlled junction on the outskirts of Carnforth which in Part 1 of the TA was forecast to operate at just above its capacity in the 2033 AM peak DS

scenario only. **Appendix A** shows that the existing junction is forecast to operate with a maximum RFC of 1.090 in this scenario whilst the junction was forecast to operate within its capacity during all other periods.

3.3.47 On further inspection of the results, the results show that the junction was forecast to operate at above its capacity for only 30 minutes of the 2033 AM peak hour DS scenario. The results also show that on the Back Lane approach to the junction, the only arm that was shown to be operating at above capacity (for 30 minutes only), the increase in delay during this peak period was 260 seconds per vehicle.

3.3.48 Given the results summarised above, it is debateable whether the impact of the LP on this junction is significant. Nevertheless, a potential scheme which will improve the operational performance of the junction so that the junction is forecast to operate at below its capacity in 2033 without and with the LP is shown in **drawing no J017-100-01 Rev P01**. The potential improvements which are within the existing highway boundary involve extending the existing short flare on the Back Lane approach to the junction so that two full lanes (a left turn and right turn lane) are provided for a distance of around 25m. Autotracking for a large Artic HGV turning in and out of the junction is shown in **drawing no J017-TR001 Rev P01** which shows that such a vehicle can safely manoeuvre in and out of the modified junction layout.

3.3.49 The Junction Capacity Assessment Results Summary Table in **Appendix A** summarises the highest RFC resulting from the junction capacity assessments undertaken at the modified junction while full junction capacity summary tables are attached in **Appendix G** along with the output files from the junction capacity assessments. These show that the potential mitigated junction layout is forecast to operate at a maximum RFC of 0.970 during the worst case 2033 AM peak DS scenario.

3.3.50 It is therefore considered that a junction layout similar to that shown in **drawing no J017-100-01 Rev P01** would mitigate for the LP and would operate at below its absolute capacity in the 2033 assessment year.

Jct Ref 18 - Kellet Rd/A601M Priority Junction

3.3.51 This junction currently operates as a three-arm priority-controlled junction on the outskirts of Carnforth. The A601(M) which is maintained by Highways England forms part of the existing junction

layout representing the give way arm of the junction. However, we understand that the A601(M) is due to be 'de-trunked' in the near future with maintenance duties being transferred to the LHA.

3.3.52 Part 1 of the TA forecast that the existing junction would operate below its capacity during 2023 with the implementation of the LP but would operate at above its capacity in 2033 with the LP in place. The summary table attached in **Appendix A** shows that the existing junction is forecast to operate with a maximum DOS in the 2033 AM peak DS scenario of 1.110 and 1.310 in the 2033 PM DS scenario.

3.3.53 A potential scheme (Option A) which will improve the operational performance of the junction so that the junction is forecast to operate below its capacity in 2033 with the LP in place is shown in **drawing no J018-100-01 Rev P01**. The potential improvements, which can be constructed within the existing adopted highway involve changing the priority of the junction so that the Kellet Road (eastern) arm becomes the minor road and gives way to traffic travelling between the A601(M) and Kellet Road (west).

3.3.54 We understand that the LHA are proposing to reduce the speed limit along this stretch of road (when 'de-trunked') and **drawing no J018-101-01 Rev P01** shows the forward visibility splay along what will become the major road between Kellet Road (western arm) and the current A601(M) based on DMRB and a new speed limit of 30mph. The drawing shows that to accommodate the forward visibility splay along the road, land outside the current adopted highway boundary is likely to be required although this still needs to be confirmed. **Drawing no J018-101-01 Rev P01** also shows the forward visibility required from the pedestrian crossings which also shows that land outside the current adopted highway boundary is likely to be required.

3.3.55 **Drawing no J018-100-TR001 Rev P01** shows that large Artic HGV movements can be accommodated within the potential junction layout.

3.3.56 A further potential junction improvement scheme has also been developed (option 2) which will improve the operational performance of the junction so that the junction is forecast to operate below its capacity in 2033 with the LP. This is shown in **drawing no J018-100-02 Rev P01** and involves the conversion of the junction into a signal-controlled junction. **Drawing no J018-100—02-TR001 Rev P01** shows that large Artic HGV movements can be accommodated within the potential junction layout.

3.3.57 Whilst **drawing no J018-100-02 Rev P01** shows that the provision of a signal-controlled junction in this location may require a small section of land outside the current adopted highway boundary to

provide the footway (to be confirmed), it is considered that this can be avoided by moving the whole junction slightly to the east.

3.3.58 The Junction Capacity Assessment Results Summary Table in **Appendix A** summarises the highest RFC resulting from the junction capacity assessments undertaken at the modified junction while full junction capacity summary tables are attached in **Appendix H** along with the output files from the junction capacity assessments. These show that both potential mitigated junction layouts are forecast to operate significantly below their capacity in the 2033 DS scenario.

3.3.59 It is therefore considered that a junction layout similar to those shown in **drawings no J018-100-01 Rev P01** and **J018-100-02 Rev P01** will mitigate for the impact of the LP and will operate at below their absolute capacities in the 2033 assessment year.

Jct Ref 22 - A6/Barton Road Priority Junction

3.3.60 This junction currently operates as a three-arm priority junction which in Part 1 of the TA was forecast to operate at just above its capacity in 2033 with the addition of the LP traffic generation in the 2033 AM peak DS scenario only. **Appendix A** shows that the junction is forecast to operate with a maximum RFC of 1.030 in this scenario whilst the junction was forecast to operate within its capacity during all other periods.

3.3.61 On further inspection of the results, the results show that the junction was forecast to operate at above its capacity for only 30 minutes of the 2033 AM peak hour DS scenario. The results also show that on the Barton Road arm of the junction, which was the only arm of the junction that was shown to be operating at above capacity (for 30 minutes only), the increase in average delay during this peak period was just 122 seconds per vehicle. This increase in delay is considered to be negligible.

3.3.62 For these reasons, it is considered that no mitigation is required at this junction as a result of the LP.

Jct Ref 23 - A6/Penny St/Thurnam St Priority Junction

3.3.63 This junction is located in Lancaster City Centre and forms part of the city's current city centre one-way system. The junction is likely to be re-configured in the future as part of the city centre movement strategy.

3.3.64 Therefore, the junction has not been considered further as part of the report, as agreed with LCC.

Jct Ref 10 and 29 – A683 Caton Road/Junction 34 Signal Junction

3.3.65 These two junctions operate as Junction 34 of the M6 and cater for the northbound off-slip and southbound on and off slip movements. The junctions are closely linked being approximately 250m apart and operate on both sides of the M6 with the northbound off-slip (western junction) and the southbound on and off slip (eastern junction) forming junctions with the A683 Caton Road/Lancaster Road which runs under the motorway into Lancaster City Centre from the east.

3.3.66 The western junction operates as a four-arm signal-controlled junction while the eastern junction operates as a three-arm signal-controlled junction. The A683 Caton Road/Lancaster Road between the two junctions under the motorway is three lanes wide (two eastbound and one west bound).

3.3.67 Part 1 of the TA forecast that both junctions are expected to operate at above their capacity in 2023 even without the implementation of the LP. (see **Appendix A**). Balancing the operational performance of the overall junction, the junction modelling undertaken in Part 1 of the TA showed that queueing back onto the southbound motorway was forecast to occur along the southbound off-slip during the 2023 PM DS, 2033 AM DS, and 2033 DS scenarios. However, this queueing back could be negated at the expenses of the worsening the operational performance of other arms of the junction.

3.3.68 Further review of the junction arrangements show that the major issue restricting capacity at the junctions is the available width of the A683 Caton Road/Lancaster Road under the motorway bridge between the two junctions. Currently only three lanes can be provided whereas a fourth lane to allow two lanes in each direction would provide much more capacity at the junction. Analysis undertaken shows that the addition of a fourth lane between the two junctions would result in the junctions operating below its capacity in the future in all flow scenarios.

3.3.69 However, in the absence of a fourth lane between the two junctions, a potential improvement to at least prevent blocking back onto the motorway has been identified as shown in **drawings J010/29-100-01 Rev P01** and **J010/29-100-02 Rev P01.** These drawings show the provision of a second left turn lane from the M6 southbound off slip onto Caton Road/Lancaster Road with the second lane continuing as far as possible westwards towards the motorway bridge.

3.3.70 **Drawings J010/29-01 Rev P01** (Option A) and **J010/29-02 Rev P01** (Option B) show this achieved in two ways. **Drawing J010/29-01 Rev P01** (Option A) shows the second lane along the A683 being achieved by keeping within the current highway boundary by reducing the central island

width, while **drawing J010/29-02 Rev P01** (Option B) shows the second lane being achieved by extending the carriageway southwards.

3.3.71 However, we understand that the LHA have some reservations concerning Option A due to the reduced width of the central reserve not providing enough queueing space for large farm vehicles and trailers to wait within the central reserve without extending back on to the straight-ahead carriageway when travelling in and out of the farm to the north. One solution to this would be to restrict the farm access to left in/left out although it is not obvious where large vehicles would be able to turn if they wanted to travel in the opposite direction. Option B is likely to involve third party land to the south.

3.3.72 Whilst the two options shown in **drawings J010/29-01 Rev P01** and **J010/29-02 Rev P01** do little to improve and lower the maximum DoS at the two junctions, the additional lane will reduce the prospect of traffic queueing back onto the motorway.

3.4 Indicative Junction Improvement Cost Estimates

3.4.1 High level indicative costs have been estimated for each of the potential junction improvement options identified above. These are summarised in **Table 3.2** attached at the end of this section. A further breakdown of costs is attached in **Appendix J.**

3.4.2 It should be noted that the estimated costs are at this stage high level indicative costs only. Furthermore, the costs do not include any potential costs associated with the removal and/or diversion of Statutory Undertakers equipment or the cost of purchasing any land required for the provision of the revised junction layouts.

Table 3.2: Indicative Preliminary Construction Cost Estimates

Jct Ref	Location	Indicative Costs (£)
2A	A6 Main Rd / Stoney Ln / Salford Rd – Galgate – Option A	£115k
2B	A6 Main Rd / Stoney Ln / Salford Rd – Galgate – Option B	£110k
3	A6 Preston Lancaster Road/Hazelrigg Lane	£260k
4	A6 Scotforth Rd / Hala Rd / Ashford Rd	£110k
5	A6 Greaves Rd/Ashton Rd (The Pointer Roundabout)	£2.4M
9	A683 / B5273	N/A
10	Caton Road / Junction 34	-
15	A683 / Middleton Road / A589	N/A
16	A6 Lancaster Rd/Scotland Rd / Market St – Carnforth	£55k
17	Kellet Road/Back Lane – Carnforth	£70k
18A	Kellet Rd / A601M – Carnforth	£90k
18B	Kellet Rd / A601M – Carnforth	£275k
22	A6 / Barton Road	N/A
23	A6 / Penny St / Thurnam St – Lancaster city centre	N/A
29A	A683 / M6 J34 – Option A	£220k
29B	A683 / M6 J34 – Option B	£240k

3.5 Summary of Mitigation Measures

3.5.1 The key points and issues described in this section have been summarised in **Table 3.3.**

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	**Location**	**Jct Type**	**Description of Potential Mitigation Measures**	**Max DoS/RFC (Pre and Post Mitigation)**				**Estimated Costs (Approx)**	**Comment**
				2023		**2033**			
				Pre	**Post**	**Pre**	**Post**		
2	A6 Main Rd/Stoney Ln/Salford Rd	Signal	(1) **Ban right turning vehicles** especially on the southern arm of the junction; 2) **Option A** - **Dwg no J02-100-01 Rev P01** Provision of a short right turn flare lane on both A6 approaches to the junction. This option requires some stop lines to be pulled back and kerb lines amended. (3) **Option B – Dwg no J02-100-02 Rev P01** Provision of right turn storage pockets in front of the stop line on both A6 approaches to try and stop right turning vehicles blocking other	133.2%	103.3%	226.1%	146.2%	**Opt A - £115k** **Opt B - £110k**	The results from the junction assessment modelling should be viewed with caution. It is difficult to produce a true representation of the way the junction works in practice because there are many multi-factorial constraints at the junction and along the approaches to the junction which impact on the level of congestion experienced and these cannot be modelled accurately due to the limitations of the modelling software. (See Part 1 of the TA for further details). Nevertheless, the modelling does show that from a capacity perspective there are several junction modifications which could potentially be implemented to provide some short-term improvement to the junction performance. However, for a longer-term solution, a comprehensive set of wide ranging improvements to the junction and to the adjacent route will be needed.

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	Location	Jct Type	Description of Potential Mitigation Measures	Max DoS/RFC (Pre and Post Mitigation)				Estimated Costs (Approx)	Comment
				2023		2033			
				Pre	Post	Pre	Post		
			movements. This option requires some stop lines to be pulled back and kerb lines amended.						In terms of the short-term solutions identified in the column opposite, banning the right turn movement from the A6 may be contentious given the limited opportunity to turn right (or turn around) at other locations in the area. That said, the volume of right turning vehicles at the junction is low. Options A and B would require kerb realignment and result in narrow lanes in places at the junction. Nevertheless, they provide a short-term solution to improve capacity at the junction. The potential for increasing the capacity at the junction has been considered by the LHA for some time and it has been concluded that there is no simple solution available. It is considered that the junction is inhibiting future growth in the area and a

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	Location	Jct Type	Description of Potential Mitigation Measures	Max DoS/RFC (Pre and Post Mitigation)				Estimated Costs (Approx)	Comment
				2023		2033			
				Pre	Post	Pre	Post		
									comprehensive scheme for the junction and A6 in general in this area is required.
3	A6 Preston Lancaster Rd/Hazelrigg Ln	Signal	**Dwg No J03-100-01 Rev P01** The provision of an additional arm at the existing junction to access the new Bailrigg development. The additional arm needs to be two exit lanes wide (left turn and straight ahead + right turn lane). The existing lane configuration on the A6 (Northern arm) also needs to be amended so that the nearside lane is left and straight ahead and the off-side lane is right turn only.	87.5%	76.3%	111.6%	97.4%	**£260k**	The junction assessments show that the potential mitigation shown in **drawing no J03-100-01 Rev P01** will more than mitigate for the LP traffic and that the junction will operate with capacity in 2033. The analysis has been based on the traffic flows and traffic assignment set out in Part 1 of the TA. This assumes that the traffic generated by the LP allocated Bailrigg Garden Village is split evenly over three access points, with this access being only one of three access points. This is a standard approach based on the anticipated development size. However, the transport approach to be taken to Bailrigg Garden Village is being developed and will be tested via the Lancaster South Area Action Plan DPD and will review access as part of this.

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	Location	Jct Type	Description of Potential Mitigation Measures	Max DoS/RFC (Pre and Post Mitigation)				Estimated Costs (Approx)	Comment
				2023		2033			
				Pre	Post	Pre	Post		
									Nevertheless, it is considered that there is potential to increase the capacity of the junction further if required in the future by using land to the west of the junction which is within the Bailrigg Garden Village site.
4	A6 Scotforth Rd/Hala Rd/Ashford Rd	Signal	**Dwg No J03-100-01 Rev P01** Provision of right turn storage pockets in front of the stop line on both A6 approaches to try and stop right turning vehicles blocking other movements. This option requires the south western kerb line to be re-aligned.	102.7%	101.9%	124.7%	123.3%	**£110k**	There appears to be limited scope to improve the operation of the junction significantly within the existing adopted highway boundary. The potential junction improvement option shown in **dwg no J03-100-01 Rev P01,** whilst within the current adopted highway boundary, provides very limited improvement to the performance of the junction. We understand that a number of parties have looked into increasing capacity at the junction in the past including the LHA. However, they have concluded that land outside the adopted highway would be required to provide a layout that significantly increases capacity.

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	Location	Jct Type	Description of Potential Mitigation Measures	Max DoS/RFC (Pre and Post Mitigation)				Estimated Costs (Approx)	Comment
				2023		2033			
				Pre	Post	Pre	Post		
									It is understood that one such scheme has been considered in the past by the LHA which uses land currently outside the adopted highway but which doesn't include for the demolition of any buildings.
5	A6 Greaves Rd/Ashton Rd (The Pointer Roundabout)	Rbt	**Dwg No J05-100-002 Rev P01** Conversion of the existing roundabout junction into traffic signals. The existing zebra crossing on the norther arm of the junction which currently causes some delay would be removed and 'run with green' pedestrian crossings incorporated into the junction.	1.520	100.4%	1.880	110.2%	**£2.4M**	The improvement option shown in **drawing no J05-100-002 Rev P01** is only one of many that could potentially be provided. The layout shown in **Dwg No J05-100-002 Rev P01** provides a betterment over the existing layout but does not result in the junction operating at below its capacity in 2033. The potential junction layout shown in **drawing no J05-100-002 Rev P01** would require the removal of the existing vegetation in the centre of the roundabout. We understand that LCC together with the LHA have been reviewing the operation of this junction as part of the wider city centre

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	Location	Jct Type	Description of Potential Mitigation Measures	Max DoS/RFC (Pre and Post Mitigation)				Estimated Costs (Approx)	Comment
				2023		2033			
				Pre	Post	Pre	Post		
			Further potential junction improvement options (which have not been drawn up at this stage) could include providing a second lane for traffic travelling straight ahead from the A6 southern arm to the northern arm in combination with full, or partial signalisation of the roundabout.						movement strategy, including as part of the proposed Bus Rapid Transit and proposed Super Cycle Highway. Therefore, it is highly likely that the layout of the junction will change in the future as part of this strategy irrespective of the LP coming forward. Any future review of the Pointer roundabout is likely to be assessed as part of the emerging Lancaster South Area Action Plan DPD.
9	A683/B5273	Rbt	Potential mitigation measures are not considered to be required	0.910	N/A	1.110	N/A	**N/A**	The junction is forecast to only operate at slightly above its capacity in the PM peak DS scenario in 2033 for an estimated 30 minutes. At all over times, the junction is forecast to operate at below its capacity. No improvements are therefore considered necessary to be required.

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	**Location**	**Jct Type**	**Description of Potential Mitigation Measures**	**Max DoS/RFC (Pre and Post Mitigation)**				**Estimated Costs (Approx)**	**Comment**
				2023		**2033**			
				Pre	**Post**	**Pre**	**Post**		
									However, reducing the hatching area around the splitter island on the Mellishaw Ln arm of the junction to increase the entry width and increasing the flare length would provide benefit.
15	A683/Middleton Rd/A589	Rbt	Potential mitigation measures are not considered to be required	0.860	N/A	1.020	N/A	**N/A**	The junction is forecast to only operate at slightly above its capacity in the AM peak DS scenario in 2033 for an estimated 30 minutes. At all over times, the junction is forecast to operate at below its capacity. No improvements are therefore considered to be required.
16	A6 Lancaster Rd/Scotland Rd/Market St	Signals	**Dwg No J16-100-01 Rev P01** Provision of additional short flared lane for right turning vehicles on both Market Street	96.3%	83.9%	107.2%	93.2%	**£55k**	The junction assessments show that the potential mitigation shown in **drawing no J16-100-01 Rev P01** will more than mitigate for the LP traffic and that the junction will operate within capacity in 2033.

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	Location	Jct Type	Description of Potential Mitigation Measures	Max DoS/RFC (Pre and Post Mitigation)				Estimated Costs (Approx)	Comment
				2023		2033			
				Pre	Post	Pre	Post		
			approaches to the junction. The proposals result in the reduction in some lane widths on both sides of Market Street.						The potential improvements shown in **drawing no J16-100-01** results in reduced lane widths on the Market Street. However, it is considered that the capacity of the junction is improved and that the junction remains operationally safe.
17	Kellet Rd/Back Ln	Priority	**Dwg No J17-100-01 Rev P01** Extension to the flare on Back Lane to provide two lanes (one left turn and one right turn) for a distance of around 25m.	0.540	0.500	1.090	0.970	**£70k**	The junction assessments show that the potential mitigation shown in **drawing no J17-100-01 Rev P01** will more than mitigate for the LP traffic and that the junction will operate within capacity in 2033. The potential junction improvement is likely to be able to be provided within the adopted highway boundary but will require a reduction in the width of the verge along Back Lane that currently exists. The existing adopted highway boundary needs to be clarified.
18	Kellet Rd/A601M	Priority	**Option A - Dwg No J18-100-01 Rev P01 - P**otential improvements	0.900	0.380 (55.7%)	1.310	0.510 (75.8%)	**Opt A - £90k**	Both potential improvement options shown will more than mitigate for the LP traffic

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	Location	Jct Type	Description of Potential Mitigation Measures	Max DoS/RFC (Pre and Post Mitigation)				Estimated Costs (Approx)	Comment
				2023		2033			
				Pre	Post	Pre	Post		
			to the junction to increase capacity include changing the priority at the junction with the Kellet Rd eastern arm becoming the minor arm of the junction. **Option B - Dwg No J18-100-02 Rev P01 -** This Option involves converting the existing priority junction into a signal-controlled junction.					**Opt B – 277k**	and result in the junction operating within capacity in 2033. However, to provide the required forward visibility at Junction Option A, land outside of the current adopted highway is likely to be required although this needs to be clarified.
22	A6/Barton Rd	Priority	Potential mitigation measures are not considered to be required	0.830	N/A	1.030	N/A	**N/A**	The junction is forecast to only operate at slightly above its capacity in the AM peak DS scenario in 2033 for an estimated 30 minutes. At all over times, the junction is forecast to operate at below its capacity.

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	**Location**	**Jct Type**	**Description of Potential Mitigation Measures**	**Max DoS/RFC (Pre and Post Mitigation)**				**Estimated Costs (Approx)**	**Comment**
				2023		**2033**			
				Pre	**Post**	**Pre**	**Post**		
									No improvements are therefore considered to be required.
23	A6/Penny St/Thurnam St	Signals	N/A	108.1%	N/A	125.8%	N/A	**N/A**	This junction is located in Lancaster City Centre and is likely to be re-configured in the future as part of the city centre movement strategy. As a result, no potential mitigation measures have been reviewed.
10/29	M6 J34	Signals	**Option A - Dwg No J010/29-100-01 Rev P01 & Option B – Dwg No J010/29-100-01 Rev P01** The provision of an additional left turn lane on the southbound 'off-slip' (eastern junction) to provide additional queueing space to avoid blocking back onto the motorway.	119.0%	119.0%	153.0%	153.0%	**Opt A - £220k** **Opt B - £240k**	The potential mitigation measures shown in **drawings no J010/29-100-01 Rev P01 & drawings no J010/29-100-01 Rev P01** have the potential to considerably reduce the propect of queueing back onto the motorway but do little to improve the performance of the junctions. We understand that the LHA have some reservations concerning Option A due to the reduced width of the central reserve not providing enough queueing space for large farm vehicles and trailers to wait within the central reserve without

Table 3.3 - Potential Junction Mitigation and Associated Costs Estimate									
Jct Ref:	Location	Jct Type	Description of Potential Mitigation Measures	Max DoS/RFC (Pre and Post Mitigation)				Estimated Costs (Approx)	Comment
				2023		2033			
				Pre	Post	Pre	Post		
			The options also provide an additional westbound lane from the eastern junction until just before the motorway bridge. In **Option A** this is provided within the existing highway by reducing the central island width while in **Option B,** the additional lane is provided by using land to the south of the existing carriageway.						extending back on to the main carriageway when travelling in and out of the farm to the north. Option 2 is likely to involve third party land to the south although this needs to be confirmed. The above said, the capacity of the junction is restricted by only having space to provide three lanes under the motorway bridge. To increase the capacity of the junction, two lanes in each direction is required. This would require the widening of the motorway bridge or an additional 'cut through' provided. With a fourth lane under the bridge, the junction is forecast to operate at below its capacity in all traffic flow scenarios.

NOTES:

1. This summary table only identifies DOS/RFC and therefore should be read in conjunction with the full junction capacity outputs (including junction delay and queue length) which are attached to **Appendix A** to **I.**

2. Initial indications are that the potential improvements identified above can be provided within the existing adopted highway boundary unless otherwise stated. However, the adoption plans maps received are poor quality in places and further clarification is required at a number of junctions.

3. Topographical surveys are required to confirm existing junction layout and land boundaries, this may require the refinement of the potential mitigation measures shown.

4. The high level initial estimated costs exclude the cost of diverting any statutory service equipment that may be required and potential third-party land costs which may be applicable.

4.0 Summary and Conclusions

4.1 Summary

4.1.1 Part 1 of the TA assessed in high-level terms the capacity of the existing highway network to accommodate future traffic flows expected to be generated by the proposed emerging LP. Part 1 of the TA recommended that 13 junctions should be considered further for potential mitigation measures in Part 2 of the study.

4.1.2 The purpose of this report (Part 2), is to consider further the need for mitigation at these 13 junctions, and where appropriate, develop a series of schematic potential localised improvement schemes that mitigate for the impact of the LP as much as possible.

4.2 Conclusions

4.2.1 Key points and conclusions from the work undertaken in this report, for all the junctions considered for mitigation are set out in **Table 4.1.**

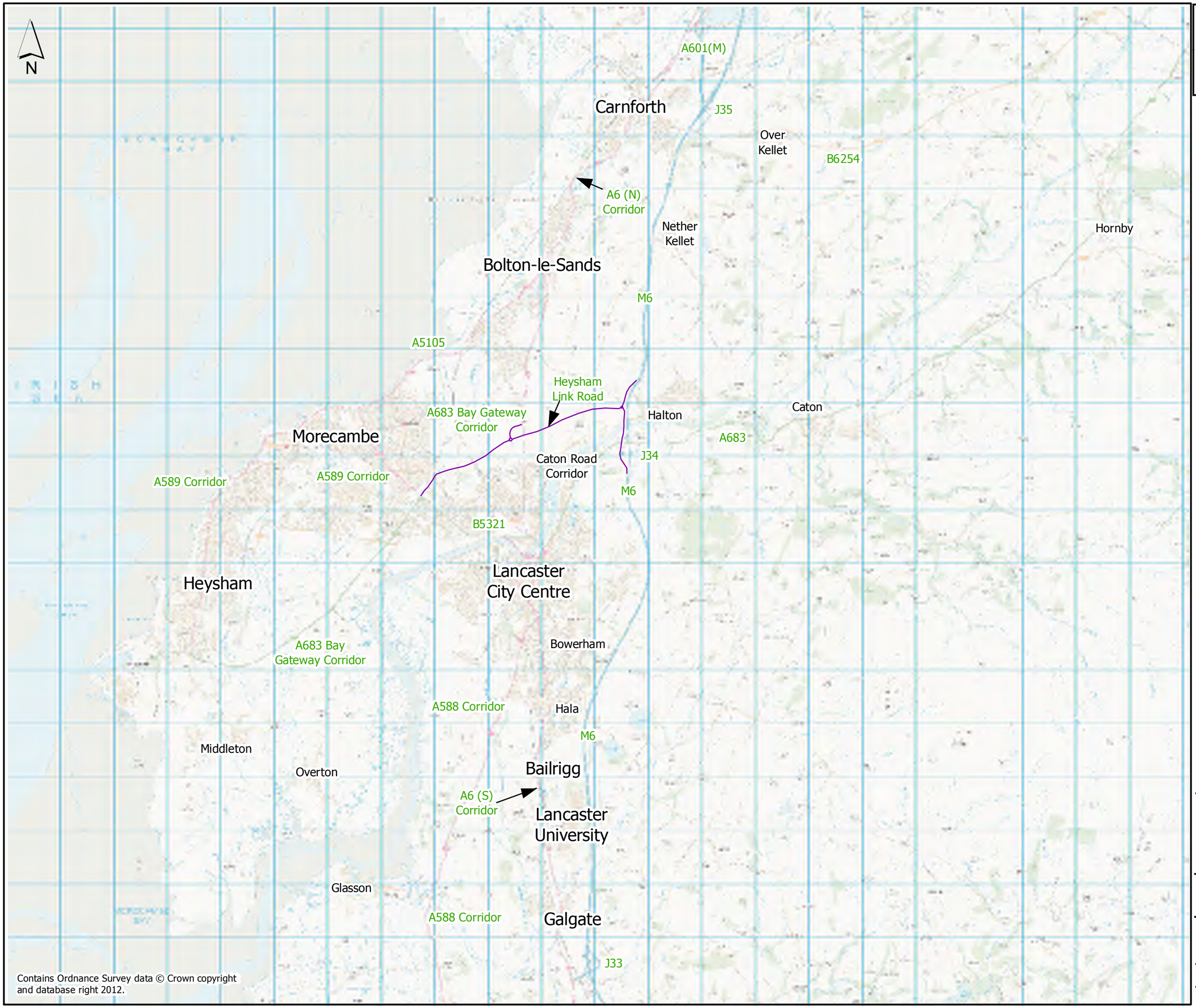
Table 4.1: Key Points and Conclusions

Jct Ref	Location/Junction	Key Points and Conclusions
2	A6 Main Rd / Stoney Ln / Salford Rd – A6 (S) Corridor (Galgate)	There are several junction modifications which could potentially be implemented within the existing adopted highway boundary to provide some modest short-term improvement to the junction performance. However, for a longer-term solution, a more comprehensive set of improvements to the junction and to the adjacent route are likely to be needed. These are currently undeliverable.
3	A6 Preston Lancaster Road/Hazelrigg Lane – A6 (S) Corridor	Junction improvements can be provided within the current adopted highway boundary or within third-party land that forms part of the Broad Area for Growth identified in the Strategic Policies and Land Allocations which more than mitigate for the impact of the LP traffic.
4	A6 Scotforth Rd / Hala Rd / Ashford Rd - A6 (S) Corridor	There is limited scope to provide any junction mitigation within the existing highway boundary. Land outside the

Jct Ref	Location/Junction	Key Points and Conclusions
		current adopted highway boundary will be needed for any junction improvement scheme which achieves this.
5	A6 Greaves Rd/Ashton Rd (The Pointer Roundabout) – Lancaster city centre	It is considered that some form of junction improvement could be provided within the current adopted highway boundary that mitigates for the impact of the LP traffic. However, LCC together with the LHA are reviewing the operation of this junction as part of the wider city centre movement strategy and will be considered as part of Lancaster South Area Action Plan DPD, and therefore it is highly likely that the layout of the junction will change in the future as part of this strategy irrespective of the LP coming forward.
9	A683 / B5273 – A683 Bay Gateway Corridor	Potential mitigation measures are not considered necessary.
10	Caton Road / Junction 34 – Caton Road Corridor	See Jct Ref 29 below.
15	A683 / Middleton Road / A589 – A683 Bay Gateway Corridor	Potential mitigation measures are not considered necessary.
16	A6 Lancaster Rd/Scotland Rd / Market St – Carnforth	Junction improvements can be provided within the current adopted highway boundary which more than mitigate for the impact of the LP traffic.
17	Kellet Road/Back Lane – Carnforth	Junction improvements can be provided within the current adopted highway boundary which more than mitigate for the impact of the LP traffic.
18	Kellet Rd / A601M – Carnforth	Subject to confirmation on the precise line of adopted highway boundary, it is considered that a junction improvement could be provided within the current adopted highway boundary which mitigates for the impact of the LP traffic.
22	A6 / Barton Road – A6 (S) Corridor	Potential mitigation measures are not considered necessary.
23	A6 / Penny St / Thurnam St – Lancaster city centre	This junction is located in Lancaster City Centre and is likely to be re-configured in the future as part of the city centre movement strategy. As a result, no potential mitigation measures have been reviewed.

Jct Ref	Location/Junction	Key Points and Conclusions
29	A683 / M6 J34 – Caton Road Corridor	The capacity of the junction is restricted by only having space to provide three lanes under the motorway bridge. To increase the capacity of the junction, two lanes in each direction is required. This would require the widening of the motorway bridge or an additional 'cut through' provided. With a fourth lane under the bridge, the junction is forecast to operate at below its capacity in all traffic flow scenarios. Options have been developed which could potentially reduce the chances of queueing traffic backing back onto the Motorway although these may require land outside the current adopted highway boundary.

Plans



Legend

Heysham to M6 Link

Quay West at MediaCityUK
Trafford Wharf Road
Trafford Park
Manchester
M17 1HH

TEL: +44 (0)161 835 2400
FAX: +44 (0)161 835 3400

Lancaster Local Plan - Transport Assessment

Study Area

Scale @ A3 1:65,000

Plan 1

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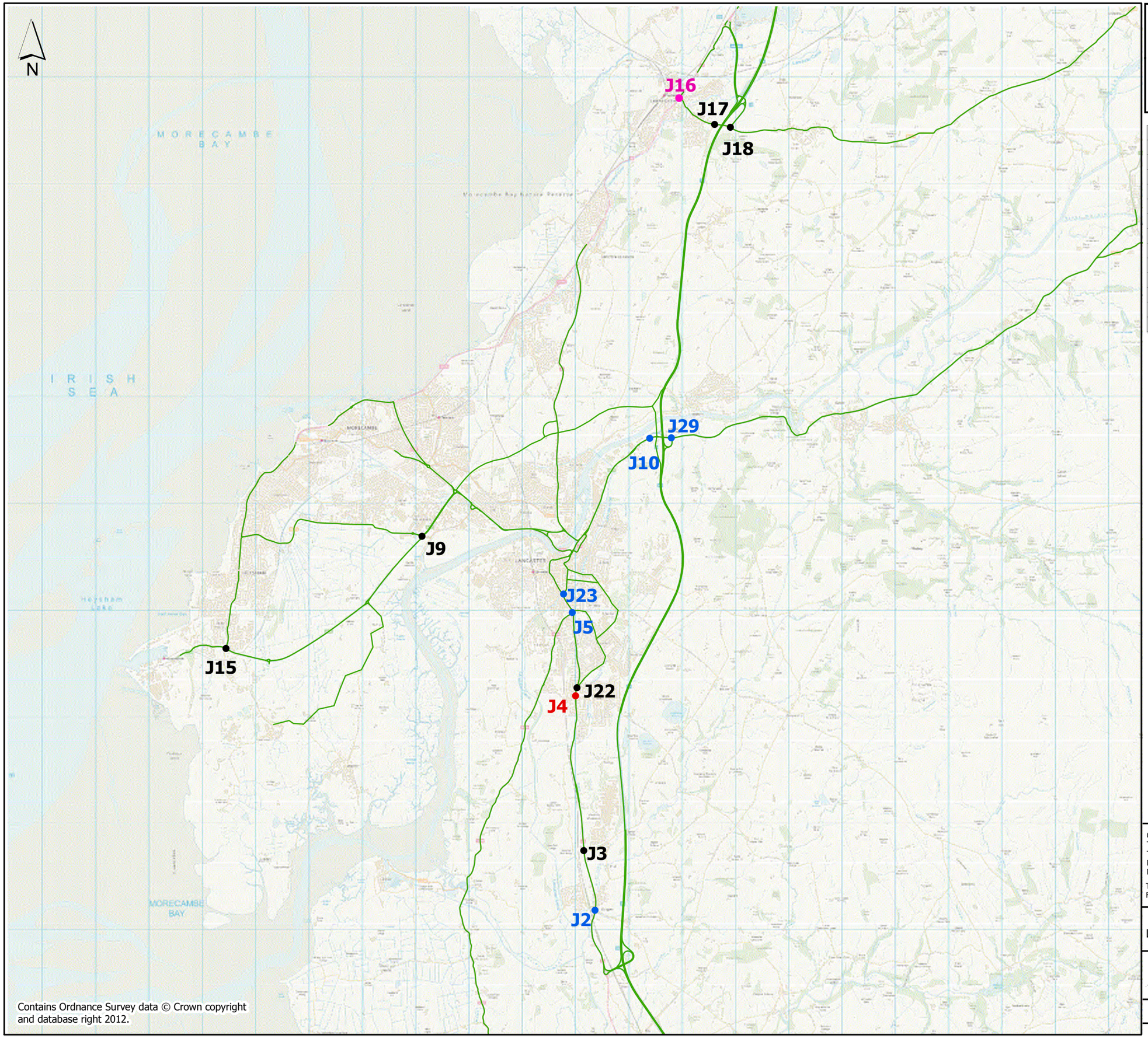

Legend - When Mitigation Should be Considered:

- 2023 Do Minimum
- 2023 Do Something
- 2033 Do Something
- 2033 Do Minimum

Junction No.	Junction
2	A6 (Main Road) / Stoney Lane / Salford Rd Signal
3	A6 Preston Lancaster Rd / Hazelrigg Lane Signal
4	A6 Scotforth Rd / Hala Rd / Ashford Rd Signal
5	A6 (Greaves Rd) / Ashton Rd (The Pointer) Roundabout
9	A683 / B5273 Roundabout
10	Caton Road / Junction 34 Signal
15	A683 / Middleton Rd / A589 Roundabout
16	A6 Lancaster Rd / Scotland Rd / Market St Signal
17	Kellet Rd / Back Lane Priority Junction
18	Kellet Rd / A601M Priority Junction
22	A6 / Barton Road Priority Junction
23	A6 / Penny St / Thurnam St Signal
29	A683 / M6 J34 Signal

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Trafford Park
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Lancaster Local Plan - Transport Assessment

Junctions To Be Considered

Scale @ A3 NTS

Plan 2

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Figures

Fig 1: AM Peak Hour 2017 / 2018 Surveyed Traffic Flows

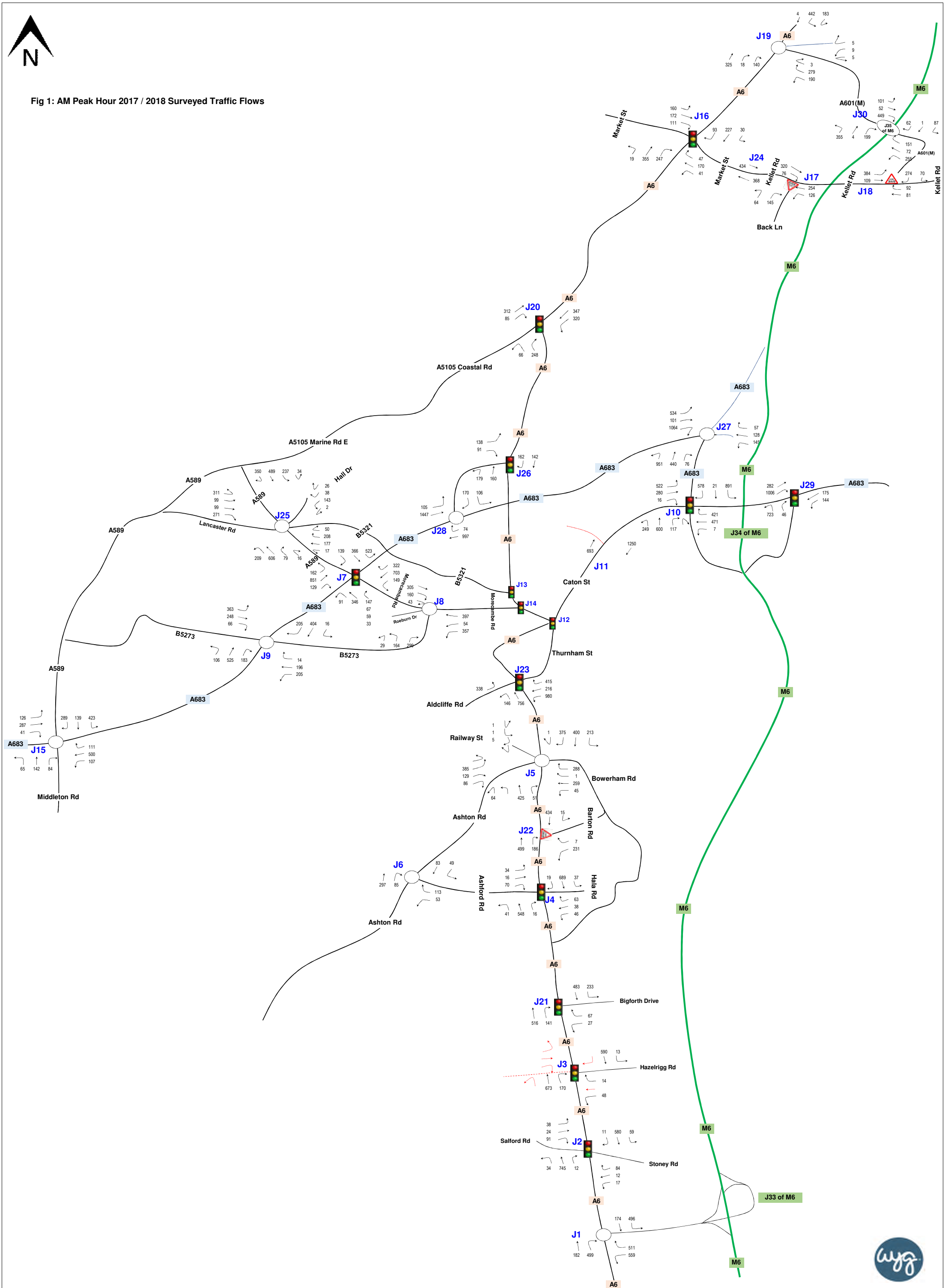

Fig 2: PM Peak Hour 2017 / 2018 Surveyed Traffic Flows

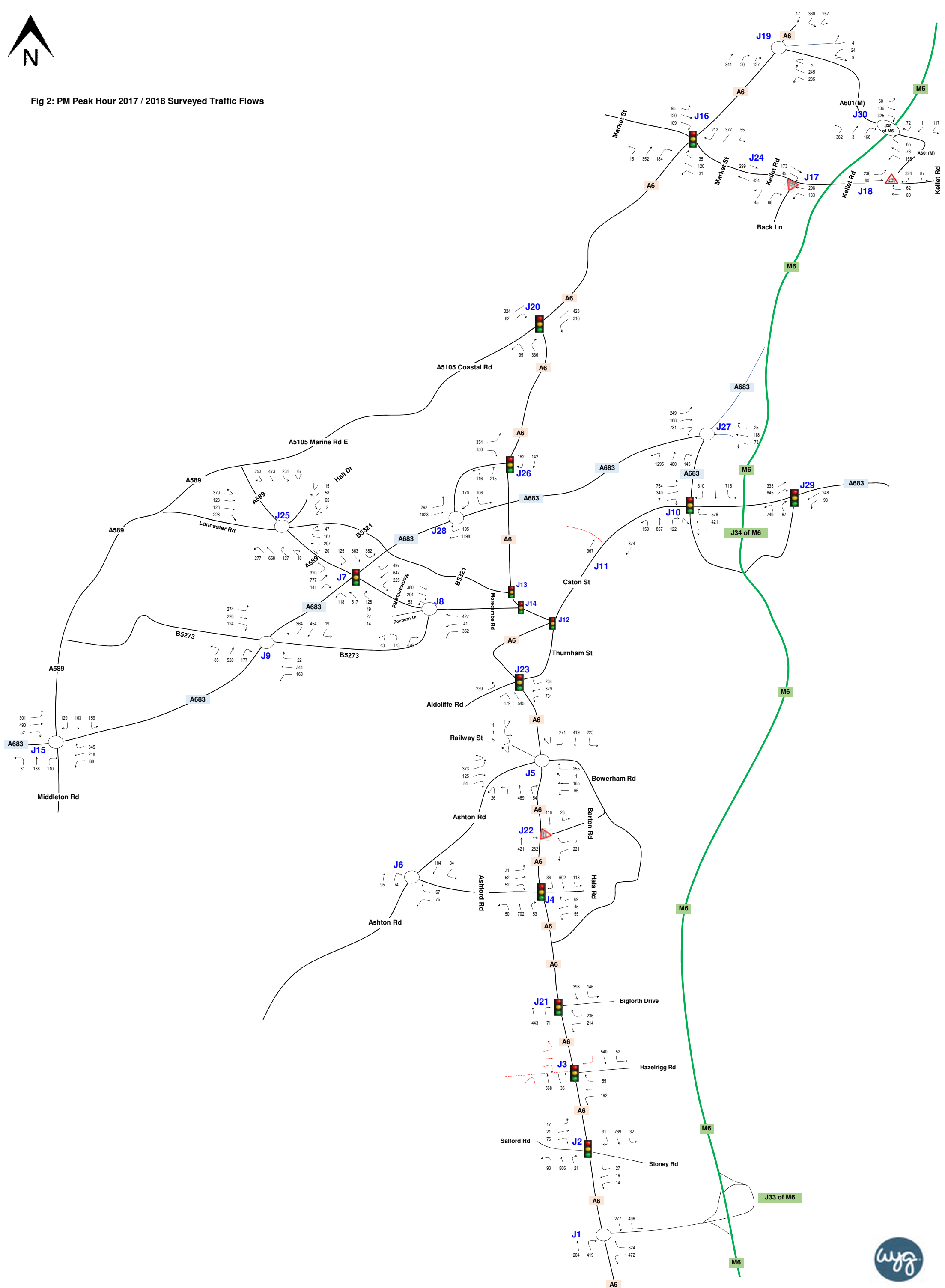

Fig 3: AM Peak Hour 2023 DM

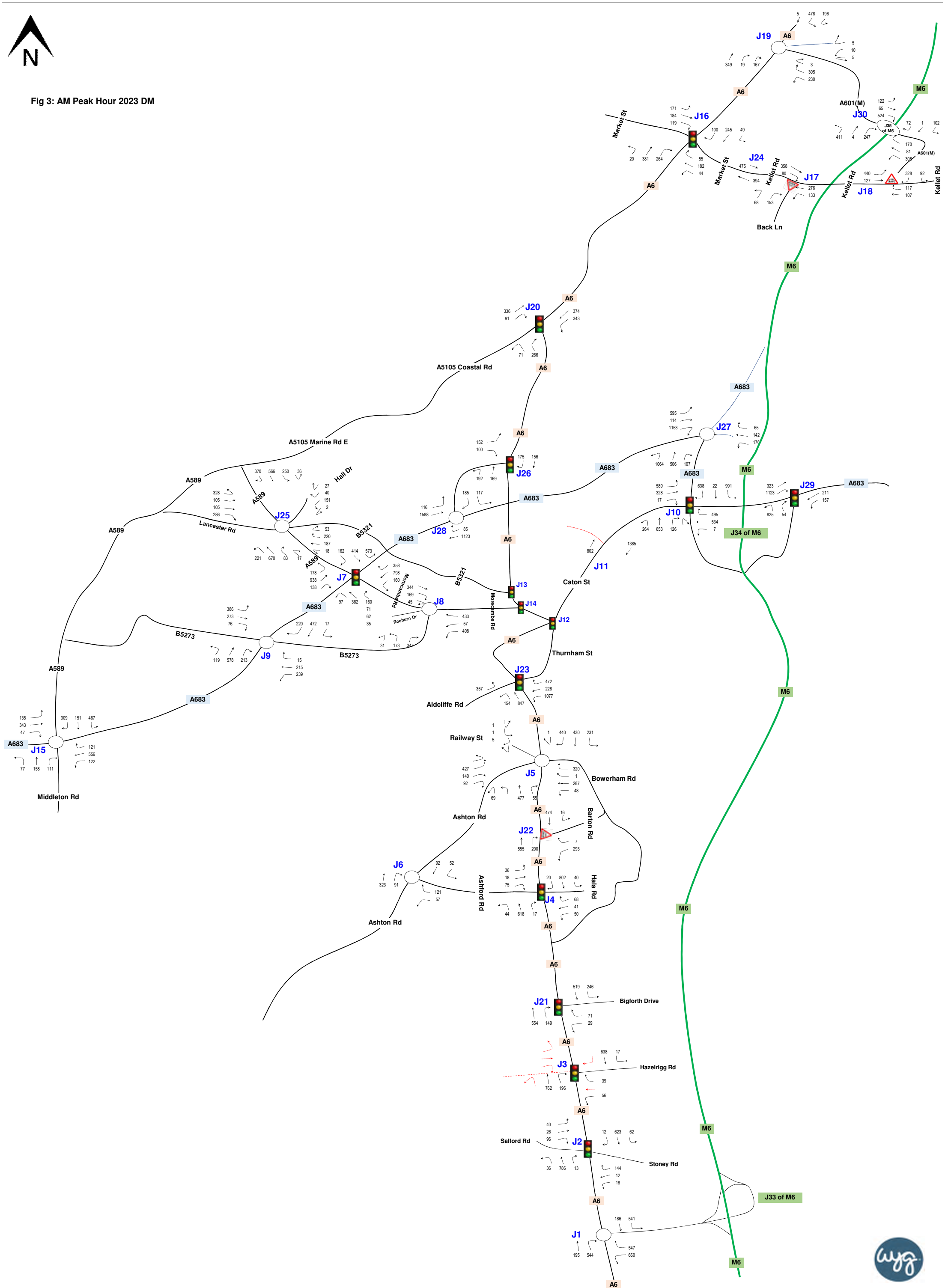

Fig 4: PM Peak Hour 2023 DM

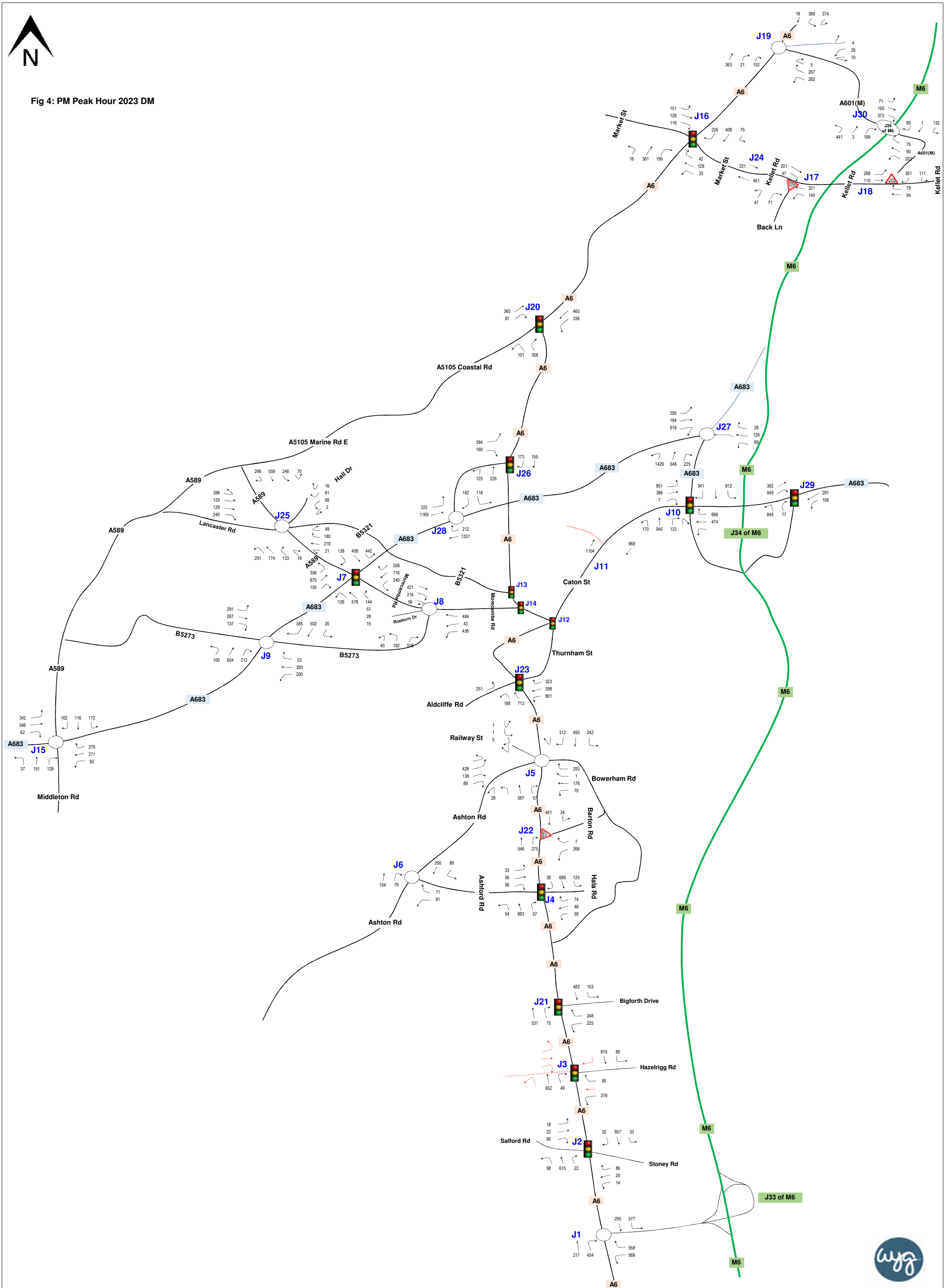

Fig 5: AM Peak Hour 2023 DS

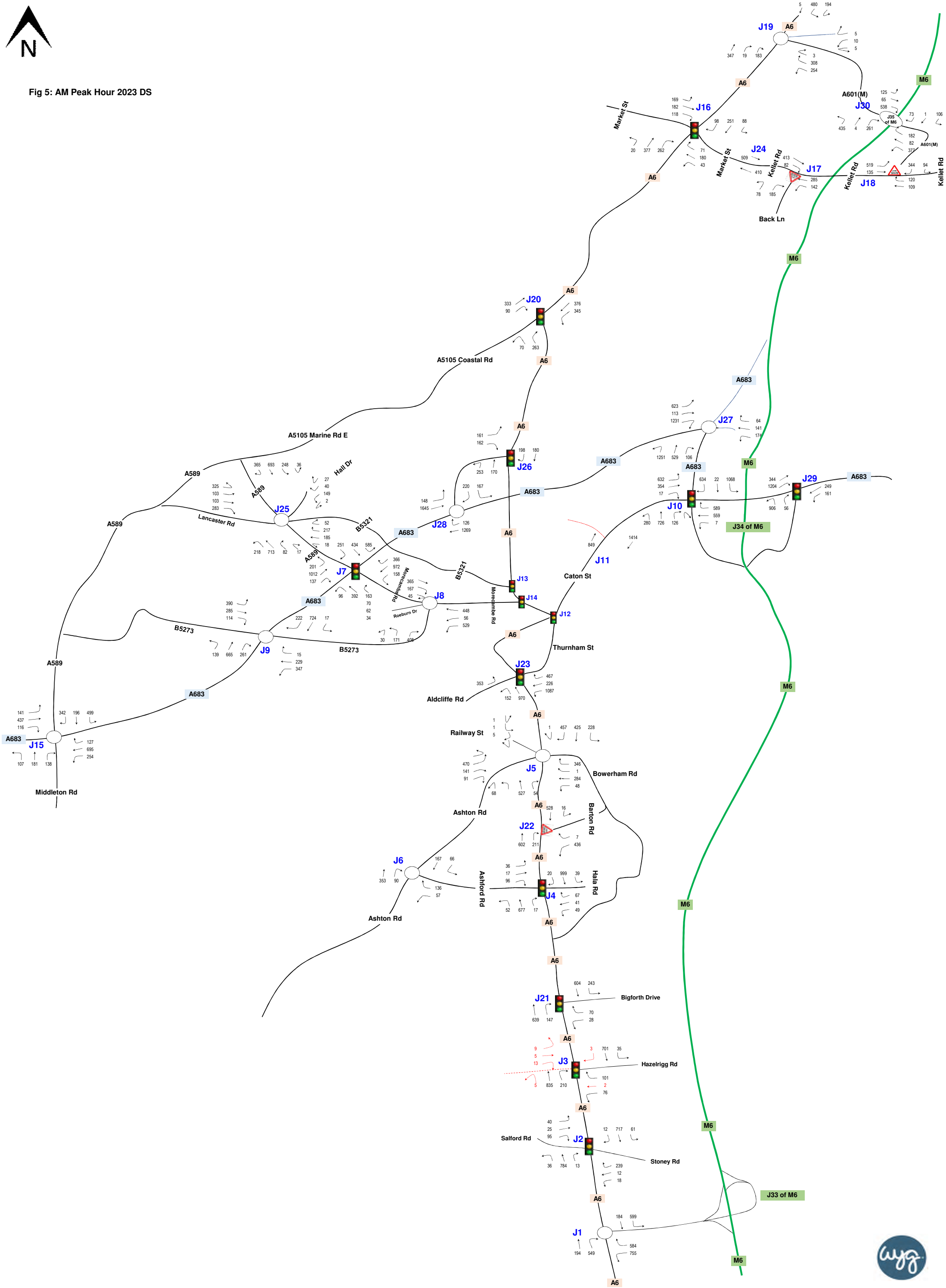

Fig 6: PM Peak Hour 2023 DS

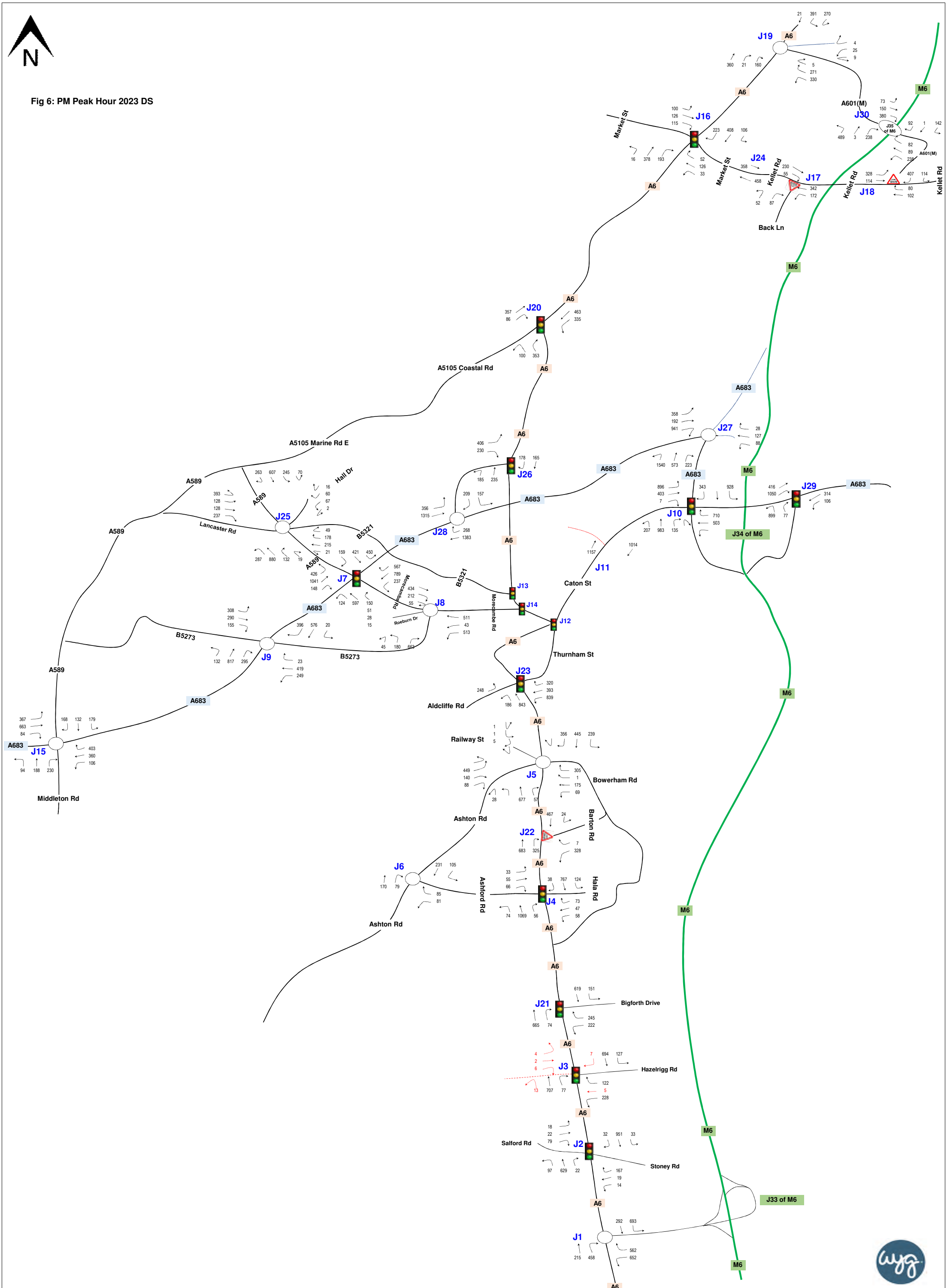

Fig 7: AM Peak Hour 2033 DM

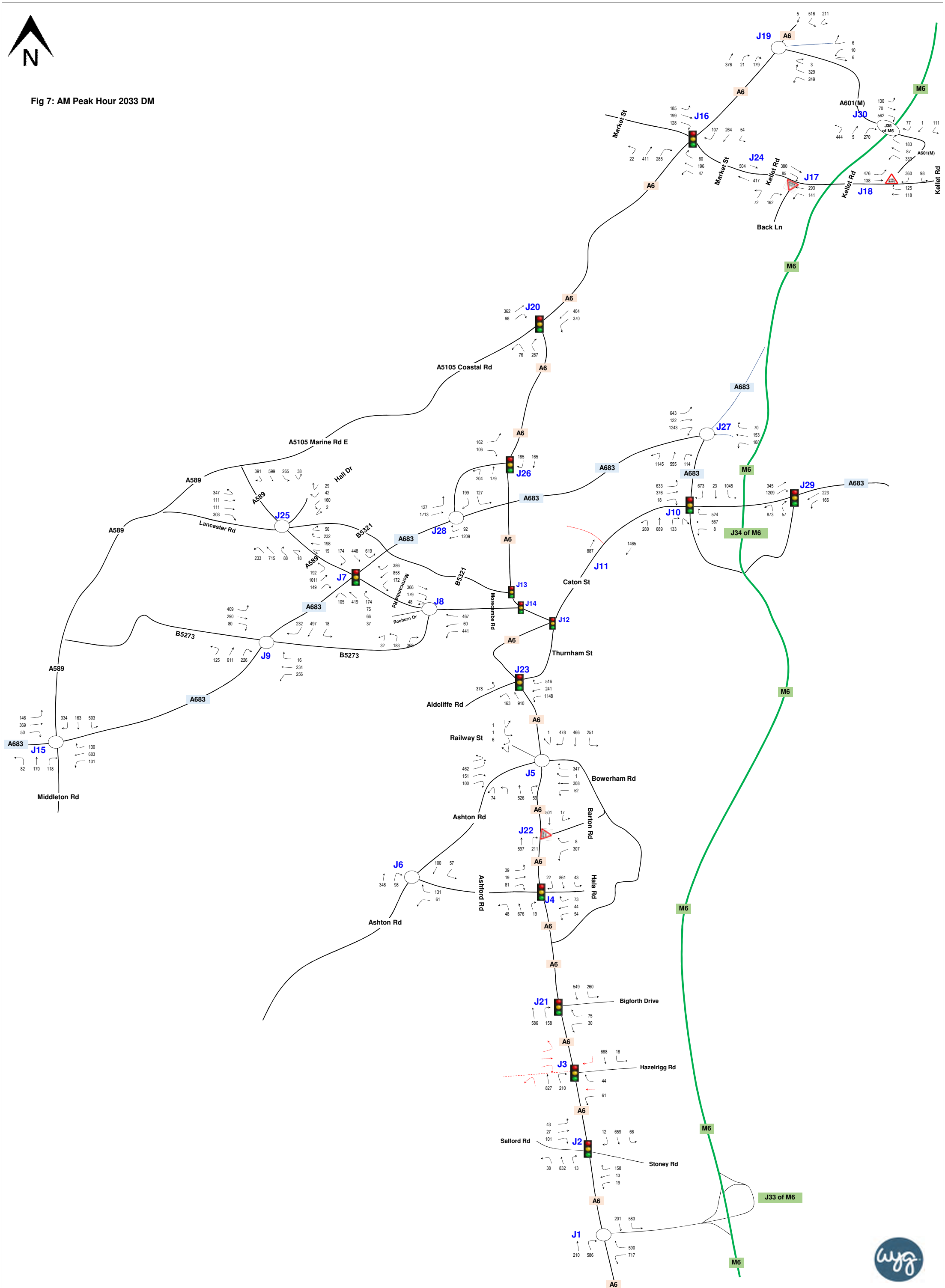

Fig 8: PM Peak Hour 2033 DM

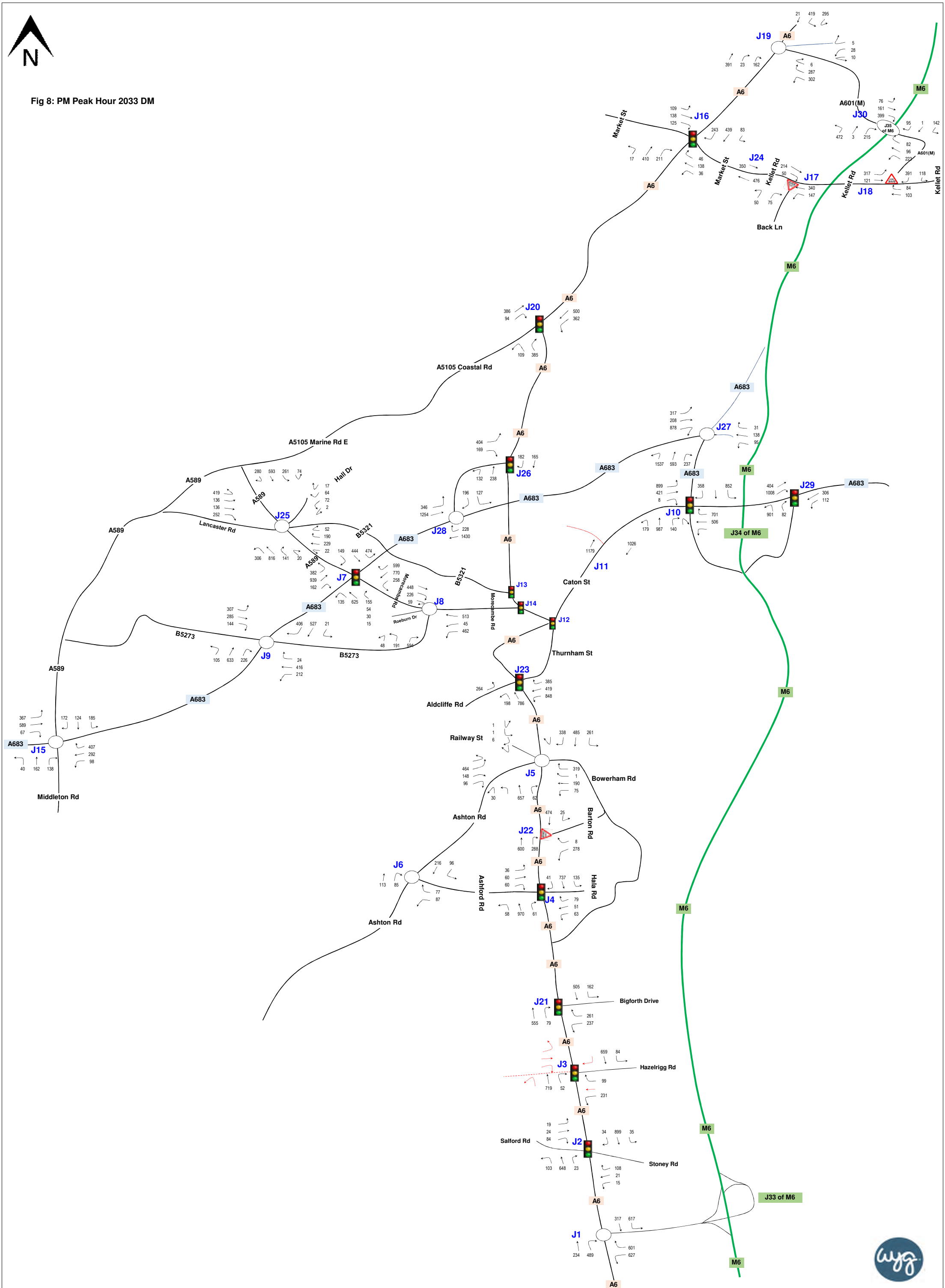

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Fig 9: AM Peak Hour 2033 DS

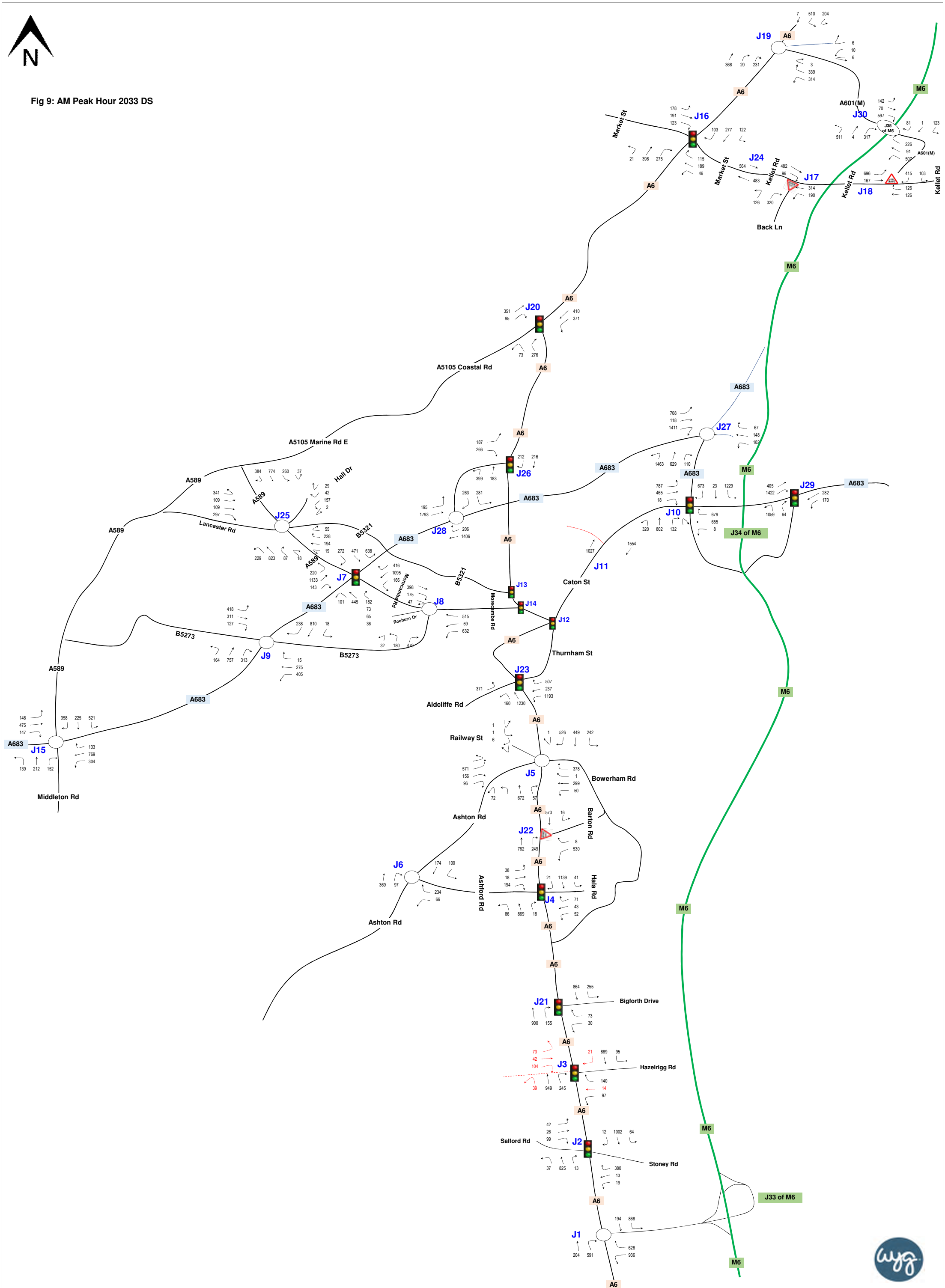
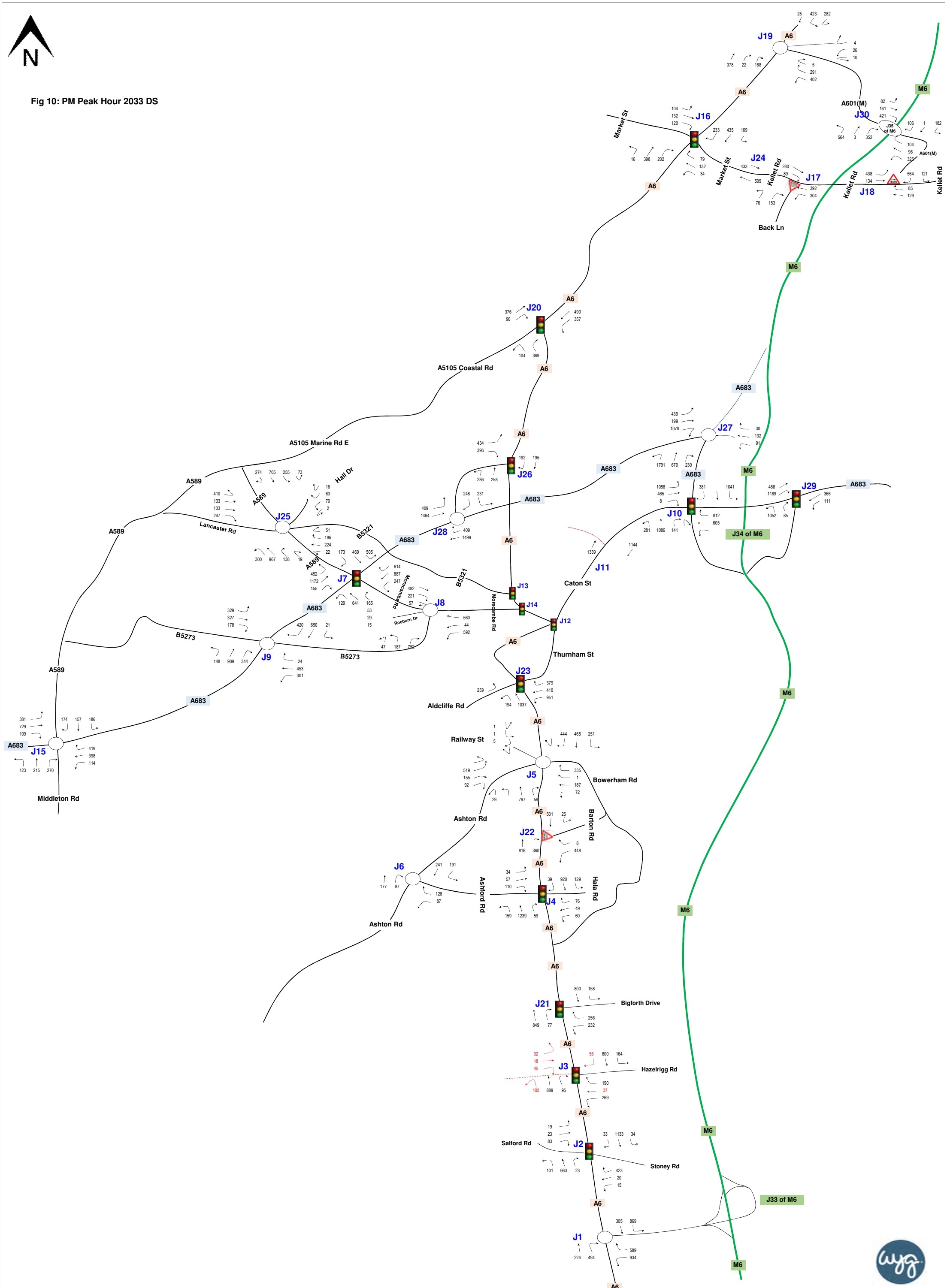
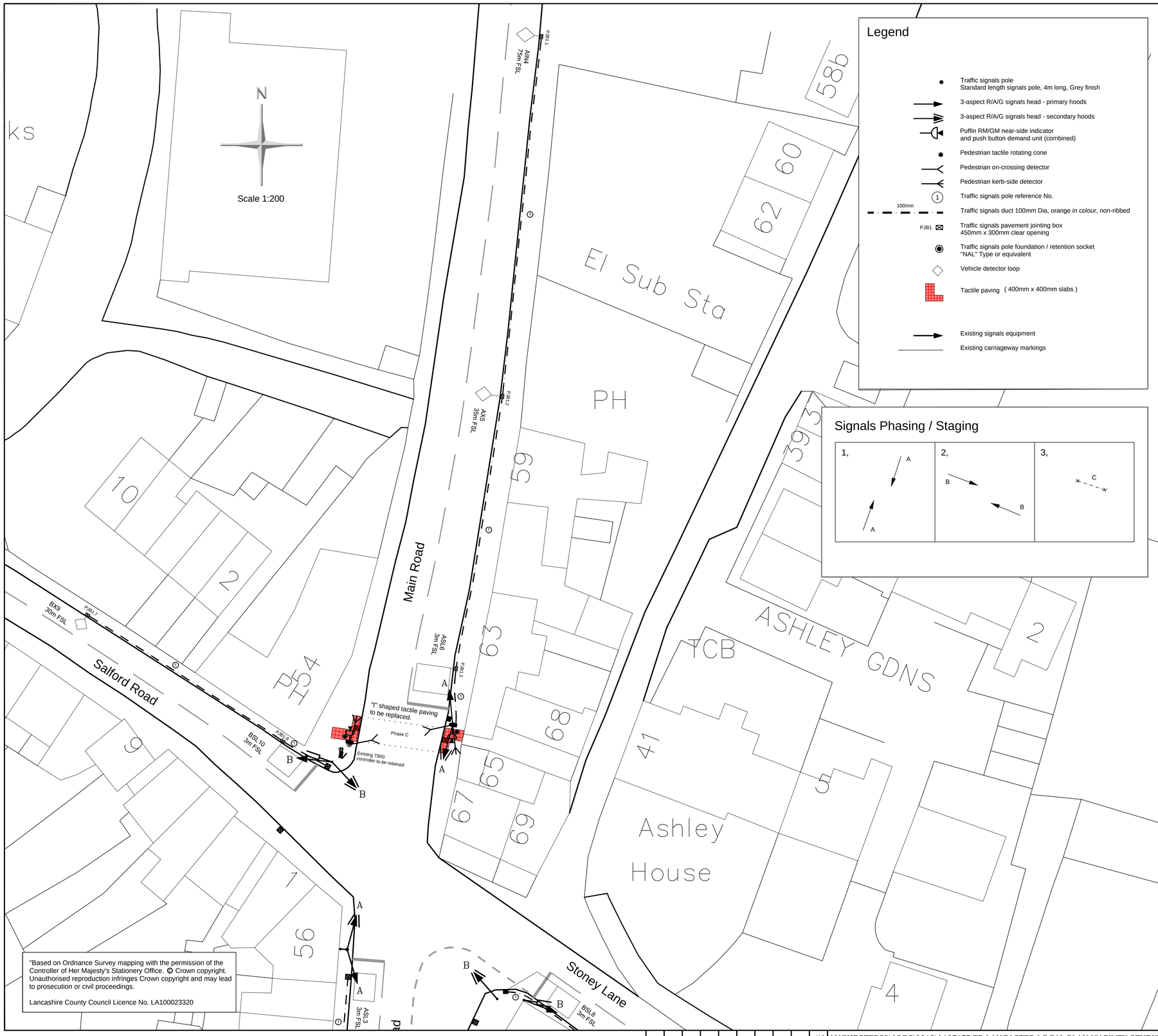


Fig 10: PM Peak Hour 2033 DS



Drawings – Existing Junction Layouts and Potential Schematic Junction Improvements

Junction 2 - A6 Main Rd / Stoney Ln / Salford Rd



GENERAL NOTES

1, This drawing shall be read in conjunction with L.C.C. Special Details Nos. LL1 - LL40 inclusive and L.C.C. Special Detail No. IL1.

2, All equipment including traffic signals, street furniture, ducts and drawpits shall be of a type approved by the Engineer.

3, The precise location of all traffic signals equipment shall be confirmed on site by the Engineer's traffic signals representative.

4, If any traffic signal pole, or any other item of traffic signals equipment or street furniture, cannot be sited in the specified location, for whatever reason, the contractor shall determine a suitable alternative location. The Contractor shall provide full details to the Engineer's traffic signals representative and either obtain his agreement to the alternative location or receive instruction on action to be taken.

5, Traffic signals poles (supplied) shall be erected in accordance with L.C.C. Special Details Nos. LL1, LL2 and LL3 and at a planting depth of 600mm below finished footway surface level. Any pole which cannot be installed at this depth, for whatever reason, must be cut accordingly and fitted with a metal plate at the pole base. The Contractor shall provide full details to the Engineer's traffic signals representative and either obtain his agreement or receive his instruction on action to be taken.

6, The Contractor shall supply and install the new traffic signals duct and drawpit infrastructure, including cable drawpits and signals pole retention sockets, in accordance with L.C.C. Special Details Nos. LL20-LL26 inclusive.

7, The Contractor shall supply and install all new traffic signals ducts in accordance with L.C.C. Special Detail No. IL 1.

8, All new traffic signals ducts are to be single 100mm Dia. non-ribbed except where stated otherwise.

9, Traffic signals controllers are to be built and configured in accordance with DfT Specification TR 2500 A.

10, The Contractor is to strip out all redundant traffic signals cabling and remove from site.

11, The Contractor shall supply and install all new traffic signals cables, including:
New LV and ELV signals cables
New detector feeder cables
and
New detector loop cables

12, All ELV traffic signals cables are to have Min 1.5mm^2 CSA conductors.

13, The Contractor's traffic signals installer must be capable of installing and commissioning pedestrian kerb-side detection and pedestrian on-crossing detection.

14, The mains electrical supply to the traffic signals feeder pillar shall be classed as 'Network Cabling'. All other cabling from the feeder pillar to the controller cabinet, and from the controller cabinet to the traffic signals equipment shall not be classed as 'Network Cabling'.

15, The Contractor shall securely cover all signals heads and push button units with orange Polyethylene covers marked LCC. These covers are to remain fitted until the commissioning and switch-on of the traffic signals installation.

16, The Contractor shall provide and erect temporary warning signs to Diagram No. 7014 reading "Signal Priorities Changed Ahead" as directed by the Engineer. These signs are to be fixed to suitable lighting columns as directed by the Engineer and the Contractor is to remove them to stores 90 days after the commissioning and switch on of the modified traffic signals installation.

SIGNAL PRIORITIES CHANGED AHEAD

Sign to Diagram No. 7014

17, The Contractor shall strictly comply with the requirements of Chapter 8 (2009) of the Traffic Signs Manual. It is essential that all temporary traffic and/or pedestrian management proposals are pre-planned and submitted to the Engineer in sufficient time to enable any consultations which may be necessary with the police and any other interested parties. The Contractor shall ensure that all traffic and/or pedestrian management equipment is fully maintained to the specified standards at all times as required by the works and agreed with the Engineer.

18, All stop lines are to be 300mm wide.

19, This drawing shall be read in conjunction with the related Appendix 12/5 and LCC's General Specification for Traffic Signals.

SITE SPECIFIC NOTES

1, The loop positions shown are currently indicative as a speed survey has not yet been conducted.

2, The existing T800 controller shall be retained.

No.	DATE	AMENDMENT DETAILS	CHECKED BY	DRAWN BY

REVISIONS

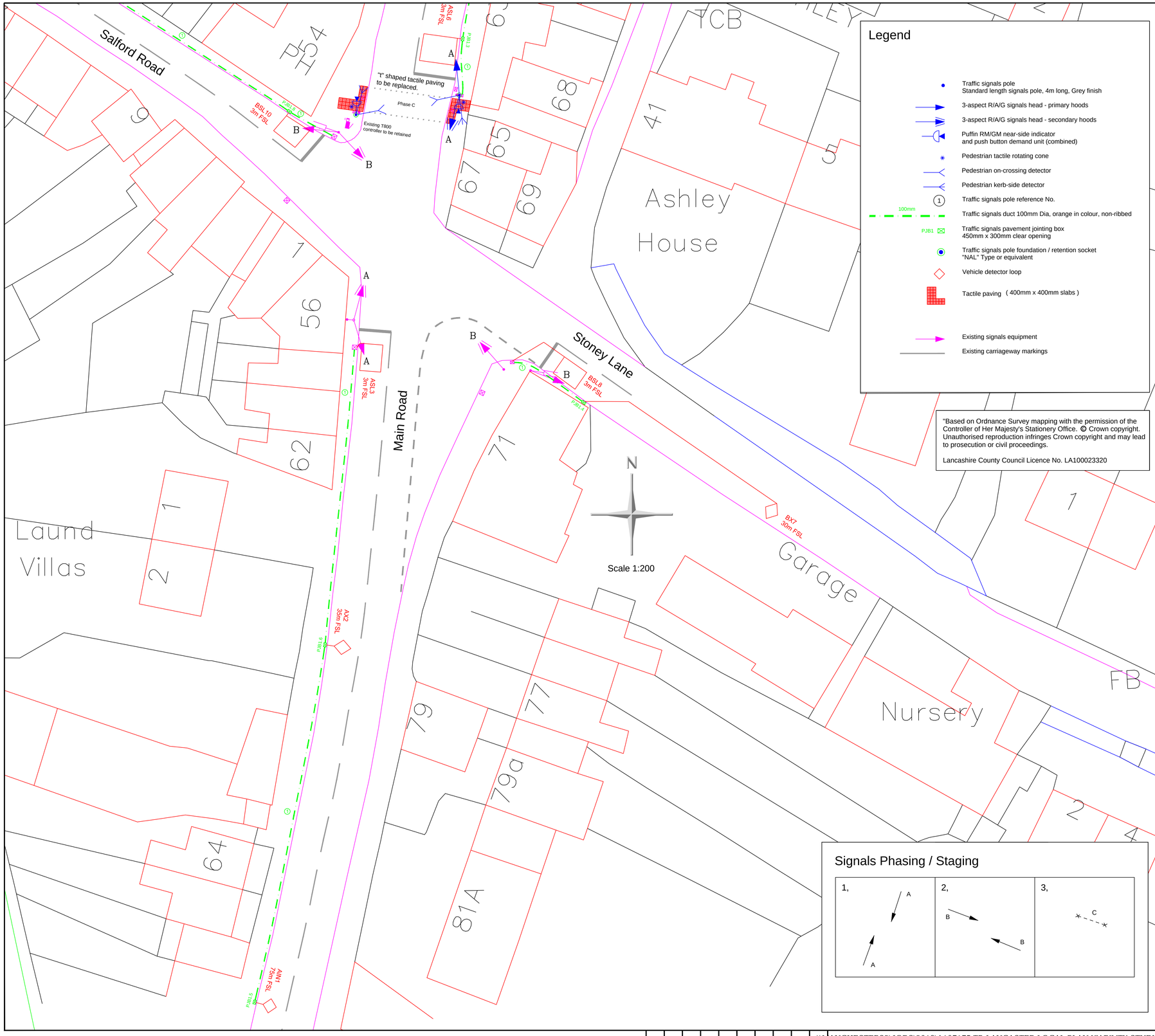
Lancashire County Council

Environment Directorate

Transport & Strategic Highways - Network Management

PROJECT TITLE A3006 Pedestrian and MOVA Upgrade Highway Works	
DRAWING TITLE Main Road, Galgate j/w Salford Road / Stoney Lane Traffic Signals Design	
DRAWN BY J.T.	**PROJECT No.** 213625
CHECKED BY K.W.	**DRAWING No.** 213625 / TS
DATE 05 / 11 / 2012	
SCALE 1:200	**SHEET No.** Sheet No.1 of 2
CLIENT No.	

\\MANCHESTER32\JOBS\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\JUNCTION MITIGATION INFORMATION (FOR DESIGN)\J02\A3006DESIGN.DWG



Legend

- Traffic signals pole
  Standard length signals pole, 4m long, Grey finish
- 3-aspect R/A/G signals head - primary hoods
- 3-aspect R/A/G signals head - secondary hoods
- Puffin RM/GM near-side indicator and push button demand unit (combined)
- Pedestrian tactile rotating cone
- Pedestrian on-crossing detector
- Pedestrian kerb-side detector
- (1) Traffic signals pole reference No.
- 100mm Traffic signals duct 100mm Dia, orange in colour, non-ribbed
- PJB1 Traffic signals pavement jointing box 450mm x 300mm clear opening
- Traffic signals pole foundation / retention socket "NAL" Type or equivalent
- Vehicle detector loop
- Tactile paving (400mm x 400mm slabs)
- Existing signals equipment
- Existing carriageway markings

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GENERAL NOTES

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Sign to Diagram No. 7014

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SITE SPECIFIC NOTES

1, The loop positions shown are currently indicative as a speed survey has not yet been conducted.

2, The existing T800 controller shall be retained.

Signals Phasing / Staging

No.	DATE	AMENDMENT DETAILS	CHECKED BY	DRAWN BY

REVISIONS

Lancashire County Council

Environment Directorate

Transport & Strategic Highways - Network Management

PROJECT TITLE: A3006 Pedestrian and MOVA Upgrade Highway Works	
DRAWING TITLE: Main Road, Galgate j/w Salford Road / Stoney Lane Traffic Signals Design	
DRAWN BY: J.T.	PROJECT No.: 213625
CHECKED BY: K.W.	DRAWING No.: 213625 / TS
DATE: 05 / 11 / 2012	
SCALE: 1:200	SHEET No.: Sheet No.2 of 2
CLIENT No.	

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0 0.01 0.02 0.04 0.06 0.08 Kilometers

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3. This drawing is based on Ordnance Survey. WYG will not be responsible for any discrepancies and the drawing should be drawn on Topographical Survey.

2. All dimensions are in metres unless specified otherwise.

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TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
A6 MAIN ROAD/ STONEY LN/ SALFORD ROAD
(J02) OPTION A

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J02-100-01	P01

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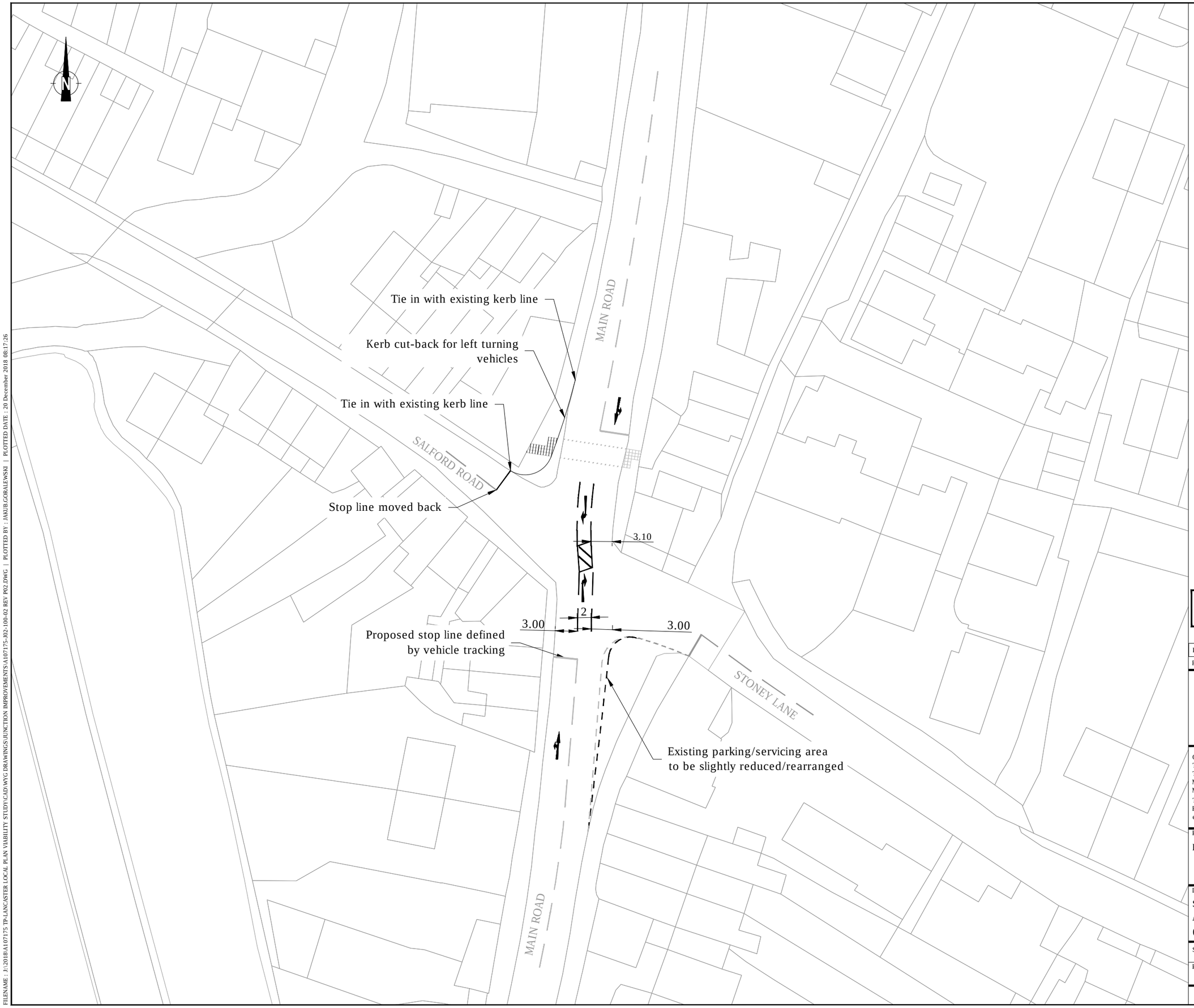

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TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
A6 MAIN ROAD/ STONEY LN/ SALFORD ROAD
(J02) OPTION B

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
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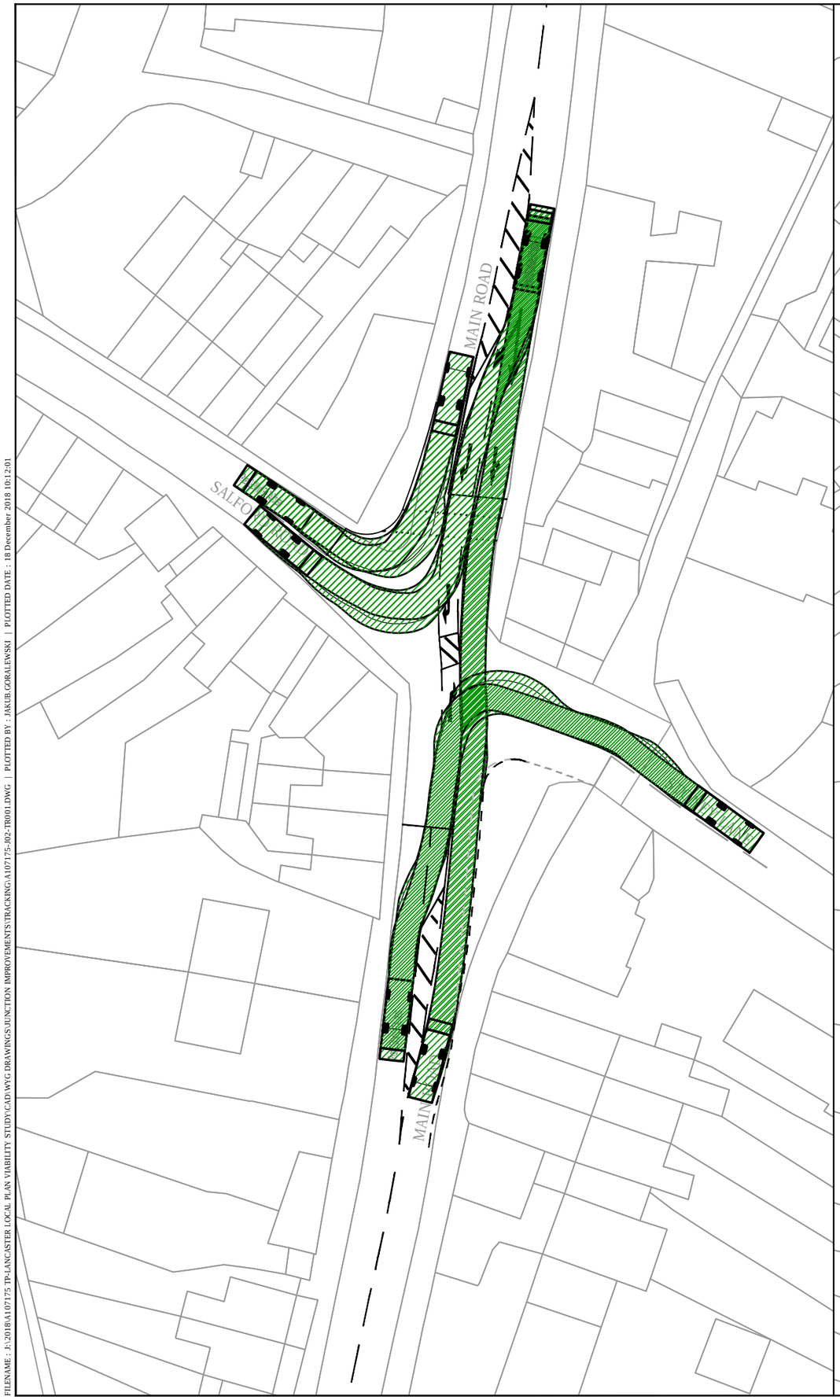

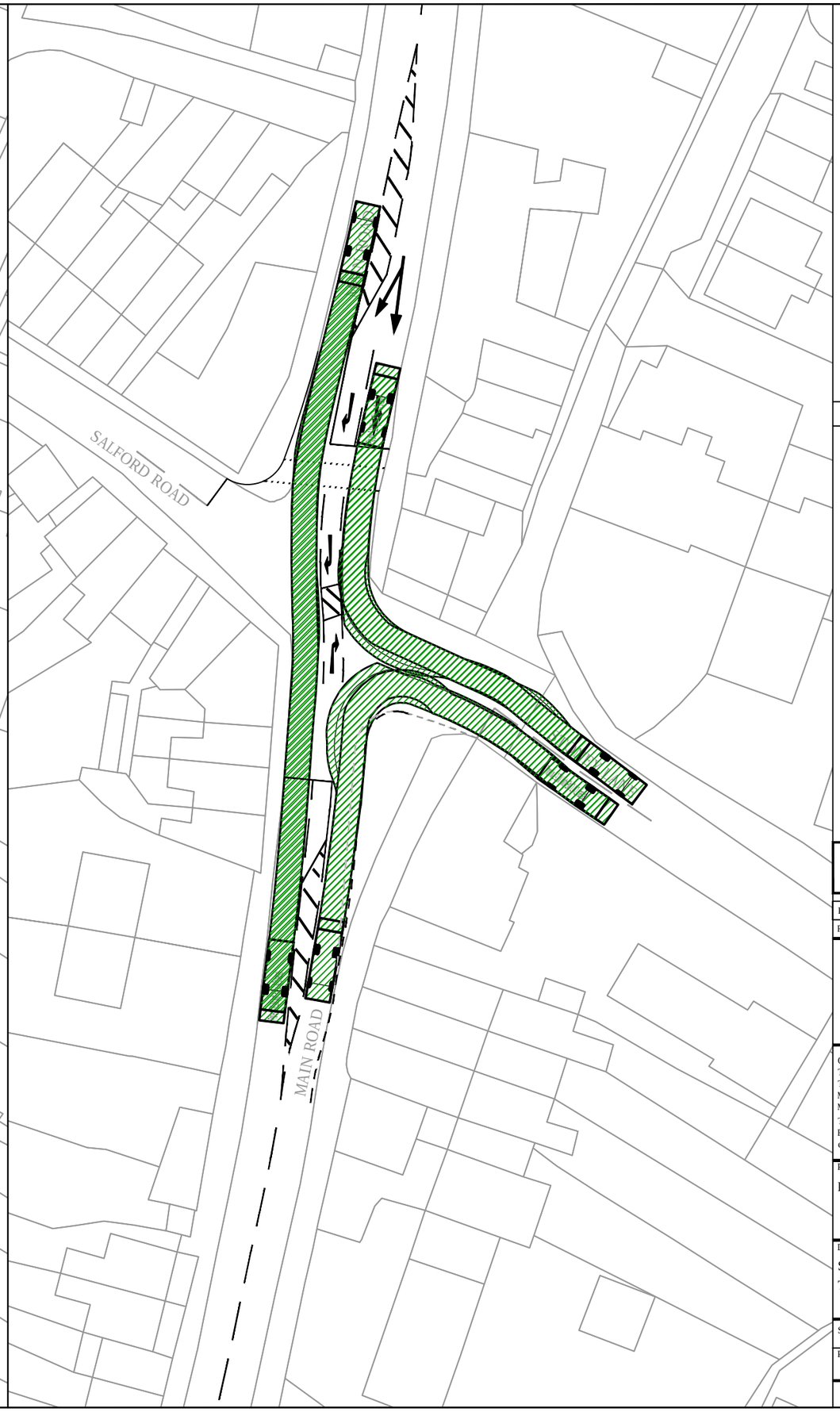

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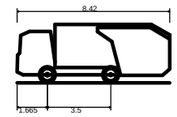
VEHICLE PROFILE



Phoenix 2-12W (with Elite 2 4x2 chassis)	
Overall Length	8.420m
Overall Width	2.530m
Overall Body Height	3.211m
Min Body Ground Clearance	0.416m
Track Width	2.530m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.750m

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

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TRAFFORD WHARF ROAD
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TEL: +44 (0)161 872 3223
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e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
TRACKING A6 MAIN ROAD/ STONEY LN/
SALFORD ROAD (J02) OPTION A

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J02-01-TR001	P01

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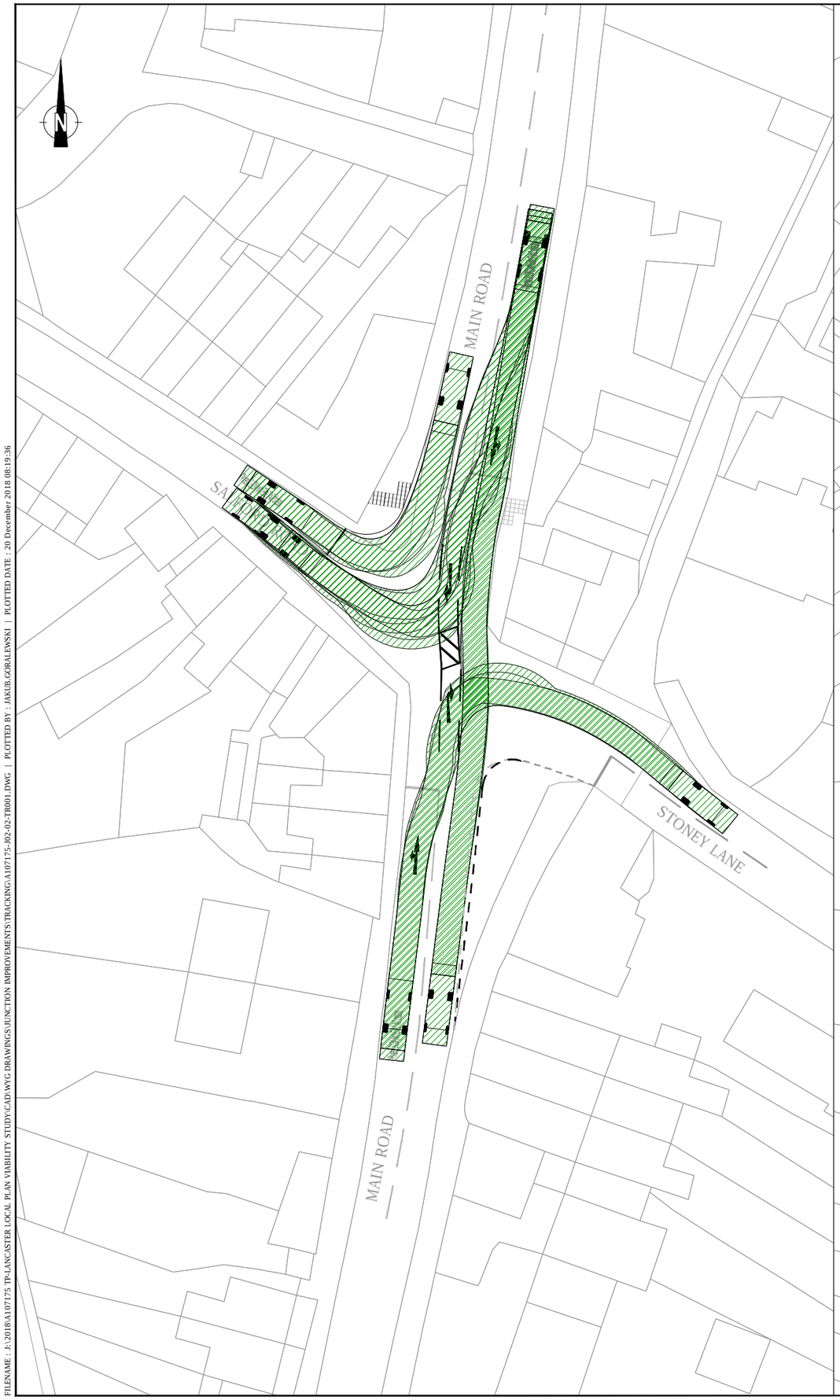
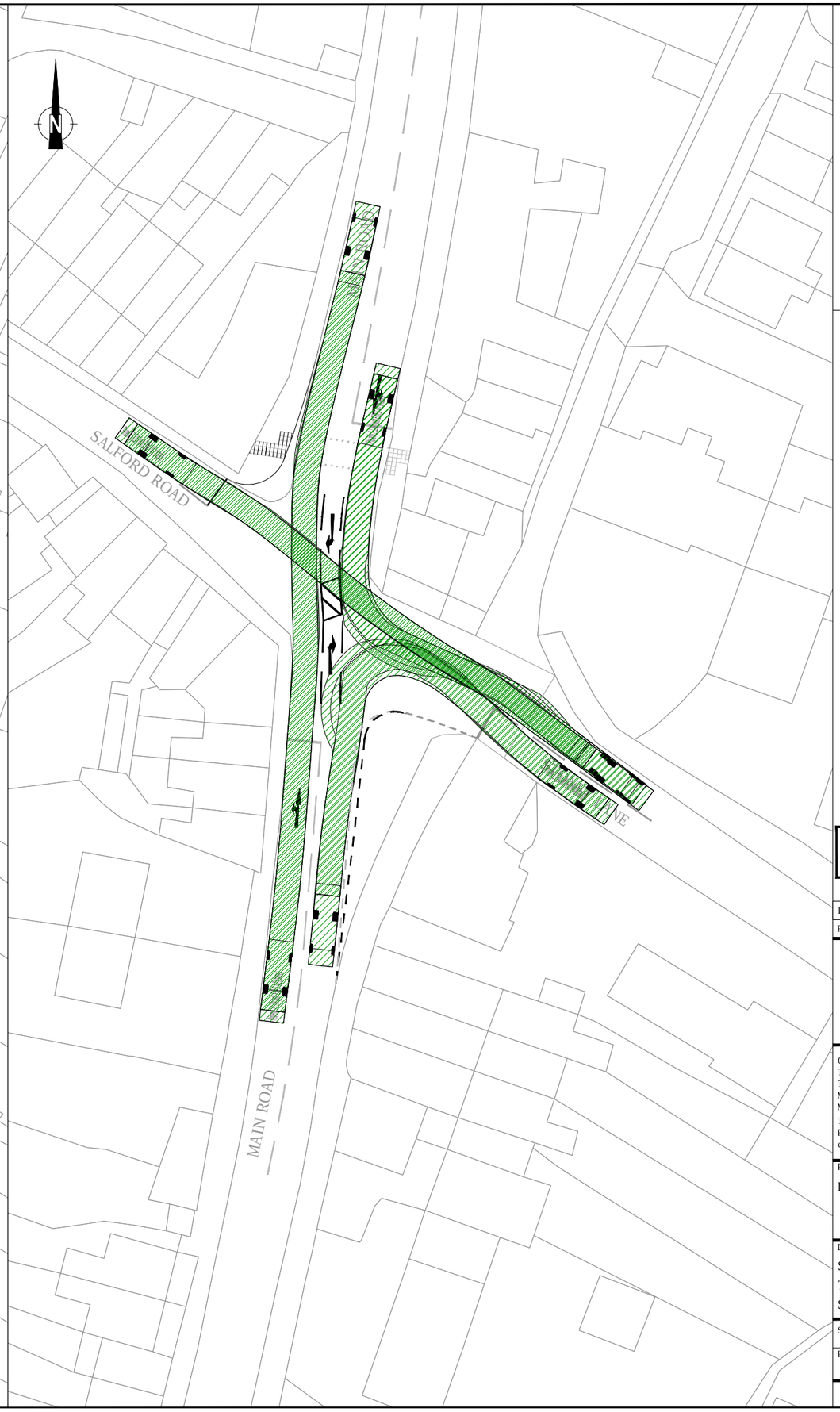
FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\TRACKING\A107175-J02-TR001.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 18 December 2018 10:12:01





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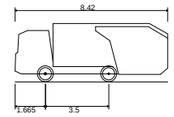
VEHICLE PROFILE



Phoenix 2-12W (with Elite 2 4x2 chassis)	
Overall Length	8.420m
Overall Width	2.530m
Overall Body Height	3.211m
Min Body Ground Clearance	0.416m
Track Width	2.530m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.750m

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	MT	MS	NOV 2018

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TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

wyg.

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS TRACKING A6 MAIN ROAD/ STONEY LN/ SALFORD ROAD (J02) OPTION B

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
1:500	JG	NOV 2018	JM	NOV 2018	LB	NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J02-02-TR001	P01

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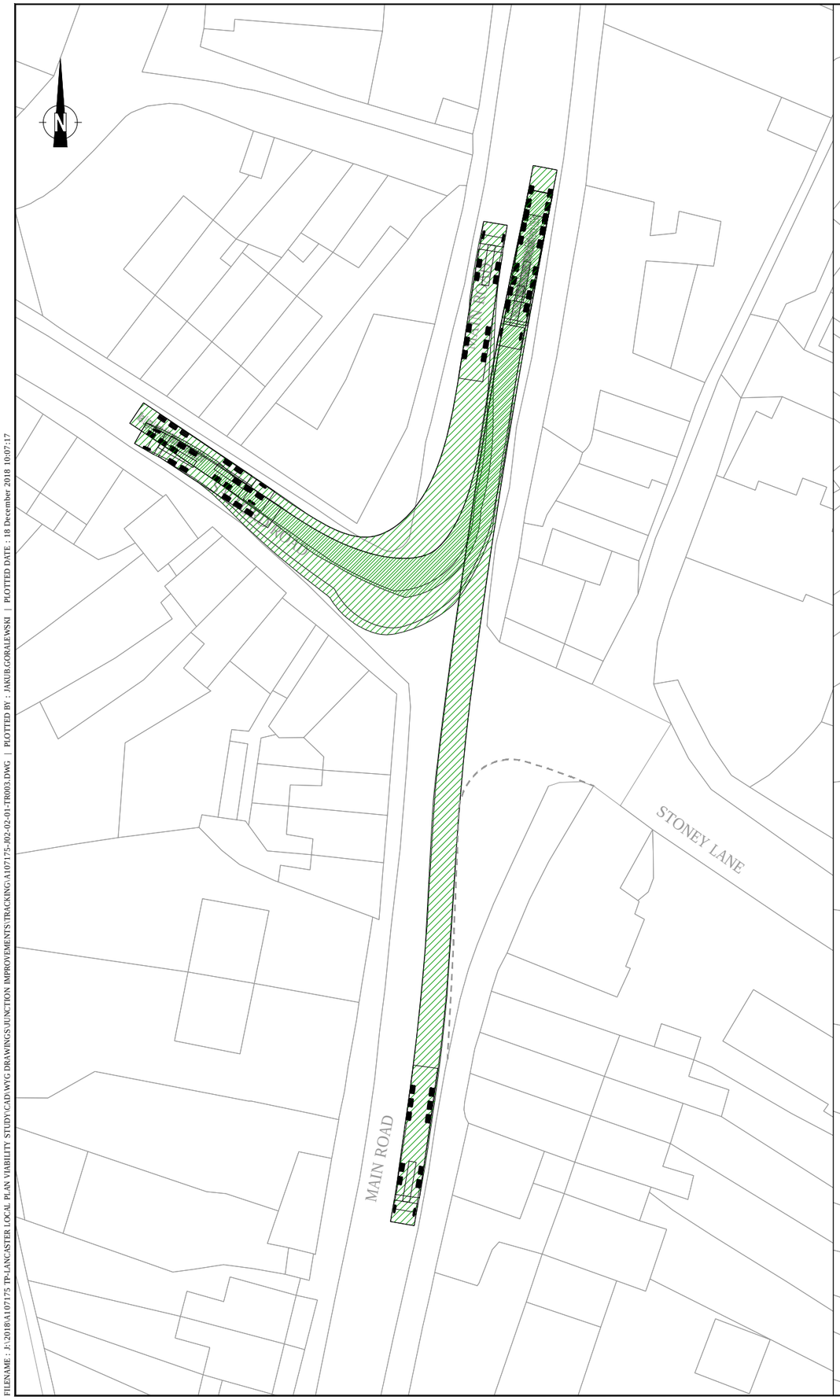

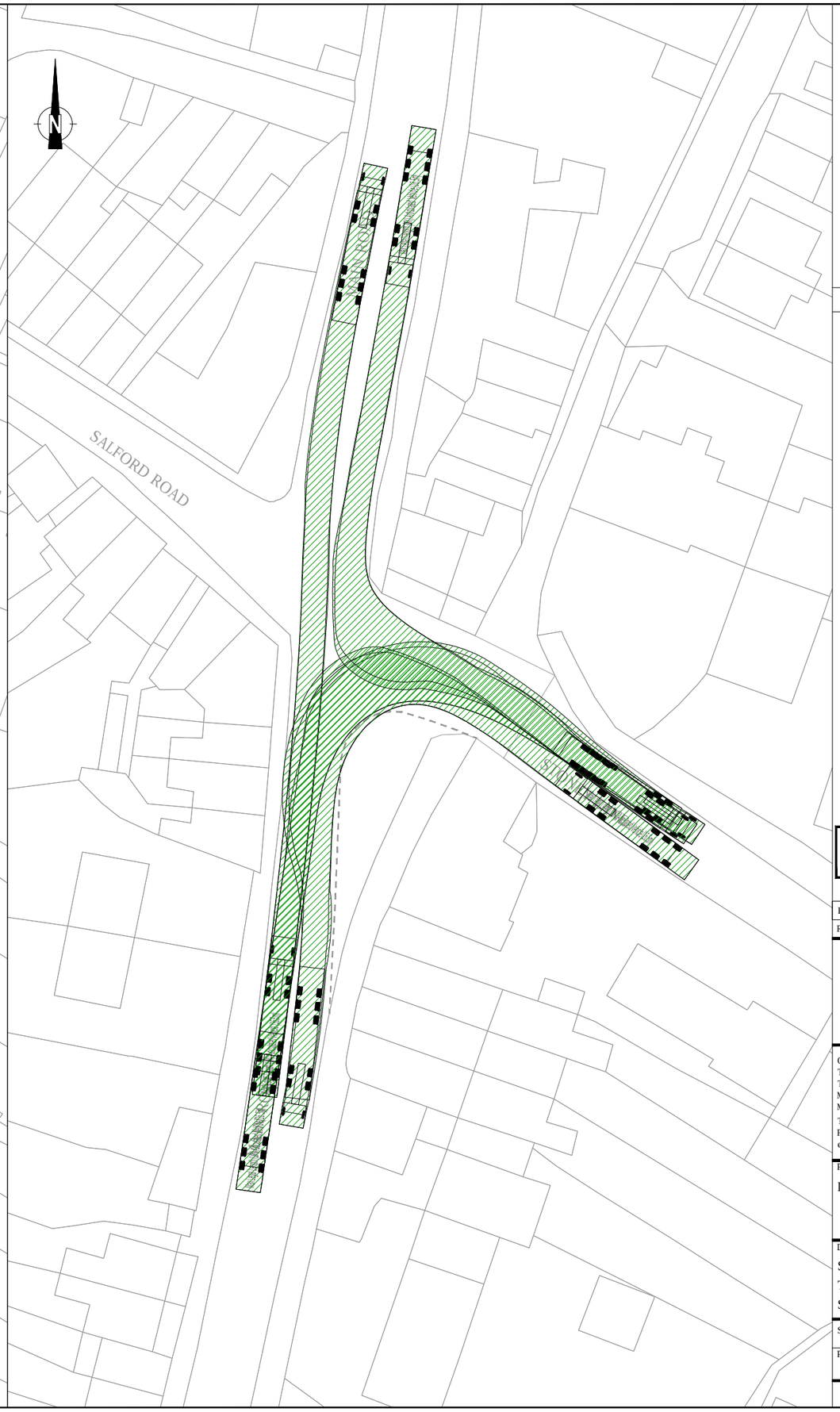

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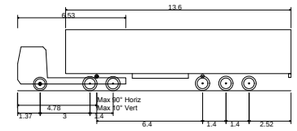
VEHICLE PROFILE



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

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QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS TRACKING A6 MAIN ROAD/ STONEY LN/ SALFORD ROAD, (J02) EXISTING LAYOUT

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J02-03-TR001	P01

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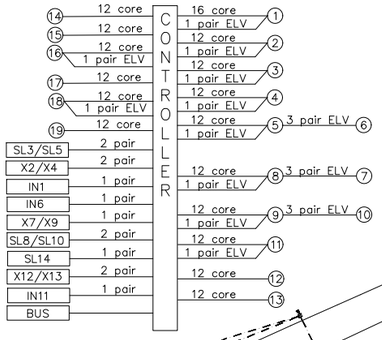
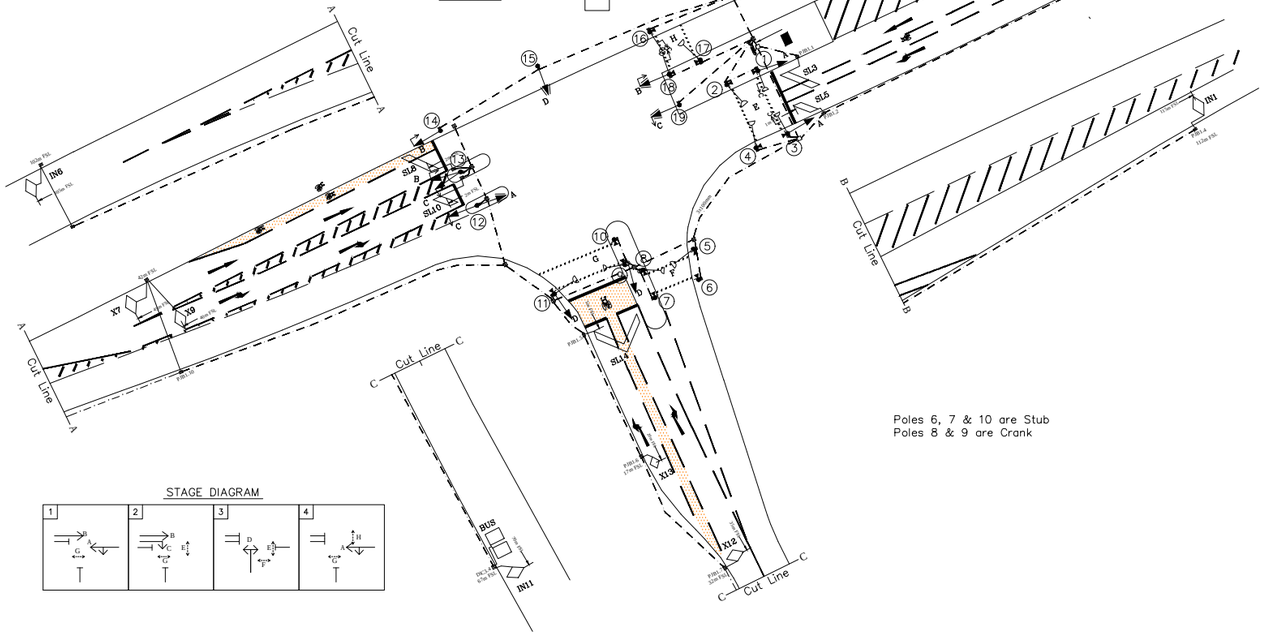
Junction 3 - A6 Preston Lancaster Road/Hazelrigg Lane

Iss	Amendments	App
1	AS INSTALLED 24/09/2004	

CABLE DIAGRAM





STAGE DIAGRAM

CABLE 16 CORES UNLESS OTHERWISE SPECIFIED

SIGNAL NEUTRAL FEEDS TO BE SEPARATE FROM 'WAIT' INDICATOR & SOLAR SWITCH (IF FITTED) NEUTRAL FEEDS

LOOPS IN ACCORDANCE WITH 667/HE/20663/000

SYMBOLS GENERALLY IN ACCORDANCE WITH BSS 505

Lancashire County Council

Environment Directorate

Graham Harding B.Eng., C.Eng., F.I.C.E., F.I.H.T., M.I.Mgt.
DIRECTOR

HIGHWAY CONSULTANCY

SITE ADDRESS:

Scotforth Road / New University Entrance Lancaster

DRAWN BY: Carl Fazackerley	**SITE NO:** A3041
CHECKED BY:	**DRAWING NO:** HC14727
DATE: 25/05/2005	

W:\HC_Roads\Signals\A3041.dwg



0 0.01 0.02 0.04 0.06 0.08 Kilometers

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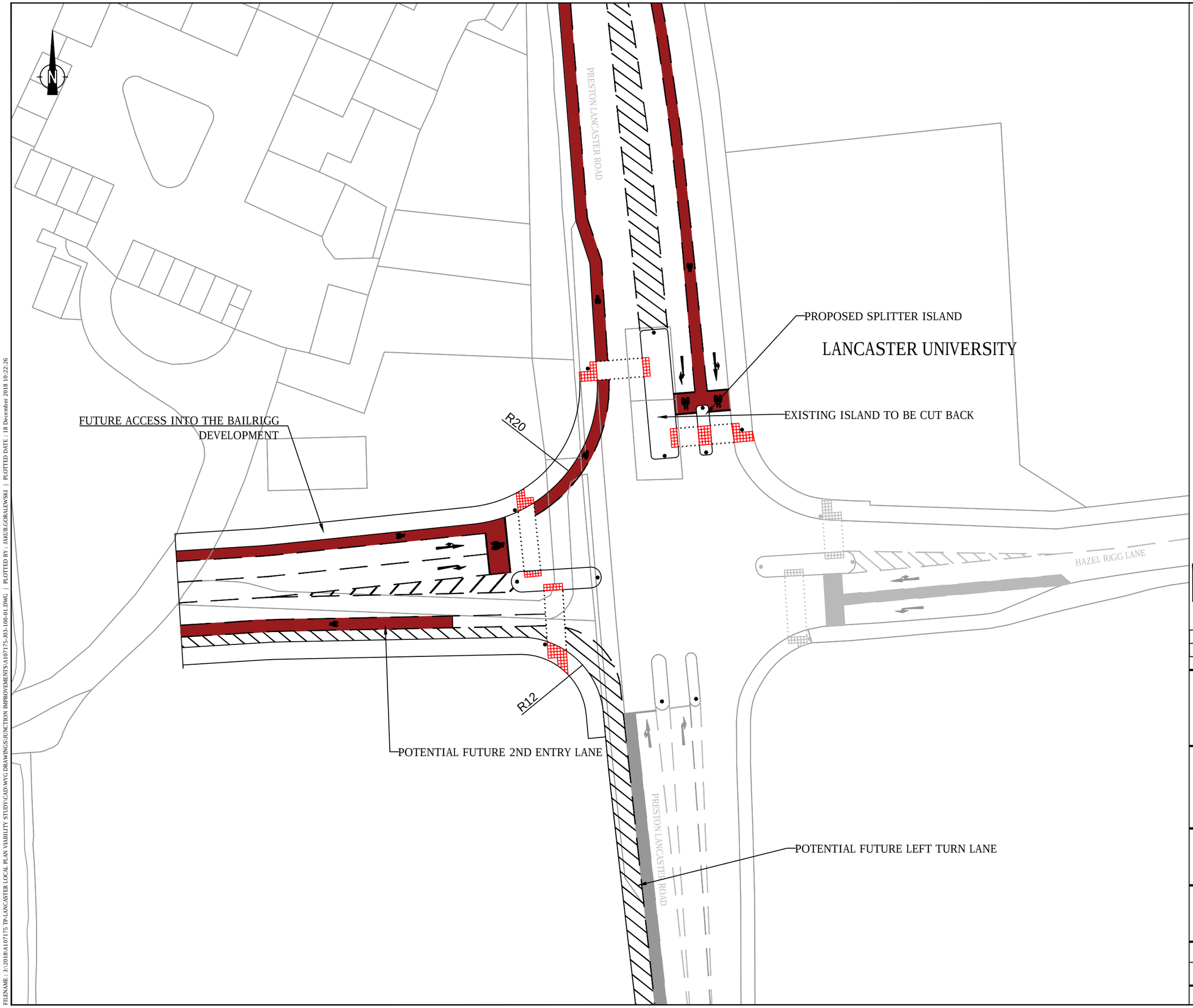

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PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P02	AMEDED AS PER COUNCIL COMMENTS	JG	RH	MS	NOV 2018
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

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Promoting City, Coast & Countryside

QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
POTENTIAL SCHEMATIC JUNCTION IMPROVEMENTS A6 PRESTON LANCASTER ROAD/ HAZELRIGG LANE (J03)

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J03-100-01	P01

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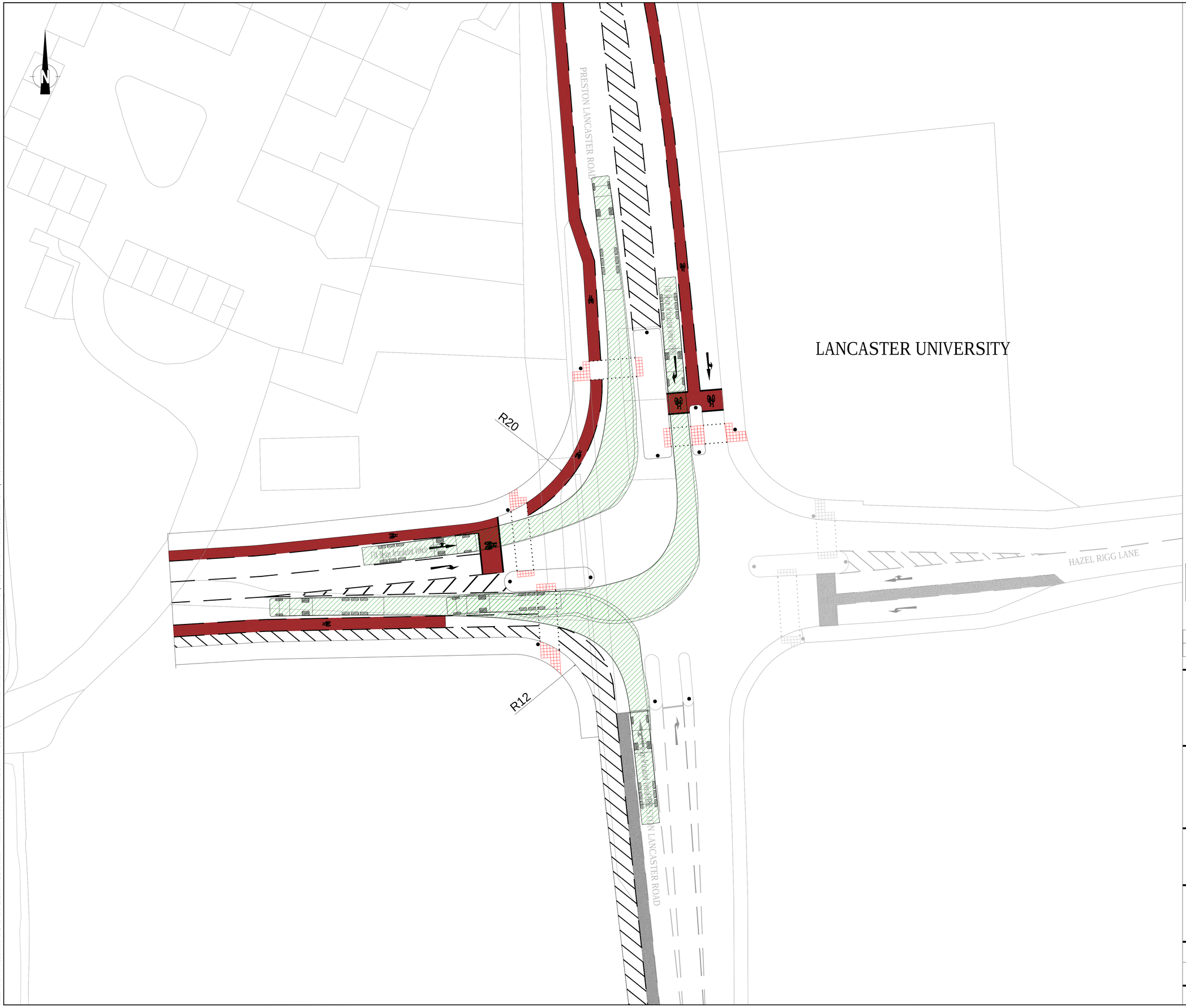
FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\A107175-J03-100-01.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 18 December 2018 10:22:26



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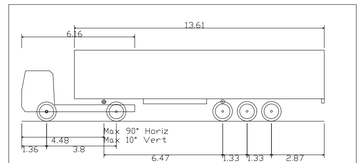

FTA Design Articulated Vehicle (1998)

Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.970m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.550m

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P02	AMEDED AS PER COUNCIL COMMENTS	JG	RH	MS	NOV 2018
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

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Promoting City, Coast & Countryside

QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:

LANCASTER LOCAL PLAN TRANSPORT STUDY
SWEPT PATH ANALYSIS

Drawing Title:

POTENTIAL SCHEMATIC JUNCTION IMPROVEMENTS A6 PRESTON LANCASTER ROAD/ HAZELRIGG LANE (J03)

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J03-100-02	P01

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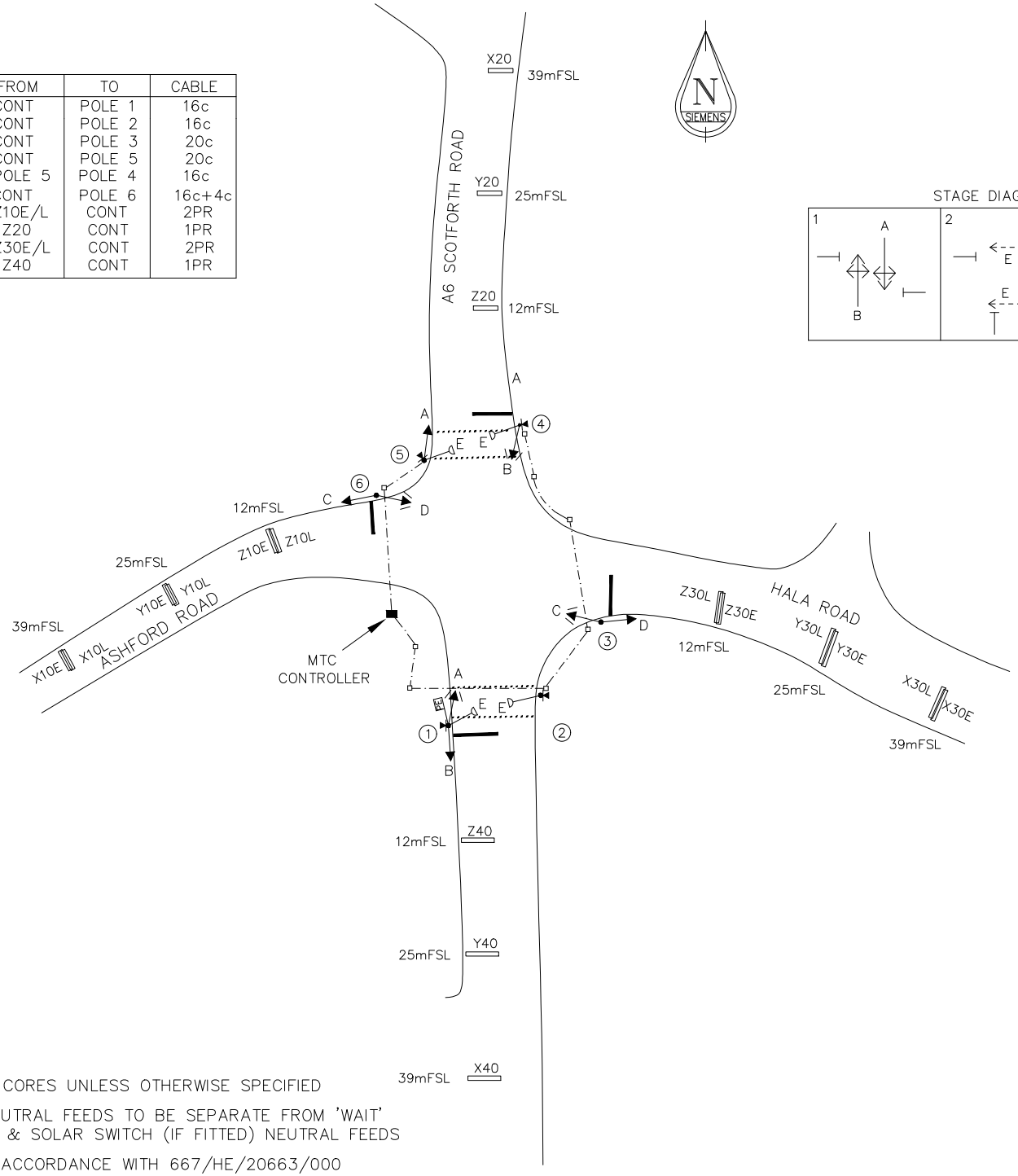
Junction 4 - A6 Scotforth Rd / Hala Rd / Ashford Rd

FROM	TO	CABLE
CONT	POLE 1	16c
CONT	POLE 2	16c
CONT	POLE 3	20c
CONT	POLE 5	20c
POLE 5	POLE 4	16c
CONT	POLE 6	16c+4c
Z10E/L	CONT	2PR
Z20	CONT	1PR
Z30E/L	CONT	2PR
Z40	CONT	1PR



CABLE 16 CORES UNLESS OTHERWISE SPECIFIED

SIGNAL NEUTRAL FEEDS TO BE SEPARATE FROM 'WAIT' INDICATOR & SOLAR SWITCH (IF FITTED) NEUTRAL FEEDS

LOOPS IN ACCORDANCE WITH 667/HE/20663/000

SYMBOLS GENERALLY IN ACORDANCE WITH BSS 505

ISSUE		APP'D
1	EX G.E.C. SITE. PED PHASE ADDED TO POLES 4 & 5. CABLING ALTERED. 26/07/96	
2	MTC ADDED. PHASING ALTERED.T/TILES FITTED TO PUSHBUTTONS. RECABLED. 25/09/97	
3	SITE NO., NORTH DIM. & ROAD NAME ADDED. ANNOTATION ALTERED. 15/12/98	

DO NOT SCALE

LANCASHIRE C.C.

SCOTFORTH ROAD/HALA ROAD/ASHFORD ROAD LANCASTER

SIEMENS Siemens Traffic Controls Limited
POOLE DORSET ENGLAND

A3014

DRN.	CHKD.	APPD.	STS25413



0 0.0075 0.015 0.03 0.045 0.06
Kilometers

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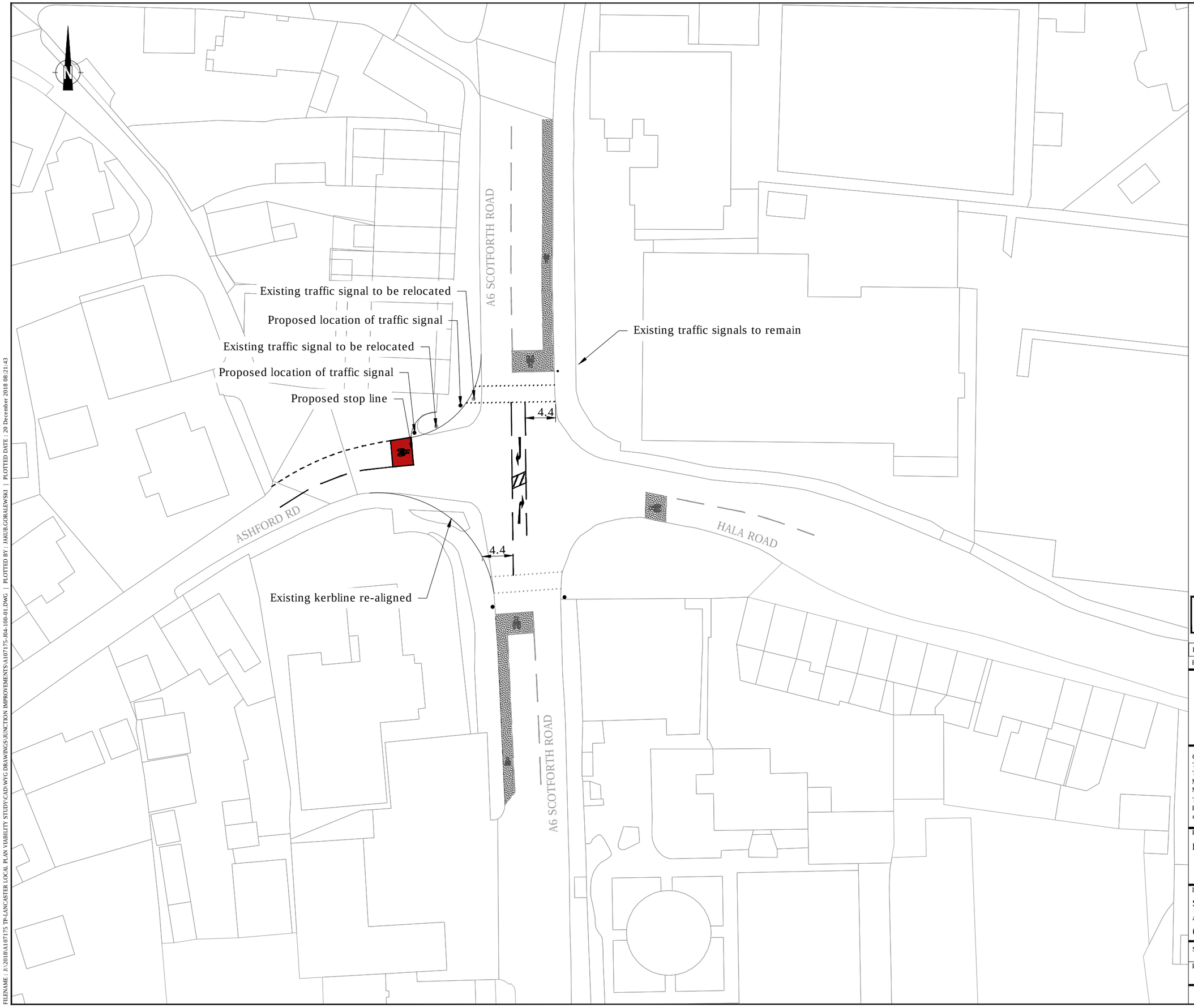

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PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

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QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
A6 SCOTFORH RD/ HALA RD/ ASHFORD RD
(J04)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
1:500	JG	NOV 2018	JM	NOV 2018	LB	NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J04-100-01	P01

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Junction 5 - A6 Greaves Rd/Ashton Rd (The Pointer Roundabout)



0 0.0125 0.025 0.05 0.075 0.1 Kilometers

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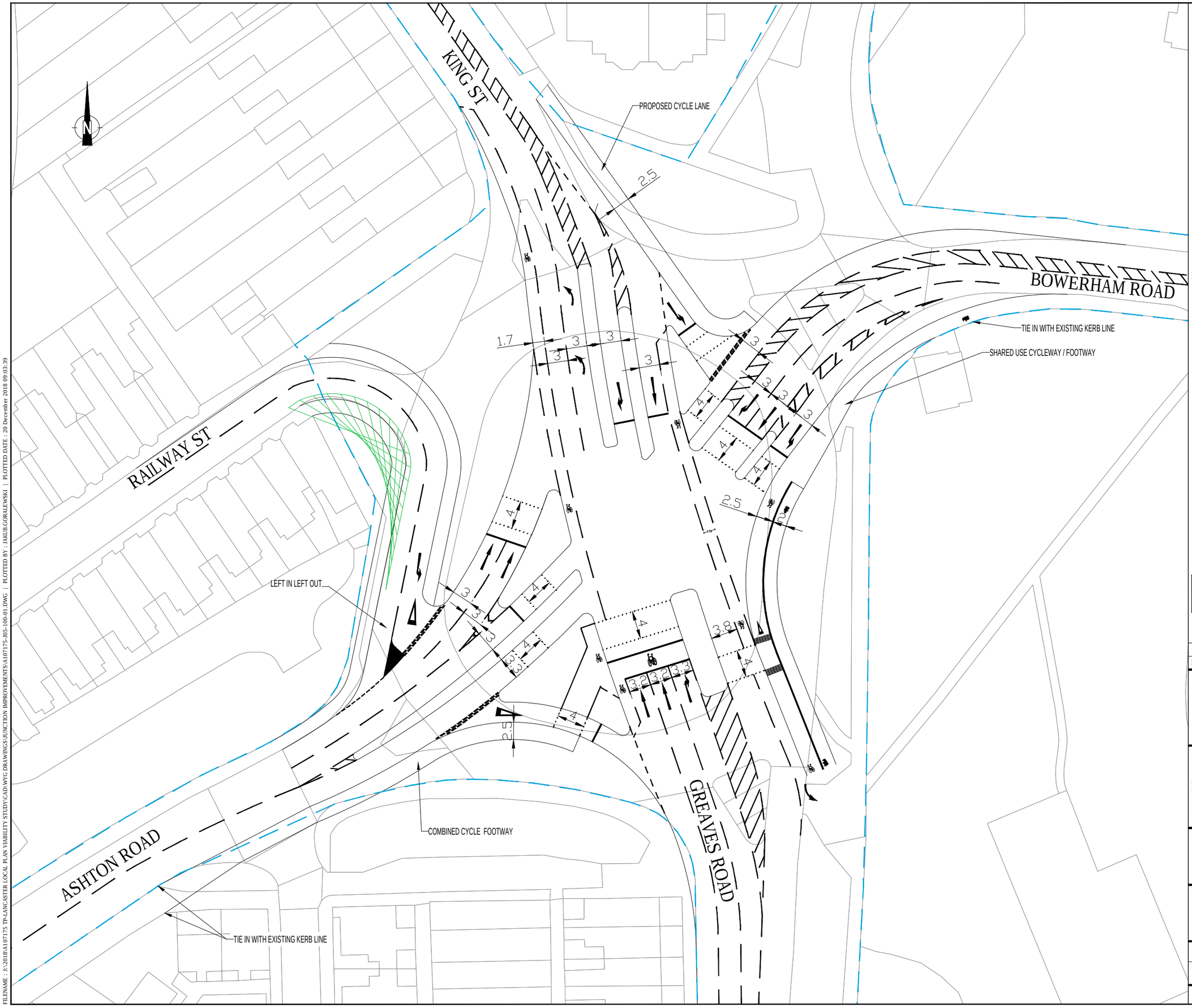

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KEY:

- INDICATIVE LINE OF HIGHWAY BOUNDARY TO BE CONFIRMED
- 22m STOPPING SIGHT DISTANCE ENVELOPE BASED ON MANUAL FOR STREETS

DRAFT ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	RH	MS	MS	13/11/18

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TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
POTENTIAL SCHEMATIC JUNCTION IMPROVEMENTS

JUNCTION 05

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
1:1000	RH	NOV 18	LR	NOV 18	LR	NOV 18

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J05-100-01	P01

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Junction 16 - A6 Lancaster Rd/Scotland Rd / Market St

Signals Phasing / Staging

0, All Red	1, A, B
2, E, G, F, H	3, C, D

Legend

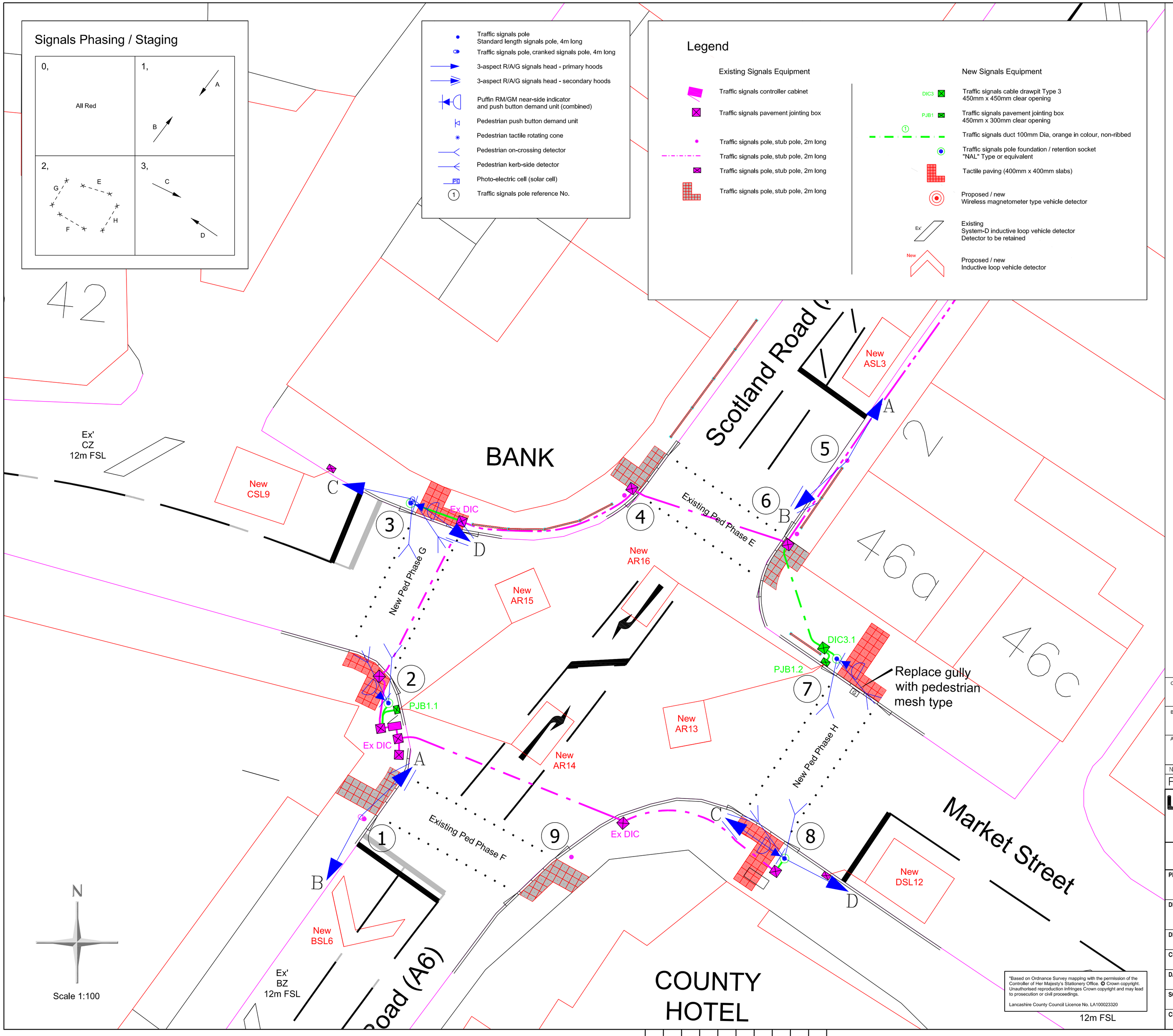
Traffic signals pole
Standard length signals pole, 4m long
Traffic signals pole, cranked signals pole, 4m long
3-aspect R/A/G signals head - primary hoods
3-aspect R/A/G signals head - secondary hoods
Puffin RM/GM near-side indicator and push button demand unit (combined)
Pedestrian push button demand unit
Pedestrian tactile rotating cone
Pedestrian on-crossing detector
Pedestrian kerb-side detector
Photo-electric cell (solar cell)
Traffic signals pole reference No.

Existing Signals Equipment

Traffic signals controller cabinet
Traffic signals pavement jointing box
Traffic signals pole, stub pole, 2m long
Traffic signals pole, stub pole, 2m long
Traffic signals pole, stub pole, 2m long
Traffic signals pole, stub pole, 2m long

New Signals Equipment

DIC3 — Traffic signals cable drawpit Type 3 450mm x 450mm clear opening
PJB1 — Traffic signals pavement jointing box 450mm x 300mm clear opening
Traffic signals duct 100mm Dia, orange in colour, non-ribbed
Traffic signals pole foundation / retention socket "NAL" Type or equivalent
Tactile paving (400mm x 400mm slabs)
Proposed / new Wireless magnetometer type vehicle detector
Ex — Existing System-D inductive loop vehicle detector Detector to be retained
New — Proposed / new Inductive loop vehicle detector



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GENERAL NOTES

1, This drawing shall be read in conjunction with L.C.C. Special Details Nos. LL1 - LL40 inclusive and L.C.C. Special Detail No. IL1.

2, All equipment including traffic signals, street furniture, ducts and drawpits shall be of a type approved by the Engineer.

3, The precise location of all traffic signals equipment shall be confirmed on site by the Engineer's traffic signals representative.

4, If any traffic signal pole, or any other item of traffic signals equipment or street furniture, cannot be sited in the specified location, for whatever reason, the contractor shall determine a suitable alternative location. The Contractor shall provide full details to the Engineer's traffic signals representative and either obtain his agreement to the alternative location or receive instruction on action to be taken.

5, Traffic signals poles (supplied) shall be erected in accordance with L.C.C. Special Details Nos. LL1, LL2 and LL3 and at a planting depth of 600mm below finished footway surface level. Any pole which cannot be installed at this depth, for whatever reason, must be cut accordingly and fitted with a metal plate at the pole base. The Contractor shall provide full details to the Engineer's traffic signals representative and either obtain his agreement or receive his instruction on action to be taken.

6, The Contractor shall supply and install all new traffic signals cables , including:
- New detector feeder cables
- New detector loop cables

7, The Contractor shall strictly comply with the requirements of Chapter 8 (2009) of the Traffic Signs Manual. It is essential that all temporary traffic and/or pedestrian management proposals are pre-planned and submitted to the Engineer in sufficient time to enable any consultations which may be necessary with the police and any other interested parties. The Contractor shall ensure that all traffic and/or pedestrian management equipment is fully maintained to the specified standards at all times as required by the works and agreed with the Engineer.

SITE SPECIFIC NOTES

1, All existing System D inductive loop detectors are to be retained.
(Detectors Nos. AX, AY/Z, BX, BY/Z, CX, CY/Z, DX and DY/Z)

2, All Red Loops AR13 , AR14 , AR15 and AR16 positions are to confirmed on site by a representative from Lancashire County Council Traffic Systems Team.

3, All PBU's and pedestrian detection on pole No. 1 ,4 , 6 and 9 are to remain.

3, The exact location of all pedestrian facilities should be arranged on site by a representative from Lancashire County Council Traffic Systems Team alongside a representative from The Contractor.

4, All existing traffic signal ducting shown are indicative.

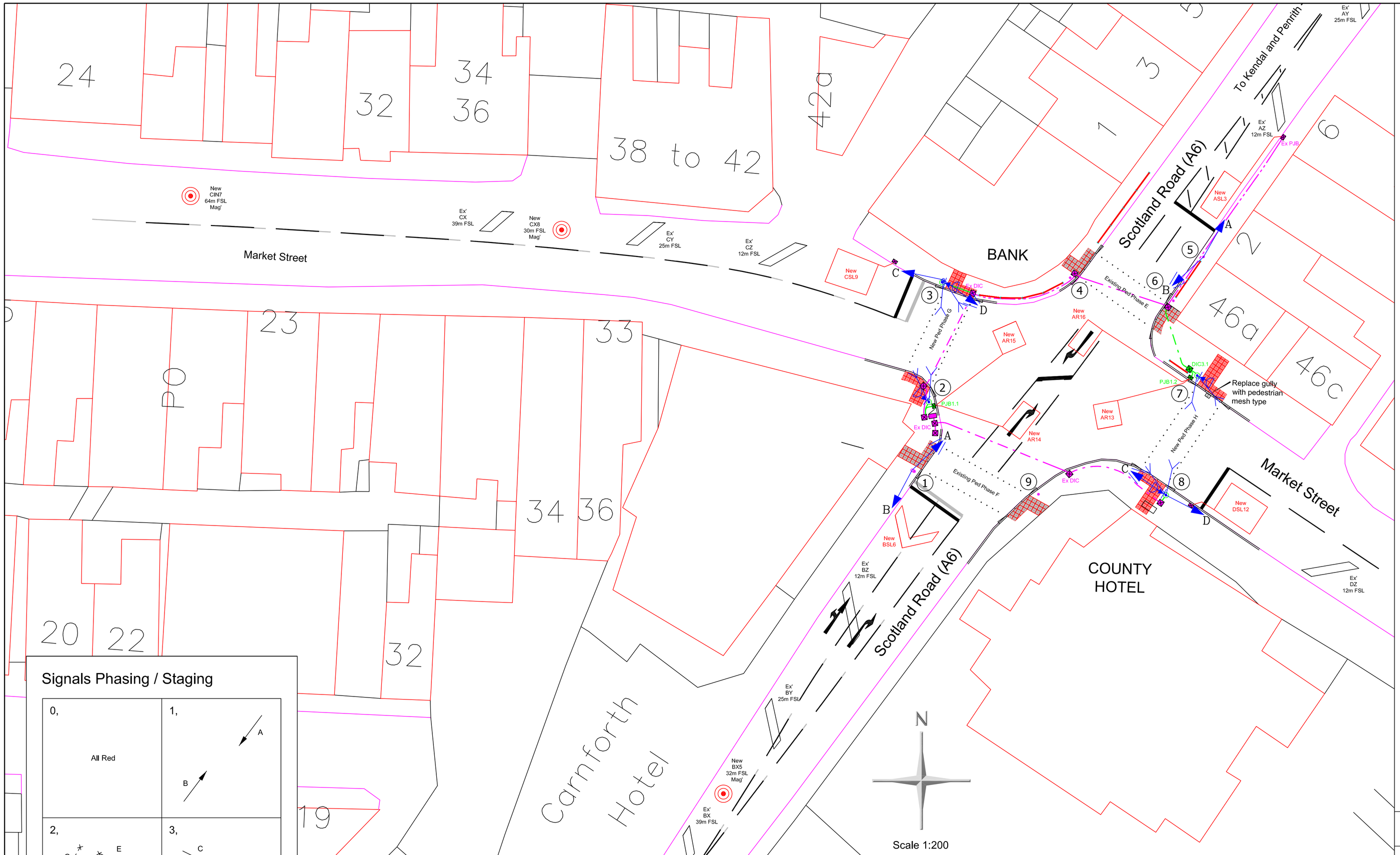
No.	DATE	AMENDMENT DETAILS	CHECKED BY	DRAWN BY
C	13 / 10 / 2014	Pedestrian facilities added to both Market Street arms Carriageway markings revised and proposed carriageway markings shown. Drawing notes revised.	-	A.B
B	14 / 03 / 2011	Detection layout and details revised. Carriageway markings revised and proposed carriageway markings shown. Drawing notes revised.	M.P.	F.L.G.
A	03/03/2011	• Inductive loops removed and replaced by wireless magnetometer detectors. • Any proposed new traffic signals ducting removed. • Existing Z loops are to be retained. • Notes and legend modified to reflect the amendments	M.P.	J.T.

REVISIONS

Lancashire County Council — Environment Directorate

Highways And Environmental Management

PROJECT TITLE	Booths Store Scotland Road (A6), Carnforth S278 Highways Works
DRAWING TITLE	Scotland Road (A6), Carnforth j/w Lancaster Road / Market Street Traffic Signals Details and Mova Upgrade
DRAWN BY J.T.	**PROJECT No.** HC16311
CHECKED BY M.P.	**DRAWING No.** HC16311 / 01 Rev C
DATE 01 / 10 / 2010	
SCALE 1:100	**SHEET No.** 1 of 3
CLIENT No. N221A0048	



Signals Phasing / Staging

- Traffic signals pole — Standard length signals pole, 4m long
- Traffic signals pole, cranked signals pole, 4m long
- 3-aspect R/A/G signals head - primary hoods
- 3-aspect R/A/G signals head - secondary hoods
- Puffin RM/GM near-side indicator and push button demand unit (combined)
- Pedestrian push button demand unit
- Pedestrian tactile rotating cone
- Pedestrian on-crossing detector
- Pedestrian kerb-side detector
- Photo-electric cell (solar cell)
- (1) Traffic signals pole reference No.

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Legend

Existing Signals Equipment

- Traffic signals controller cabinet
- Traffic signals pavement jointing box
- Traffic signals pole, stub pole, 2m long
- Traffic signals pole, stub pole, 2m long
- Traffic signals pole, stub pole, 2m long
- Traffic signals pole, stub pole, 2m long

New Signals Equipment

- DIC3 — Traffic signals cable drawpit Type 3 450mm x 450mm clear opening
- PJB1 — Traffic signals pavement jointing box 450mm x 300mm clear opening
- (1) — Traffic signals duct 100mm Dia, orange in colour, non-ribbed
- Traffic signals pole foundation / retention socket "NAL" Type or equivalent
- Tactile paving (400mm x 400mm slabs)
- Proposed / new Wireless magnetometer type vehicle detector
- Ex' — Existing System-D inductive loop vehicle detector Detector to be retained
- New — Proposed / new Inductive loop vehicle detector

GENERAL NOTES

1, This drawing shall be read in conjunction with L.C.C. Special Details Nos. LL1 - LL40 inclusive and L.C.C. Special Detail No. IL1.

2, All equipment including traffic signals, street furniture, ducts and drawpits shall be of a type approved by the Engineer.

3, The precise location of all traffic signals equipment shall be confirmed on site by the Engineer's traffic signals representative.

4, If any traffic signal pole, or any other item of traffic signals equipment or street furniture, cannot be sited in the specified location, for whatever reason, the contractor shall determine a suitable alternative location. The Contractor shall provide full details to the Engineer's traffic signals representative and either obtain his agreement to the alternative location or receive instruction on action to be taken.

5, Traffic signals poles (supplied) shall be erected in accordance with L.C.C. Special Details Nos. LL1, LL2 and LL3 and at a planting depth of 600mm below finished footway surface level. Any pole which cannot be installed at this depth, for whatever reason, must be cut accordingly and fitted with a metal plate at the pole base. The Contractor shall provide full details to the Engineer's traffic signals representative and either obtain his agreement or receive his instruction on action to be taken.

6, The Contractor shall supply and install all new traffic signals cables , including:
- New detector feeder cables
- New detector loop cables

7, The Contractor shall strictly comply with the requirements of Chapter 8 (2009) of the Traffic Signs Manual. It is essential that all temporary traffic and/or pedestrian management proposals are pre-planned and submitted to the Engineer in sufficient time to enable any consultations which may be necessary with the police and any other interested parties. The Contractor shall ensure that all traffic and/or pedestrian management equipment is fully maintained to the specified standards at all times as required by the works and agreed with the Engineer.

SITE SPECIFIC NOTES

1, All existing System D inductive loop detectors are to be retained.
(Detectors Nos. AX, AY/Z, BX, BY/Z, CX, CY/Z, DX and DY/Z)

2, All Red Loops AR13 , AR14 , AR15 and AR16 positions are to confirmed on site by a representative from Lancashire County Council Traffic Systems Team.

3, All PBU's and pedestrian detection on pole No. 1 ,4 , 6 and 9 are to remain.

3, The exact location of all pedestrian facilities should be arranged on site by a representative from Lancashire County Council Traffic Systems Team alongside a representative from The Contractor.

4, All existing traffic signal ducting shown are indicative.

No.	DATE	AMENDMENT DETAILS	CHECKED BY	DRAWN BY
C	13 / 10 / 2014	Pedestrian facilities added to both Market Street arms Carriageway markings revised and proposed carriageway markings shown. Drawing notes revised.	-	A.B
B	14 / 03 / 2011	Detection layout and details revised. Carriageway markings revised and proposed carriageway markings shown. Drawing notes revised.	M.P.	F.L.G.
A	03/03/2011	• Inductive loops removed and replaced by wireless magnetometer detectors. • Any proposed new traffic signals ducting removed. • Existing Z loops are to be retained. • Notes and legend modified to reflect the amendments	M.P.	J.T.

REVISIONS

Lancashire County Council

Environment Directorate

Highways And Environmental Management

PROJECT TITLE
Booths Store Scotland Road (A6), Carnforth
S278 Highways Works

DRAWING TITLE
Scotland Road (A6), Carnforth j/w Lancaster Road / Market Street
Traffic Signals Details and Mova Upgrade

DRAWN BY J.T.	**PROJECT No.** HC16311
CHECKED BY M.P.	**DRAWING No.** HC16311 / 01 Rev C
DATE 01 / 10 / 2010	
SCALE 1:200	**SHEET No.** 2 of 3
CLIENT No. N221A0048	

Legend

Existing Signals Equipment

- Traffic signals controller cabinet
- Traffic signals pavement jointing box
- Traffic signals pole, stub pole, 2m long
- Traffic signals pole, stub pole, 2m long
- Traffic signals pole, stub pole, 2m long
- Traffic signals pole, stub pole, 2m long

New Signals Equipment

- DIC3 — Traffic signals cable drawpit Type 3 450mm x 450mm clear opening
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- Proposed / new Wireless magnetometer type vehicle detector
- Ex' — Existing System-D inductive loop vehicle detector Detector to be retained
- New — Proposed / new Inductive loop vehicle detector

N

Scale 1:200

Signals Phasing / Staging

0, All Red	1, A, B
2, E, G, F, H	3, C, D

- Traffic signals pole Standard length signals pole, 4m long
- Traffic signals pole, cranked signals pole, 4m long
- 3-aspect R/A/G signals head - primary hoods
- 3-aspect R/A/G signals head - secondary hoods
- Puffin RM/GM near-side indicator and push button demand unit (combined)
- Pedestrian push button demand unit
- Pedestrian tactile rotating cone
- Pedestrian on-crossing detector
- Pedestrian kerb-side detector
- PD — Photo-electric cell (solar cell)
- ① — Traffic signals pole reference No.

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GENERAL NOTES

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New detector loop cables

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(Detectors Nos. AX, AY/Z, BX, BY/Z, CX, CY/Z, DX and DY/Z)

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3, The exact location of all pedestrian facilities should be arranged on site by a representative from Lancashire County Council Traffic Systems Team alongside a representative from The Contractor.

4, All existing traffic signal ducting shown are indicative.

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C	13 / 10 / 2014	Pedestrian facilities added to both Market Street arms Carriageway markings revised and proposed carriageway markings shown. Drawing notes revised.	-	A.B
B	14 / 03 / 2011	Detection layout and details revised. Carriageway markings revised and proposed carriageway markings shown. Drawing notes revised.	M.P.	F.L.G.
A	03/03/2011	• Inductive loops removed and replaced by wireless magnetometer detectors. • Any proposed new traffic signals ducting removed. • Existing Z loops are to be retained. • Notes and legend modified to reflect the amendments	M.P.	J.T.

REVISIONS

Lancashire County Council

Environment Directorate

Highways And Environmental Management

PROJECT TITLE
Booths Store Scotland Road (A6), Carnforth
S278 Highways Works

DRAWING TITLE
Scotland Road (A6), Carnforth j/w Lancaster Road / Market Street
Traffic Signals Details and Mova Upgrade

DRAWN BY J.T.	**PROJECT No.** HC16311
CHECKED BY M.P.	**DRAWING No.** HC16311 / 01 Rev C
DATE 01 / 10 / 2010	
SCALE 1:200	**SHEET No.** 3 of 3
CLIENT No. N221A0048	



0 0.01 0.02 0.04 0.06 0.08
Kilometers

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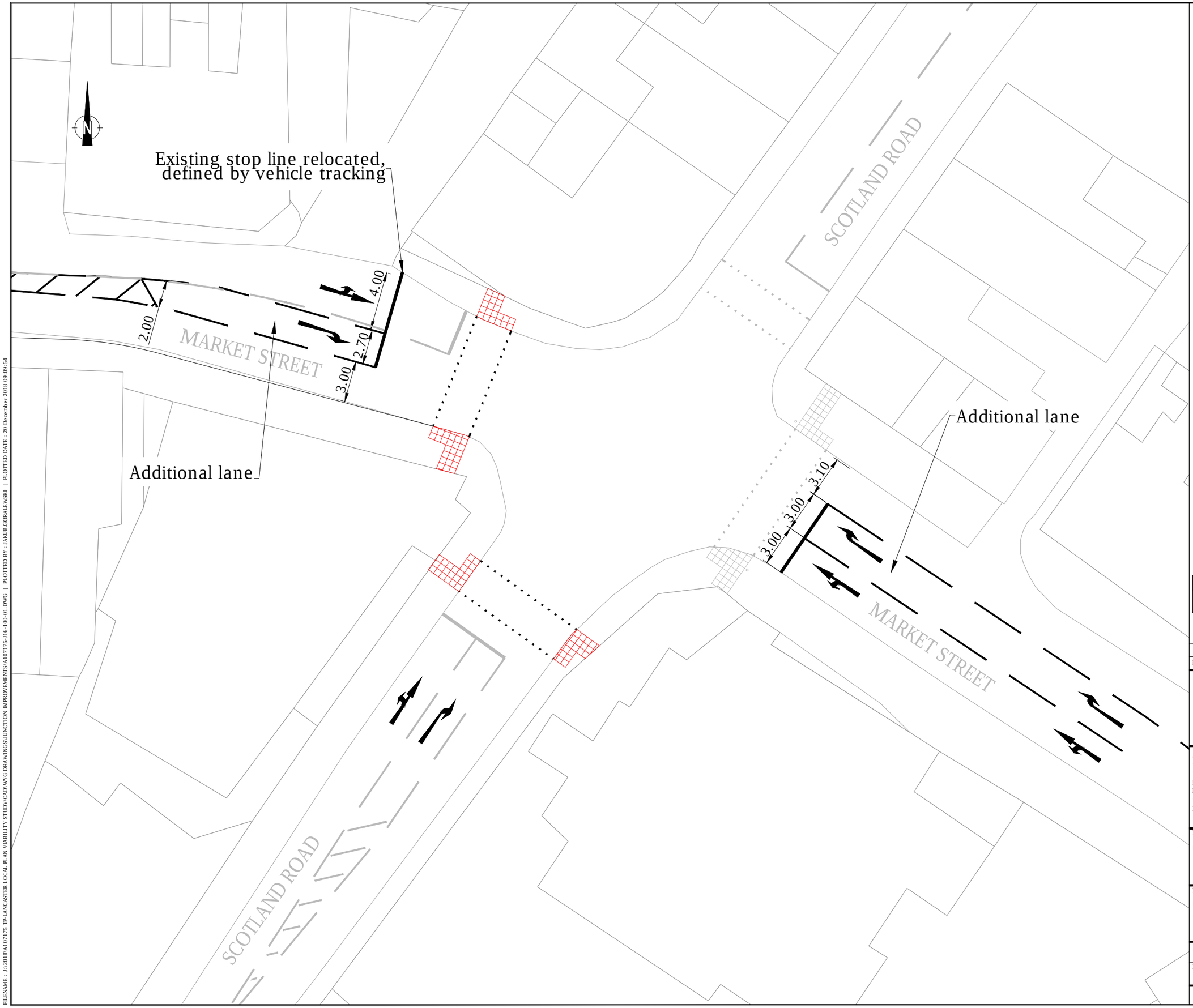

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1. THIS DRAWING IS TO BE READ IN RELATION TO THE SUBJECT OF THE TITLE ONLY. OTHER INFORMATION SHOWN ON THE DRAWING IS TO BE CONSIDERED INDICATIVE ONLY. REFERENCE SHOULD BE MADE TO APPROPRIATE DRAWING SERIES/ SPECIFICATIONS FOR OTHER OTHER INFROMATION.

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DRAFT ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	FIRST ISSUE	RH	LR	LR	13/11/18

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TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
POTENTIAL SCHEMATIC JUNCTION IMPROVEMENTS
SCOTLAND ROAD / MARKET STREET
JUNCTION 16

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
1:1000	RH	NOV 18	LR	NOV 18	LR	NOV 18

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J16-100-01	P01

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FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\A107175-J16-100-01.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 20 December 2018 09:09:54

Junction 17 - Kellet Road/Back Lane



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Kilometers

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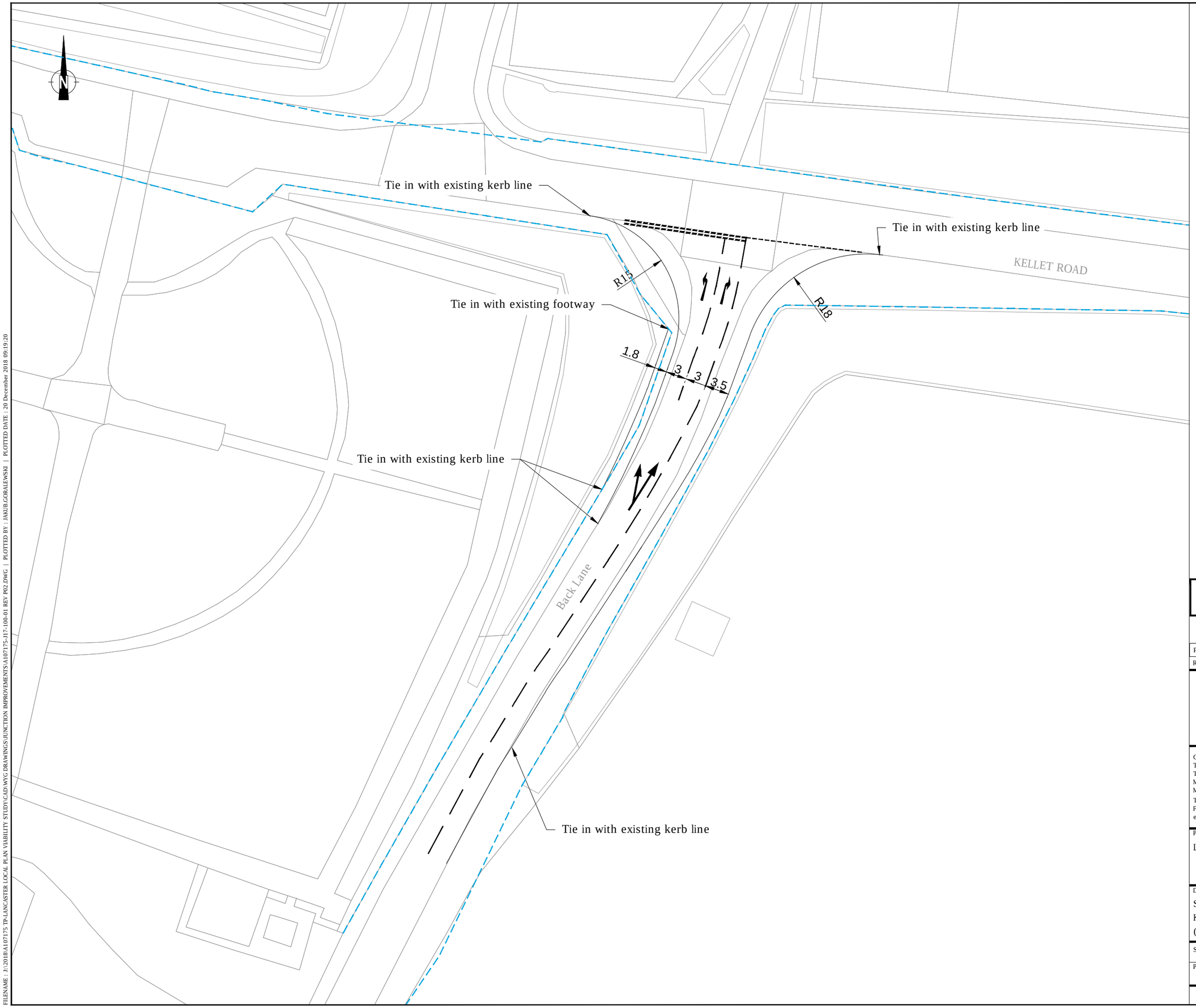

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3. This drawing is based on Ordnance Survey. WYG will not be responsible for any discrepancies and the drawing should be drawn on Topographical Survey.

2. All dimensions are in metres unless specified otherwise.

Key:

Indicative line of highway boundary to be confirmed.

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

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QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
KELLET ROAD/ BACK LANE
(J017)

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J017-100-01	P01

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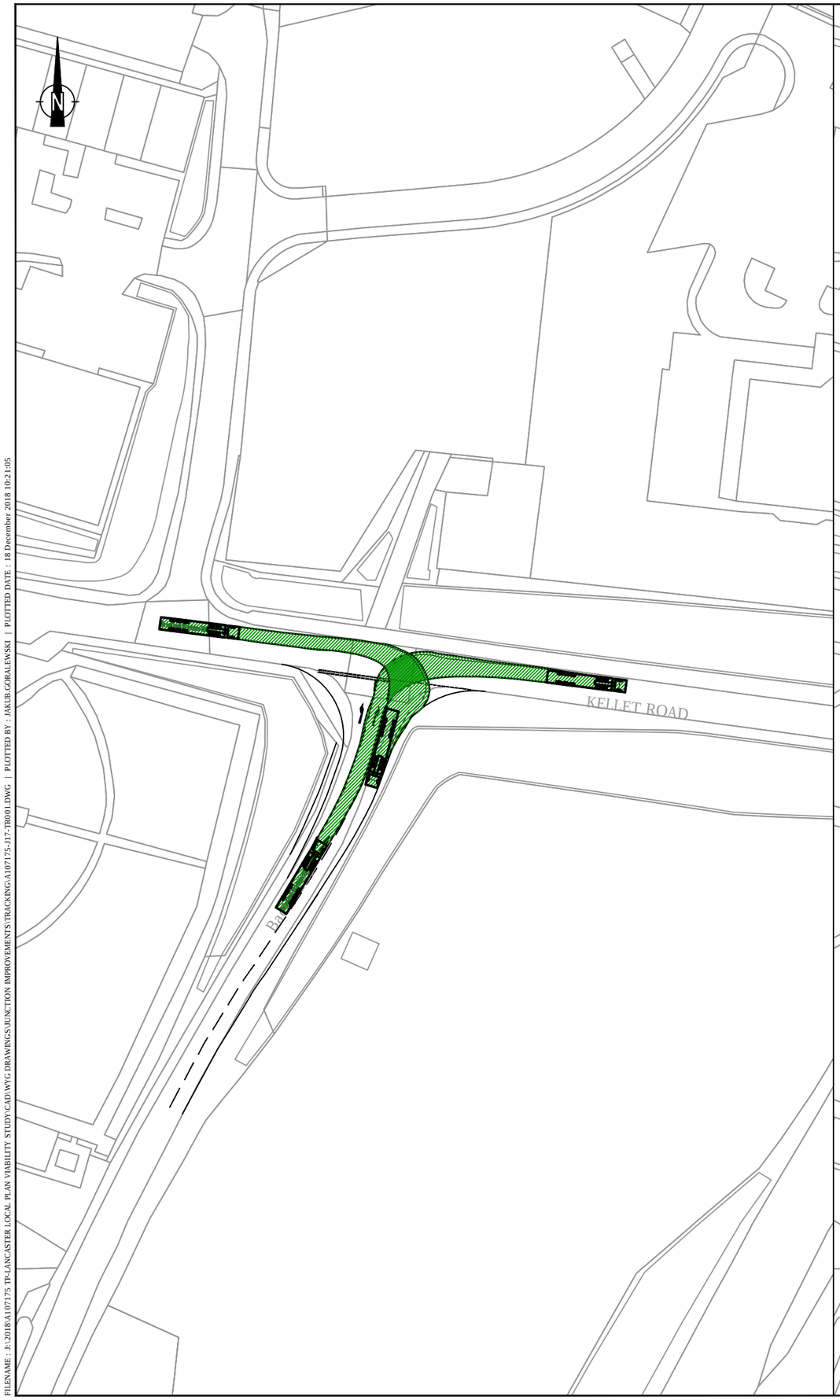
FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\A107175-J17-100-01 REV P02.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 20 December 2018 09:19:20





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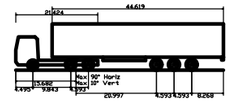
VEHICLE PROFILE



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	54.134Ft
Overall Width	8.366Ft
Overall Body Height	12.075Ft
Min Body Ground Clearance	1.350Ft
Max Track Width	9.200Ft
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	21.424Ft

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

LANCASTER CITY COUNCIL
Promoting City, Coast & Countryside

QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS VEHICLE TRACKING - KELLET ROAD / BACK LANE (J017)

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:1000	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J017-01-TR001	P01

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FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\TRACKING\A107175-J17-TR001.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 18 December 2018 10:21:05

Junction 18 - Kellet Rd / A601M



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Kilometers

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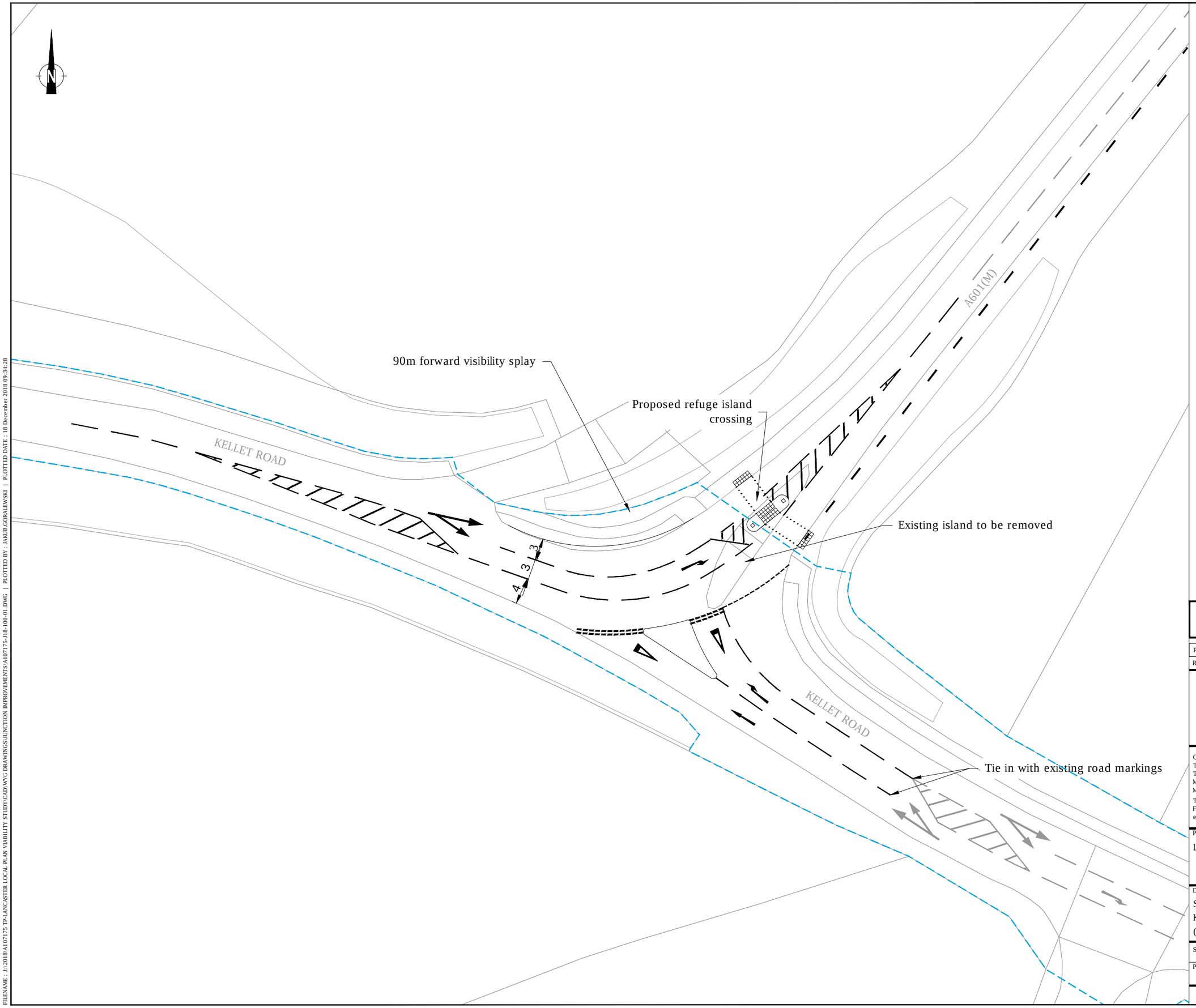

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2. All dimensions are in metres unless specified otherwise.

Key:

Indicative line of highway boundary to be confirmed.

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

LANCASTER CITY COUNCIL
Promoting City, Coast & Countryside

QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
KELLET ROAD/A601M
(J018) OPTION A

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J018-100-01	P01

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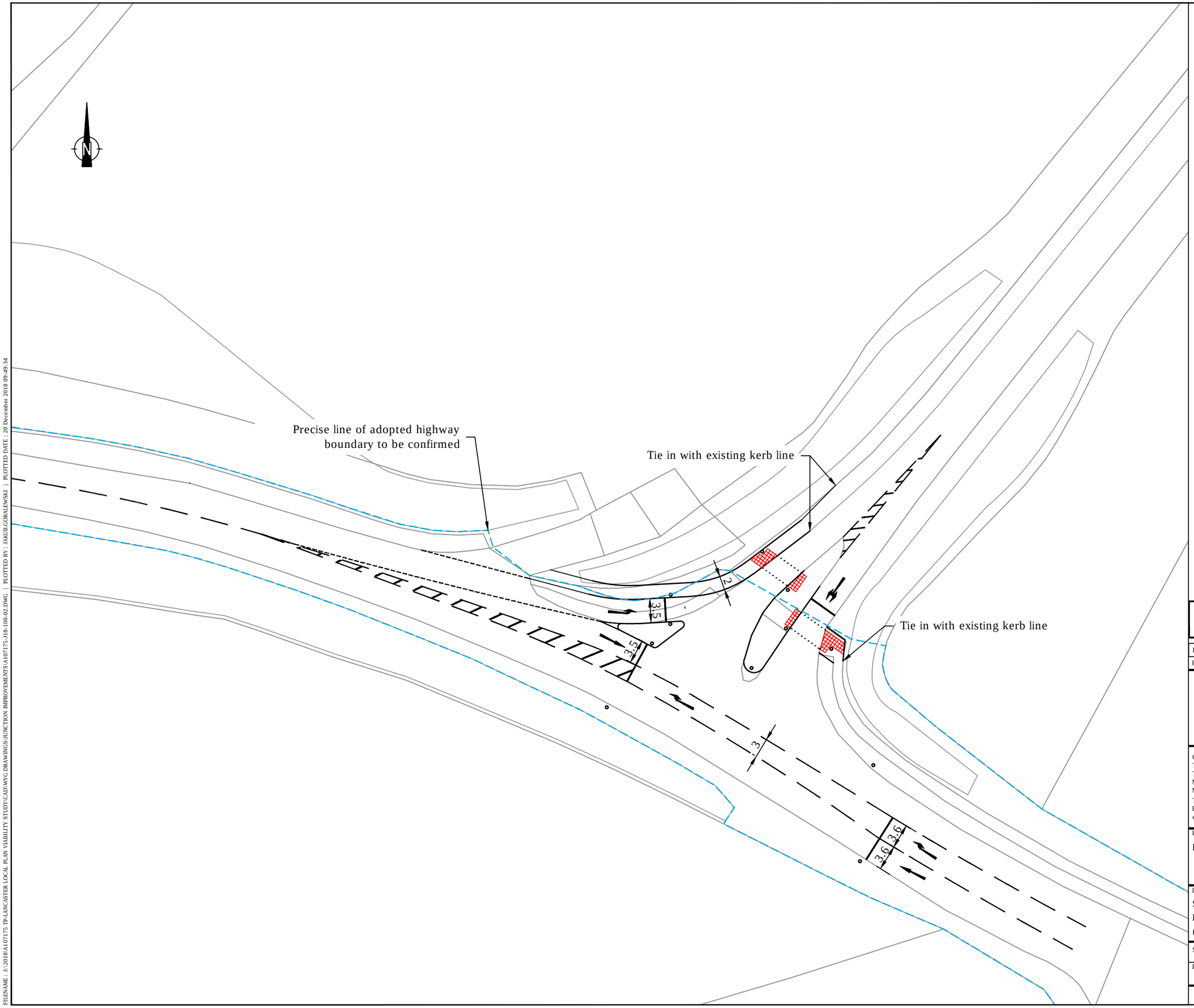
FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\A107175-J18-100-01.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 18 December 2018 09:34:28



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Key:

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PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

LANCASTER CITY COUNCIL
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QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
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e-mail: manchester@wyg.com

Project:
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Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
KELLET ROAD/A601M
(J018) OPTION B

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
1:500	JG	NOV 2018	JM	NOV 2018	LB	NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J018-100-02	P01

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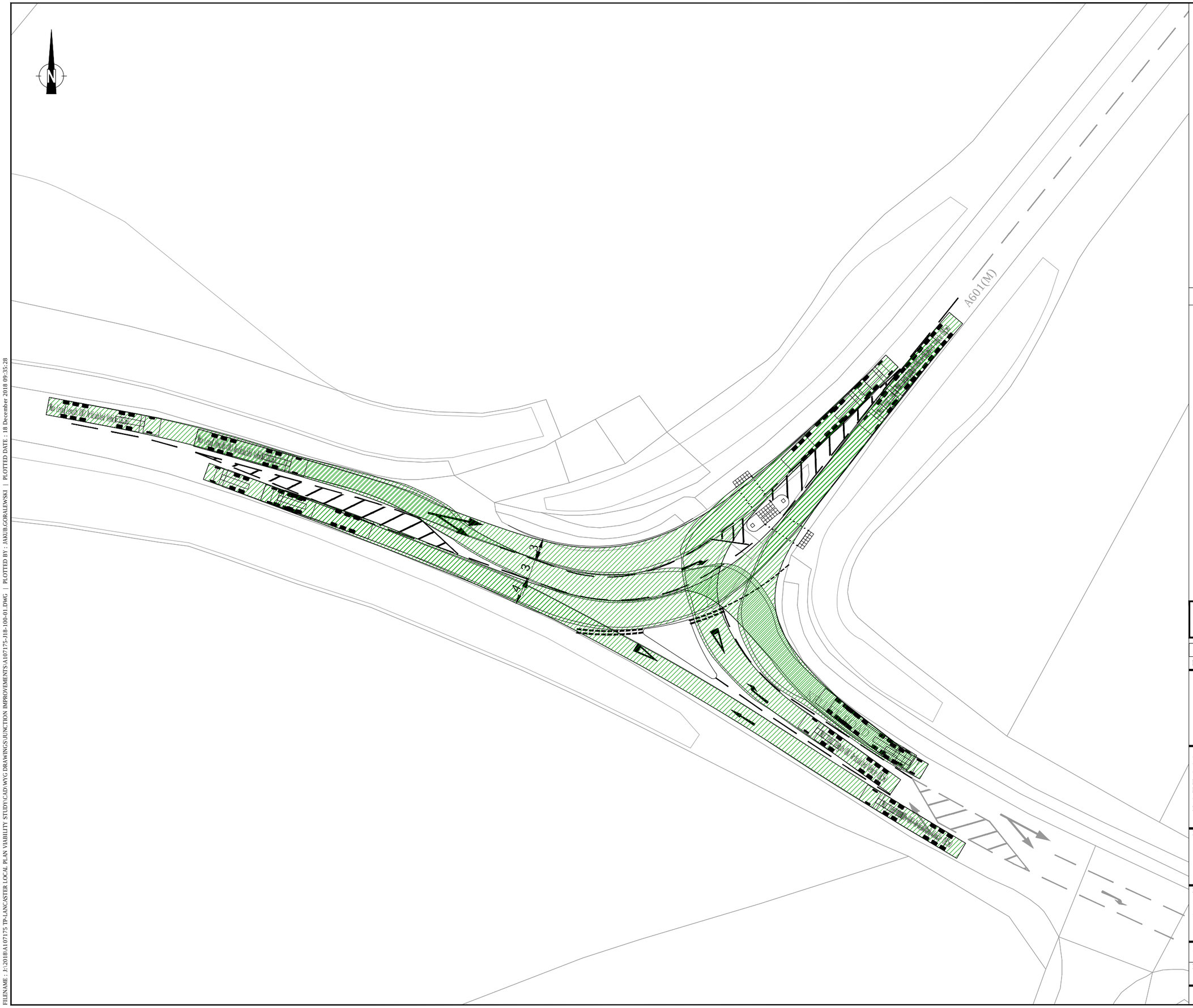
FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\A107175-J18-100-02.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 20 December 2018 09:49:34



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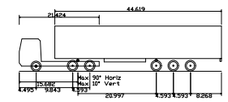
VEHICLE PROFILE



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	54.134ft
Overall Width	8.366ft
Overall Body Height	12.076ft
Min. Body Ground Clearance	1.350ft
Max Track Width	8.202ft
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	21.424ft

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

LANCASTER CITY COUNCIL
Promoting City, Coast & Countryside

QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:

LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:

SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
VEHICLE TRACKING: KELLET ROAD/A601M
(J018) OPTION A

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J018-100-TR001	P01

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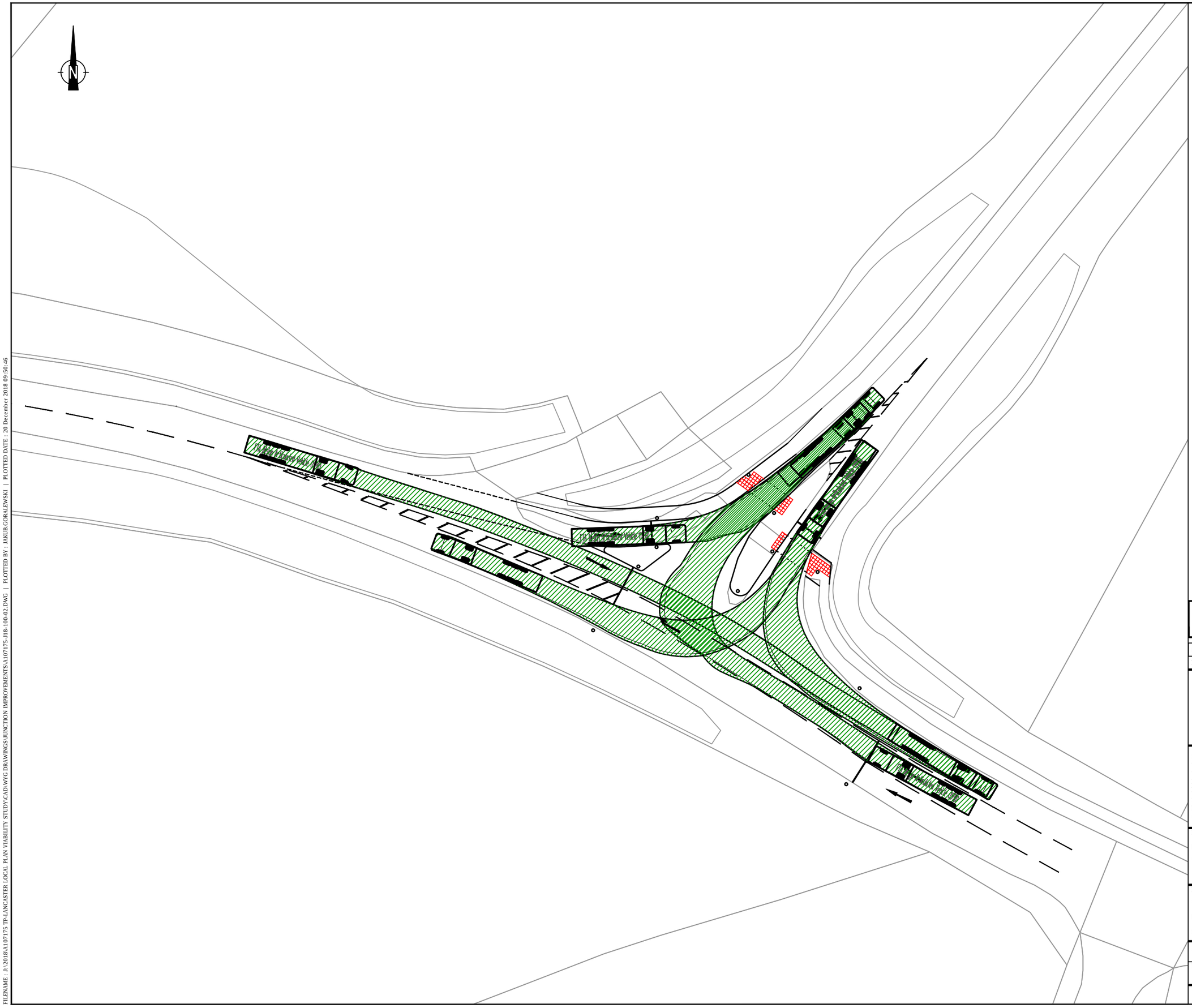
FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\ WYG DRAWINGS\JUNCTION IMPROVEMENTS\A107175-J18-100-01.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 18 December 2018 09:35:28


N
Kellet Road
Kellet Road
Kellet Road

Junction 29 - A683 / M6 J34

GENERAL NOTES

1, This drawing shall be read in conjunction with L.C.C. Special Details Nos. LL1 - LL40 inclusive and L.C.C. Special Detail No. IL1.

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6, The Contractor shall supply and install the new traffic signals duct and drawpit infrastructure, including cable drawpits and signals pole retention sockets, in accordance with L.C.C. Special Details Nos. LL20-LL26 inclusive.

7, The Contractor shall supply and install all new traffic signals ducts in accordance with L.C.C. Special Detail No. IL 1.

8, All new traffic signals ducts are to be single 100mm Dia. non-ribbed except where stated otherwise.

9, Traffic signals controllers are to be built and configured in accordance with DfT Specification TR 2500 A.

10, The Contractor is to strip out all redundant traffic signals cabling and remove from site.

11, The Contractor shall supply and install all new traffic signals cables, including:
New LV and ELV signals cables
New detector feeder cables
and
New detector loop cables

12, All ELV traffic signals cables are to have Min 1.5mm^2 CSA conductors.

13, The Contractor's traffic signals installer must be capable of installing and commissioning pedestrian kerb-side detection and pedestrian on-crossing detection.

14, The mains electrical supply to the traffic signals feeder pillar shall be classed as 'Network Cabling'. All other cabling from the feeder pillar to the controller cabinet, and from the controller cabinet to the traffic signals equipment shall not be classed as 'Network Cabling'.

15, The Contractor shall securely cover all signals heads and push button units with orange Polyethylene covers marked LCC. These covers are to remain fitted until the commissioning and switch-on of the traffic signals installation.

16, The Contractor shall provide and erect temporary warning signs to Diagram No. 7014 reading "New Traffic Signals Ahead" as directed by the Engineer. These signs are to be fixed to suitable lighting columns as directed by the Engineer and the Contractor is to remove them to stores 90 days after the commissioning and switch on of the new traffic signals installation.

NEW TRAFFIC SIGNALS AHEAD

Sign to Diagram No. 7014

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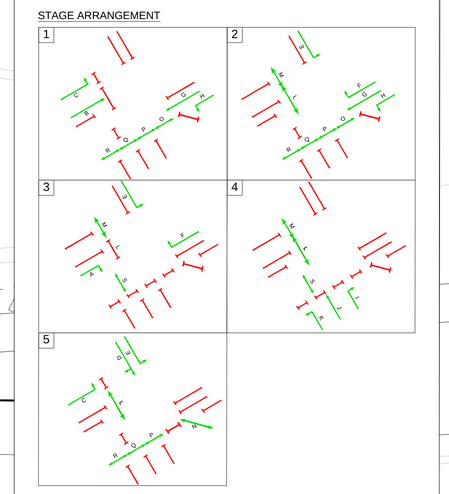
STAGE ARRANGEMENT



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Scale 1:200

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No.	DATE	AMENDMENT DETAILS	CHECKED BY	DRAWN BY
Issue 2	06/06/2016	Please see Traffic Signals Drawing Register	K.J.W.	J.A.T.

REVISIONS

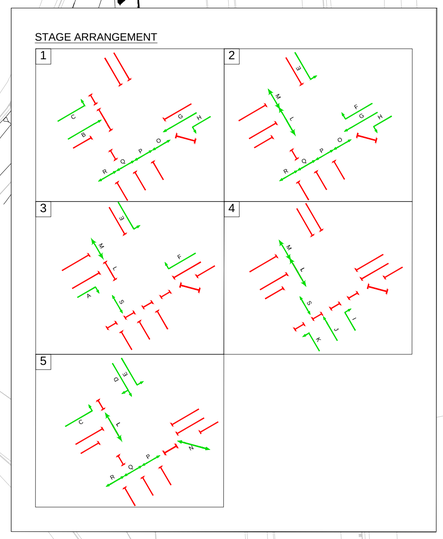
Lancashire County Council

Community Services

Network Control - Traffic Systems

PROJECT TITLE	Heysham To M6 Link Road Project Junction E
DRAWING TITLE	Caton Road (A683) j/w Link Road Traffic Signals Details
DRAWN BY: J.A.T.	PROJECT No.: 11063
CHECKED BY: K.J.W.	DRAWING No.: 11063 / 1250 / 010 / Issue 2
DATE: 06 / 06 / 2016	
SCALE: 1:200	SHEET No.: Sheet No.1 of 4
CLIENT No.	

\\MANCHESTER32\JOBS\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\JUNCTION MITIGATION INFORMATION (FOR DESIGN)\J10 & J29\A3046.DWG



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Issue 2	06/06/2016	Please see Traffic Signals Drawing Register	K.J.W.	J.A.T.

REVISIONS

Lancashire County Council

Community Services

Network Control - Traffic Systems

PROJECT TITLE Heysham To M6 Link Road Project Junction E	
DRAWING TITLE Caton Road (A683) j/w Link Road Traffic Signals Details	
DRAWN BY J.A.T.	**PROJECT No.** 11063
CHECKED BY K.J.W.	**DRAWING No.** 11063 / 1250 / 010 / Issue 2
DATE 06 / 06 / 2016	
SCALE 1:500	**SHEET No.** Sheet No.2 of 4
CLIENT No.	

N

Scale 1:500

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1x100mm dia. MOVA link duct to the Bulk Green junction.

1x100mm dia. MOVA link duct to the Park & Ride junction.

Caton Road (A683)

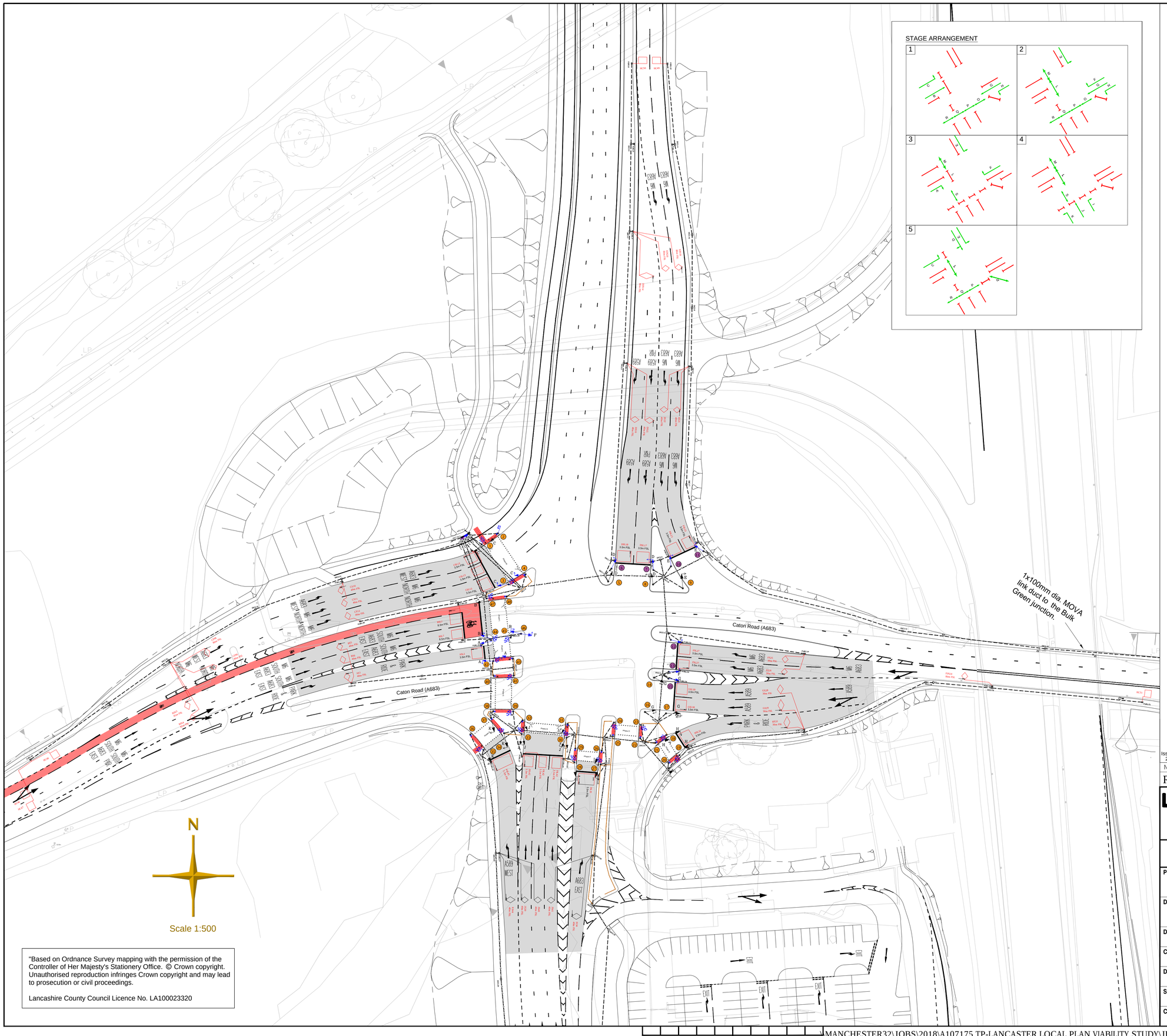
A589 WEST

A683 EAST

PARK & RIDE

EXIT

\MANCHESTER32\JOBS\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\JUNCTION MITIGATION INFORMATION (FOR DESIGN)\J10 & J29\A3046.DWG



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Issue 2	06/06/2016	Please see Traffic Signals Drawing Register	K.J.W.	J.A.T.

REVISIONS

Lancashire County Council

Community Services

Network Control - Traffic Systems

PROJECT TITLE
Heysham To M6 Link Road Project
Junction E

DRAWING TITLE
Caton Road (A683) j/w Link Road
Traffic Signals Details

DRAWN BY J.A.T.	**PROJECT No.** 11063
CHECKED BY K.J.W.	**DRAWING No.** 11063 / 1250 / 010 / Issue 2
DATE 06 / 06 / 2016	
SCALE 1:500	**SHEET No.** Sheet No.3 of 4
CLIENT No.	

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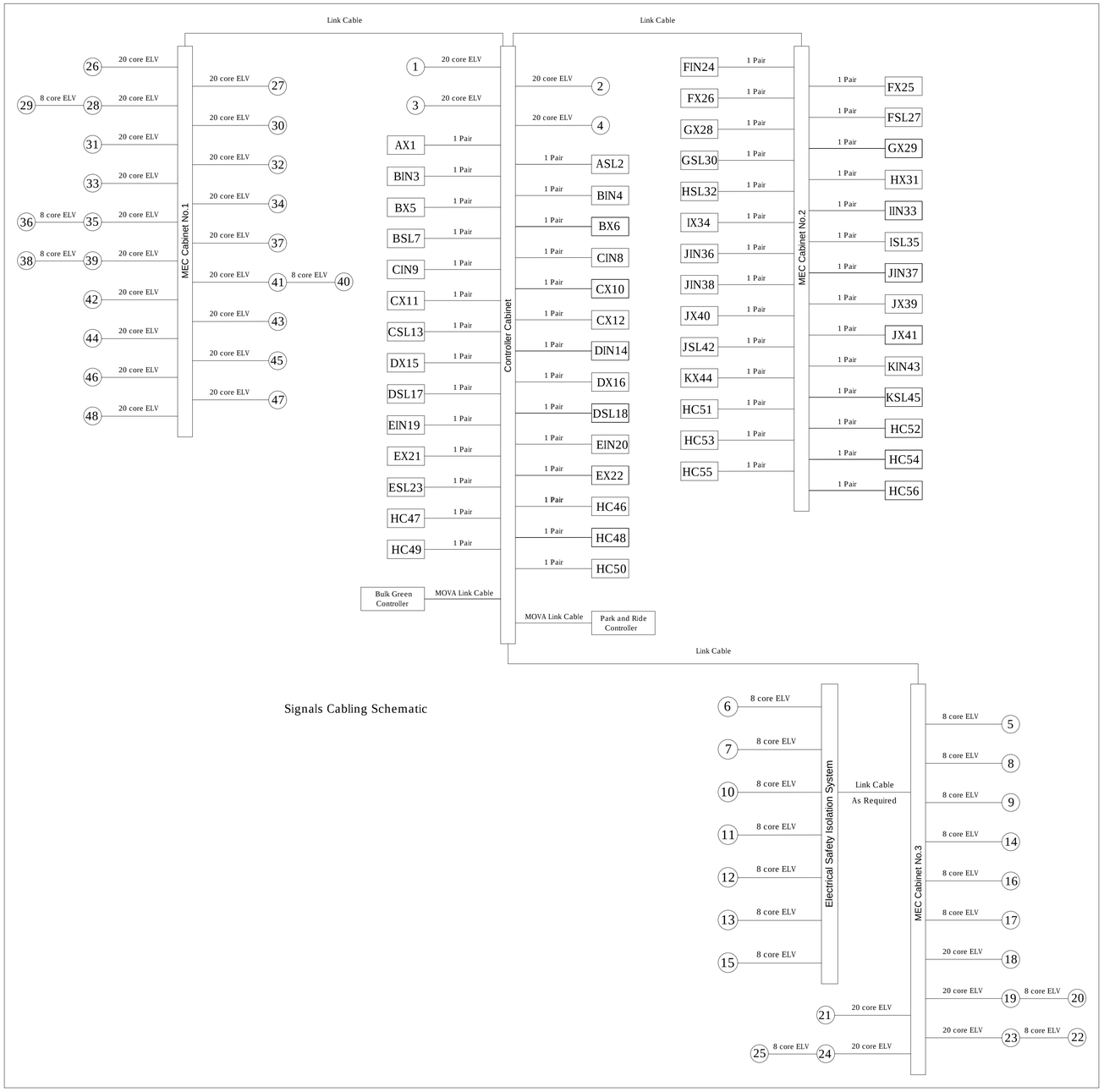

Signals Cabling Schematic

Legend

Signals Equipment

- Traffic signals controller cabinet
- MEC termination cabinet
- E — Electrical service box / mains electricity feeder pillar for dedicated mains electrical supply to traffic signals only
- BT — BT Terminal Interface Pillar
- Traffic signals pole
  Standard length signals pole, 4m long
- Traffic signals pole, stub pole, 2m long
- 3-aspect R/A/G signals head - primary hoods
- 3-aspect R/A/G signals head - secondary hoods
- Green arrow Left Turn / Ahead Only / Right Turn
- Regulatory sign (Box sign)
- C — Toucan RM/GM near-side indicator and push button demand unit (combined)
- Pedestrian push button demand unit
- Pedestrian tactile rotating cone
- Pedestrian on-crossing detector
- PE — Photo-electric cell (solar cell)
- 1 — Traffic signals pole reference No.
- 1 — Aluminum passively safe traffic signal pole
- 1 — Standard galvanized traffic signal pole type

Other Equipment

- DIC1 — Traffic signals cable drawpit Type 1
  900mm x 600mm clear opening
- DIC2 — Traffic signals cable drawpit Type 2
  600mm x 600mm clear opening
- DIC3 — Traffic signals cable drawpit Type 3
  450mm x 450mm clear opening
- PJB1 — Traffic signals pavement jointing box
  450mm x 300mm clear opening
- 1 — Traffic signals duct 100mm Dia, orange in colour, non-ribbed
- Traffic signals pole foundation / retention socket
  "NAL" Type or equivalent
- Vehicle detector loop
- Anti-skid surface dressing
- Tactile paving (400mm x 400mm slabs)

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Issue 2	06/06/2016	Please see Traffic Signals Drawing Register	K.J.W.	J.A.T.

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\\MANCHESTER32\JOBS\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\JUNCTION MITIGATION INFORMATION (FOR DESIGN)\J10 & J29\A3046.DWG



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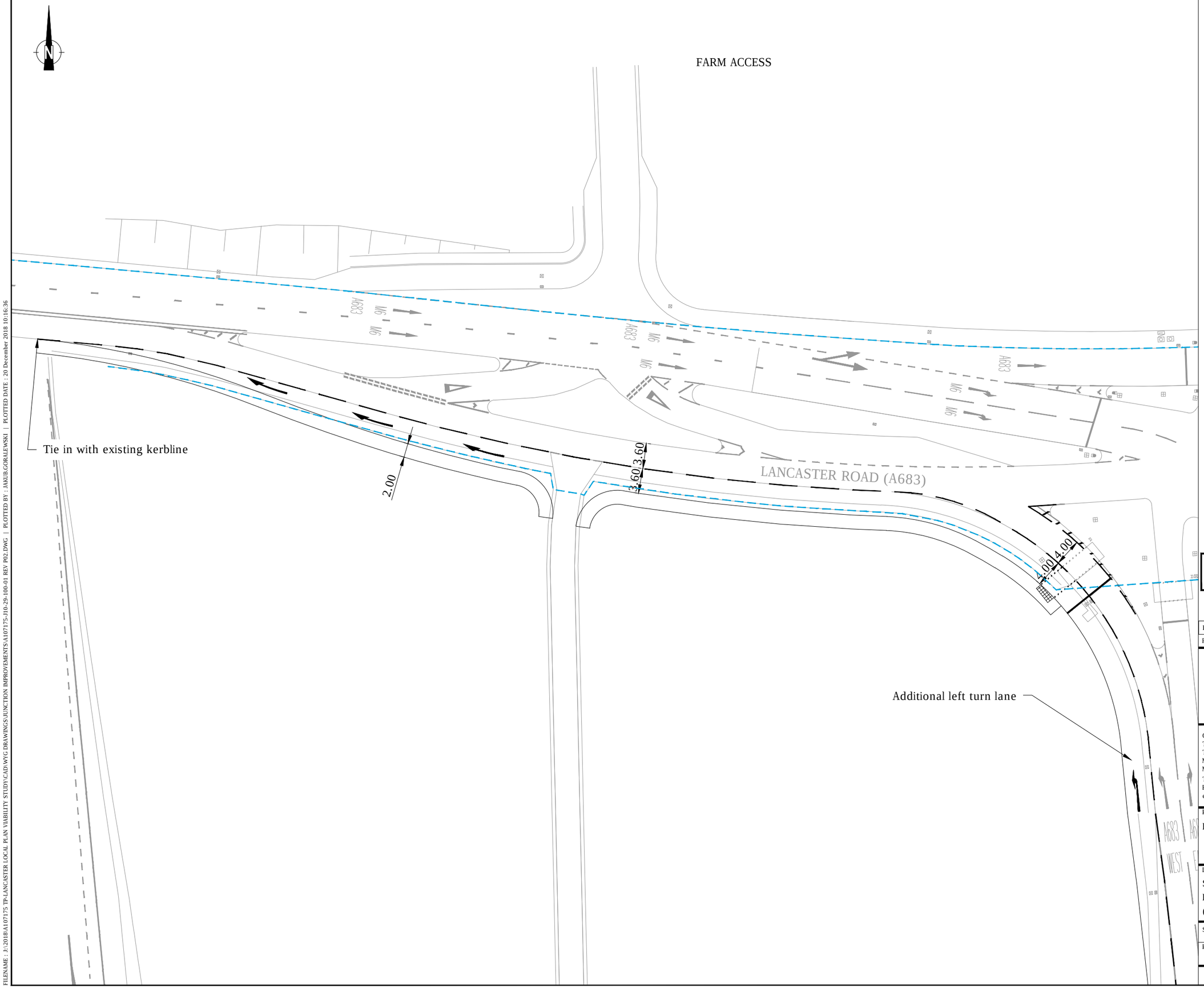

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Key:

Indicative line of highway boundary to be confirmed.

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

LANCASTER CITY COUNCIL
Promoting City, Coast & Countryside

QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
LANCASTER ROAD (A683) J34 OFF THE M6
(J10/29) OPTION B

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J010/29-100-02	P01

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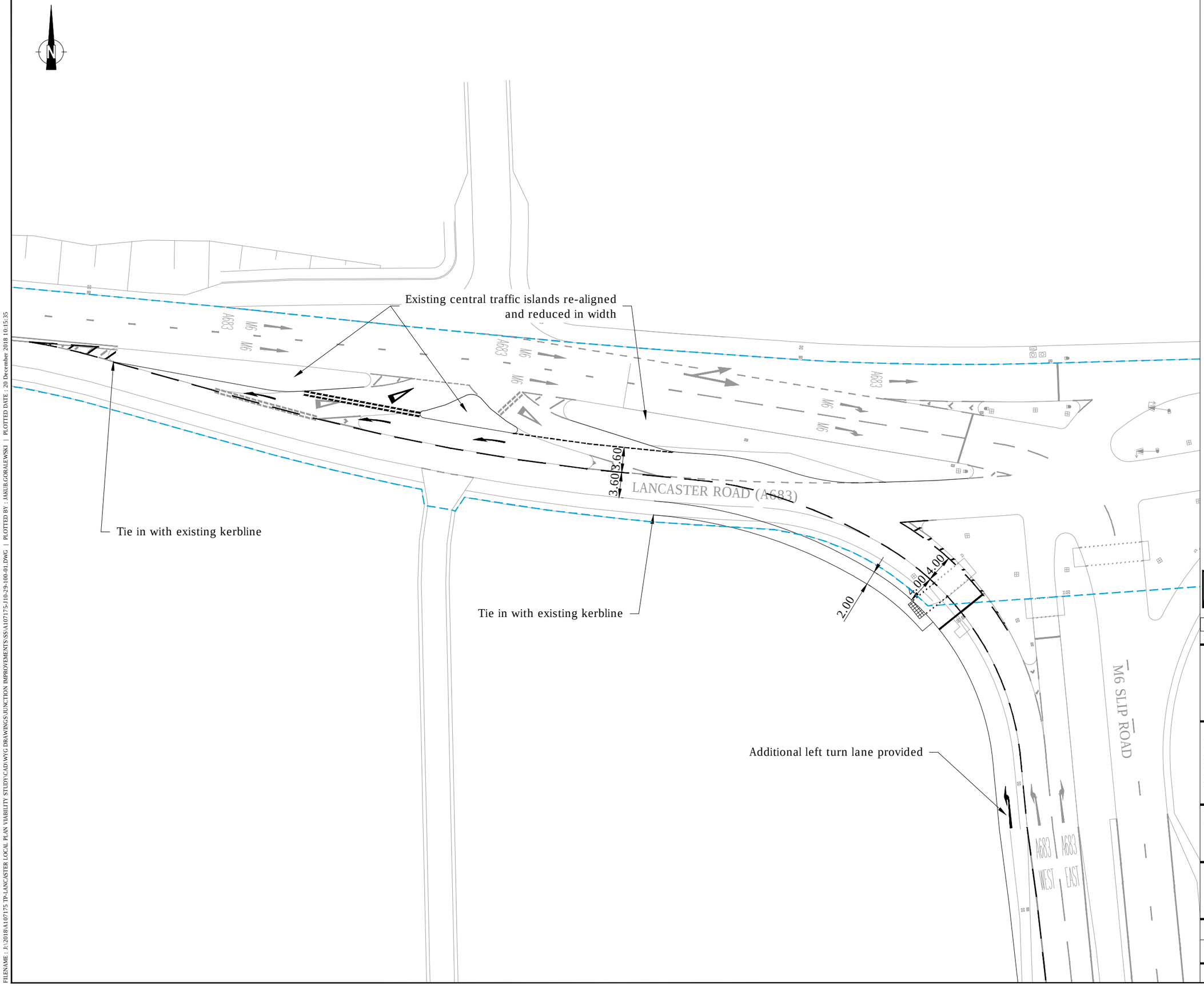
FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\A107175-J10-29-100-01 REV P02.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 20 December 2018 10:16:36



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QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
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M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
J34 OFF THE M6 (EASTERN JUNCTION)
(J10/29) OPTION A

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
1:500	JG	NOV 2018	JM	NOV 2018	LB	NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J010/29-100-01	P01

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FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\SS\A107175-J10-29-100-01.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 20 December 2018 10:15:35



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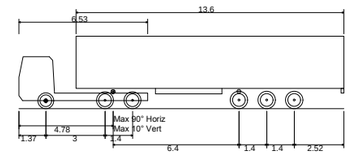
VEHICLE PROFILE



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

PRELIMINARY ISSUE

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VEHICLE TRACKING- LANCASTER RD (A683)
J34 OFF THE M6, (J10/29) OPTION A

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J010/29-01-TR001	P01

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FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD WYG DRAWINGS\JUNCTION IMPROVEMENTS\TRACKING\A107175-J10-29-100-02 TR001.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 20 December 2018 10:12:17



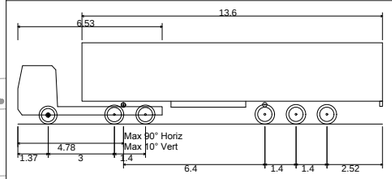
DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND REPORT ANY OMISSIONS OR ERRORS

1. This drawing should be read in relation to the subject of the title only. Other information shown on the drawing is to be considered indicative only. Reference should be made to appropriate drawing series/specifications for other information.

3. This drawing is based on Ordnance Survey. WYG will not be responsible for any discrepancies and the drawing should be drawn on Topographical Survey.

2. All dimensions are in metres unless specified otherwise.

VEHICLE PROFILE



Max Legal Length (UK) Articulated Vehicle (16.5m)	
Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

PRELIMINARY ISSUE

REV	DESCRIPTION	BY	CHK	APP	DATE
P01	INITIAL ISSUE	JG	RH	MS	NOV 2018

LANCASTER CITY COUNCIL
Promoting City, Coast & Countryside

QUAY WEST at MediaCity UK
TRAFFORD WHARF ROAD
TRAFFORD PARK
MANCHESTER
M17 1HH
TEL: +44 (0)161 872 3223
FAX: +44 (0)161 872 3193
e-mail: manchester@wyg.com

Project:
LANCASTER LOCAL PLAN TRANSPORT STUDY

Drawing Title:
SCHEMATIC POTENTIAL JUNCTION IMPROVEMENTS
VEHICLE TRACKING- LANCASTER RD (A683)
J34 OFF THE M6, (J10/29) OPTION B

Scale @ A3	Drawn Date	Checked Date	Approved Date
1:500	JG NOV 2018	JM NOV 2018	LB NOV 2018

Project No.	Office	Type	Drawing No.	Revision
A107175	27	C	J010/29-02-TR001	P01

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FILENAME : J:\2018\A107175 TP-LANCASTER LOCAL PLAN VIABILITY STUDY\CAD\WYG DRAWINGS\JUNCTION IMPROVEMENTS\TRACKING\A107175-J10_29-TR001.DWG | PLOTTED BY : JAKUB.GORALEWSKI | PLOTTED DATE : 20 December 2018 10:17:00

Appendices

Appendix A – Existing and Mitigated Junction Capacity Assessment Results Summary

LANCASTER LOCAL PLAN TRANSPORT ASSESSMENT- JUNCTION CAPACITY ASSESSMENT RESULT SUMMARY

RFC/DOS Threshold (Where one or more arms are operating at)	Level of Performance	Severity Colour Code
< 0.85 for non-signalised or <0.9 for signalised	Operating Satisfactory	Green
0.85/0.9 – 1.00	Approaching Capacity	Amber
1.0 – 1.25	Over Capacity	Red
>=1.25	Significantly Over Capacity	Purple

Jct No.	Location	Current Junction Type	Area	Survey Date	Junction Performance									
					Existing Flows 2017/2018		2023 Flows				2033 Flows			
					AM	PM	AM		PM		AM		PM	
							DM	DS	DM	DS	DM	DS	DM	DS
2	A6 (Main Rd) / Stoney Ln / Salford Rd **(Existing Layout)**	Signals	A6 Corridor	Tues 08/05/18	101.8%	102.1%	118.7%	129.8%	113.6%	129.9%	133.5%	226.1%	128.2%	203.3%
				Tues 16/10/18	99.9%	106.1%	122.6%	130.4%	123.2%	133.2%	130.1%	220.8%	158.1%	218.0%
	A6 (Main Rd) / Stoney Ln / Salford Rd **(With Mitigation Option 1 - Right Turn Flare on A6 Arms)**	Signals	A6 Corridor	Tues 08/05/18	76.3%	77.1%	85.9%	96.1%	83.9%	100.0%	91.7%	131.2%	89.5%	141.4%
				Tues 16/10/18	74.0%	76.3%	84.8%	93.9%	85.8%	102.9%	89.8%	133.3%	93.0%	143.8%
	A6 (Main Rd) / Stoney Ln / Salford Rd **(With Mitigation Option 2 - Right Turn Pocket on A6 Arms)**	Signals	A6 Corridor	Tues 08/05/18	74.0%	77.3%	85.0%	95.4%	86.9%	103.3%	90.1%	134.1%	94.2%	146.2%
				Tues 16/10/18	76.3%	78.1%	85.9%	96.1%	84.2%	101.7%	92.0%	131.5%	91.0%	143.8%
3	A6 Preston Lancaster Rd/Hazelrigg Ln **(Previous Proposed Jun.)**	Signals	A6 Corridor	Tues 28/11/17	56.3%	54.6%	63.9%	79.1%	64.3%	87.5%	69.2%	111.6%	68.8%	108.5%
	A6 Preston Lancaster Rd/Hazelrigg Ln **(Latest Proposed Jun.)**	Signals	A6 Corridor	Tues 28/11/17	56.3%	54.6%	63.9%	74.5%	64.3%	76.3%	69.2%	96.0%	68.8%	97.4%
4	A6 Scotforth Rd / Hala Rd / Ashford Rd **(Existing Layout)**	Signals	A6 Corridor	Thurs 09/02/17	60.5%	75.4%	66.8%	75.7%	88.8%	102.7%	72.9%	95.4%	96.4%	124.7%
				Tues 16/10/18	60.4%	70.5%	69.1%	81.4%	84.1%	97.5%	74.3%	100.0%	91.2%	118.2%
	A6 Scotforth Rd / Hala Rd / Ashford Rd **(With Mitigation)**	Signals	A6 Corridor	Thurs 09/02/17	60.1%	74.7%	66.7%	75.7%	88.5%	101.9%	72.4%	94.7%	95.7%	123.3%
				Tues 16/10/18	60.4%	70.1%	69.1%	81.4%	83.7%	96.9%	74.3%	100.0%	90.7%	117.0%
5	A6 (Greaves Rd)/Ashton Rd (The Pointer) **(Existing Layout)**	Roundabout	Lancaster	Thurs 09/02/17	1.010	0.980	1.190	1.300	1.290	1.520	1.310	1.660	1.470	1.880
				Tues 16/10/18	0.810	0.940	0.960	1.050	1.050	1.080	1.100	1.350	1.150	1.310
	A6 (Greaves Rd)/Ashton Rd (The Pointer) **(With Mitigation)**	Signal	Lancaster	Thurs 09/02/17	83.4%	78.0%	92.2%	92.7%	85.5%	87.6%	100.1%	100.6%	92.3%	96.5%
				Tues 16/10/18	88.5%	90.0%	96.2%	98.1%	98.5%	100.4%	104.5%	108.7%	106.0%	110.2%
16	A6 Lancaster Rd/Scotland Rd / Market St **(Existing Layout)**	Signals	Carnforth	Thurs 30/11/17	75.4%	82.4%	82.3%	84.8%	94.6%	96.3%	93.2%	91.7%	107.2%	105.6%
	A6 Lancaster Rd/Scotland Rd / Market St **(With Mitigation)**	Signals	Carnforth	Thurs 30/11/17	71.0%	74.9%	76.0%	77.6%	82.7%	83.9%	82.8%	91.4%	91.6%	93.2%
17	Kellet Rd / Back Ln **(Existing Layout)**	Priority	Carnforth	Tues 08/05/18	0.390	0.170	0.430	0.540	0.180	0.230	0.470	1.090	0.190	0.460
	Kellet Rd / Back Ln **(With mitigation)**	Priority	Carnforth	Tues 08/05/18	0.370	0.170	0.400	0.500	0.180	0.230	0.440	0.970	0.190	0.450
18	Kellet Rd / A601M **(Existing Layout)**	Priority	Carnforth	Tues 21/11/17	0.610	0.670	0.770	0.830	0.790	0.900	0.870	1.110	0.870	1.310
	Kellet Rd / A601M **(With Mitigation Option 1 - Change Priority)**	Priority	Carnforth	Tues 21/11/17	0.250	0.180	0.350	0.380	0.230	0.250	0.400	0.510	0.260	0.340
	Kellet Rd / A601M **(With Mitigation Option 2 - Sigalised)**	Signal	Carnforth	Tues 21/11/17	39.9%	41.4%	51.3%	55.7%	47.9%	52.5%	56.8%	75.8%	51.9%	75.8%
10	Caton Rd / Junction 34 **(Existing Layout)**	Signals	Caton Rd Corridor	Tues 16/10/18	70.0%	81.0%	80.0%	110.0%	100.0%	119.0%	97.0%	110.0%	100.0%	115.0%
29	A683 / M6 J34 **(Existing Layout)**	Signals	Caton Rd Corridor	Tues 16/10/18	59.0%	61.0%	71.0%	83.0%	107.0%	108.0%	64.0%	141.0%	120.0%	153.0%
10	Caton Rd / Junction 34 **(With mitigation)**	Signals	Caton Rd Corridor	Tues 16/10/18	70.0%	81.0%	80.0%	110.0%	100.0%	119.0%	97.0%	110.0%	100.0%	115.0%
29	A683 / M6 J34 **(With mitigation)**	Signals	Caton Rd Corridor	Tues 16/10/18	59.0%	61.0%	71.0%	83.0%	107.0%	100.0%	64.0%	141.0%	120.0%	153.0%

J2: A6 (Main Road) / Stoney Ln / Salford Rd Signal (Existing Layout) Survey Date: Tuesday 08/05/2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year						2018 Queue Survey			
	AM Peak			PM Peak			AM Peak	PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)				
A6 Main Road (N)	98.0%	69.4	20	91.4%	32.6	18	15	10	5	8
Stoney Lane	72.6%	89.0	5	47.5%	76.2	2	4	2	1	1
A6 Main Road (S)	101.8%	111.1	44	102.1%	122.7	43	17	10	28	33
Salford Road	91.1%	132.2	8	94.3%	175.3	8	3	3	5	4
max	101.8%			102.1%						

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	118.7%	355.1	86	129.8%	501.3	128	**146**	**42**	113.6%	300.6	103	129.9%	557.4	187	**257**	**84**
Stoney Lane	116.0%	380.9	21	118.8%	395.7	34	**15**	**13**	94.8%	175.0	8	90.2%	110.8	10	**-64**	**2**
A6 Main Road (S)	102.4%	117.0	47	129.0%	484.6	127	**368**	**80**	102.2%	128.6	47	128.8%	542.3	130	**414**	**83**
Salford Road	96.4%	161.7	10	55.2%	55.7	5	**-106**	**-5**	95.2%	178.1	8	47.9%	57.3	4	**-121**	**-4**
max	118.7%			129.8%					113.6%			129.9%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	133.5%	544.9	128	116.4%	318.6	121	**-226**	**-7**	128.2%	523.9	167	119.2%	408.9	174	**-115**	**7**
Stoney Lane	84.3%	90.6	8	226.1%	1181.9	141	**1091**	**133**	113.8%	406.9	19	203.3%	1214.1	163	**807**	**145**
A6 Main Road (S)	126.3%	452.0	127	219.2%	1129.7	286	**678**	**159**	102.2%	129.6	48	201.3%	1175.4	274	**1046**	**226**
Salford Road	60.1%	58.1	6	62.9%	65.6	6	**7**	**1**	100.6%	220.8	10	50.4%	58.0	4	**-163**	**-6**
max	133.5%			226.1%					128.2%			203.3%				

J2: A6 (Main Road) / Stoney Ln / Salford Rd Signal (Existing Layout) Survey Date: Tuesday 16/10/2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year						2018 Queue Survey			
	AM Peak			PM Peak			AM Peak	PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)				
A6 Main Road (N)	98.7%	74.6	22	106.1%	173.1	65	13	19	9	46
Stoney Lane	83.4%	101.7	7	47.0%	70.8	3	4	2	2	1
A6 Main Road (S)	99.9%	91.4	35	105.6%	180.6	59	15	10	20	49
Salford Road	64.2%	71.3	5	71.0%	92.4	4	3	3	1	1
max	99.9%			106.1%						

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	122.6%	409.1	97	130.4%	508.3	131	**99**	**34**	123.2%	451.0	143	132.4%	588.3	206	**137**	**64**
Stoney Lane	121.0%	435.6	29	124.1%	460.2	44	**25**	**15**	104.0%	268.2	12	95.4%	161.7	14	**-107**	**2**
A6 Main Road (S)	96.4%	62.6	31	121.5%	393.6	101	**331**	**71**	104.7%	171.6	58	133.2%	606.1	157	**435**	**99**
Salford Road	68.3%	74.5	5	47.2%	53.1	4	**-21**	**-1**	83.0%	121.6	5	45.8%	61.2	4	**-60**	**-1**
max	122.6%			130.4%					123.2%			133.2%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	130.1%	505.7	122	114.7%	293.4	115	**-212**	**-7**	158.1%	867.9	270	119.2%	408.1	176	**-460**	**-94**
Stoney Lane	88.2%	94.3	10	220.8%	1159.8	152	**1066**	**142**	123.8%	541.7	27	218.0%	1291.6	178	**750**	**152**
A6 Main Road (S)	125.6%	444.0	118	216.5%	1118.1	269	**674**	**150**	94.0%	51.2	33	214.4%	1241.8	307	**1191**	**274**
Salford Road	49.0%	52.6	4	57.9%	61.4	5	**9**	**0**	86.0%	131.7	6	45.6%	57.8	3	**-74**	**-3**
max	130.1%			220.8%					158.1%			218.0%				

J2: A6 (Main Road) / Stoney Ln / Salford Rd Signal (with WYG mitigation - Right Turn Flare on A6 Arms) Survey Date: Tuesday 08/05/2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	62.2%	21.3	14	77.1%	25.1	21
Stoney Lane	64.9%	75.7	4	34.5%	62.1	2
A6 Main Road (S)	75.5%	25.7	20	66.1%	21.4	16
Salford Road	76.3%	83.4	6	71.5%	86.7	5
max	76.3%			77.1%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	71.3%	26.8	17	89.9%	45.9	26	**19**	**9**	83.9%	28.6	25	100.0%	82.2	47	**54**	**22**
Stoney Lane	85.9%	100.2	8	96.1%	124.9	14	**25**	**6**	78.0%	98.8	5	99.3%	170.4	13	**72**	**8**
A6 Main Road (S)	85.3%	34.9	25	95.0%	59.4	31	**25**	**7**	68.3%	21.6	17	75.4%	27.9	19	**6**	**3**
Salford Road	62.4%	62.1	5	46.7%	48.1	5	**-14**	**-1**	75.3%	92.4	5	51.5%	60.5	4	**-32**	**-1**
max	85.9%			96.1%					83.9%			100.0%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	76.7%	29.9	20	129.5%	490.3	167	**460**	**147**	89.5%	35.4	30	141.4%	616.9	227	**582**	**197**
Stoney Lane	89.7%	109.9	9	131.2%	535.9	68	**426**	**59**	89.1%	126.3	7	139.8%	627.9	87	**502**	**80**
A6 Main Road (S)	91.7%	45.0	30	106.0%	171.4	61	**126**	**31**	73.1%	24.1	19	95.4%	63.8	30	**40**	**12**
Salford Road	62.7%	60.7	6	43.1%	44.0	5	**-17**	**-1**	72.9%	85.2	5	33.7%	43.0	3	**-42**	**-2**
max	91.7%			131.2%					89.5%			141.4%				

J2: A6 (Main Road) / Stoney Ln / Salford Rd Signal (with WYG mitigation - Right Turn Flare on A6 Arms) Survey Date: Tuesday 16/10/2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	64.7%	23.2	15	76.3%	23.4	21
Stoney Lane	74.0%	79.5	6	49.6%	73.5	3
A6 Main Road (S)	73.5%	26.1	19	68.2%	20.8	17
Salford Road	56.4%	62.7	4	75.1%	101.2	4
max	74.0%			76.3%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	75.5%	30.5	19	93.9%	57.4	29	**27**	**11**	85.8%	30.3	27	101.9%	104.5	56	**74**	**29**
Stoney Lane	80.6%	77.7	8	93.9%	103.8	14	**26**	**6**	85.5%	117.1	6	102.9%	204.5	16	**87**	**9**
A6 Main Road (S)	84.8%	36.7	24	93.2%	55.1	29	**18**	**5**	72.9%	23.3	19	80.2%	30.5	22	**7**	**3**
Salford Road	46.2%	51.7	4	37.1%	43.8	4	**-8**	**0**	65.7%	80.9	4	44.9%	58.2	3	**-23**	**-1**
max	84.8%			93.9%					85.8%			102.9%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	80.0%	33.1	21	133.3%	533.6	181	**501**	**160**	93.0%	42.9	33	143.8%	640.1	238	**597**	**205**
Stoney Lane	88.2%	94.3	10	129.0%	508.4	71	**414**	**61**	90.6%	128.5	8	140.6%	636.1	91	**508**	**83**
A6 Main Road (S)	89.8%	42.9	27	102.2%	120.9	47	**78**	**19**	79.2%	27.7	22	101.5%	111.0	45	**83**	**24**
Salford Road	48.9%	52.5	4	35.9%	41.6	4	**-11**	**-1**	58.8%	70.3	4	29.0%	42.1	3	**-28**	**-1**
max	89.8%			133.3%					93.0%			143.8%				

J2: A6 (Main Road) / Stoney Ln / Salford Rd Signal (with WYG mitigation - Right Turn Pocket on A6 Arms) Survey Date: Tuesday 08/05/2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	63.1%	21.7	14	78.1%	26.1	21
Stoney Lane	64.9%	75.7	4	34.5%	62.1	2
A6 Main Road (S)	75.7%	25.9	20	66.4%	21.7	16
Salford Road	76.3%	83.4	6	71.5%	86.7	5
max	76.3%			78.1%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	72.4%	27.5	18	91.3%	49.1	27	**22**	**10**	83.8%	28.4	26	101.7%	103.9	53	**76**	**27**
Stoney Lane	85.9%	100.2	8	96.1%	124.9	14	**25**	**6**	84.2%	118.2	6	99.3%	170.4	13	**52**	**7**
A6 Main Road (S)	85.5%	35.3	25	95.3%	60.9	32	**26**	**7**	67.7%	21.0	16	75.6%	28.3	19	**7**	**3**
Salford Road	62.4%	62.1	5	46.7%	48.1	5	**-14**	**-1**	83.6%	115.6	6	51.5%	60.5	4	**-55**	**-2**
max	85.9%			96.1%					84.2%			101.7%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	77.8%	30.8	20	131.5%	513.9	172	**483**	**152**	91.0%	38.5	31	143.8%	639.6	232	**601**	**201**
Stoney Lane	89.7%	109.9	9	131.2%	535.9	68	**426**	**59**	89.1%	126.3	7	139.8%	627.9	87	**502**	**80**
A6 Main Road (S)	92.0%	45.7	30	106.3%	177.0	61	**131**	**31**	74.2%	24.7	19	96.0%	66.8	31	**42**	**12**
Salford Road	62.7%	60.7	6	43.1%	44.0	5	**-17**	**-1**	72.9%	85.2	5	33.7%	43.0	3	**-42**	**-2**
max	92.0%			131.5%					91.0%			143.8%				

J2: A6 (Main Road) / Stoney Ln / Salford Rd Signal (with WYG mitigation - Right Turn Pocket on A6 Arms) Survey Date: Tuesday 16/10/2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	65.5%	23.6	15	77.3%	24.2	21
Stoney Lane	74.0%	79.5	6	49.6%	73.5	3
A6 Main Road (S)	73.8%	26.3	19	68.4%	21.1	17
Salford Road	56.4%	62.7	4	75.1%	101.2	4
max	74.0%			77.3%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	75.2%	29.9	19	95.4%	63.3	31	**33**	**12**	86.9%	31.8	28	103.3%	124.0	59	**92**	**32**
Stoney Lane	85.0%	88.3	9	93.9%	103.8	14	**16**	**6**	85.5%	117.1	6	102.9%	204.5	16	**87**	**9**
A6 Main Road (S)	83.5%	34.9	23	93.5%	56.2	29	**21**	**6**	73.7%	23.8	19	80.5%	30.8	22	**7**	**3**
Salford Road	48.2%	53.6	4	37.1%	43.8	4	**-10**	**0**	65.7%	80.9	4	44.9%	58.2	3	**-23**	**-1**
max	85.0%			95.4%					86.9%			103.3%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Main Road (N)	81.1%	34.1	21	132.2%	521.2	176	**487**	**155**	94.2%	46.8	35	146.2%	661.9	244	**615**	**209**
Stoney Lane	88.2%	94.3	10	134.1%	566.8	79	**473**	**69**	90.6%	128.5	8	140.6%	636.1	91	**508**	**83**
A6 Main Road (S)	90.1%	43.6	27	100.5%	99.0	41	**55**	**14**	81.4%	29.2	22	102.0%	116.7	45	**88**	**23**
Salford Road	48.9%	52.5	4	37.2%	42.8	4	**-10**	**-1**	58.8%	70.3	4	29.0%	42.1	3	**-28**	**-1**
max	90.1%			134.1%					94.2%			146.2%				

J3: A6 Preston Lancaster Rd / Hazelrigg Lane Signal

Table 1: Surveyed Year Capacity Assessment Results

Approach	2017 Surveyed Year						2017 Queue Survey			
	AM Peak			PM Peak			AM Peak	PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)				
A6 Preston Lancaster Rd (SB)	53.1%	17.8	12	54.4%	19.6	12	8	7	4	5
Hazelrigg Ln	32.7%	65.7	2	54.6%	47.7	6	2	5	0	2
A6 Preston Lancaster Rd (NB)	56.3%	17.8	10	51.9%	21.6	12	3	4	8	8
max	56.3%			54.6%						

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Preston Lancaster Rd (SB)	57.7%	18.7	14	79.1%	34.5	22	**16**	**8**	64.3%	22.2	15	87.0%	40.3	26	**18**	**10**
Hazelrigg Ln	38.2%	63.6	2	75.1%	83.1	5	**20**	**3**	62.4%	48.7	8	87.5%	77.8	12	**29**	**4**
A6 Preston Lancaster Rd (NB)	63.9%	19.0	13	74.4%	21.6	17	**3**	**4**	61.1%	24.3	15	63.2%	22.0	16	**-2**	**1**
Potential Access to SG1 Left Ahead	n/a	n/a	n/a	11.6%	69.5	1	**n/a**	**n/a**	n/a	n/a	n/a	2.0%	48.2	0	**n/a**	**n/a**
Potential Access to SG1 Right	n/a	n/a	n/a	21.7%	95.7	1	**n/a**	**n/a**	n/a	n/a	n/a	7.9%	78.7	0	**n/a**	**n/a**
max	63.9%			79.1%					64.3%			87.5%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Preston Lancaster Rd (SB)	62.2%	19.8	16	111.6%	255.4	95	**236**	**79**	68.8%	23.6	17	108.5%	207.2	83	**184**	**66**
Hazelrigg Ln	41.6%	64.2	2	105.2%	223.5	17	**159**	**15**	67.8%	50.7	9	107.1%	218.1	36	**167**	**28**
A6 Preston Lancaster Rd (NB)	69.2%	20.0	16	102.0%	96.1	54	**76**	**38**	67.2%	25.9	18	86.7%	32.7	32	**7**	**13**
Potential Access to SG1 Left Ahead	n/a	n/a	n/a	54.3%	68.4	4	**n/a**	**n/a**	n/a	n/a	n/a	15.7%	48.7	2	**n/a**	**n/a**
Potential Access to SG1 Right	n/a	n/a	n/a	90.7%	163.6	7	**n/a**	**n/a**	n/a	n/a	n/a	52.5%	97.3	2	**n/a**	**n/a**
max	69.2%			111.6%					68.8%			108.5%				

J3: A6 Preston Lancaster Rd / Hazelrigg Lane Signal (Latest Proposed Junction)

Table 1: Surveyed Year Capacity Assessment Results

Approach	2017 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 Preston Lancaster Rd (SB)	53.1%	17.8	12	54.4%	19.6	12
Hazelrigg Ln	32.7%	65.7	2	54.6%	47.7	6
A6 Preston Lancaster Rd (NB)	56.3%	17.8	10	51.9%	21.6	12
max	56.3%			54.6%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Preston Lancaster Rd (SB)	57.7%	18.7	14	63.1%	19.2	16	**1**	**3**	64.3%	22.2	15	76.1%	26.3	22	**4**	**7**
Hazelrigg Ln	38.2%	63.6	2	72.5%	79.7	5	**16**	**3**	62.4%	48.7	8	76.3%	58.2	10	**10**	**2**
A6 Preston Lancaster Rd (NB)	63.9%	19.0	13	74.5%	21.9	18	**3**	**5**	61.1%	24.3	15	71.0%	26.7	19	**2**	**3**
Potential Access to SG1 Left Ahead	n/a	n/a	n/a	11.5%	69.4	1	**n/a**	**n/a**	n/a	n/a	n/a	1.6%	43.8	0	**n/a**	**n/a**
Potential Access to SG1 Right	n/a	n/a	n/a	21.7%	95.7	1	**n/a**	**n/a**	n/a	n/a	n/a	4.9%	64.5	0	**n/a**	**n/a**
max	63.9%			74.5%					64.3%			76.3%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 Preston Lancaster Rd (SB)	62.2%	19.8	16	91.6%	42.0	35	**22**	**19**	68.8%	23.6	17	92.0%	43.5	35	**20**	**17**
Hazelrigg Ln	41.6%	64.2	2	96.0%	134.7	11	**71**	**9**	67.8%	50.7	9	97.4%	106.0	20	**55**	**12**
A6 Preston Lancaster Rd (NB)	69.2%	20.0	16	95.1%	46.7	42	**27**	**26**	67.2%	25.9	18	97.0%	59.9	43	**34**	**25**
Potential Access to SG1 Left Ahead	n/a	n/a	n/a	50.3%	64.7	4	**n/a**	**n/a**	n/a	n/a	n/a	13.7%	45.2	1	**n/a**	**n/a**
Potential Access to SG1 Right	n/a	n/a	n/a	79.4%	115.3	5	**n/a**	**n/a**	n/a	n/a	n/a	50.4%	93.2	2	**n/a**	**n/a**
max	69.2%			96.0%					68.8%			97.4%				

J4: A6 Scotforth Rd / Hala Rd / Ashford Rd Signal (Existing Layout) Survey Date: Thursday 09/02/2017

Table 1: Surveyed Year Capacity Assessment Results

Approach	2017 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	52.1%	12.9	10	56.7%	13.6	11
Hala Rd	60.0%	48.0	4	72.0%	60.7	5
A6 (S)	60.5%	14.3	12	75.4%	18.4	18
Ashton Rd	42.0%	42.5	3	60.5%	53.0	4
max	60.5%			75.4%		

2017 Queue Survey			
AM Peak	PM Peak		
7	6	3	5
3	3	2	2
6	10	6	9
2	2		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	60.5%	14.0	12	75.7%	18.0	20	**4**	**8**	62.3%	14.4	14	66.9%	15.4	16	**1**	**2**
Hala Rd	66.7%	52.8	5	75.3%	64.8	6	**12**	**1**	88.5%	98.2	7	98.5%	165.5	10	**67**	**3**
A6 (S)	66.8%	15.5	14	71.7%	17.0	17	**2**	**3**	88.8%	26.5	29	102.7%	102.9	69	**76**	**40**
Ashton Rd	47.7%	45.2	3	65.3%	57.9	4	**13**	**1**	75.7%	70.9	5	90.4%	115.7	7	**45**	**3**
max	66.8%			75.7%					88.8%			102.7%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	64.9%	15.0	14	90.5%	30.1	27	**15**	**13**	66.7%	15.9	16	78.9%	18.9	23	**3**	**7**
Hala Rd	72.0%	56.7	5	61.7%	47.0	5	**-10**	**-1**	95.6%	131.9	9	103.6%	217.4	13	**86**	**4**
A6 (S)	72.9%	17.2	17	95.4%	42.8	32	**26**	**16**	96.4%	44.0	41	124.7%	445.3	225	**401**	**185**
Ashton Rd	52.7%	47.1	3	93.6%	114.3	12	**67**	**8**	81.2%	79.4	6	118.4%	418.8	27	**339**	**21**
max	72.9%			95.4%					96.4%			124.7%				

J4: A6 Scotforth Rd / Hala Rd / Ashford Rd Signal (Existing Layout) Survey Date: Tuesday 16/10/2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	60.4%	13.6	13	64.0%	15.4	14
Hala Rd	58.7%	49.5	4	67.4%	55.0	5
A6 (S)	51.1%	12.3	9	70.5%	17.4	16
Ashton Rd	49.4%	47.2	3	52.6%	46.9	3
max	60.4%			70.5%		

2018 Queue Survey			
AM Peak	PM Peak		
10	11	3	3
2	5	2	0
6	11	3	4
2	3		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	69.1%	15.3	16	81.4%	19.0	25	**4**	**9**	69.7%	16.4	17	73.7%	17.3	19	**1**	**3**
Hala Rd	66.4%	54.9	4	80.1%	77.9	6	**23**	**1**	83.1%	78.9	6	96.1%	139.7	9	**61**	**3**
A6 (S)	56.7%	13.0	11	60.0%	13.0	13	**0**	**2**	84.1%	22.8	24	97.5%	49.2	44	**26**	**20**
Ashton Rd	55.9%	50.8	3	78.9%	78.5	5	**28**	**2**	65.0%	56.4	4	81.5%	82.1	5	**26**	**1**
max	69.1%			81.4%					84.1%			97.5%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	74.3%	16.8	18	100.0%	70.8	45	**54**	**27**	75.1%	18.3	19	85.1%	22.6	27	**4**	**9**
Hala Rd	71.4%	58.9	5	58.7%	47.1	5	**-12**	**0**	88.6%	93.9	8	106.1%	251.2	15	**157**	**8**
A6 (S)	62.1%	14.0	13	85.0%	24.1	22	**10**	**9**	91.2%	30.2	30	118.2%	354.1	178	**324**	**148**
Ashton Rd	61.0%	53.6	4	98.9%	154.1	15	**101**	**11**	69.9%	60.7	5	113.9%	356.1	23	**295**	**18**
max	74.3%			100.0%					91.2%			118.2%				

J4: A6 Scotforth Rd / Hala Rd / Ashford Rd Signal (with Mitigation)

Note: The ped stage is modelled as once in every other cycle, which is based on the survey video on Tuesday 16 Oct 2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2017 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	52.1%	12.8	10	56.7%	13.6	11
Hala Rd	60.0%	48.1	4	72.0%	60.8	5
A6 (S)	60.1%	14.2	12	74.7%	18.1	18
Ashton Rd	41.6%	42.3	3	60.0%	52.6	4
max	60.1%			74.7%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	60.5%	14.0	12	75.7%	18.0	20	**4**	**8**	62.3%	14.4	14	66.9%	15.4	16	**1**	**2**
Hala Rd	66.7%	52.8	5	75.3%	64.8	6	**12**	**1**	88.5%	98.2	7	98.5%	165.5	10	**67**	**3**
A6 (S)	66.4%	15.3	14	71.2%	16.8	17	**2**	**3**	88.2%	25.7	29	101.9%	91.7	66	**66**	**37**
Ashton Rd	47.4%	45.0	3	65.0%	57.6	4	**13**	**1**	74.7%	69.3	5	89.3%	110.0	7	**41**	**3**
max	66.7%			75.7%					88.5%			101.9%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	64.9%	15.0	14	90.5%	30.0	27	**15**	**13**	67.3%	16.0	16	78.9%	18.9	23	**3**	**7**
Hala Rd	72.0%	56.7	5	61.7%	47.0	5	**-10**	**-1**	95.6%	132.0	9	103.6%	217.4	13	**85**	**4**
A6 (S)	72.4%	17.0	17	94.7%	39.9	32	**23**	**15**	95.7%	41.0	39	123.3%	425.8	217	**385**	**178**
Ashton Rd	52.4%	46.9	3	93.4%	113.3	12	**66**	**8**	80.1%	77.0	6	117.3%	402.9	26	**326**	**20**
max	72.4%			94.7%					95.7%			123.3%				

J4: A6 Scotforth Rd / Hala Rd / Ashford Rd Signal (with Mitigation)

Note: The ped stage is modelled as once in every other cycle, which is based on the survey video on Tuesday 16 Oct 2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	60.4%	13.6	13	64.0%	15.4	14
Hala Rd	58.7%	49.5	4	67.4%	55.0	5
A6 (S)	50.8%	12.2	9	70.1%	17.3	16
Ashton Rd	49.0%	47.0	3	51.9%	46.5	3
max	60.4%			70.1%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	69.1%	15.2	16	81.4%	19.0	25	**4**	**9**	69.7%	16.4	17	73.7%	17.3	19	**1**	**3**
Hala Rd	66.4%	54.9	4	80.1%	77.9	6	**23**	**1**	83.1%	78.9	6	96.1%	139.7	9	**61**	**3**
A6 (S)	56.4%	12.9	11	59.5%	12.9	13	**0**	**2**	83.7%	22.5	24	96.9%	45.8	42	**23**	**18**
Ashton Rd	55.5%	50.5	3	78.9%	78.6	5	**28**	**2**	64.1%	55.6	4	80.5%	79.7	5	**24**	**1**
max	69.1%			81.4%					83.7%			96.9%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	74.3%	16.8	18	100.0%	70.8	45	**54**	**27**	75.1%	18.3	19	85.1%	22.6	27	**4**	**9**
Hala Rd	71.4%	58.9	5	58.7%	47.1	5	**-12**	**0**	88.7%	94.3	8	106.1%	251.2	15	**157**	**8**
A6 (S)	61.7%	13.9	13	84.3%	23.5	22	**10**	**9**	90.7%	29.4	30	117.0%	334.7	170	**305**	**140**
Ashton Rd	60.5%	53.2	4	98.8%	153.2	15	**100**	**11**	69.0%	59.6	5	112.9%	340.6	22	**281**	**17**
max	74.3%			100.0%					90.7%			117.0%				

J5: A6 (Greaves Rd) / Ashton Rd (The Pointer) Roundabout (Existing Layout)

Survey Date: Thursday 09/02/2017

Table 1: Surveyed Year Capacity Assessment Results

Link Description	2017 Surveyed Year						2017 Queue Survey			
	AM Peak			PM Peak			AM Peak	PM Peak		
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)				
A6 (N)	0.770	11.4	3	0.810	15.9	4	1	1	2	3
Bowerham Road	0.950	65.9	11	0.810	29.3	4	11	4	0	0
A6 (S)	1.010	112.4	19	0.980	88.2	14	19	14	0	1
Ashton Road	0.630	9.6	2	0.890	41.1	7	2	7	-1	-1
Unnamed Rd	0.030	16.8	0	0.030	16.9	0	0	0	0	0
Average Jun. Delay (s/pcu)		42.88			39.89					
max	1.010			0.980						

Table 2: 2023 Assessment Years Capacity Assessment Results

Link Description	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
A6 (N)	0.860	18.7	6	0.860	19.2	6	**1**	**0**	0.890	26.6	8	0.920	33.5	10	**7**	**2**
Bowerham Road	1.120	220.2	48	1.170	278.2	62	**58**	**14**	0.950	70.0	11	0.990	96.2	16	**26**	**5**
A6 (S)	1.190	352.6	59	1.300	595.8	97	**243**	**38**	1.290	482.4	89	1.520	1034.7	185	**552**	**96**
Ashton Road	0.680	11.3	2	0.730	13.3	3	**2**	**1**	1.020	114.0	23	1.040	139.7	30	**26**	**7**
Unnamed Rd	0.040	18.3	0	0.040	20.3	0	**2**	**0**	0.040	19.3	0	0.040	19.3	0	**0**	**0**
Average Jun. Delay (s/pcu)		127.1			192.63		66			161.04			319.8		159	
max	1.190			1.300					1.290			1.520				

Table 3: 2033 Assessment Years Capacity Assessment Results

Link Description	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
A6 (N)	0.940	36.3	12	0.950	41.4	15	**5**	**2**	0.970	51.9	16	1.030	93.8	35	**42**	**18**
Bowerham Road	1.290	465.6	94	1.350	583.8	112	**118**	**18**	1.070	164.7	31	1.140	241.8	46	**77**	**15**
A6 (S)	1.310	657.4	106	1.660	1740.8	275	**1083**	**169**	1.470	1017.4	177	1.880	2289.1	383	**1272**	**206**
Ashton Road	0.730	13.3	3	0.850	22.7	6	**9**	**3**	1.100	214.6	46	1.160	340.6	69	**126**	**24**
Unnamed Rd	0.050	19.8	0	0.060	25.6	0	**6**	**0**	0.050	19.7	0	0.040	19.6	0	**0**	**0**
Average Jun. Delay (s/pcu)		248.44			527.85		279			340.34			744.07		404	
max	1.310			1.660					1.470			1.880				

J5: A6 (Greaves Rd) / Ashton Rd (The Pointer) Roundabout (Existing Layout)

Survey Date: Tuesday 16/10/2018

Table 1: Surveyed Year Capacity Assessment Results

Link Description	2018 Surveyed Year					
	AM Peak			PM Peak		
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)
A6 (N)	0.760	11.1	3	0.940	42.9	12
Bowerham Road	0.810	25.8	4	0.550	10.5	1
A6 (S)	0.780	23.9	4	0.730	16.3	3
Ashton Road	0.580	7.5	1	0.620	8.5	2
Unnamed Rd	0.000	0.0	0	0.050	19.6	0
Average Jun. Delay (s/pcu)		15.75			23.43	
max	0.810			0.940		

2018 Queue Survey			
AM Peak	PM Peak		
1	1	2	11
5	1	0	0
5	0	-2	2
2	2	0	0
0	0	0	0

Table 2: 2023 Assessment Years Capacity Assessment Results

Link Description	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
A6 (N)	0.860	18.3	6	0.860	18.9	6	**1**	**0**	1.050	120.5	41	1.080	151.3	55	**31**	**13**
Bowerham Road	0.960	70.5	13	1.010	99.9	19	**29**	**7**	0.630	13.2	2	0.660	14.2	2	**1**	**0**
A6 (S)	0.940	64.4	11	1.050	134.8	27	**70**	**16**	0.930	49.0	10	1.070	156.6	40	**108**	**30**
Ashton Road	0.660	9.6	2	0.720	11.7	3	**2**	**1**	0.760	14.3	3	0.800	17.8	4	**3**	**1**
Unnamed Rd	0.000	0.0	0	0.000	0.0	0	**0**	**0**	0.090	35.6	0	0.110	47.1	0	**12**	**0**
Average Jun. Delay (s/pcu)		35.97			57.2		21			60.9			100.01		39	
max	0.960			1.050					1.050			1.080				

Table 3: 2033 Assessment Years Capacity Assessment Results

Link Description	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
A6 (N)	0.940	36.7	12	0.950	39.3	14	**3**	**1**	1.150	255.1	90	1.210	386.6	126	**132**	**36**
Bowerham Road	1.100	181.7	40	1.160	248.7	56	**67**	**17**	0.690	15.5	2	0.720	17.6	3	**2**	**0**
A6 (S)	1.070	155.3	31	1.350	674.3	132	**519**	**100**	1.050	136.3	34	1.310	588.2	132	**452**	**99**
Ashton Road	0.720	11.7	3	0.830	19.6	5	**8**	**2**	0.850	22.7	5	0.900	33.1	8	**10**	**3**
Unnamed Rd	0.000	0.0	0	0.000	0.0	0	**0**	**0**	0.160	61.8	0	0.190	82.4	0	**21**	**0**
Average Jun. Delay (s/pcu)		83.89			214.87		131			132.83			300.95		168	
max	1.100			1.350					1.150			1.310				

J5: A6 (Greaves Rd) / Ashton Rd (The Pointer) **Signal Mitigation** Survey Date: Thursday 09/02/2017

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	83.4%	27.6	25	78.0%	25.0	22
Bowerham Road	83.1%	52.2	14	66.8%	43.6	7
A6 (S) Ahead Left	24.4%	19.7	4	23.5%	19.3	4
A6 (S) Ahead Right	29.3%	22.3	5	30.0%	23.0	5
Ashton Road	78.1%	45.6	8	77.5%	45.4	8
Average Jun. Delay (s/pcu)		35.7			32.5	
max	83.4%			78.0%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	92.2%	38.4	34	92.5%	39.5	34	**1**	**0**	85.5%	30.1	27	86.5%	30.9	28	**1**	**1**
Bowerham Road	91.8%	66.1	19	92.7%	70.5	20	**4**	**1**	76.0%	47.1	8	79.7%	50.2	9	**3**	**0**
A6 (S) Ahead Left	27.3%	20.1	5	29.8%	20.5	5	**0**	**1**	29.7%	20.2	6	33.9%	20.2	7	**0**	**1**
A6 (S) Ahead Right	32.4%	22.3	6	34.9%	22.1	6	**0**	**1**	36.0%	24.4	7	39.7%	23.5	8	**-1**	**1**
Ashton Road	84.6%	50.1	10	87.6%	53.0	11	**3**	**1**	84.9%	50.3	10	87.6%	54.0	11	**4**	**1**
Average Jun. Delay (s/pcu)		43.6			45.5		2			36.2			37.3		1	
max	92.2%			92.7%					85.5%			87.6%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	100.1%	77.1	53	99.3%	76.6	57	**-1**	**3**	92.3%	40.0	35	96.5%	61.0	46	**21**	**11**
Bowerham Road	98.8%	107.4	28	100.4%	123.1	31	**16**	**3**	85.7%	55.2	11	89.7%	61.5	12	**6**	**0**
A6 (S) Ahead Left	30.1%	20.5	5	69.9%	50.7	12	**30**	**6**	33.5%	20.7	7	54.6%	34.8	11	**14**	**4**
A6 (S) Ahead Right	36.9%	22.9	7	74.8%	52.0	13	**29**	**7**	41.5%	26.4	8	60.7%	36.8	12	**10**	**5**
Ashton Road	93.5%	66.5	16	100.6%	94.2	28	**28**	**12**	91.4%	59.8	14	95.7%	65.9	18	**6**	**4**
Average Jun. Delay (s/pcu)		70.2			84.5		14			43.4			55.6		12	
max	100.1%			100.6%					92.3%			96.5%				

J5: A6 (Greaves Rd) / Ashton Rd (The Pointer) **Signal Mitigation** Survey Date: Tuesday 16/10/2018

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	88.5%	36.2	27	89.7%	39.7	30
Bowerham Road	70.2%	39.4	9	70.9%	43.4	5
A6 (S) Ahead Left	28.1%	24.5	4	24.0%	22.9	4
A6 (S) Ahead Right	33.8%	28.4	5	72.3%	42.4	7
Ashton Road	86.6%	50.5	15	90.0%	56.6	16
Average Jun. Delay (s/pcu)		38.4			43.5	
max	88.5%			90.0%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	96.2%	54.2	38	98.1%	65.9	42	**12**	**4**	98.2%	70.2	44	100.4%	91.3	51	**21**	**8**
Bowerham Road	82.8%	52.4	13	90.9%	63.8	15	**11**	**2**	87.6%	60.8	7	91.4%	70.3	8	**10**	**1**
A6 (S) Ahead Left	30.7%	24.2	4	30.5%	24.7	5	**1**	**1**	47.8%	41.0	8	47.9%	36.2	9	**-5**	**1**
A6 (S) Ahead Right	41.3%	28.2	6	41.5%	28.4	6	**0**	**1**	72.8%	66.9	10	70.9%	59.2	11	**-8**	**1**
Ashton Road	96.0%	75.7	23	96.0%	72.9	23	**-3**	**1**	98.5%	83.9	26	99.4%	91.3	28	**7**	**2**
Average Jun. Delay (s/pcu)		53.5			59.3		6			69.0			77.7		9	
max	96.2%			98.1%					98.5%			100.4%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
A6 (N)	104.5%	139.2	71	107.6%	190.7	92	**52**	**21**	106.0%	166.8	78	110.2%	233.0	103	**66**	**25**
Bowerham Road	89.4%	64.2	16	100.5%	118.9	26	**55**	**10**	95.5%	86.9	11	100.4%	123.1	16	**36**	**5**
A6 (S) Ahead Left	32.9%	24.5	5	42.1%	28.8	8	**4**	**3**	66.4%	49.4	11	43.9%	26.2	9	**-23**	**-2**
A6 (S) Ahead Right	50.9%	30.1	6	48.8%	30.4	8	**0**	**2**	78.8%	76.0	11	62.6%	37.5	11	**-39**	**0**
Ashton Road	103.5%	142.7	40	108.7%	206.9	62	**64**	**22**	106.0%	166.5	49	108.3%	203.2	59	**37**	**10**
Average Jun. Delay (s/pcu)		102.9			145.3		42			129.8			157.5		28	
max	104.5%			108.7%					106.0%			110.2%				

J16: A6 Lancaster Rd/ Scotland Rd/ Market St Signal

Survey Date: Thursday 30/11/2017

Table 1: Surveyed Year Capacity Assessment Results

Approach	2017 Surveyed Year						2017 Queue Survey			
	AM Peak			PM Peak			AM Peak	PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)				
Scotland Road	57.0%	28.9	8	82.4%	34.1	16	3	8	4	8
Kellet Road	43.3%	28.4	5	39.3%	35.0	4	4	5	1	-1
A6 Lancaster Road	73.9%	31.4	11	55.4%	18.3	7	8	18	3	-10
Market Street	75.4%	39.2	11	82.1%	57.1	10	4	3	8	7
max	75.4%			82.4%						

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Scotland Road	68.3%	33.6	9	64.1%	28.7	10	**-5**	**0**	94.6%	57.4	24	94.4%	55.0	24	**-2**	**1**
Kellet Road	46.9%	28.3	6	58.1%	34.0	7	**6**	**1**	43.3%	35.9	5	47.6%	38.0	5	**2**	**0**
A6 Lancaster Road	82.3%	37.9	14	80.5%	35.3	13	**-3**	**-1**	66.8%	20.9	9	72.6%	22.4	9	**2**	**0**
Market Street	80.4%	42.3	13	84.8%	49.7	14	**7**	**1**	92.0%	80.4	13	96.3%	103.7	15	**23**	**2**
max	82.3%			84.8%					94.6%			96.3%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Scotland Road	77.4%	39.0	11	66.3%	26.7	11	**-12**	**0**	107.2%	184.8	52	105.6%	157.4	51	**-27**	**-1**
Kellet Road	52.3%	29.5	6	86.6%	61.7	11	**32**	**5**	46.8%	36.6	5	60.3%	43.4	6	**7**	**1**
A6 Lancaster Road	93.2%	55.3	19	91.4%	47.9	15	**-7**	**-4**	65.1%	20.6	10	79.8%	25.8	10	**5**	**0**
Market Street	89.8%	56.0	16	91.7%	65.1	16	**9**	**0**	104.8%	187.2	25	99.5%	126.7	18	**-61**	**-7**
max	93.2%			91.7%					107.2%			105.6%				

J16: A6 Lancaster Rd/ Scotland Rd/ Market St Signal (with Mitigation) Survey Date: Thursday 30/11/2017

Table 1: Surveyed Year Capacity Assessment Results

Approach	2017 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
Scotland Road	52.8%	26.1	7	74.9%	26.5	14
Kellet Road	40.4%	30.2	4	42.0%	38.9	4
A6 Lancaster Road	70.6%	28.5	11	52.0%	15.9	7
Market Street	71.0%	36.4	10	72.8%	48.0	7
max	71.0%			74.9%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Scotland Road	60.7%	28.3	9	62.1%	27.2	9	**-1**	**1**	82.7%	31.1	18	83.2%	30.1	18	**-1**	**1**
Kellet Road	43.8%	31.2	5	46.2%	33.0	5	**2**	**0**	47.3%	41.2	4	49.9%	43.0	4	**2**	**0**
A6 Lancaster Road	75.6%	31.2	12	75.8%	31.7	12	**1**	**-1**	55.9%	16.1	7	57.2%	15.9	7	**0**	**0**
Market Street	76.0%	39.0	11	77.6%	41.0	11	**2**	**0**	81.1%	56.2	9	83.9%	61.4	9	**5**	**0**
max	76.0%			77.6%					82.7%			83.9%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Scotland Road	68.2%	31.2	10	66.3%	26.7	11	**-5**	**1**	89.7%	39.2	21	93.2%	44.3	25	**5**	**4**
Kellet Road	47.1%	32.2	5	86.9%	62.7	8	**31**	**3**	53.7%	44.1	4	62.8%	49.2	5	**5**	**0**
A6 Lancaster Road	82.8%	36.0	15	91.4%	47.9	15	**12**	**0**	66.5%	17.8	9	83.1%	26.5	9	**9**	**1**
Market Street	82.1%	43.6	13	87.1%	53.2	14	**10**	**1**	91.6%	78.7	12	92.0%	82.2	12	**4**	**0**
max	82.8%			91.4%					91.6%			93.2%				

J17: Kellet Rd / Back Lane Priority Junction (Existing Layout)

Table 1: Surveyed Year Capacity Assessment Results

Link Description	2018 Surveyed Year					
	AM Peak			PM Peak		
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)
Back Ln (Left Ln)	0.130	7.9	0	0.080	6.9	0
Back Ln (Right Ln)	0.390	16.5	1	0.170	11.8	0
Kellet Rd (W)	0.180	5.6	0	0.100	5.7	0
max	0.390			0.170		

2018 Queue Survey			
AM Peak	PM Peak		
0	0	0	0
1	0	0	0
0	0	0	0

Table 2: 2023 Assessment Years Capacity Assessment Results

Link Description	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
Back Ln (Left Ln)	0.150	8.4	0	0.190	9.8	0	**1**	**0**	0.090	7.0	0	0.100	7.4	0	**0**	**0**
Back Ln (Right Ln)	0.430	18.3	1	0.540	22.9	1	**5**	**1**	0.180	12.4	0	0.230	13.0	0	**1**	**0**
Kellet Rd (W)	0.200	5.5	0	0.210	5.4	1	**0**	**0**	0.100	5.6	0	0.130	5.7	0	**0**	**0**
max	0.430			0.540					0.180			0.230				

Table 3: 2033 Assessment Years Capacity Assessment Results

Link Description	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
Back Ln (Left Ln)	0.160	8.9	0	1.090	268.7	10	**260**	**10**	0.090	7.2	0	0.180	9.8	0	**0**	**0**
Back Ln (Right Ln)	0.470	20.2	1	1.080	213.4	21	**193**	**20**	0.190	12.9	0	0.460	19.7	1	**1**	**1**
Kellet Rd (W)	0.210	5.6	1	0.270	5.6	1	**0**	**0**	0.110	5.7	0	0.240	6.6	1	**0**	**0**
max	0.470			1.090					0.190			0.460				

J17: Kellet Rd / Back Lane Priority Junction (With Mitigation)

Table 1: Surveyed Year Capacity Assessment Results

Link Description	2018 Surveyed Year					
	AM Peak			PM Peak		
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)
Back Ln (Left Ln)	0.130	7.7	0	0.080	7.1	0
Back Ln (Right Ln)	0.370	14.9	1	0.170	11.9	0
Kellet Rd (W)	0.180	5.6	0	0.100	5.7	0
max	0.370			0.170		

Table 2: 2023 Assessment Years Capacity Assessment Results

Link Description	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
Back Ln (Left Ln)	0.140	8.0	0	0.170	8.6	0	**1**	**0**	0.090	7.2	0	0.100	7.5	0	**0**	**0**
Back Ln (Right Ln)	0.400	16.4	1	0.500	19.8	1	**3**	**0**	0.180	12.4	0	0.230	13.0	0	**1**	**0**
Kellet Rd (W)	0.200	5.5	0	0.210	5.4	1	**0**	**0**	0.100	5.6	0	0.130	5.7	0	**0**	**0**
max	0.400			0.500					0.180			0.230				

Table 3: 2033 Assessment Years Capacity Assessment Results

Link Description	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
Back Ln (Left Ln)	0.150	8.3	0	0.970	130.6	5	**122**	**5**	0.100	7.4	0	0.170	9.3	0	**0**	**0**
Back Ln (Right Ln)	0.440	18.0	1	0.940	99.5	9	**82**	**8**	0.190	13.0	0	0.450	19.3	1	**1**	**1**
Kellet Rd (W)	0.210	5.6	1	0.270	5.6	1	**0**	**0**	0.110	5.7	0	0.240	6.6	1	**0**	**0**
max	0.440			0.970					0.190			0.450				

J18: Kellet Rd / A601M Priority Junction (Existing Layout)

Table 1: Surveyed Year Capacity Assessment Results

Link Description	2017 Surveyed Year					
	AM Peak			PM Peak		
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)
A601(M) - Left Turn	0.160	10.2	0	0.210	11.8	0
A601(M) - Right Turn	0.610	20.6	2	0.670	21.2	2
Kellet Rd (E)	0.180	9.2	0	0.120	7.3	0
max	0.610			0.670		

2017 Queue Survey	
AM Peak	PM Peak
n/a	n/a
n/a	n/a
n/a	n/a

Table 2: 2023 Assessment Years Capacity Assessment Results

Link Description	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
A601(M) - Left Turn	0.290	16.3	1	0.390	24.1	1	**8**	**0**	0.350	17.9	1	0.640	54.0	2	**36**	**1**
A601(M) - Right Turn	0.770	36.3	4	0.830	49.0	5	**13**	**1**	0.790	33.5	4	0.900	62.0	7	**28**	**4**
Kellet Rd (E)	0.240	10.0	0	0.260	10.7	0	**1**	**0**	0.150	7.8	0	0.160	8.1	0	**0**	**0**
max	0.770			0.830					0.790			0.900				

Table 3: 2033 Assessment Years Capacity Assessment Results

Link Description	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
A601(M) - Left Turn	0.500	36.1	1	1.110	309.2	9	**273**	**8**	0.540	35.4	1	1.260	680.2	20	**645**	**19**
A601(M) - Right Turn	0.870	60.2	6	1.100	221.0	29	**161**	**23**	0.870	52.8	6	1.310	624.4	88	**572**	**82**
Kellet Rd (E)	0.270	10.5	0	0.310	12.7	1	**2**	**0**	0.160	8.1	0	0.180	8.7	0	**1**	**0**
max	0.870			1.110					0.870			1.310				

J18: Kellet Rd / A601M Priority Junction (with Mitigation Option 1- change priority)

Table 1: Surveyed Year Capacity Assessment Results

Link Description	2017 Surveyed Year					
	AM Peak			PM Peak		
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)
Kellet Rd (E) - Left Turn	0.150	7.6	0	0.140	7.1	0
Kellet Rd (E)- Right Turn	0.250	13.5	0	0.170	11.6	0
Kellet Rd (W)	0.210	8.4	0	0.180	8.3	0
max	0.250			0.180		

Table 2: 2023 Assessment Years Capacity Assessment Results

Link Description	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
Kellet Rd (E) - Left Turn	0.210	8.4	0	0.210	8.7	0	**0**	**0**	0.170	7.6	0	0.190	7.9	0	**0**	**0**
Kellet Rd (E)- Right Turn	0.350	16.8	1	0.380	18.8	1	**2**	**0**	0.230	13.3	0	0.250	14.5	0	**1**	**0**
Kellet Rd (W)	0.250	9.1	0	0.270	9.4	0	**0**	**0**	0.230	9.0	0	0.240	9.4	0	**0**	**0**
max	0.350			0.380					0.230			0.250				

Table 3: 2033 Assessment Years Capacity Assessment Results

Link Description	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Max RFC	Average Delay (s/pcu)	Max Queue (PCU)	Average Delay (s/pcu)	Max Queue (PCU)
Kellet Rd (E) - Left Turn	0.230	9.0	0	0.270	10.1	0	**1**	**0**	0.190	8.0	0	0.260	9.5	0	**1**	**0**
Kellet Rd (E)- Right Turn	0.400	19.3	1	0.510	29.3	1	**10**	**0**	0.260	14.5	0	0.340	20.6	1	**6**	**0**
Kellet Rd (W)	0.280	9.7	0	0.350	10.9	1	**1**	**0**	0.250	9.5	0	0.310	11.2	1	**2**	**0**
max	0.400			0.510					0.260			0.340				

J18: Kellet Rd / A601M Priority Junction (with Mitigation Option 2- signalisation)

Table 1: Surveyed Year Capacity Assessment Results

Approach	2017 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
Kellet Rd (EB)	39.3%	8.3	3	32.6%	10.5	2
A601(M)	39.6%	19.1	6	41.4%	15.7	6
Kellet Rd (WB)	39.9%	37.2	3	39.5%	41.5	3
max	39.9%			41.4%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Kellet Rd (EB)	44.0%	8.3	3	47.1%	7.9	4	**0**	**1**	39.9%	11.0	2	42.8%	10.7	3	**0**	**0**
A601(M)	50.8%	22.3	8	55.7%	24.8	9	**3**	**1**	47.6%	16.6	8	52.5%	17.4	9	**1**	**1**
Kellet Rd (WB)	51.3%	38.5	4	55.3%	39.1	4	**1**	**0**	47.9%	43.6	3	50.6%	44.6	4	**1**	**0**
max	51.3%			55.7%					47.9%			52.5%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Kellet Rd (EB)	46.9%	8.3	4	56.0%	7.7	7	**-1**	**4**	43.9%	11.2	3	56.0%	7.7	7	**-4**	**4**
A601(M)	56.8%	24.3	9	75.8%	35.7	13	**11**	**4**	51.3%	17.2	9	75.8%	35.7	13	**19**	**4**
Kellet Rd (WB)	55.5%	38.9	5	73.4%	48.7	5	**10**	**1**	51.9%	45.0	4	73.4%	48.7	5	**4**	**1**
max	56.8%			75.8%					51.9%			75.8%				

J10: Caton Road / Junction 34 Signal (Existing Layout)

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year						2018 Queue Survey			
	AM Peak			PM Peak			AM Peak	PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)				
M6 J34 Northbound Off Slip Road - left turn	53.0%	45.6	7	30.0%	37.2	4	13	4	-6	1
M6 J34 Northbound Off Slip Road - straight on (worst lane is reported)	70.0%	59.3	8	81.0%	64.2	12	5	9	3	3
M6 J34 Northbound Off Slip Road - straight on (Lane 3)	31.0%	46.3	3	40.0%	44.9	5	1	3	2	2
M6 J34 Northbound Off Slip Road - right turn lane	31.0%	46.3	3	27.0%	42.3	3	3	3	1	1
A683 Caton Road - left turn (worst lane is reported)	30.0%	29.0	5	41.6%	52.0	8	4	6	1	2
A683 Caton Road - straight on (worst lane is reported)	66.0%	68.0	5	69.0%	66.4	6	5	5	0	1
A683 Caton Road - right turn	12.0%	54.5	1	5.0%	53.5	0	1	1	0	0
A6 to Heysham Link Roundabout - left turn (worst lane is reported)	50.0%	6.5	5	45.0%	7.2	5	7	5	-2	0
A6 to Heysham Link Roundabout - right turn/straight on (worst lane is reported)	67.0%	52.0	9	72.0%	72.8	6	10	4	0	2
Westbound Link Rd between Western and Eastern Juns (worst lane is reported)	50.0%	41.2	12	57.0%	37.0	18	n/a	n/a		
max	70.0%			81.0%						

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
M6 J34 Northbound Off Slip Road - left turn	56.0%	46.5	8	61.0%	73.0	9	**26**	**1**	32.0%	37.5	5	36.0%	64.3	6	**27**	**1**
M6 J34 Northbound Off Slip Road - straight on (worst lane is reported)	76.0%	64.0	9	110.0%	526.1	73	**462**	**64**	89.0%	146.9	24	119.0%	571.0	93	**424**	**69**
M6 J34 Northbound Off Slip Road - straight on (Lane 3)	33.0%	46.8	3	39.0%	48.6	4	**2**	**0**	44.0%	45.9	6	53.0%	49.2	6	**3**	**0**
M6 J34 Northbound Off Slip Road - right turn lane	33.0%	46.8	4	35.0%	50.7	4	**4**	**0**	29.0%	42.7	4	34.0%	44.9	4	**2**	**0**
A683 Caton Road - left turn (worst lane is reported)	36.0%	31.4	6	42.0%	35.6	7	**4**	**1**	67.0%	50.1	10	71.0%	51.9	11	**2**	**1**
A683 Caton Road - straight on (worst lane is reported)	78.0%	80.3	6	101.0%	435.8	25	**356**	**19**	91.0%	113.8	9	95.0%	246.0	18	**132**	**8**
A683 Caton Road - right turn	13.0%	54.6	1	13.0%	54.6	1	**0**	**0**	5.0%	53.5	0	5.0%	53.5	0	**0**	**0**
A6 to Heysham Link Roundabout - left turn (worst lane is reported)	56.0%	6.9	6	55.0%	6.5	6	**0**	**0**	50.0%	8.4	5	54.0%	8.5	6	**0**	**1**
A6 to Heysham Link Roundabout - right turn/straight on (worst lane is reported)	80.0%	63.3	11	87.0%	76.5	13	**13**	**1**	95.0%	230.8	14	95.0%	254.5	15	**24**	**1**
Westbound Link Rd between Western and Eastern Juns (worst lane is reported)	66.0%	53.8	26	100.0%	116.0	57	**62**	**31**	100.0%	125.0	58	100.0%	124.2	58	**-1**	**0**
max	80.0%			110.0%					100.0%			119.0%				

Blocking Back to M6 J34 SB Off Slip Roads

Blocking Back to M6 J34 SB Off Slip Roads

Blocking Back to M6 J34 SB Off Slip Roads

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
M6 J34 Northbound Off Slip Road - left turn	62.0%	49.4	8	65.0%	73.1	10	**24**	**2**	32.0%	37.0	5	45.0%	65.0	8	**28**	**4**
M6 J34 Northbound Off Slip Road - straight on (worst lane is reported)	84.0%	75.8	11	110.0%	482.4	78	**407**	**67**	89.0%	180.6	30	115.0%	489.5	98	**309**	**68**
M6 J34 Northbound Off Slip Road - straight on (Lane 3)	37.0%	48.4	4	43.0%	49.7	4	**1**	**1**	45.0%	45.1	6	51.0%	47.7	7	**3**	**1**
M6 J34 Northbound Off Slip Road - right turn lane	37.0%	48.5	4	37.0%	48.5	4	**0**	**0**	30.0%	42.0	4	32.0%	43.1	4	**1**	**0**
A683 Caton Road - left turn (worst lane is reported)	40.0%	33.6	7	46.0%	33.1	9	**0**	**2**	69.0%	50.0	11	75.0%	52.2	13	**2**	**2**
A683 Caton Road - straight on (worst lane is reported)	97.0%	287.0	18	94.0%	216.4	18	**-71**	**0**	92.0%	119.4	11	94.0%	231.0	19	**112**	**9**
A683 Caton Road - right turn	10.0%	51.0	1	13.0%	54.8	1	**4**	**0**	6.0%	53.6	0	6.0%	53.6	0	**0**	**0**
A6 to Heysham Link Roundabout - left turn (worst lane is reported)	57.0%	6.6	6	71.0%	8.2	8	**2**	**2**	54.0%	9.4	6	66.0%	11.0	8	**2**	**2**
A6 to Heysham Link Roundabout - right turn/straight on (worst lane is reported)	88.0%	91.3	15	88.0%	91.6	15	**0**	**0**	100.0%	425.0	27	96.0%	317.4	22	**-108**	**-5**
Westbound Link Rd between Western and Eastern Juns (worst lane is reported)	79.0%	58.6	25	100.0%	156.3	61	**98**	**36**	100.0%	135.0	59	100.0%	140.7	59	**6**	**0**
max	97.0%			110.0%					100.0%			115.0%				

Blocking Back to M6 J34 SB Off Slip Roads

Blocking Back to M6 J34 SB Off Slip Roads

Blocking Back to M6 J34 SB Off Slip Roads

J29: A683 / M6 J34 Signal (Existing Layout)

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year						2018 Queue Survey			
	AM Peak			PM Peak			AM Peak	PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)				
Eastbound Link Rd between Western and Eastern Juns	42.0%	5.6	3	40.0%	6.4	8	n/a	n/a		
A683 Lancaster Road - left turn	31.0%	39.9	4	18.0%	33.1	2	2	1	2	1
A683 Lancaster Road - straight on	59.0%	56.8	6	61.0%	51.8	8	3	5	3	2
M6 J34 SB Off Slip Roads - left turn	50.0%	8.3	9	56.0%	11.7	11	8	14	1	-3
M6 J34 SB Off Slip Roads - right turn	34.0%	60.5	2	50.0%	67.2	3	1	1	2	1
max	59.0%			61.0%						

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Eastbound Link Rd between Western and Eastern Juns (worst lane is reported)	48.0%	6.1	6	51.0%	6.5	10	**0**	**4**	60.0%	22.4	13	57.0%	15.3	13	**-7**	**0**
A683 Lancaster Road - left turn	33.0%	39.4	4	33.0%	38.6	4	**-1**	**0**	12.0%	20.7	2	14.0%	25.2	2	**5**	**0**
A683 Lancaster Road - straight on	71.0%	63.8	7	83.0%	77.5	10	**14**	**2**	40.0%	32.1	7	52.0%	39.8	8	**8**	**1**
M6 J34 SB Off Slip Roads - left turn	57.0%	9.2	10	63.0%	10.3	13	**1**	**3**	107.0%	270.1	102	108.0%	276.0	111	**6**	**9**
M6 J34 SB Off Slip Roads - right turn	36.0%	59.3	2	40.0%	62.6	2	**3**	**0**	54.0%	90.9	3	52.0%	82.7	3	**-8**	**0**
max	71.0%			83.0%					107.0%			108.0%				

Q would block back to M6 from SB off slip road

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Eastbound Link Rd between Western and Eastern Juns (worst lane is reported)	54.0%	8.6	10	72.0%	24.4	20	**16**	**10**	59.0%	22.4	13	76.0%	36.5	32	**14**	**18**
A683 Lancaster Road - left turn	30.0%	35.1	4	27.0%	31.0	4	**-4**	**0**	14.0%	23.3	2	15.0%	24.6	2	**1**	**0**
A683 Lancaster Road - straight on	64.0%	55.9	7	58.0%	46.0	8	**-10**	**1**	47.0%	36.3	8	59.0%	41.2	10	**5**	**2**
M6 J34 SB Off Slip Roads - left turn	63.0%	11.8	13	141.0%	660.0	228	**648**	**215**	120.0%	449.7	151	153.0%	773.2	259	**324**	**108**
M6 J34 SB Off Slip Roads - right turn	31.0%	55.3	2	34.0%	73.8	2	**19**	**0**	51.0%	85.4	3	41.0%	82.9	2	**-3**	**0**
max	64.0%			141.0%					120.0%			153.0%				

Q would block back to M6 from SB off slip road

Q would block back to M6 from SB off slip road

Q would block back to M6 from SB off slip road

J10: Caton Road / Junction 34 Signal (with Mitigation)

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
M6 J34 Northbound Off Slip Road - left turn	53.0%	45.6	7	30.0%	37.2	4
M6 J34 Northbound Off Slip Road - straight on (worst lane is reported)	70.0%	59.3	8	81.0%	64.2	12
M6 J34 Northbound Off Slip Road - straight on (Lane 3)	31.0%	46.3	3	40.0%	44.9	5
M6 J34 Northbound Off Slip Road - right turn lane	31.0%	46.3	3	27.0%	42.3	3
A683 Caton Road - left turn (worst lane is reported)	30.0%	29.0	5	41.6%	52.0	8
A683 Caton Road - straight on (worst lane is reported)	66.0%	68.0	5	69.0%	66.4	6
A683 Caton Road - right turn	12.0%	54.5	1	5.0%	53.5	0
A6 to Heysham Link Roundabout - left turn (worst lane is reported)	50.0%	6.5	5	45.0%	7.2	5
A6 to Heysham Link Roundabout - right turn/straight on (worst lane is reported)	67.0%	52.0	9	72.0%	72.8	6
Westbound Link Rd between Western and Eastern Juns (worst lane is reported)	50.0%	41.2	13	57.0%	37.0	18
max	70.0%			81.0%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
M6 J34 Northbound Off Slip Road - left turn	56.0%	46.5	8	61.0%	73.0	9	**26**	**1**	32.0%	37.5	5	36.0%	64.3	6	**27**	**1**
M6 J34 Northbound Off Slip Road - straight on (worst lane is reported)	76.0%	64.0	9	110.0%	526.1	73	**462**	**64**	89.0%	146.9	24	119.0%	571.0	93	**424**	**69**
M6 J34 Northbound Off Slip Road - straight on (Lane 3)	33.0%	46.8	3	39.0%	48.6	4	**2**	**0**	44.0%	45.9	6	53.0%	49.2	6	**3**	**0**
M6 J34 Northbound Off Slip Road - right turn lane	33.0%	46.8	4	35.0%	50.7	4	**4**	**0**	29.0%	42.7	4	34.0%	44.9	4	**2**	**0**
A683 Caton Road - left turn (worst lane is reported)	36.0%	31.4	6	42.0%	35.6	7	**4**	**1**	67.0%	50.1	10	71.0%	51.9	11	**2**	**1**
A683 Caton Road - straight on (worst lane is reported)	78.0%	80.3	6	101.0%	435.8	25	**356**	**19**	91.0%	113.8	9	95.0%	246.0	18	**132**	**8**
A683 Caton Road - right turn	13.0%	54.6	1	13.0%	54.6	1	**0**	**0**	5.0%	53.5	0	5.0%	53.5	0	**0**	**0**
A6 to Heysham Link Roundabout - left turn (worst lane is reported)	56.0%	6.9	6	55.0%	6.5	6	**0**	**0**	50.0%	8.4	5	54.0%	8.5	6	**0**	**1**
A6 to Heysham Link Roundabout - right turn/straight on (worst lane is reported)	80.0%	63.3	11	87.0%	76.5	13	**13**	**1**	95.0%	230.8	14	95.0%	254.5	15	**24**	**1**
Westbound Link Rd between Western and Eastern Juns (worst lane is reported)	66.0%	53.8	26	100.0%	116.0	57	**62**	**31**	100.0%	125.0	58	100.0%	124.2	58	**-1**	**0**
max	80.0%			110.0%					100.0%			119.0%				

Blocking Back to M6 J34 SB Off Slip Roads

Blocking Back to M6 J34 SB Off Slip Roads

Blocking Back to M6 J34 SB Off Slip Roads

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
M6 J34 Northbound Off Slip Road - left turn	62.0%	49.4	8	65.0%	73.1	10	**24**	**2**	32.0%	37.0	5	45.0%	65.0	8	**28**	**4**
M6 J34 Northbound Off Slip Road - straight on (worst lane is reported)	84.0%	75.8	11	110.0%	482.4	78	**407**	**67**	89.0%	180.6	30	115.0%	489.5	98	**309**	**68**
M6 J34 Northbound Off Slip Road - straight on (Lane 3)	37.0%	48.4	4	43.0%	49.7	4	**1**	**1**	45.0%	45.1	6	51.0%	47.7	7	**3**	**1**
M6 J34 Northbound Off Slip Road - right turn lane	37.0%	48.5	4	37.0%	48.5	4	**0**	**0**	30.0%	42.0	4	32.0%	43.1	4	**1**	**0**
A683 Caton Road - left turn (worst lane is reported)	40.0%	33.6	7	46.0%	33.1	9	**0**	**2**	69.0%	50.0	11	67.0%	47.6	12	**-2**	**1**
A683 Caton Road - straight on (worst lane is reported)	97.0%	287.0	18	94.0%	216.4	18	**-71**	**0**	92.0%	119.4	11	94.0%	231.0	19	**112**	**9**
A683 Caton Road - right turn	10.0%	51.0	1	13.0%	54.8	1	**4**	**0**	6.0%	53.6	0	6.0%	53.6	0	**0**	**0**
A6 to Heysham Link Roundabout - left turn (worst lane is reported)	57.0%	6.6	6	71.0%	8.2	8	**2**	**2**	54.0%	9.4	6	66.0%	11.0	8	**2**	**2**
A6 to Heysham Link Roundabout - right turn/straight on (worst lane is reported)	88.0%	91.3	15	88.0%	91.6	15	**0**	**0**	100.0%	425.0	27	96.0%	314.0	20	**-111**	**-7**
Westbound Link Rd between Western and Eastern Juns (worst lane is reported)	79.0%	58.6	25	100.0%	156.3	61	**98**	**36**	100.0%	135.0	59	100.0%	140.7	59	**6**	**0**
max	97.0%			110.0%					100.0%			115.0%				

Blocking Back to M6 J34 SB Off Slip Roads

Blocking Back to M6 J34 SB Off Slip Roads

Blocking Back to M6 J34 SB Off Slip Roads

J29: A683 / M6 J34 Signal (with Mitigation)

Table 1: Surveyed Year Capacity Assessment Results

Approach	2018 Surveyed Year					
	AM Peak			PM Peak		
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)
Eastbound Link Rd between Western and Eastern Juns	42.0%	5.6	3	40.0%	6.4	8
A683 Lancaster Road - left turn	31.0%	39.9	4	18.0%	33.1	2
A683 Lancaster Road - straight on	59.0%	56.8	6	61.0%	51.8	8
M6 J34 SB Off Slip Roads - left turn (worst lane is reported)	26.0%	5.8	4	29.0%	8.2	5
M6 J34 SB Off Slip Roads - right turn	34.0%	60.5	2	50.0%	67.2	3
max	59.0%			61.0%		

Table 2: 2023 Assessment Years Capacity Assessment Results

Approach	2023 AM								2023 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Eastbound Link Rd between Western and Eastern Juns (worst lane is reported)	48.0%	6.1	6	51.0%	6.5	10	**0**	**4**	60.0%	22.4	13	57.0%	15.3	13	**-7**	**0**
A683 Lancaster Road - left turn	33.0%	39.4	4	33.0%	38.6	4	**-1**	**0**	12.0%	20.7	2	14.0%	25.2	2	**5**	**0**
A683 Lancaster Road - straight on	71.0%	63.8	7	83.0%	77.5	10	**14**	**2**	40.0%	32.1	7	52.0%	39.8	8	**8**	**1**
M6 J34 SB Off Slip Roads - left turn (worst lane is reported)	29.0%	6.1	5	32.0%	6.3	5	**0**	**0**	107.0%	329.0	48	100.0%	332.0	69	**3**	**21**
M6 J34 SB Off Slip Roads - right turn	36.0%	59.3	2	33.0%	57.0	2	**-2**	**0**	54.0%	90.9	3	52.0%	79.6	3	**-11**	**0**
max	71.0%			83.0%					107.0%			100.0%				

Table 3: 2033 Assessment Years Capacity Assessment Results

Approach	2033 AM								2033 PM							
	DM			DS			Difference		DM			DS			Difference	
	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	DoS (%)	Average Delay (s/pcu)	MMQ (pcu)	Average Delay (s/pcu)	MMQ (pcu)
Eastbound Link Rd between Western and Eastern Juns (worst lane is reported)	54.0%	8.6	10	69.0%	15.0	22	**6**	**12**	59.0%	22.4	13	66.0%	19.0	18	**-3**	**5**
A683 Lancaster Road - left turn	30.0%	35.1	4	27.0%	31.0	4	**-4**	**0**	14.0%	23.3	2	15.0%	24.6	2	**1**	**0**
A683 Lancaster Road - straight on	64.0%	55.9	7	58.0%	46.0	8	**-10**	**1**	47.0%	36.3	8	59.0%	41.2	10	**5**	**2**
M6 J34 SB Off Slip Roads - left turn (worst lane is reported)	32.0%	7.4	5	141.0%	874.0	145	**867**	**140**	120.0%	715.0	107.0	153.0%	1024.0	163	**309**	**56**
M6 J34 SB Off Slip Roads - right turn	31.0%	55.3	2	34.0%	50.1	2	**-5**	**0**	51.0%	85.4	3	41.0%	82.9	2	**-3**	**0**
max	64.0%			141.0%					120.0%			153.0%				

Q would block back to M6 from SB off slip road

Q would block back to M6 from SB off slip road

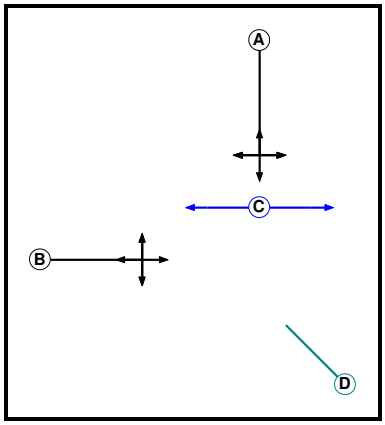
Appendix B – A6 Main Rd/Stoney Ln/Salford Rd Junction Capacity Assessment Results

Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	A6 (Main Road)_Stoney Lane_Salford Rd (2018-11-21) (110_220) Mitigation-right turn lnV3.lsg3x
Author:	
Company:	
Address:	

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Pedestrian		6	6
D	Dummy		3	3

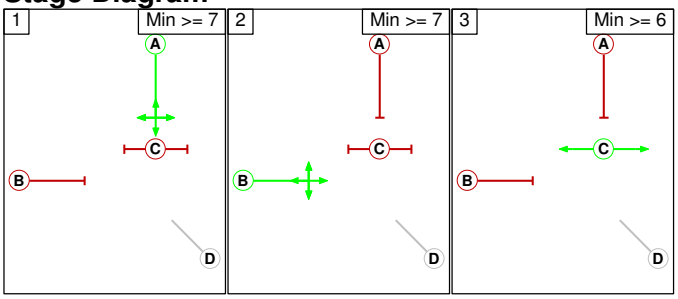
Phase Intergreens Matrix

Terminating Phase	Starting Phase A	B	C	D
A		9	9	-
B	9		9	-
C	10	10		-
D	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	B
3	C

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage 1	2	3
1		9	9
2	9		9
3	10	10	

Give-Way Lane Input Data

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.

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)
1/2 (A6 Main Road (N))	6/1 (Right)	1439	0	3/1	1.09	To 6/1 (Left) To 7/1 (Ahead)	2.00	-	0.50	2	2.00
2/1 (Stoney Lane)	7/1 (Right)	1439	0	4/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	-	0.50	2	2.00
3/2 (A6 Main Road (S))	8/1 (Right)	1439	0	1/1	1.09	To 5/1 (Ahead) To 8/1 (Left)	2.00	-	0.50	2	2.00
4/1 (Salford Road)	5/1 (Right)	1439	0	2/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	-	0.50	2	2.00

Lane Input Data

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.

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 (A6 Main Road (N))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	6.57
1/2 (A6 Main Road (N))	O	A	2	3	1.9	Geom	-	2.50	0.00	Y	Arm 6 Right	2.70
2/1 (Stoney Lane)	O	B	2	3	60.0	Geom	-	3.35	0.00	Y	Arm 5 Left	5.07
											Arm 6 Ahead	Inf
											Arm 7 Right	12.53
3/1 (A6 Main Road (S))	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Left	8.93
											Arm 7 Ahead	Inf
3/2 (A6 Main Road (S))	O	A	2	3	1.3	Geom	-	2.00	0.00	Y	Arm 8 Right	2.70
											Arm 5 Right	12.30
4/1 (Salford Road)	O	B	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 7 Left	4.00
											Arm 8 Ahead	Inf
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)'	07:30	08:30	01:00	
2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)'	07:30	08:30	01:00	
4: 'PM Peak 2023 DM (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)'	07:30	08:30	01:00	
6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)'	07:30	08:30	01:00	
8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)'	07:30	08:30	01:00	
10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	
13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	
15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	
17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	
19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	

Scenario 1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)' (FG1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	47	603	8	658
	B	125	0	14	10	149
	C	712	6	0	31	749
	D	25	15	89	0	129
	Tot.	862	68	706	49	1685

Traffic Lane Flows

Lane	Scenario 1: AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	658(In) 650(Out)
1/2 (short)	8
2/1	149
3/1 (with short)	749(In) 743(Out)
3/2 (short)	6
4/1	129
5/1	706
6/1	49
7/1	862
8/1	68

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	92.8 %	1884	1884
				Arm 8 Left	6.57	7.2 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	9.4 %	1728	1728
				Arm 6 Ahead	Inf	6.7 %		
				Arm 7 Right	12.53	83.9 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.2 %	1902	1902
				Arm 7 Ahead	Inf	95.8 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	69.0 %	1725	1725
				Arm 7 Left	4.00	19.4 %		
				Arm 8 Ahead	Inf	11.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)' (FG2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	55	779	18	852
	B	34	0	17	19	70
	C	631	22	0	93	746
	D	14	20	65	0	99
	Tot.	679	97	861	130	1767

Traffic Lane Flows

Lane	Scenario 2: PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	852(In) 834(Out)
1/2 (short)	18
2/1	70
3/1 (with short)	746(In) 724(Out)
3/2 (short)	22
4/1	99
5/1	861
6/1	130
7/1	679
8/1	97

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.4 %	1887	1887
				Arm 8 Left	6.57	6.6 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	24.3 %	1726	1726
				Arm 6 Ahead	Inf	27.1 %		
				Arm 7 Right	12.53	48.6 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.8 %	1875	1875
				Arm 7 Ahead	Inf	87.2 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	65.7 %	1761	1761
				Arm 7 Left	4.00	14.1 %		
				Arm 8 Ahead	Inf	20.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)' (FG3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	49	647	8	704
	B	187	0	15	10	212
	C	752	6	0	33	791
	D	27	16	94	0	137
	Tot.	966	71	756	51	1844

Traffic Lane Flows

Lane	Scenario 3: AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	704(In) 696(Out)
1/2 (short)	8
2/1	212
3/1 (with short)	791(In) 785(Out)
3/2 (short)	6
4/1	137
5/1	756
6/1	51
7/1	966
8/1	71

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.0 %	1885	1885
				Arm 8 Left	6.57	7.0 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	7.1 %	1731	1731
				Arm 6 Ahead	Inf	4.7 %		
				Arm 7 Right	12.53	88.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.2 %	1902	1902
				Arm 7 Ahead	Inf	95.8 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	68.6 %	1723	1723
				Arm 7 Left	4.00	19.7 %		
				Arm 8 Ahead	Inf	11.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Peak 2023 DM (based on Tues Tues 16/10/18 survey)' (FG4: 'PM Peak 2023 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	57	867	20	944
	B	93	0	18	20	131
	C	663	24	0	98	785
	D	15	21	69	0	105
	Tot.	771	102	954	138	1965

Traffic Lane Flows

Lane	Scenario 4: PM Peak 2023 DM (based on Tues Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	944(In) 924(Out)
1/2 (short)	20
2/1	131
3/1 (with short)	785(In) 761(Out)
3/2 (short)	24
4/1	105
5/1	954
6/1	138
7/1	771
8/1	102

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.8 %	1888	1888
				Arm 8 Left	6.57	6.2 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	13.7 %	1732	1732
				Arm 6 Ahead	Inf	15.3 %		
				Arm 7 Right	12.53	71.0 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.9 %	1874	1874
				Arm 7 Ahead	Inf	87.1 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	65.7 %	1760	1760
				Arm 7 Left	4.00	14.3 %		
				Arm 8 Ahead	Inf	20.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)' (FG5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	49	741	8	798
	B	282	0	15	10	307
	C	750	6	0	33	789
	D	27	16	93	0	136
	Tot.	1059	71	849	51	2030

Traffic Lane Flows

Lane	Scenario 5: AM Peak 2023 DS (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	798(In) 790(Out)
1/2 (short)	8
2/1	307
3/1 (with short)	789(In) 783(Out)
3/2 (short)	6
4/1	136
5/1	849
6/1	51
7/1	1059
8/1	71

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.8 %	1888	1888
				Arm 8 Left	6.57	6.2 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	4.9 %	1734	1734
				Arm 6 Ahead	Inf	3.3 %		
				Arm 7 Right	12.53	91.9 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.2 %	1902	1902
				Arm 7 Ahead	Inf	95.8 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	68.4 %	1723	1723
				Arm 7 Left	4.00	19.9 %		
				Arm 8 Ahead	Inf	11.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)' (FG6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	57	960	20	1037
	B	175	0	18	20	213
	C	677	24	0	96	797
	D	14	21	68	0	103
	Tot.	866	102	1046	136	2150

Traffic Lane Flows

Lane	Scenario 6: PM Peak 2023 DS (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	1037(In) 1017(Out)
1/2 (short)	20
2/1	213
3/1 (with short)	797(In) 773(Out)
3/2 (short)	24
4/1	103
5/1	1046
6/1	136
7/1	866
8/1	102

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	94.4 %	1891	1891
				Arm 8 Left	6.57	5.6 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	8.5 %	1736	1736
				Arm 6 Ahead	Inf	9.4 %		
				Arm 7 Right	12.53	82.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.4 %	1876	1876
				Arm 7 Ahead	Inf	87.6 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.0 %	1763	1763
				Arm 7 Left	4.00	13.6 %		
				Arm 8 Ahead	Inf	20.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)' (FG7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	52	685	9	746
	B	203	0	16	11	230
	C	795	7	0	35	837
	D	28	17	100	0	145
	Tot.	1026	76	801	55	1958

Traffic Lane Flows

Lane	Scenario 7: AM Peak 2033 DM (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	746(In) 737(Out)
1/2 (short)	9
2/1	230
3/1 (with short)	837(In) 830(Out)
3/2 (short)	7
4/1	145
5/1	801
6/1	55
7/1	1026
8/1	76

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	92.9 %	1885	1885
				Arm 8 Left	6.57	7.1 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	7.0 %	1731	1731
				Arm 6 Ahead	Inf	4.8 %		
				Arm 7 Right	12.53	88.3 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.2 %	1902	1902
				Arm 7 Ahead	Inf	95.8 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	69.0 %	1725	1725
				Arm 7 Left	4.00	19.3 %		
				Arm 8 Ahead	Inf	11.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)' (FG8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	60	910	21	991
	B	116	0	19	21	156
	C	698	25	0	103	826
	D	15	22	72	0	109
	Tot.	829	107	1001	145	2082

Traffic Lane Flows

Lane	Scenario 8: PM Peak 2033 DM (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	991(In) 970(Out)
1/2 (short)	21
2/1	156
3/1 (with short)	826(In) 801(Out)
3/2 (short)	25
4/1	109
5/1	1001
6/1	145
7/1	829
8/1	107

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.8 %	1888	1888
				Arm 8 Left	6.57	6.2 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	12.2 %	1733	1733
				Arm 6 Ahead	Inf	13.5 %		
				Arm 7 Right	12.53	74.4 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.9 %	1875	1875
				Arm 7 Ahead	Inf	87.1 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.1 %	1762	1762
				Arm 7 Left	4.00	13.8 %		
				Arm 8 Ahead	Inf	20.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)' (FG9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	51	1028	9	1088
	B	425	0	15	11	451
	C	789	7	0	34	830
	D	28	17	98	0	143
	Tot.	1242	75	1141	54	2512

Traffic Lane Flows

Lane	Scenario 9: AM Peak 2033 DS (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	1088(In) 1079(Out)
1/2 (short)	9
2/1	451
3/1 (with short)	830(In) 823(Out)
3/2 (short)	7
4/1	143
5/1	1141
6/1	54
7/1	1242
8/1	75

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	95.3 %	1895	1895
				Arm 8 Left	6.57	4.7 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	3.3 %	1737	1737
				Arm 6 Ahead	Inf	2.4 %		
				Arm 7 Right	12.53	94.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.1 %	1902	1902
				Arm 7 Ahead	Inf	95.9 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	68.5 %	1724	1724
				Arm 7 Left	4.00	19.6 %		
				Arm 8 Ahead	Inf	11.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)' (FG10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	59	1143	20	1222
	B	431	0	18	21	470
	C	713	25	0	101	839
	D	15	21	71	0	107
	Tot.	1159	105	1232	142	2638

Traffic Lane Flows

Lane	Scenario 10: PM Peak 2033 DS (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	1222(In) 1202(Out)
1/2 (short)	20
2/1	470
3/1 (with short)	839(In) 814(Out)
3/2 (short)	25
4/1	107
5/1	1232
6/1	142
7/1	1159
8/1	105

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.

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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	95.1 %	1894	1894
				Arm 8 Left	6.57	4.9 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	3.8 %	1739	1739
				Arm 6 Ahead	Inf	4.5 %		
				Arm 7 Right	12.53	91.7 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.4 %	1876	1876
				Arm 7 Ahead	Inf	87.6 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.4 %	1760	1760
				Arm 7 Left	4.00	14.0 %		
				Arm 8 Ahead	Inf	19.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)' (FG11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	59	580	11	650
	B	84	0	17	12	113
	C	745	12	0	34	791
	D	38	24	91	0	153
	Tot.	867	95	688	57	1707

Traffic Lane Flows

Lane	Scenario 11: AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	650(In) 639(Out)
1/2 (short)	11
2/1	113
3/1 (with short)	791(In) 779(Out)
3/2 (short)	12
4/1	153
5/1	688
6/1	57
7/1	867
8/1	95

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	90.8 %	1875	1875
				Arm 8 Left	6.57	9.2 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	15.0 %	1720	1720
				Arm 6 Ahead	Inf	10.6 %		
				Arm 7 Right	12.53	74.3 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.4 %	1901	1901
				Arm 7 Ahead	Inf	95.6 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.5 %	1711	1711
				Arm 7 Left	4.00	24.8 %		
				Arm 8 Ahead	Inf	15.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)' (FG12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	32	769	31	832
	B	27	0	14	19	60
	C	586	21	0	93	700
	D	17	21	76	0	114
	Tot.	630	74	859	143	1706

Traffic Lane Flows

Lane	Scenario 12: PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	832(In) 801(Out)
1/2 (short)	31
2/1	60
3/1 (with short)	700(In) 679(Out)
3/2 (short)	21
4/1	114
5/1	859
6/1	143
7/1	630
8/1	74

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	96.0 %	1898	1898
				Arm 8 Left	6.57	4.0 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	23.3 %	1737	1737
				Arm 6 Ahead	Inf	31.7 %		
				Arm 7 Right	12.53	45.0 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.7 %	1872	1872
				Arm 7 Ahead	Inf	86.3 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.7 %	1754	1754
				Arm 7 Left	4.00	14.9 %		
				Arm 8 Ahead	Inf	18.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)' (FG13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	62	623	12	697
	B	144	0	18	12	174
	C	786	13	0	36	835
	D	40	26	96	0	162
	Tot.	970	101	737	60	1868

Traffic Lane Flows

Lane	Scenario 13: AM Peak 2023 DM (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	697(In) 685(Out)
1/2 (short)	12
2/1	174
3/1 (with short)	835(In) 822(Out)
3/2 (short)	13
4/1	162
5/1	737
6/1	60
7/1	970
8/1	101

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	90.9 %	1876	1876
				Arm 8 Left	6.57	9.1 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	10.3 %	1726	1726
				Arm 6 Ahead	Inf	6.9 %		
				Arm 7 Right	12.53	82.8 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.4 %	1901	1901
				Arm 7 Ahead	Inf	95.6 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.3 %	1713	1713
				Arm 7 Left	4.00	24.7 %		
				Arm 8 Ahead	Inf	16.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)' (FG14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	33	857	32	922
	B	86	0	14	20	120
	C	615	22	0	98	735
	D	18	22	80	0	120
	Tot.	719	77	951	150	1897

Traffic Lane Flows

Lane	Scenario 14: PM Peak 2023 DM (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	922(In) 890(Out)
1/2 (short)	32
2/1	120
3/1 (with short)	735(In) 713(Out)
3/2 (short)	22
4/1	120
5/1	951
6/1	150
7/1	719
8/1	77

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	96.3 %	1899	1899
				Arm 8 Left	6.57	3.7 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	11.7 %	1741	1741
				Arm 6 Ahead	Inf	16.7 %		
				Arm 7 Right	12.53	71.7 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.7 %	1872	1872
				Arm 7 Ahead	Inf	86.3 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.7 %	1754	1754
				Arm 7 Left	4.00	15.0 %		
				Arm 8 Ahead	Inf	18.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)' (FG15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	61	717	12	790
	B	239	0	18	12	269
	C	784	13	0	36	833
	D	40	25	95	0	160
	Tot.	1063	99	830	60	2052

Traffic Lane Flows

Lane	Scenario 15: AM Peak 2023 DS (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	790(In) 778(Out)
1/2 (short)	12
2/1	269
3/1 (with short)	833(In) 820(Out)
3/2 (short)	13
4/1	160
5/1	830
6/1	60
7/1	1063
8/1	99

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	92.2 %	1881	1881
				Arm 8 Left	6.57	7.8 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	6.7 %	1732	1732
				Arm 6 Ahead	Inf	4.5 %		
				Arm 7 Right	12.53	88.8 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.4 %	1901	1901
				Arm 7 Ahead	Inf	95.6 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.4 %	1711	1711
				Arm 7 Left	4.00	25.0 %		
				Arm 8 Ahead	Inf	15.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)' (FG16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	33	951	32	1016
	B	167	0	14	19	200
	C	629	22	0	97	748
	D	18	22	79	0	119
	Tot.	814	77	1044	148	2083

Traffic Lane Flows

Lane	Scenario 16: PM Peak 2023 DS (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	1016(In) 984(Out)
1/2 (short)	32
2/1	200
3/1 (with short)	748(In) 726(Out)
3/2 (short)	22
4/1	119
5/1	1044
6/1	148
7/1	814
8/1	77

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	96.6 %	1900	1900
				Arm 8 Left	6.57	3.4 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	7.0 %	1740	1740
				Arm 6 Ahead	Inf	9.5 %		
				Arm 7 Right	12.53	83.5 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.4 %	1873	1873
				Arm 7 Ahead	Inf	86.6 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.4 %	1754	1754
				Arm 7 Left	4.00	15.1 %		
				Arm 8 Ahead	Inf	18.5 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)' (FG17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	66	659	12	737
	B	158	0	19	13	190
	C	832	13	0	38	883
	D	43	27	101	0	171
	Tot.	1033	106	779	63	1981

Traffic Lane Flows

Lane	Scenario 17: AM Peak 2033 DM (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	737(In) 725(Out)
1/2 (short)	12
2/1	190
3/1 (with short)	883(In) 870(Out)
3/2 (short)	13
4/1	171
5/1	779
6/1	63
7/1	1033
8/1	106

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	90.9 %	1876	1876
				Arm 8 Left	6.57	9.1 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	10.0 %	1727	1727
				Arm 6 Ahead	Inf	6.8 %		
				Arm 7 Right	12.53	83.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.4 %	1901	1901
				Arm 7 Ahead	Inf	95.6 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.1 %	1710	1710
				Arm 7 Left	4.00	25.1 %		
				Arm 8 Ahead	Inf	15.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)' (FG18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	35	899	34	968
	B	108	0	15	21	144
	C	648	23	0	103	774
	D	19	24	84	0	127
	Tot.	775	82	998	158	2013

Traffic Lane Flows

Lane	Scenario 18: PM Peak 2033 DM (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	968(In) 934(Out)
1/2 (short)	34
2/1	144
3/1 (with short)	774(In) 751(Out)
3/2 (short)	23
4/1	127
5/1	998
6/1	158
7/1	775
8/1	82

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	96.3 %	1899	1899
				Arm 8 Left	6.57	3.7 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	10.4 %	1740	1740
				Arm 6 Ahead	Inf	14.6 %		
				Arm 7 Right	12.53	75.0 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.7 %	1872	1872
				Arm 7 Ahead	Inf	86.3 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.1 %	1755	1755
				Arm 7 Left	4.00	15.0 %		
				Arm 8 Ahead	Inf	18.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)' (FG19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	64	1002	12	1078
	B	380	0	19	13	412
	C	825	13	0	37	875
	D	42	26	99	0	167
	Tot.	1247	103	1120	62	2532

Traffic Lane Flows

Lane	Scenario 19: AM Peak 2033 DS (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	1078(In) 1066(Out)
1/2 (short)	12
2/1	412
3/1 (with short)	875(In) 862(Out)
3/2 (short)	13
4/1	167
5/1	1120
6/1	62
7/1	1247
8/1	103

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	94.0 %	1889	1889
				Arm 8 Left	6.57	6.0 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	4.6 %	1735	1735
				Arm 6 Ahead	Inf	3.2 %		
				Arm 7 Right	12.53	92.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.3 %	1901	1901
				Arm 7 Ahead	Inf	95.7 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.3 %	1710	1710
				Arm 7 Left	4.00	25.1 %		
				Arm 8 Ahead	Inf	15.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)' (FG20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	34	1133	33	1200
	B	423	0	15	20	458
	C	663	23	0	101	787
	D	19	23	83	0	125
	Tot.	1105	80	1231	154	2570

Traffic Lane Flows

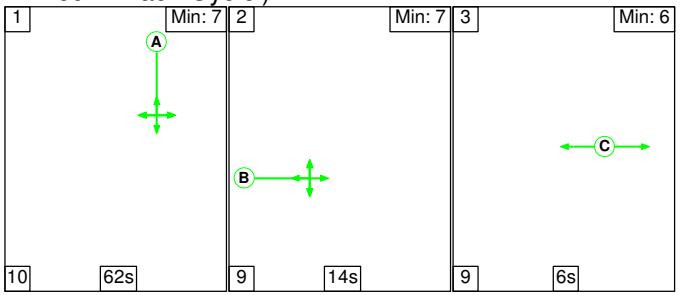
Lane	Scenario 20: PM Peak 2033 DS (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1 (with short)	1200(In) 1167(Out)
1/2 (short)	33
2/1	458
3/1 (with short)	787(In) 764(Out)
3/2 (short)	23
4/1	125
5/1	1231
6/1	154
7/1	1105
8/1	80

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	97.1 %	1902	1902
				Arm 8 Left	6.57	2.9 %		
1/2 (A6 Main Road (N))	2.50	0.00	Y	Arm 6 Right	2.70	100.0 %	1199	1199
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	3.3 %	1741	1741
				Arm 6 Ahead	Inf	4.4 %		
				Arm 7 Right	12.53	92.4 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.2 %	1873	1873
				Arm 7 Ahead	Inf	86.8 %		
3/2 (A6 Main Road (S))	2.00	0.00	Y	Arm 8 Right	2.70	100.0 %	1167	1167
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.4 %	1753	1753
				Arm 7 Left	4.00	15.2 %		
				Arm 8 Ahead	Inf	18.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Stage Sequence Diagram

Scenario 1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)' (FG1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



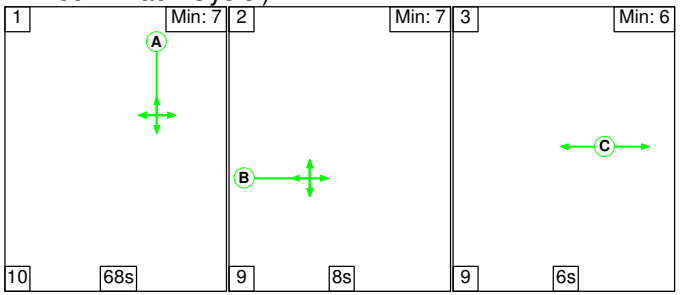
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**74.0%**	**10.8**	**4.3**	**15.2**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**74.0%**	**10.8**	**4.3**	**15.2**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	658	1884:1199	1017	64.7%	3.3	0.9	4.2	23.2	14.1	0.9	15.0
2/1	Stoney Lane Left Ahead Right	B	149	1728	201	74.0%	1.9	1.4	3.3	79.5	4.3	1.4	5.7
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	749	1902:1167	1018	73.5%	4.0	1.4	5.4	26.1	17.5	1.4	18.8
4/1	Salford Road Right Left Ahead	B	129	1725	229	56.4%	1.6	0.6	2.2	62.7	3.7	0.6	4.3
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 21.6 Total Delay for Signalled Lanes (pcuHr): 15.21 Cycle Time (s): 110
PRC Over All Lanes (%): 21.6 Total Delay Over All Lanes(pcuHr): 15.21

Stage Sequence Diagram

Scenario 2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)' (FG2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



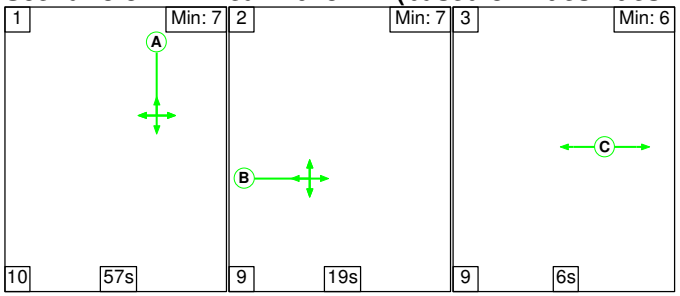
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**76.3%**	**9.4**	**4.5**	**14.1**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**76.3%**	**9.4**	**4.5**	**14.1**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	852	1887:1199	1116	76.3%	3.9	1.6	5.5	23.4	19.1	1.6	20.7
2/1	Stoney Lane Left Ahead Right	B	70	1726	141	49.6%	0.9	0.5	1.4	73.5	2.0	0.5	2.5
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	746	1875:1167	1094	68.2%	3.2	1.1	4.3	20.8	15.5	1.1	16.6
4/1	Salford Road Right Left Ahead	B	99	1761	132	75.1%	1.4	1.4	2.8	101.2	2.9	1.4	4.3
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 17.9 Total Delay for Signalled Lanes (pcuHr): 14.07 Cycle Time (s): 110
PRC Over All Lanes (%): 17.9 Total Delay Over All Lanes(pcuHr): 14.07

Stage Sequence Diagram

Scenario 3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)' (FG3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



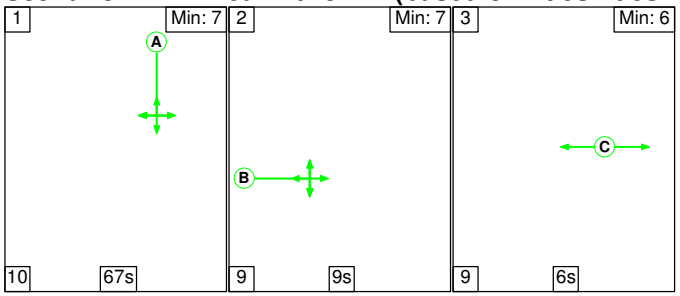
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**84.8%**	**13.8**	**6.6**	**20.6**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**84.8%**	**13.8**	**6.6**	**20.6**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	704	1885:1199	933	75.5%	4.4	1.5	6.0	30.5	17.2	1.5	18.7
2/1	Stoney Lane Left Ahead Right	B	212	1731	263	80.6%	2.5	1.9	4.6	77.7	6.2	1.9	8.1
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	791	1902:1167	933	84.8%	5.3	2.7	8.1	36.7	20.9	2.7	23.6
4/1	Salford Road Right Left Ahead	B	137	1723	296	46.2%	1.5	0.4	2.0	51.7	3.7	0.4	4.1
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 6.1 Total Delay for Signalled Lanes (pcuHr): 20.57 Cycle Time (s): 110
PRC Over All Lanes (%): 6.1 Total Delay Over All Lanes(pcuHr): 20.57

Stage Sequence Diagram

Scenario 4: 'PM Peak 2023 DM (based on Tues Tues 16/10/18 survey)' (FG4: 'PM Peak 2023 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



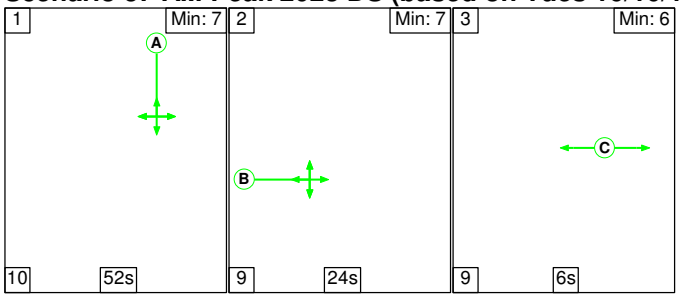
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**85.8%**	**11.8**	**7.6**	**19.6**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**85.8%**	**11.8**	**7.6**	**19.6**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	944	1888:1199	1100	85.8%	5.0	2.9	7.9	30.3	23.8	2.9	26.7
2/1	Stoney Lane Left Ahead Right	B	131	1732	153	85.5%	1.8	2.4	4.3	117.1	3.9	2.4	6.3
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	785	1874:1167	1076	72.9%	3.6	1.3	5.1	23.3	17.2	1.3	18.5
4/1	Salford Road Right Left Ahead	B	105	1760	160	65.7%	1.4	0.9	2.4	80.9	3.1	0.9	4.0
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 4.8 Total Delay for Signalled Lanes (pcuHr): 19.65 Cycle Time (s): 110
PRC Over All Lanes (%): 4.8 Total Delay Over All Lanes(pcuHr): 19.65

Stage Sequence Diagram

Scenario 5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)' (FG5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



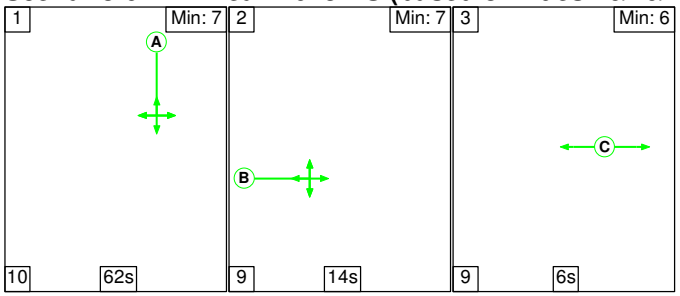
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**93.9%**	**17.6**	**17.3**	**35.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**93.9%**	**17.6**	**17.3**	**35.3**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	798	1888:1199	850	93.9%	6.4	6.2	12.7	57.4	23.0	6.2	29.3
2/1	Stoney Lane Left Ahead Right	B	307	1734	327	93.9%	3.5	5.1	8.8	103.8	9.2	5.1	14.3
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	789	1902:1167	847	93.2%	6.3	5.7	12.1	55.1	22.8	5.7	28.5
4/1	Salford Road Right Left Ahead	B	136	1723	367	37.1%	1.3	0.3	1.7	43.8	3.5	0.3	3.8
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -4.4 Total Delay for Signalled Lanes (pcuHr): 35.30 Cycle Time (s): 110
PRC Over All Lanes (%): -4.4 Total Delay Over All Lanes(pcuHr): 35.30

Stage Sequence Diagram

Scenario 6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)' (FG6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



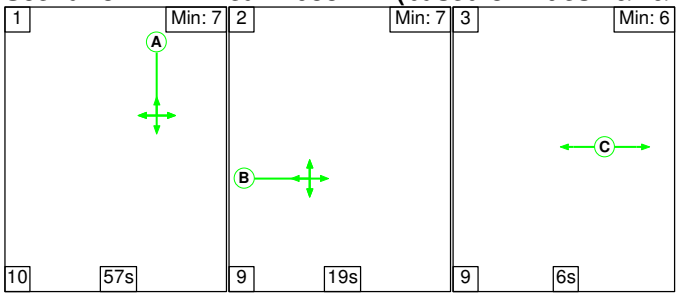
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**102.9%**	**17.0**	**33.1**	**50.6**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**102.9%**	**17.0**	**33.1**	**50.6**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	1037	1891:1199	1017	101.9%	8.2	21.8	30.1	104.5	33.7	21.8	55.5
2/1	Stoney Lane Left Ahead Right	B	213	1736	207	102.9%	3.0	9.0	12.1	204.5	6.7	9.0	15.6
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	797	1876:1167	994	80.2%	4.5	2.0	6.8	30.5	19.7	2.0	21.6
4/1	Salford Road Right Left Ahead	B	103	1763	229	44.9%	1.2	0.4	1.7	58.2	2.9	0.4	3.3
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -14.3 Total Delay for Signalled Lanes (pcuHr): 50.61 Cycle Time (s): 110
PRC Over All Lanes (%): -14.3 Total Delay Over All Lanes(pcuHr): 50.61

Stage Sequence Diagram

Scenario 7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)' (FG7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



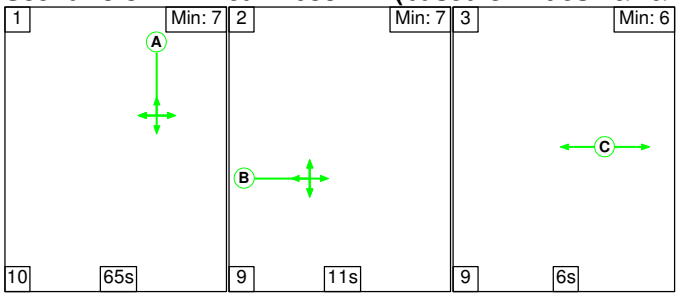
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**89.8%**	**15.1**	**9.6**	**25.0**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**89.8%**	**15.1**	**9.6**	**25.0**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	746	1885:1199	933	80.0%	4.8	2.0	6.9	33.1	18.8	2.0	20.8
2/1	Stoney Lane Left Ahead Right	B	230	1731	261	88.2%	2.8	3.1	6.0	94.3	6.8	3.1	9.9
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	837	1902:1167	932	89.8%	5.9	4.1	10.0	42.9	23.2	4.1	27.3
4/1	Salford Road Right Left Ahead	B	145	1725	297	48.9%	1.6	0.5	2.1	52.5	3.9	0.5	4.4
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 0.2 Total Delay for Signalled Lanes (pcuHr): 24.98 Cycle Time (s): 110
PRC Over All Lanes (%): 0.2 Total Delay Over All Lanes(pcuHr): 24.98

Stage Sequence Diagram

Scenario 8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)' (FG8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



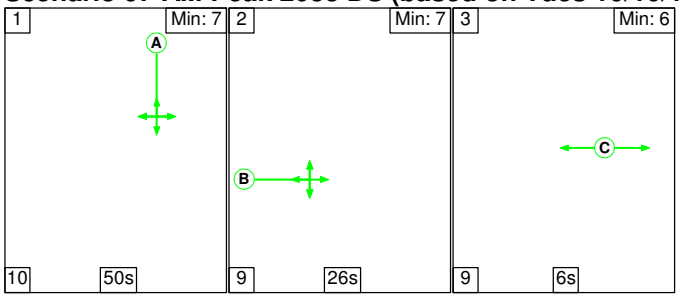
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**93.0%**	**13.8**	**11.7**	**25.9**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**93.0%**	**13.8**	**11.7**	**25.9**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	991	1888:1199	1066	93.0%	6.0	5.7	11.8	42.9	27.5	5.7	33.2
2/1	Stoney Lane Left Ahead Right	B	156	1733	172	90.6%	2.1	3.4	5.6	128.5	4.7	3.4	8.1
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	826	1875:1167	1043	79.2%	4.3	1.9	6.4	27.7	19.7	1.9	21.6
4/1	Salford Road Right Left Ahead	B	109	1762	185	58.8%	1.4	0.7	2.1	70.3	3.1	0.7	3.8
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -3.3 Total Delay for Signalled Lanes (pcuHr): 25.86 Cycle Time (s): 110
PRC Over All Lanes (%): -3.3 Total Delay Over All Lanes(pcuHr): 25.86

Stage Sequence Diagram

Scenario 9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)' (FG9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



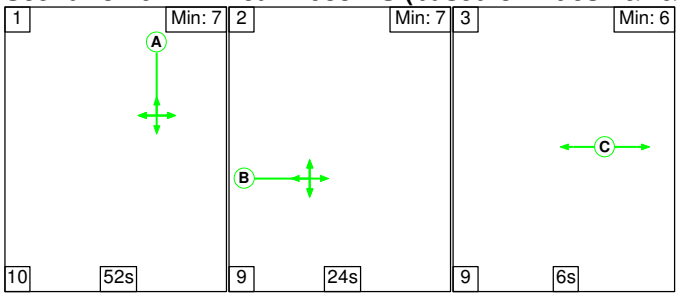
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**133.3%**	**43.6**	**210.5**	**254.5**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**133.3%**	**43.6**	**210.5**	**254.5**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	1088	1895:1199	816	133.3%	23.5	137.8	161.3	533.6	43.0	137.8	180.8
2/1	Stoney Lane Left Ahead Right	B	451	1737	350	129.0%	10.6	52.8	63.7	508.4	18.5	52.8	71.3
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	830	1902:1167	812	102.2%	8.2	19.7	27.9	120.9	27.1	19.7	46.7
4/1	Salford Road Right Left Ahead	B	143	1724	398	35.9%	1.4	0.3	1.7	41.6	3.6	0.3	3.9
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -48.1 Total Delay for Signalled Lanes (pcuHr): 254.49 Cycle Time (s): 110
PRC Over All Lanes (%): -48.1 Total Delay Over All Lanes(pcuHr): 254.49

Stage Sequence Diagram

Scenario 10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)' (FG10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



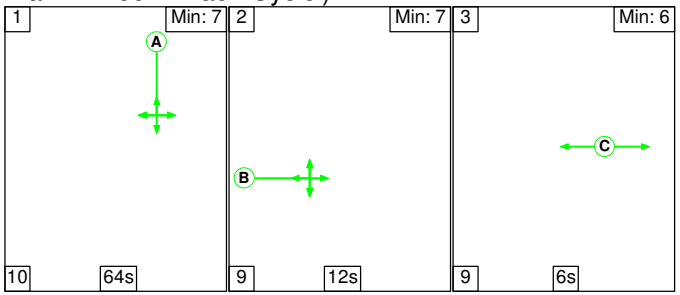
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**143.8%**	**51.3**	**275.6**	**327.4**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**143.8%**	**51.3**	**275.6**	**327.4**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	1222	1894:1199	850	143.8%	29.3	187.8	217.3	640.1	50.4	187.8	238.2
2/1	Stoney Lane Left Ahead Right	B	470	1739	334	140.6%	13.2	69.6	83.0	636.1	21.1	69.6	90.7
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	839	1876:1167	826	101.5%	7.7	18.0	25.9	111.0	27.1	18.0	45.1
4/1	Salford Road Right Left Ahead	B	107	1760	369	29.0%	1.0	0.2	1.3	42.1	2.7	0.2	2.9
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -59.8 Total Delay for Signalled Lanes (pcuHr): 327.42 Cycle Time (s): 110
PRC Over All Lanes (%): -59.8 Total Delay Over All Lanes(pcuHr): 327.42

Stage Sequence Diagram

Scenario 11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)' (FG11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



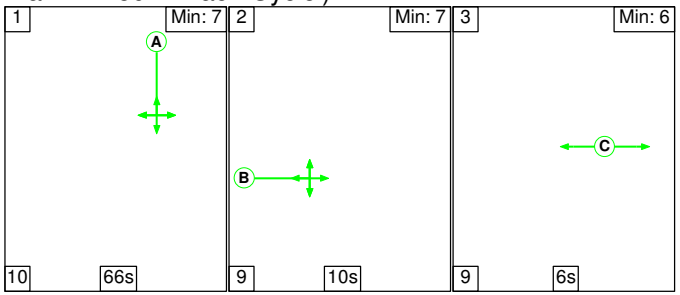
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**76.3%**	**10.5**	**4.7**	**15.4**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**76.3%**	**10.5**	**4.7**	**15.4**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	650	1875:1199	1044	62.2%	3.0	0.8	3.9	21.3	13.3	0.8	14.1
2/1	Stoney Lane Left Ahead Right	B	113	1720	174	64.9%	1.4	0.9	2.4	75.7	3.2	0.9	4.1
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	791	1901:1167	1048	75.5%	4.1	1.5	5.6	25.7	18.4	1.5	20.0
4/1	Salford Road Right Left Ahead	B	153	1711	201	76.3%	2.0	1.5	3.5	83.4	4.5	1.5	6.0
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 18.0 Total Delay for Signalled Lanes (pcuHr): 15.41 Cycle Time (s): 110
PRC Over All Lanes (%): 18.0 Total Delay Over All Lanes(pcuHr): 15.41

Stage Sequence Diagram

Scenario 12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)' (FG12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



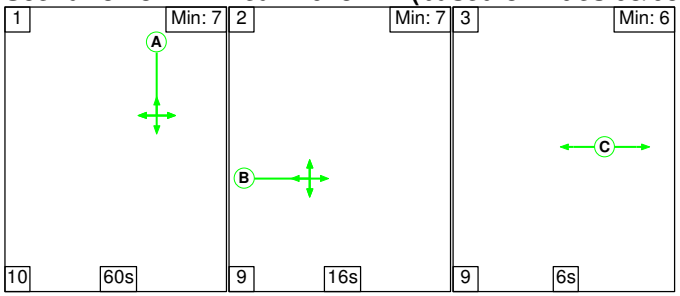
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**77.1%**	**9.4**	**4.1**	**13.7**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**77.1%**	**9.4**	**4.1**	**13.7**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	832	1898:1199	1080	77.1%	4.1	1.7	5.8	25.1	19.1	1.7	20.8
2/1	Stoney Lane Left Ahead Right	B	60	1737	174	34.5%	0.8	0.3	1.0	62.1	1.7	0.3	2.0
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	700	1872:1167	1059	66.1%	3.1	1.0	4.2	21.4	14.5	1.0	15.5
4/1	Salford Road Right Left Ahead	B	114	1754	159	71.5%	1.5	1.2	2.7	86.7	3.3	1.2	4.5
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 16.8 Total Delay for Signalled Lanes (pcuHr): 13.74 Cycle Time (s): 110
PRC Over All Lanes (%): 16.8 Total Delay Over All Lanes(pcuHr): 13.74

Stage Sequence Diagram

Scenario 13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)' (FG13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



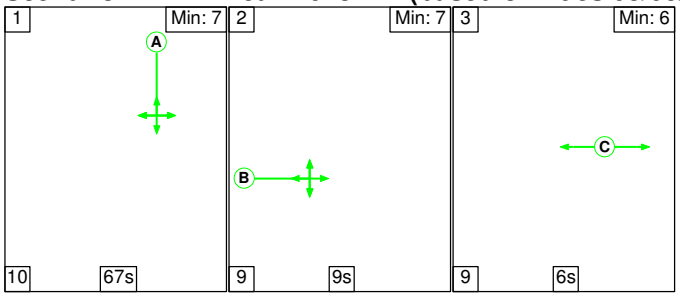
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**85.9%**	**13.2**	**7.4**	**20.9**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**85.9%**	**13.2**	**7.4**	**20.9**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	697	1876:1199	977	71.3%	3.9	1.2	5.2	26.8	16.0	1.2	17.3
2/1	Stoney Lane Left Ahead Right	B	174	1726	203	85.9%	2.1	2.6	4.8	100.2	5.1	2.6	7.7
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	835	1901:1167	979	85.3%	5.3	2.8	8.1	34.9	21.8	2.8	24.6
4/1	Salford Road Right Left Ahead	B	162	1713	260	62.4%	2.0	0.8	2.8	62.1	4.6	0.8	5.4
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 4.8 Total Delay for Signalled Lanes (pcuHr): 20.92 Cycle Time (s): 110
PRC Over All Lanes (%): 4.8 Total Delay Over All Lanes(pcuHr): 20.92

Stage Sequence Diagram

Scenario 14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)' (FG14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



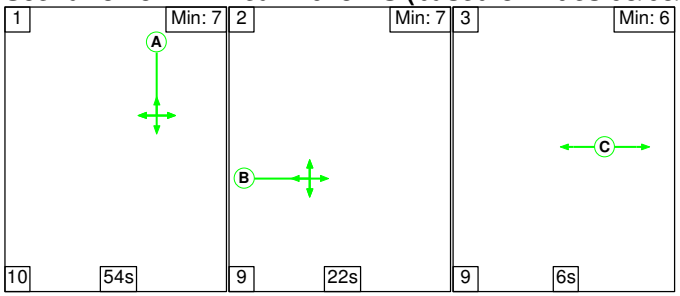
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**83.9%**	**11.2**	**6.7**	**18.1**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**83.9%**	**11.2**	**6.7**	**18.1**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	922	1899:1199	1098	83.9%	4.7	2.5	7.3	28.6	22.7	2.5	25.3
2/1	Stoney Lane Left Ahead Right	B	120	1741	154	78.0%	1.6	1.6	3.3	98.8	3.6	1.6	5.2
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	735	1872:1167	1075	68.3%	3.2	1.1	4.4	21.6	15.5	1.1	16.5
4/1	Salford Road Right Left Ahead	B	120	1754	159	75.3%	1.6	1.4	3.1	92.4	3.6	1.4	5.0
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 7.2 Total Delay for Signalled Lanes (pcuHr): 18.12 Cycle Time (s): 110
PRC Over All Lanes (%): 7.2 Total Delay Over All Lanes(pcuHr): 18.12

Stage Sequence Diagram

Scenario 15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)' (FG15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



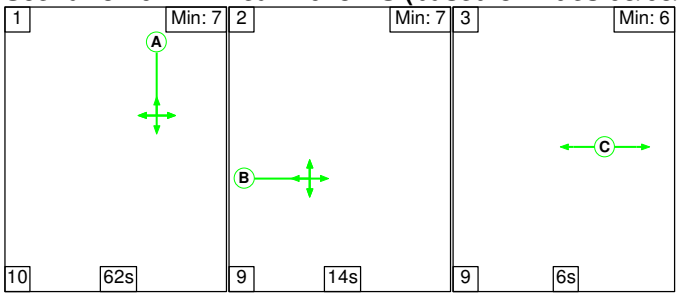
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**96.1%**	**17.3**	**17.6**	**35.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**96.1%**	**17.3**	**17.6**	**35.3**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	790	1881:1199	879	89.9%	5.9	4.1	10.1	45.9	21.9	4.1	26.0
2/1	Stoney Lane Left Ahead Right	B	269	1732	280	96.1%	3.2	5.9	9.3	124.9	8.1	5.9	14.0
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	833	1901:1167	877	95.0%	6.5	7.2	13.7	59.4	24.3	7.2	31.4
4/1	Salford Road Right Left Ahead	B	160	1711	343	46.7%	1.7	0.4	2.1	48.1	4.2	0.4	4.7
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -6.8 Total Delay for Signalled Lanes (pcuHr): 35.29 Cycle Time (s): 110
PRC Over All Lanes (%): -6.8 Total Delay Over All Lanes(pcuHr): 35.29

Stage Sequence Diagram

Scenario 16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)' (FG16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



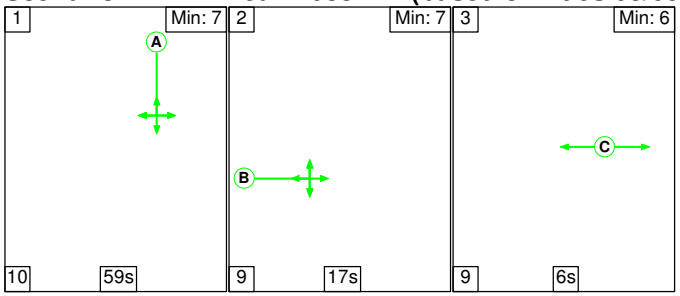
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**100.0%**	**15.2**	**24.8**	**40.5**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**100.0%**	**15.2**	**24.8**	**40.5**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	1016	1900:1199	1016	100.0%	7.1	16.0	23.2	82.2	31.0	16.0	47.0
2/1	Stoney Lane Left Ahead Right	B	200	1740	201	99.3%	2.6	6.7	9.5	170.4	6.1	6.7	12.8
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	748	1873:1167	993	75.4%	4.1	1.5	5.8	27.9	17.6	1.5	19.1
4/1	Salford Road Right Left Ahead	B	119	1754	231	51.5%	1.5	0.5	2.0	60.5	3.3	0.5	3.9
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -11.1 Total Delay for Signalled Lanes (pcuHr): 40.46 Cycle Time (s): 110
PRC Over All Lanes (%): -11.1 Total Delay Over All Lanes(pcuHr): 40.46

Stage Sequence Diagram

Scenario 17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)' (FG17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



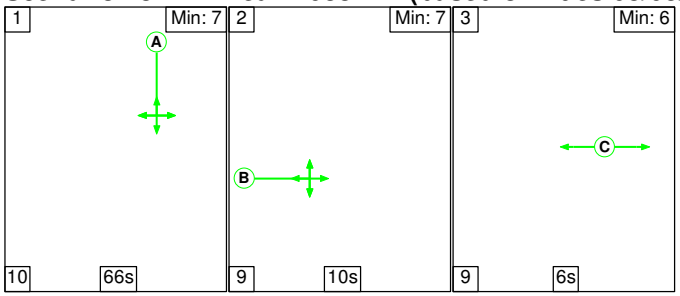
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**91.7%**	**14.8**	**10.7**	**25.8**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**91.7%**	**14.8**	**10.7**	**25.8**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	737	1876:1199	961	76.7%	4.4	1.6	6.1	29.9	18.0	1.6	19.6
2/1	Stoney Lane Left Ahead Right	B	190	1727	212	89.7%	2.3	3.3	5.8	109.9	5.6	3.3	9.0
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	883	1901:1167	963	91.7%	6.1	4.9	11.0	45.0	24.8	4.9	29.7
4/1	Salford Road Right Left Ahead	B	171	1710	273	62.7%	2.0	0.8	2.9	60.7	4.8	0.8	5.7
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -1.9 Total Delay for Signalled Lanes (pcuHr): 25.84 Cycle Time (s): 110
PRC Over All Lanes (%): -1.9 Total Delay Over All Lanes(pcuHr): 25.84

Stage Sequence Diagram

Scenario 18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)' (FG18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



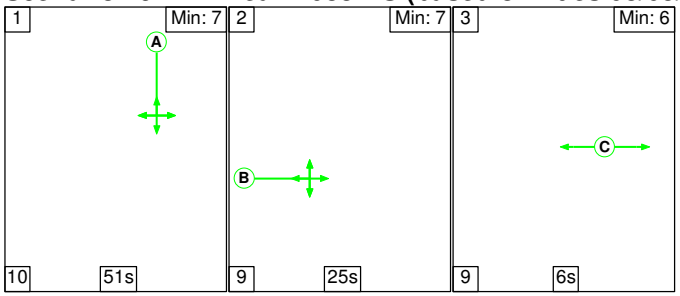
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**89.5%**	**12.7**	**9.6**	**22.8**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**89.5%**	**12.7**	**9.6**	**22.8**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	968	1899:1199	1081	89.5%	5.4	4.0	9.5	35.4	25.7	4.0	29.7
2/1	Stoney Lane Left Ahead Right	B	144	1740	162	89.1%	1.9	3.0	5.1	126.3	4.3	3.0	7.3
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	774	1872:1167	1059	73.1%	3.7	1.3	5.2	24.1	17.2	1.3	18.5
4/1	Salford Road Right Left Ahead	B	127	1755	174	72.9%	1.7	1.3	3.0	85.2	3.7	1.3	5.0
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 0.5 Total Delay for Signalled Lanes (pcuHr): 22.76 Cycle Time (s): 110
PRC Over All Lanes (%): 0.5 Total Delay Over All Lanes(pcuHr): 22.76

Stage Sequence Diagram

Scenario 19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)' (FG19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



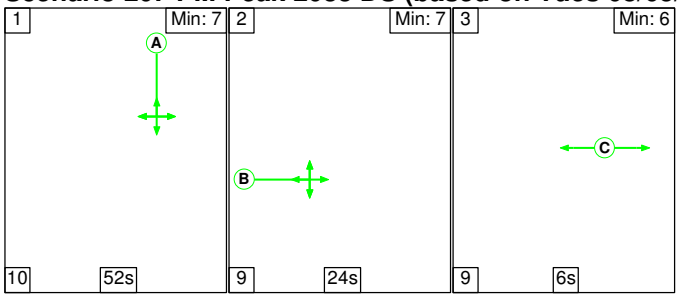
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**131.2%**	**43.6**	**207.8**	**251.9**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**131.2%**	**43.6**	**207.8**	**251.9**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	1078	1889:1199	832	129.5%	21.8	124.9	146.8	490.3	41.9	124.9	166.8
2/1	Stoney Lane Left Ahead Right	B	412	1735	314	131.2%	10.1	51.0	61.3	535.9	17.2	51.0	68.2
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	875	1901:1167	826	106.0%	10.0	31.6	41.7	171.4	29.4	31.6	61.0
4/1	Salford Road Right Left Ahead	B	167	1710	388	43.1%	1.6	0.4	2.0	44.0	4.3	0.4	4.7
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -45.7 Total Delay for Signalled Lanes (pcuHr): 251.85 Cycle Time (s): 110
PRC Over All Lanes (%): -45.7 Total Delay Over All Lanes(pcuHr): 251.85

Stage Sequence Diagram

Scenario 20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)' (FG20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**141.4%**	**48.4**	**252.0**	**301.0**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**141.4%**	**48.4**	**252.0**	**301.0**	-	-	-	-
1/1+1/2	A6 Main Road (N) Ahead Right Left	A	1200	1902:1199	848	141.4%	28.0	177.5	205.6	616.9	49.0	177.5	226.5
2/1	Stoney Lane Left Ahead Right	B	458	1741	328	139.8%	12.7	66.9	79.9	627.9	20.4	66.9	87.3
3/1+3/2	A6 Main Road (S) Left Ahead Right	A	787	1873:1167	825	95.4%	6.4	7.4	13.9	63.8	22.9	7.4	30.3
4/1	Salford Road Right Left Ahead	B	125	1753	370	33.7%	1.2	0.3	1.5	43.0	3.2	0.3	3.4
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

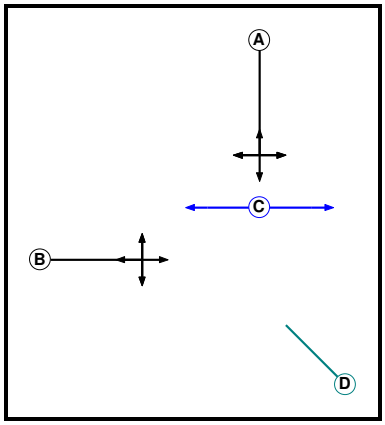
C1 PRC for Signalled Lanes (%): -57.1 Total Delay for Signalled Lanes (pcuHr): 300.95 Cycle Time (s): 110
PRC Over All Lanes (%): -57.1 Total Delay Over All Lanes(pcuHr): 300.95

Full Input Data And Results

User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	A6 (Main Road)_Stoney Lane_Salford Rd (2018-11-21) (110_220) Mitigation-right turn pocketsV2.lsg3x
Author:	
Company:	
Address:	

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Pedestrian		6	6
D	Dummy		3	3

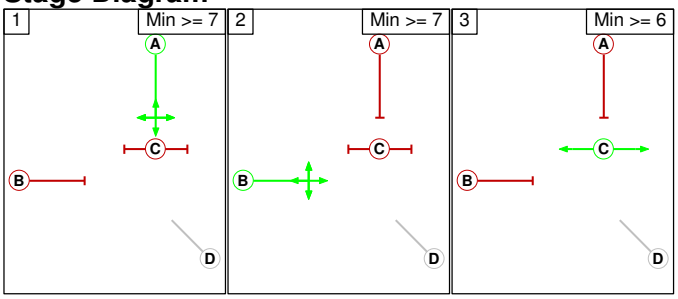
Phase Intergreens Matrix

Terminating Phase	Starting Phase A	B	C	D
A		9	9	-
B	9		9	-
C	10	10		-
D	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A
2	B
3	C

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage	To Stage 1	2	3
1		9	9
2	9		9
3	10	10	

Give-Way Lane Input Data

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.

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 (A6 Main Road (N))	6/1 (Right)	1439	0	3/1	1.09	To 6/1 (Left) To 7/1 (Ahead)	2.00	1.00	0.50	2	2.00
2/1 (Stoney Lane)	7/1 (Right)	1439	0	4/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	-	0.50	2	2.00
3/1 (A6 Main Road (S))	8/1 (Right)	1439	0	1/1	1.00	To 5/1 (Ahead) To 8/1 (Left)	2.00	1.00	0.50	2	2.00
4/1 (Salford Road)	5/1 (Right)	1439	0	2/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	-	0.50	2	2.00

Lane Input Data

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.

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 (A6 Main Road (N))	O	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 6 Right	2.70
											Arm 8 Left	6.57
2/1 (Stoney Lane)	O	B	2	3	60.0	Geom	-	3.35	0.00	Y	Arm 5 Left	5.07
											Arm 6 Ahead	Inf
											Arm 7 Right	12.53
3/1 (A6 Main Road (S))	O	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Left	8.93
											Arm 7 Ahead	Inf
											Arm 8 Right	2.70
4/1 (Salford Road)	O	B	2	3	60.0	Geom	-	3.80	0.00	Y	Arm 5 Right	12.30
											Arm 7 Left	4.00
											Arm 8 Ahead	Inf
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)'	07:30	08:30	01:00	
2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)'	07:30	08:30	01:00	
4: 'PM Peak 2023 DM (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)'	07:30	08:30	01:00	
6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)'	07:30	08:30	01:00	
8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)'	07:30	08:30	01:00	
10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)'	16:30	17:30	01:00	
11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	
13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	
15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	
17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	
19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)'	07:30	08:30	01:00	
20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)'	16:30	17:30	01:00	

Scenario 1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)' (FG1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	47	603	8	658
	B	125	0	14	10	149
	C	712	6	0	31	749
	D	25	15	89	0	129
	Tot.	862	68	706	49	1685

Traffic Lane Flows

Lane	Scenario 1: AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	658
2/1	149
3/1	749
4/1	129
5/1	706
6/1	49
7/1	862
8/1	68

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	91.6 %	1872	1872
				Arm 6 Right	2.70	1.2 %		
				Arm 8 Left	6.57	7.1 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	9.4 %	1728	1728
				Arm 6 Ahead	Inf	6.7 %		
				Arm 7 Right	12.53	83.9 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.1 %	1893	1893
				Arm 7 Ahead	Inf	95.1 %		
				Arm 8 Right	2.70	0.8 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	69.0 %	1725	1725
				Arm 7 Left	4.00	19.4 %		
				Arm 8 Ahead	Inf	11.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)' (FG2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	55	779	18	852
	B	34	0	17	19	70
	C	631	22	0	93	746
	D	14	20	65	0	99
	Tot.	679	97	861	130	1767

Traffic Lane Flows

Lane	Scenario 2: PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	852
2/1	70
3/1	746
4/1	99
5/1	861
6/1	130
7/1	679
8/1	97

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	91.4 %	1866	1866
				Arm 6 Right	2.70	2.1 %		
				Arm 8 Left	6.57	6.5 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	24.3 %	1726	1726
				Arm 6 Ahead	Inf	27.1 %		
				Arm 7 Right	12.53	48.6 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.5 %	1846	1846
				Arm 7 Ahead	Inf	84.6 %		
				Arm 8 Right	2.70	2.9 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	65.7 %	1761	1761
				Arm 7 Left	4.00	14.1 %		
				Arm 8 Ahead	Inf	20.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)' (FG3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	49	647	8	704
	B	187	0	15	10	212
	C	752	6	0	33	791
	D	27	16	94	0	137
	Tot.	966	71	756	51	1844

Traffic Lane Flows

Lane	Scenario 3: AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	704
2/1	212
3/1	791
4/1	137
5/1	756
6/1	51
7/1	966
8/1	71

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	91.9 %	1873	1873
				Arm 6 Right	2.70	1.1 %		
				Arm 8 Left	6.57	7.0 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	7.1 %	1731	1731
				Arm 6 Ahead	Inf	4.7 %		
				Arm 7 Right	12.53	88.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.2 %	1894	1894
				Arm 7 Ahead	Inf	95.1 %		
				Arm 8 Right	2.70	0.8 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	68.6 %	1723	1723
				Arm 7 Left	4.00	19.7 %		
				Arm 8 Ahead	Inf	11.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Peak 2023 DM (based on Tues Tues 16/10/18 survey)' (FG4: 'PM Peak 2023 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	57	867	20	944
	B	93	0	18	20	131
	C	663	24	0	98	785
	D	15	21	69	0	105
	Tot.	771	102	954	138	1965

Traffic Lane Flows

Lane	Scenario 4: PM Peak 2023 DM (based on Tues Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	944
2/1	131
3/1	785
4/1	105
5/1	954
6/1	138
7/1	771
8/1	102

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	91.8 %	1867	1867
				Arm 6 Right	2.70	2.1 %		
				Arm 8 Left	6.57	6.0 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	13.7 %	1732	1732
				Arm 6 Ahead	Inf	15.3 %		
				Arm 7 Right	12.53	71.0 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.5 %	1845	1845
				Arm 7 Ahead	Inf	84.5 %		
				Arm 8 Right	2.70	3.1 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	65.7 %	1760	1760
				Arm 7 Left	4.00	14.3 %		
				Arm 8 Ahead	Inf	20.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)' (FG5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	49	741	8	798
	B	282	0	15	10	307
	C	750	6	0	33	789
	D	27	16	93	0	136
	Tot.	1059	71	849	51	2030

Traffic Lane Flows

Lane	Scenario 5: AM Peak 2023 DS (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	798
2/1	307
3/1	789
4/1	136
5/1	849
6/1	51
7/1	1059
8/1	71

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	92.9 %	1878	1878
				Arm 6 Right	2.70	1.0 %		
				Arm 8 Left	6.57	6.1 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	4.9 %	1734	1734
				Arm 6 Ahead	Inf	3.3 %		
				Arm 7 Right	12.53	91.9 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.2 %	1894	1894
				Arm 7 Ahead	Inf	95.1 %		
				Arm 8 Right	2.70	0.8 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	68.4 %	1723	1723
				Arm 7 Left	4.00	19.9 %		
				Arm 8 Ahead	Inf	11.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)' (FG6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	57	960	20	1037
	B	175	0	18	20	213
	C	677	24	0	96	797
	D	14	21	68	0	103
	Tot.	866	102	1046	136	2150

Traffic Lane Flows

Lane	Scenario 6: PM Peak 2023 DS (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	1037
2/1	213
3/1	797
4/1	103
5/1	1046
6/1	136
7/1	866
8/1	102

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	92.6 %	1871	1871
				Arm 6 Right	2.70	1.9 %		
				Arm 8 Left	6.57	5.5 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	8.5 %	1736	1736
				Arm 6 Ahead	Inf	9.4 %		
				Arm 7 Right	12.53	82.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.0 %	1847	1847
				Arm 7 Ahead	Inf	84.9 %		
				Arm 8 Right	2.70	3.0 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.0 %	1763	1763
				Arm 7 Left	4.00	13.6 %		
				Arm 8 Ahead	Inf	20.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)' (FG7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	52	685	9	746
	B	203	0	16	11	230
	C	795	7	0	35	837
	D	28	17	100	0	145
	Tot.	1026	76	801	55	1958

Traffic Lane Flows

Lane	Scenario 7: AM Peak 2033 DM (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	746
2/1	230
3/1	837
4/1	145
5/1	801
6/1	55
7/1	1026
8/1	76

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	91.8 %	1873	1873
				Arm 6 Right	2.70	1.2 %		
				Arm 8 Left	6.57	7.0 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	7.0 %	1731	1731
				Arm 6 Ahead	Inf	4.8 %		
				Arm 7 Right	12.53	88.3 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.2 %	1893	1893
				Arm 7 Ahead	Inf	95.0 %		
				Arm 8 Right	2.70	0.8 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	69.0 %	1725	1725
				Arm 7 Left	4.00	19.3 %		
				Arm 8 Ahead	Inf	11.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)' (FG8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	60	910	21	991
	B	116	0	19	21	156
	C	698	25	0	103	826
	D	15	22	72	0	109
	Tot.	829	107	1001	145	2082

Traffic Lane Flows

Lane	Scenario 8: PM Peak 2033 DM (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	991
2/1	156
3/1	826
4/1	109
5/1	1001
6/1	145
7/1	829
8/1	107

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	91.8 %	1867	1867
				Arm 6 Right	2.70	2.1 %		
				Arm 8 Left	6.57	6.1 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	12.2 %	1733	1733
				Arm 6 Ahead	Inf	13.5 %		
				Arm 7 Right	12.53	74.4 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.5 %	1845	1845
				Arm 7 Ahead	Inf	84.5 %		
				Arm 8 Right	2.70	3.0 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.1 %	1762	1762
				Arm 7 Left	4.00	13.8 %		
				Arm 8 Ahead	Inf	20.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)' (FG9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	51	1028	9	1088
	B	425	0	15	11	451
	C	789	7	0	34	830
	D	28	17	98	0	143
	Tot.	1242	75	1141	54	2512

Traffic Lane Flows

Lane	Scenario 9: AM Peak 2033 DS (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	1088
2/1	451
3/1	830
4/1	143
5/1	1141
6/1	54
7/1	1242
8/1	75

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	94.5 %	1886	1886
				Arm 6 Right	2.70	0.8 %		
				Arm 8 Left	6.57	4.7 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	3.3 %	1737	1737
				Arm 6 Ahead	Inf	2.4 %		
				Arm 7 Right	12.53	94.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.1 %	1893	1893
				Arm 7 Ahead	Inf	95.1 %		
				Arm 8 Right	2.70	0.8 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	68.5 %	1724	1724
				Arm 7 Left	4.00	19.6 %		
				Arm 8 Ahead	Inf	11.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)' (FG10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	59	1143	20	1222
	B	431	0	18	21	470
	C	713	25	0	101	839
	D	15	21	71	0	107
	Tot.	1159	105	1232	142	2638

Traffic Lane Flows

Lane	Scenario 10: PM Peak 2033 DS (based on Tues 16/10/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	1222
2/1	470
3/1	839
4/1	107
5/1	1232
6/1	142
7/1	1159
8/1	105

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.5 %	1877	1877
				Arm 6 Right	2.70	1.6 %		
				Arm 8 Left	6.57	4.8 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	3.8 %	1739	1739
				Arm 6 Ahead	Inf	4.5 %		
				Arm 7 Right	12.53	91.7 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.0 %	1847	1847
				Arm 7 Ahead	Inf	85.0 %		
				Arm 8 Right	2.70	3.0 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.4 %	1760	1760
				Arm 7 Left	4.00	14.0 %		
				Arm 8 Ahead	Inf	19.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)' (FG11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	59	580	11	650
	B	84	0	17	12	113
	C	745	12	0	34	791
	D	38	24	91	0	153
	Tot.	867	95	688	57	1707

Traffic Lane Flows

Lane	Scenario 11: AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	650
2/1	113
3/1	791
4/1	153
5/1	688
6/1	57
7/1	867
8/1	95

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	89.2 %	1859	1859
				Arm 6 Right	2.70	1.7 %		
				Arm 8 Left	6.57	9.1 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	15.0 %	1720	1720
				Arm 6 Ahead	Inf	10.6 %		
				Arm 7 Right	12.53	74.3 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.3 %	1885	1885
				Arm 7 Ahead	Inf	94.2 %		
				Arm 8 Right	2.70	1.5 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.5 %	1711	1711
				Arm 7 Left	4.00	24.8 %		
				Arm 8 Ahead	Inf	15.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)' (FG12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	32	769	31	832
	B	27	0	14	19	60
	C	586	21	0	93	700
	D	17	21	76	0	114
	Tot.	630	74	859	143	1706

Traffic Lane Flows

Lane	Scenario 12: PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	832
2/1	60
3/1	700
4/1	114
5/1	859
6/1	143
7/1	630
8/1	74

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	92.4 %	1860	1860
				Arm 6 Right	2.70	3.7 %		
				Arm 8 Left	6.57	3.8 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	23.3 %	1737	1737
				Arm 6 Ahead	Inf	31.7 %		
				Arm 7 Right	12.53	45.0 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.3 %	1843	1843
				Arm 7 Ahead	Inf	83.7 %		
				Arm 8 Right	2.70	3.0 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.7 %	1754	1754
				Arm 7 Left	4.00	14.9 %		
				Arm 8 Ahead	Inf	18.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)' (FG13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	62	623	12	697
	B	144	0	18	12	174
	C	786	13	0	36	835
	D	40	26	96	0	162
	Tot.	970	101	737	60	1868

Traffic Lane Flows

Lane	Scenario 13: AM Peak 2023 DM (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	697
2/1	174
3/1	835
4/1	162
5/1	737
6/1	60
7/1	970
8/1	101

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	89.4 %	1859	1859
				Arm 6 Right	2.70	1.7 %		
				Arm 8 Left	6.57	8.9 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	10.3 %	1726	1726
				Arm 6 Ahead	Inf	6.9 %		
				Arm 7 Right	12.53	82.8 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.3 %	1885	1885
				Arm 7 Ahead	Inf	94.1 %		
				Arm 8 Right	2.70	1.6 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.3 %	1713	1713
				Arm 7 Left	4.00	24.7 %		
				Arm 8 Ahead	Inf	16.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)' (FG14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	33	857	32	922
	B	86	0	14	20	120
	C	615	22	0	98	735
	D	18	22	80	0	120
	Tot.	719	77	951	150	1897

Traffic Lane Flows

Lane	Scenario 14: PM Peak 2023 DM (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	922
2/1	120
3/1	735
4/1	120
5/1	951
6/1	150
7/1	719
8/1	77

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.0 %	1864	1864
				Arm 6 Right	2.70	3.5 %		
				Arm 8 Left	6.57	3.6 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	11.7 %	1741	1741
				Arm 6 Ahead	Inf	16.7 %		
				Arm 7 Right	12.53	71.7 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.3 %	1843	1843
				Arm 7 Ahead	Inf	83.7 %		
				Arm 8 Right	2.70	3.0 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.7 %	1754	1754
				Arm 7 Left	4.00	15.0 %		
				Arm 8 Ahead	Inf	18.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)' (FG15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	61	717	12	790
	B	239	0	18	12	269
	C	784	13	0	36	833
	D	40	25	95	0	160
	Tot.	1063	99	830	60	2052

Traffic Lane Flows

Lane	Scenario 15: AM Peak 2023 DS (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	790
2/1	269
3/1	833
4/1	160
5/1	830
6/1	60
7/1	1063
8/1	99

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	90.8 %	1866	1866
				Arm 6 Right	2.70	1.5 %		
				Arm 8 Left	6.57	7.7 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	6.7 %	1732	1732
				Arm 6 Ahead	Inf	4.5 %		
				Arm 7 Right	12.53	88.8 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.3 %	1885	1885
				Arm 7 Ahead	Inf	94.1 %		
				Arm 8 Right	2.70	1.6 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.4 %	1711	1711
				Arm 7 Left	4.00	25.0 %		
				Arm 8 Ahead	Inf	15.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)' (FG16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	33	951	32	1016
	B	167	0	14	19	200
	C	629	22	0	97	748
	D	18	22	79	0	119
	Tot.	814	77	1044	148	2083

Traffic Lane Flows

Lane	Scenario 16: PM Peak 2023 DS (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	1016
2/1	200
3/1	748
4/1	119
5/1	1044
6/1	148
7/1	814
8/1	77

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	93.6 %	1868	1868
				Arm 6 Right	2.70	3.1 %		
				Arm 8 Left	6.57	3.2 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	7.0 %	1740	1740
				Arm 6 Ahead	Inf	9.5 %		
				Arm 7 Right	12.53	83.5 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.0 %	1845	1845
				Arm 7 Ahead	Inf	84.1 %		
				Arm 8 Right	2.70	2.9 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.4 %	1754	1754
				Arm 7 Left	4.00	15.1 %		
				Arm 8 Ahead	Inf	18.5 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)' (FG17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	66	659	12	737
	B	158	0	19	13	190
	C	832	13	0	38	883
	D	43	27	101	0	171
	Tot.	1033	106	779	63	1981

Traffic Lane Flows

Lane	Scenario 17: AM Peak 2033 DM (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	737
2/1	190
3/1	883
4/1	171
5/1	779
6/1	63
7/1	1033
8/1	106

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	89.4 %	1860	1860
				Arm 6 Right	2.70	1.6 %		
				Arm 8 Left	6.57	9.0 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	10.0 %	1727	1727
				Arm 6 Ahead	Inf	6.8 %		
				Arm 7 Right	12.53	83.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.3 %	1886	1886
				Arm 7 Ahead	Inf	94.2 %		
				Arm 8 Right	2.70	1.5 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.1 %	1710	1710
				Arm 7 Left	4.00	25.1 %		
				Arm 8 Ahead	Inf	15.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)' (FG18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	35	899	34	968
	B	108	0	15	21	144
	C	648	23	0	103	774
	D	19	24	84	0	127
	Tot.	775	82	998	158	2013

Traffic Lane Flows

Lane	Scenario 18: PM Peak 2033 DM (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	968
2/1	144
3/1	774
4/1	127
5/1	998
6/1	158
7/1	775
8/1	82

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	92.9 %	1863	1863
				Arm 6 Right	2.70	3.5 %		
				Arm 8 Left	6.57	3.6 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	10.4 %	1740	1740
				Arm 6 Ahead	Inf	14.6 %		
				Arm 7 Right	12.53	75.0 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	13.3 %	1843	1843
				Arm 7 Ahead	Inf	83.7 %		
				Arm 8 Right	2.70	3.0 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.1 %	1755	1755
				Arm 7 Left	4.00	15.0 %		
				Arm 8 Ahead	Inf	18.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)' (FG19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	64	1002	12	1078
	B	380	0	19	13	412
	C	825	13	0	37	875
	D	42	26	99	0	167
	Tot.	1247	103	1120	62	2532

Traffic Lane Flows

Lane	Scenario 19: AM Peak 2033 DS (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	1078
2/1	412
3/1	875
4/1	167
5/1	1120
6/1	62
7/1	1247
8/1	103

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	92.9 %	1878	1878
				Arm 6 Right	2.70	1.1 %		
				Arm 8 Left	6.57	5.9 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	4.6 %	1735	1735
				Arm 6 Ahead	Inf	3.2 %		
				Arm 7 Right	12.53	92.2 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	4.2 %	1886	1886
				Arm 7 Ahead	Inf	94.3 %		
				Arm 8 Right	2.70	1.5 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	59.3 %	1710	1710
				Arm 7 Left	4.00	25.1 %		
				Arm 8 Ahead	Inf	15.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)' (FG20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	34	1133	33	1200
	B	423	0	15	20	458
	C	663	23	0	101	787
	D	19	23	83	0	125
	Tot.	1105	80	1231	154	2570

Traffic Lane Flows

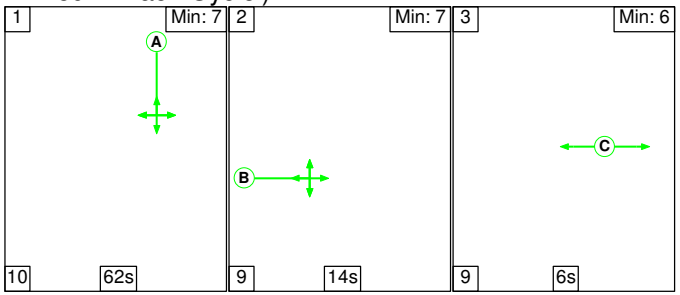
Lane	Scenario 20: PM Peak 2033 DS (based on Tues 08/05/18 survey)
Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	
1/1	1200
2/1	458
3/1	787
4/1	125
5/1	1231
6/1	154
7/1	1105
8/1	80

Lane Saturation Flows

Junction: A6 Main Road/ Salford Road/Stoney Lane Signal Jun.								
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 (A6 Main Road (N))	3.00	0.00	Y	Arm 5 Ahead	Inf	94.4 %	1874	1874
				Arm 6 Right	2.70	2.8 %		
				Arm 8 Left	6.57	2.8 %		
2/1 (Stoney Lane)	3.35	0.00	Y	Arm 5 Left	5.07	3.3 %	1741	1741
				Arm 6 Ahead	Inf	4.4 %		
				Arm 7 Right	12.53	92.4 %		
3/1 (A6 Main Road (S))	3.00	0.00	Y	Arm 6 Left	8.93	12.8 %	1845	1845
				Arm 7 Ahead	Inf	84.2 %		
				Arm 8 Right	2.70	2.9 %		
4/1 (Salford Road)	3.80	0.00	Y	Arm 5 Right	12.30	66.4 %	1753	1753
				Arm 7 Left	4.00	15.2 %		
				Arm 8 Ahead	Inf	18.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Stage Sequence Diagram

Scenario 1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)' (FG1: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



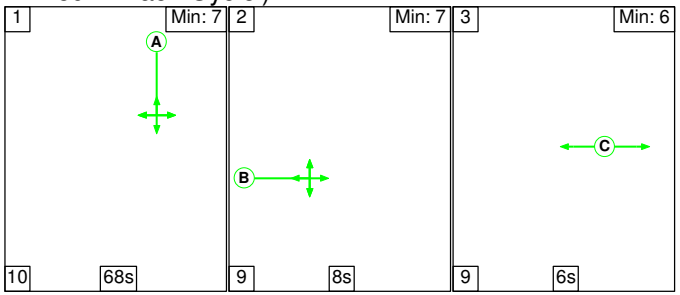
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**74.0%**	**10.9**	**4.3**	**15.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**74.0%**	**10.9**	**4.3**	**15.3**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	658	1872	1004	65.5%	3.3	0.9	4.3	23.6	14.3	0.9	15.2
2/1	Stoney Lane Left Ahead Right	B	149	1728	201	74.0%	1.9	1.4	3.3	79.5	4.3	1.4	5.7
3/1	A6 Main Road (S) Left Ahead Right	A	749	1893	1015	73.8%	4.1	1.4	5.5	26.3	17.5	1.4	18.9
4/1	Salford Road Right Left Ahead	B	129	1725	229	56.4%	1.6	0.6	2.2	62.7	3.7	0.6	4.3
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 21.6 Total Delay for Signalled Lanes (pcuHr): 15.32 Cycle Time (s): 110
PRC Over All Lanes (%): 21.6 Total Delay Over All Lanes(pcuHr): 15.32

Stage Sequence Diagram

Scenario 2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)' (FG2: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



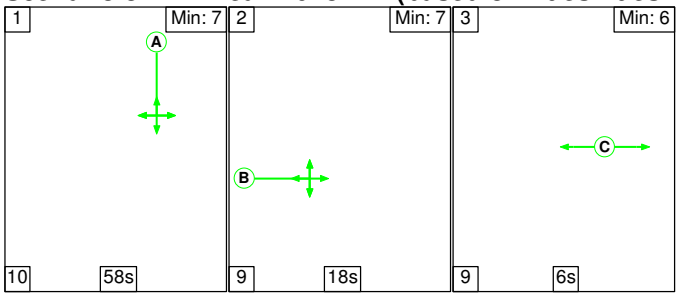
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**77.3%**	**9.5**	**4.6**	**14.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**77.3%**	**9.5**	**4.6**	**14.3**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	852	1866	1103	77.3%	4.0	1.7	5.7	24.2	19.4	1.7	21.1
2/1	Stoney Lane Left Ahead Right	B	70	1726	141	49.6%	0.9	0.5	1.4	73.5	2.0	0.5	2.5
3/1	A6 Main Road (S) Left Ahead Right	A	746	1846	1090	68.4%	3.2	1.1	4.4	21.1	15.5	1.1	16.6
4/1	Salford Road Right Left Ahead	B	99	1761	132	75.1%	1.4	1.4	2.8	101.2	2.9	1.4	4.3
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 16.5 Total Delay for Signalled Lanes (pcuHr): 14.31 Cycle Time (s): 110
PRC Over All Lanes (%): 16.5 Total Delay Over All Lanes(pcuHr): 14.31

Stage Sequence Diagram

Scenario 3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)' (FG3: 'AM Peak 2023 DM (based on Tues Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



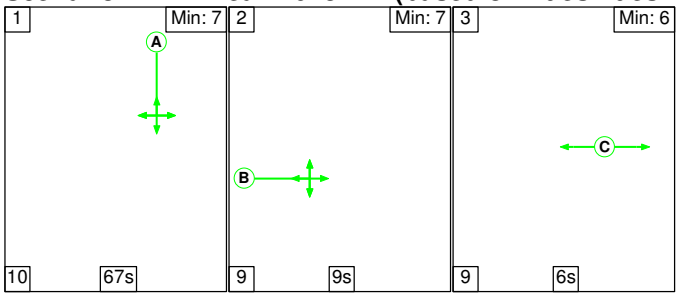
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**85.0%**	**13.6**	**6.9**	**20.7**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**85.0%**	**13.6**	**6.9**	**20.7**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	704	1873	937	75.2%	4.3	1.5	5.8	29.9	17.2	1.5	18.7
2/1	Stoney Lane Left Ahead Right	B	212	1731	250	85.0%	2.6	2.5	5.2	88.3	6.2	2.5	8.7
3/1	A6 Main Road (S) Left Ahead Right	A	791	1894	947	83.5%	5.2	2.5	7.7	34.9	20.7	2.5	23.1
4/1	Salford Road Right Left Ahead	B	137	1723	284	48.2%	1.6	0.5	2.0	53.6	3.7	0.5	4.2
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 5.9 Total Delay for Signalled Lanes (pcuHr): 20.74 Cycle Time (s): 110
PRC Over All Lanes (%): 5.9 Total Delay Over All Lanes(pcuHr): 20.74

Stage Sequence Diagram

Scenario 4: 'PM Peak 2023 DM (based on Tues Tues 16/10/18 survey)' (FG4: 'PM Peak 2023 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



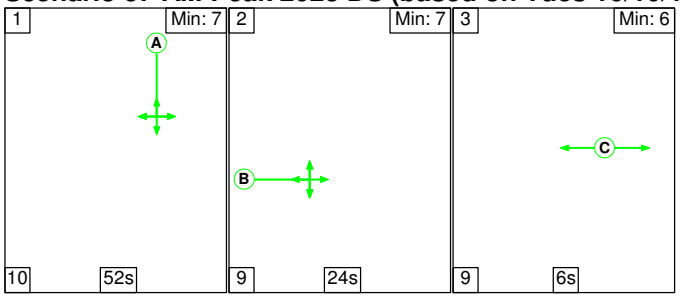
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**86.9%**	**12.0**	**7.9**	**20.1**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**86.9%**	**12.0**	**7.9**	**20.1**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	944	1867	1086	86.9%	5.1	3.2	8.3	31.8	24.4	3.2	27.6
2/1	Stoney Lane Left Ahead Right	B	131	1732	153	85.5%	1.8	2.4	4.3	117.1	3.9	2.4	6.3
3/1	A6 Main Road (S) Left Ahead Right	A	785	1845	1065	73.7%	3.7	1.4	5.2	23.8	17.4	1.4	18.8
4/1	Salford Road Right Left Ahead	B	105	1760	160	65.7%	1.4	0.9	2.4	80.9	3.1	0.9	4.0
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 3.6 Total Delay for Signalled Lanes (pcuHr): 20.14 Cycle Time (s): 110
PRC Over All Lanes (%): 3.6 Total Delay Over All Lanes(pcuHr): 20.14

Stage Sequence Diagram

Scenario 5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)' (FG5: 'AM Peak 2023 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



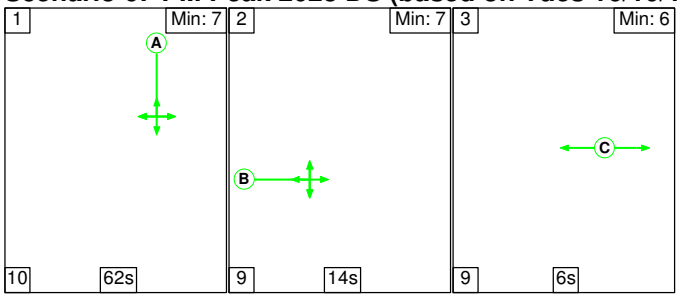
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**95.4%**	**17.7**	**18.8**	**36.8**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**95.4%**	**17.7**	**18.8**	**36.8**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	798	1878	837	95.4%	6.5	7.5	14.0	63.3	23.5	7.5	31.0
2/1	Stoney Lane Left Ahead Right	B	307	1734	327	93.9%	3.5	5.1	8.8	103.8	9.2	5.1	14.3
3/1	A6 Main Road (S) Left Ahead Right	A	789	1894	844	93.5%	6.4	5.9	12.3	56.2	22.8	5.9	28.7
4/1	Salford Road Right Left Ahead	B	136	1723	367	37.1%	1.3	0.3	1.7	43.8	3.5	0.3	3.8
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -6.0 Total Delay for Signalled Lanes (pcuHr): 36.84 Cycle Time (s): 110
PRC Over All Lanes (%): -6.0 Total Delay Over All Lanes(pcuHr): 36.84

Stage Sequence Diagram

Scenario 6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)' (FG6: 'PM Peak 2023 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



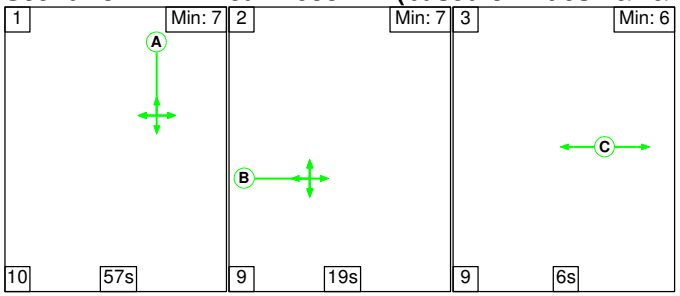
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**103.3%**	**18.0**	**37.9**	**56.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**103.3%**	**18.0**	**37.9**	**56.3**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	1037	1871	1004	103.3%	9.1	26.5	35.7	124.0	32.8	26.5	59.3
2/1	Stoney Lane Left Ahead Right	B	213	1736	207	102.9%	3.0	9.0	12.1	204.5	6.7	9.0	15.6
3/1	A6 Main Road (S) Left Ahead Right	A	797	1847	991	80.5%	4.6	2.0	6.8	30.8	19.7	2.0	21.7
4/1	Salford Road Right Left Ahead	B	103	1763	229	44.9%	1.2	0.4	1.7	58.2	2.9	0.4	3.3
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -14.8 Total Delay for Signalled Lanes (pcuHr): 56.32 Cycle Time (s): 110
PRC Over All Lanes (%): -14.8 Total Delay Over All Lanes(pcuHr): 56.32

Stage Sequence Diagram

Scenario 7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)' (FG7: 'AM Peak 2033 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



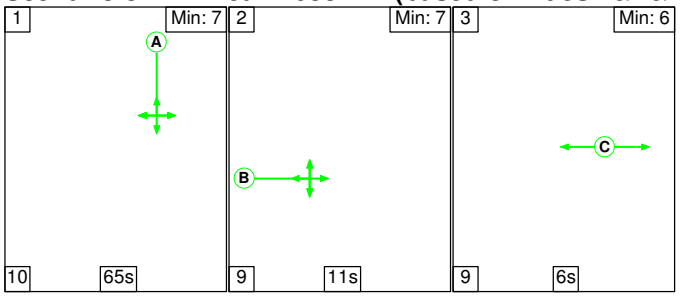
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**90.1%**	**15.2**	**9.8**	**25.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**90.1%**	**15.2**	**9.8**	**25.3**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	746	1873	919	81.1%	4.9	2.1	7.1	34.1	19.3	2.1	21.4
2/1	Stoney Lane Left Ahead Right	B	230	1731	261	88.2%	2.8	3.1	6.0	94.3	6.8	3.1	9.9
3/1	A6 Main Road (S) Left Ahead Right	A	837	1893	929	90.1%	5.9	4.2	10.1	43.6	23.2	4.2	27.4
4/1	Salford Road Right Left Ahead	B	145	1725	297	48.9%	1.6	0.5	2.1	52.5	3.9	0.5	4.4
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -0.1 Total Delay for Signalled Lanes (pcuHr): 25.33 Cycle Time (s): 110
PRC Over All Lanes (%): -0.1 Total Delay Over All Lanes(pcuHr): 25.33

Stage Sequence Diagram

Scenario 8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)' (FG8: 'PM Peak 2033 DM (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



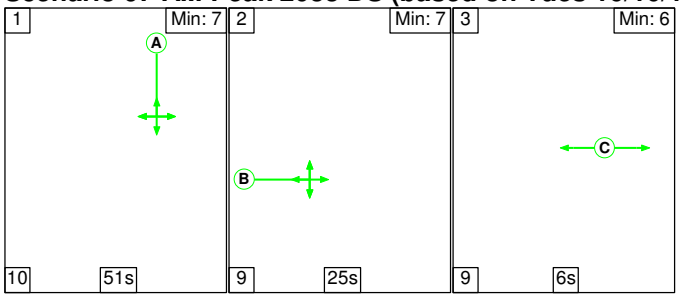
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**94.2%**	**14.0**	**12.9**	**27.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**94.2%**	**14.0**	**12.9**	**27.3**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	991	1867	1052	94.2%	6.2	6.6	12.9	46.8	28.1	6.6	34.7
2/1	Stoney Lane Left Ahead Right	B	156	1733	172	90.6%	2.1	3.4	5.6	128.5	4.7	3.4	8.1
3/1	A6 Main Road (S) Left Ahead Right	A	826	1845	1014	81.4%	4.4	2.1	6.7	29.2	19.7	2.1	21.9
4/1	Salford Road Right Left Ahead	B	109	1762	185	58.8%	1.4	0.7	2.1	70.3	3.1	0.7	3.8
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -4.6 Total Delay for Signalled Lanes (pcuHr): 27.27 Cycle Time (s): 110
PRC Over All Lanes (%): -4.6 Total Delay Over All Lanes(pcuHr): 27.27

Stage Sequence Diagram

Scenario 9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)' (FG9: 'AM Peak 2033 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



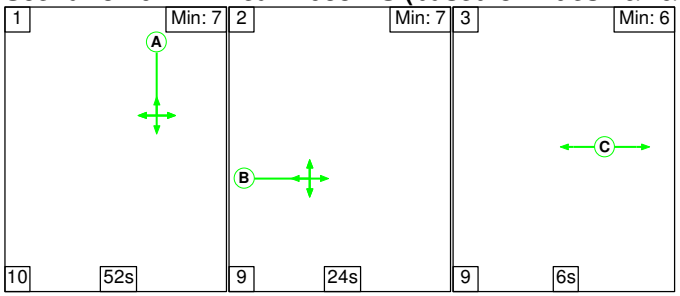
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**134.1%**	**43.2**	**209.5**	**253.1**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**134.1%**	**43.2**	**209.5**	**253.1**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	1088	1886	823	132.2%	23.0	134.5	157.5	521.2	41.3	134.5	175.9
2/1	Stoney Lane Left Ahead Right	B	451	1737	336	134.1%	11.5	59.2	71.0	566.8	19.3	59.2	78.5
3/1	A6 Main Road (S) Left Ahead Right	A	830	1893	826	100.5%	7.4	15.4	22.8	99.0	25.5	15.4	40.9
4/1	Salford Road Right Left Ahead	B	143	1724	385	37.2%	1.4	0.3	1.7	42.8	3.6	0.3	3.9
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -49.0 Total Delay for Signalled Lanes (pcuHr): 253.06 Cycle Time (s): 110
PRC Over All Lanes (%): -49.0 Total Delay Over All Lanes(pcuHr): 253.06

Stage Sequence Diagram

Scenario 10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)' (FG10: 'PM Peak 2033 DS (based on Tues 16/10/18 survey)', Plan 1: 'Ped in Each Cycle')



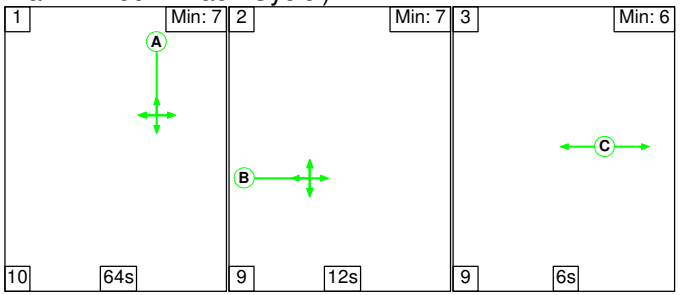
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**146.2%**	**52.2**	**283.4**	**336.2**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**146.2%**	**52.2**	**283.4**	**336.2**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	1222	1877	836	146.2%	30.1	194.5	224.7	661.9	49.1	194.5	243.6
2/1	Stoney Lane Left Ahead Right	B	470	1739	334	140.6%	13.2	69.6	83.0	636.1	21.1	69.6	90.7
3/1	A6 Main Road (S) Left Ahead Right	A	839	1847	823	102.0%	7.9	19.1	27.2	116.7	26.1	19.1	45.2
4/1	Salford Road Right Left Ahead	B	107	1760	369	29.0%	1.0	0.2	1.3	42.1	2.7	0.2	2.9
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -62.4 Total Delay for Signalled Lanes (pcuHr): 336.17 Cycle Time (s): 110
PRC Over All Lanes (%): -62.4 Total Delay Over All Lanes(pcuHr): 336.17

Stage Sequence Diagram

Scenario 11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)' (FG11: 'AM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



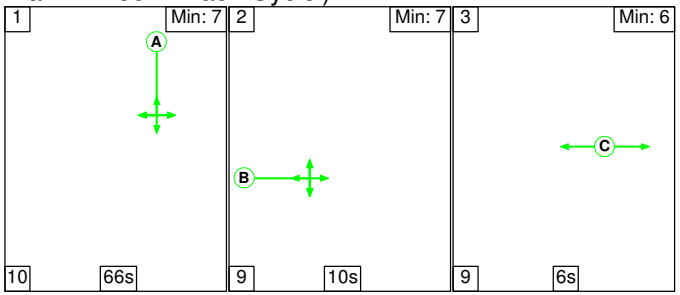
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**76.3%**	**10.6**	**4.8**	**15.5**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**76.3%**	**10.6**	**4.8**	**15.5**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	650	1859	1031	63.1%	3.0	0.8	3.9	21.7	13.5	0.8	14.4
2/1	Stoney Lane Left Ahead Right	B	113	1720	174	64.9%	1.4	0.9	2.4	75.7	3.2	0.9	4.1
3/1	A6 Main Road (S) Left Ahead Right	A	791	1885	1045	75.7%	4.1	1.5	5.7	25.9	18.5	1.5	20.0
4/1	Salford Road Right Left Ahead	B	153	1711	201	76.3%	2.0	1.5	3.5	83.4	4.5	1.5	6.0
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 18.0 Total Delay for Signalled Lanes (pcuHr): 15.53 Cycle Time (s): 110
PRC Over All Lanes (%): 18.0 Total Delay Over All Lanes(pcuHr): 15.53

Stage Sequence Diagram

Scenario 12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)' (FG12: 'PM Peak Hour 2018 Surveyed Flows (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



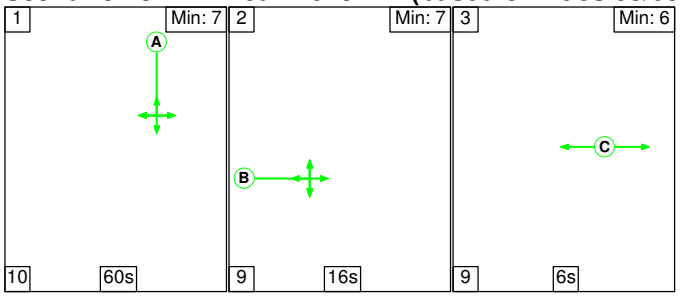
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**78.1%**	**9.6**	**4.2**	**14.0**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**78.1%**	**9.6**	**4.2**	**14.0**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	832	1860	1065	78.1%	4.2	1.8	6.0	26.1	19.6	1.8	21.4
2/1	Stoney Lane Left Ahead Right	B	60	1737	174	34.5%	0.8	0.3	1.0	62.1	1.7	0.3	2.0
3/1	A6 Main Road (S) Left Ahead Right	A	700	1843	1055	66.4%	3.1	1.0	4.2	21.7	14.6	1.0	15.6
4/1	Salford Road Right Left Ahead	B	114	1754	159	71.5%	1.5	1.2	2.7	86.7	3.3	1.2	4.5
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 15.2 Total Delay for Signalled Lanes (pcuHr): 14.04 Cycle Time (s): 110
PRC Over All Lanes (%): 15.2 Total Delay Over All Lanes(pcuHr): 14.04

Stage Sequence Diagram

Scenario 13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)' (FG13: 'AM Peak 2023 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



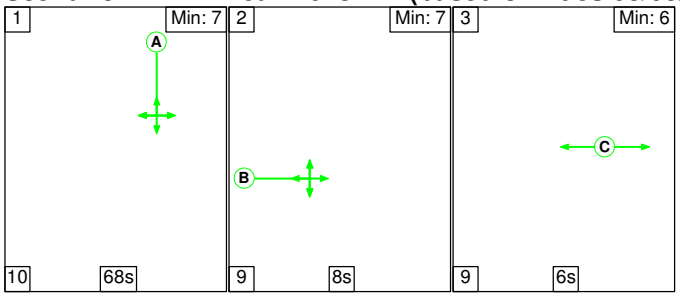
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**85.9%**	**13.4**	**7.5**	**21.1**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**85.9%**	**13.4**	**7.5**	**21.1**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	697	1859	963	72.4%	4.0	1.3	5.3	27.5	16.3	1.3	17.6
2/1	Stoney Lane Left Ahead Right	B	174	1726	203	85.9%	2.1	2.6	4.8	100.2	5.1	2.6	7.7
3/1	A6 Main Road (S) Left Ahead Right	A	835	1885	977	85.5%	5.3	2.8	8.2	35.3	22.0	2.8	24.9
4/1	Salford Road Right Left Ahead	B	162	1713	260	62.4%	2.0	0.8	2.8	62.1	4.6	0.8	5.4
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 4.8 Total Delay for Signalled Lanes (pcuHr): 21.14 Cycle Time (s): 110
PRC Over All Lanes (%): 4.8 Total Delay Over All Lanes(pcuHr): 21.14

Stage Sequence Diagram

Scenario 14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)' (FG14: 'PM Peak 2023 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



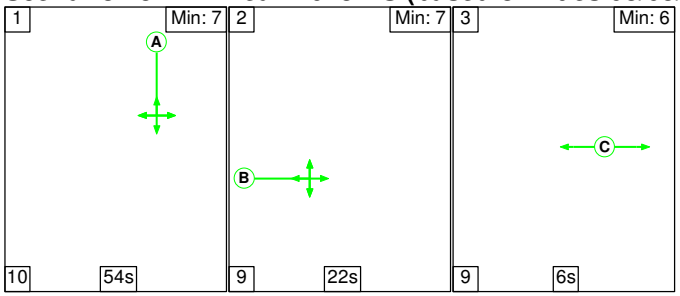
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**84.2%**	**11.1**	**7.9**	**19.4**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**84.2%**	**11.1**	**7.9**	**19.4**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	922	1864	1101	83.8%	4.7	2.5	7.3	28.4	23.1	2.5	25.6
2/1	Stoney Lane Left Ahead Right	B	120	1741	142	84.2%	1.7	2.2	3.9	118.2	3.6	2.2	5.8
3/1	A6 Main Road (S) Left Ahead Right	A	735	1843	1085	67.7%	3.1	1.0	4.3	21.0	15.1	1.0	16.2
4/1	Salford Road Right Left Ahead	B	120	1754	144	83.6%	1.7	2.2	3.9	115.6	3.6	2.2	5.8
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 6.8 Total Delay for Signalled Lanes (pcuHr): 19.35 Cycle Time (s): 110
PRC Over All Lanes (%): 6.8 Total Delay Over All Lanes(pcuHr): 19.35

Stage Sequence Diagram

Scenario 15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)' (FG15: 'AM Peak 2023 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



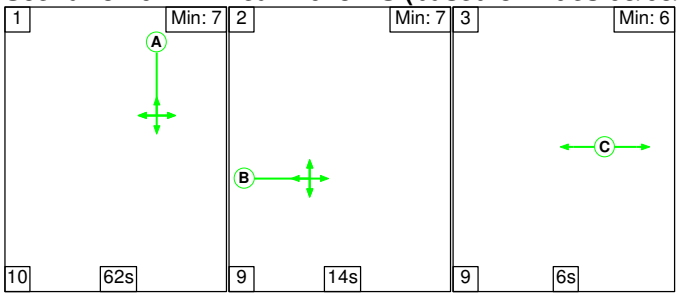
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**96.1%**	**17.4**	**18.5**	**36.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**96.1%**	**17.4**	**18.5**	**36.3**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	790	1866	865	91.3%	6.0	4.7	10.8	49.1	22.4	4.7	27.1
2/1	Stoney Lane Left Ahead Right	B	269	1732	280	96.1%	3.2	5.9	9.3	124.9	8.1	5.9	14.0
3/1	A6 Main Road (S) Left Ahead Right	A	833	1885	874	95.3%	6.6	7.5	14.1	60.9	24.3	7.5	31.8
4/1	Salford Road Right Left Ahead	B	160	1711	343	46.7%	1.7	0.4	2.1	48.1	4.2	0.4	4.7
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -6.8 Total Delay for Signalled Lanes (pcuHr): 36.32 Cycle Time (s): 110
PRC Over All Lanes (%): -6.8 Total Delay Over All Lanes(pcuHr): 36.32

Stage Sequence Diagram

Scenario 16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)' (FG16: 'PM Peak 2023 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



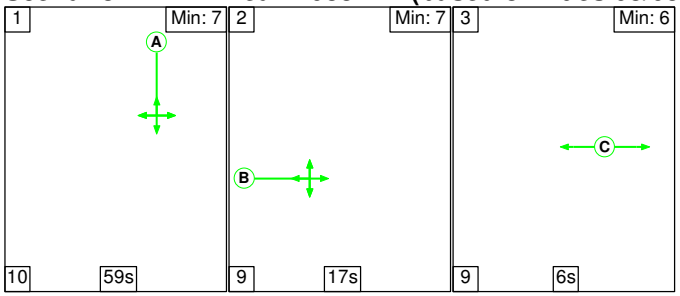
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**101.7%**	**16.5**	**29.7**	**46.7**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**101.7%**	**16.5**	**29.7**	**46.7**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	1016	1868	999	101.7%	8.3	20.9	29.3	103.9	31.9	20.9	52.8
2/1	Stoney Lane Left Ahead Right	B	200	1740	201	99.3%	2.6	6.7	9.5	170.4	6.1	6.7	12.8
3/1	A6 Main Road (S) Left Ahead Right	A	748	1845	989	75.6%	4.1	1.5	5.9	28.3	17.7	1.5	19.2
4/1	Salford Road Right Left Ahead	B	119	1754	231	51.5%	1.5	0.5	2.0	60.5	3.3	0.5	3.9
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -13.1 Total Delay for Signalled Lanes (pcuHr): 46.66 Cycle Time (s): 110
PRC Over All Lanes (%): -13.1 Total Delay Over All Lanes(pcuHr): 46.66

Stage Sequence Diagram

Scenario 17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)' (FG17: 'AM Peak 2033 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



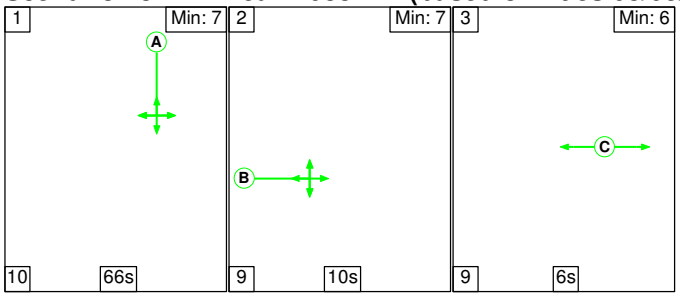
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**92.0%**	**14.9**	**10.9**	**26.2**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**92.0%**	**14.9**	**10.9**	**26.2**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	737	1860	947	77.8%	4.5	1.7	6.3	30.8	18.2	1.7	19.9
2/1	Stoney Lane Left Ahead Right	B	190	1727	212	89.7%	2.3	3.3	5.8	109.9	5.6	3.3	9.0
3/1	A6 Main Road (S) Left Ahead Right	A	883	1886	960	92.0%	6.1	5.1	11.2	45.7	24.8	5.1	29.8
4/1	Salford Road Right Left Ahead	B	171	1710	273	62.7%	2.0	0.8	2.9	60.7	4.8	0.8	5.7
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -2.2 Total Delay for Signalled Lanes (pcuHr): 26.20 Cycle Time (s): 110
PRC Over All Lanes (%): -2.2 Total Delay Over All Lanes(pcuHr): 26.20

Stage Sequence Diagram

Scenario 18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)' (FG18: 'PM Peak 2033 DM (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



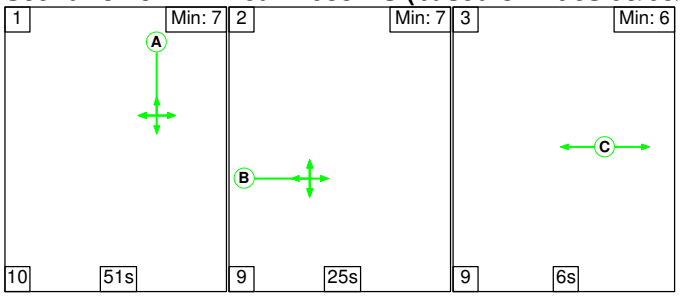
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**91.0%**	**13.0**	**10.3**	**23.7**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**91.0%**	**13.0**	**10.3**	**23.7**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	968	1863	1064	91.0%	5.7	4.6	10.4	38.5	26.6	4.6	31.2
2/1	Stoney Lane Left Ahead Right	B	144	1740	162	89.1%	1.9	3.0	5.1	126.3	4.3	3.0	7.3
3/1	A6 Main Road (S) Left Ahead Right	A	774	1843	1043	74.2%	3.7	1.4	5.3	24.7	17.4	1.4	18.8
4/1	Salford Road Right Left Ahead	B	127	1755	174	72.9%	1.7	1.3	3.0	85.2	3.7	1.3	5.0
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -1.1 Total Delay for Signalled Lanes (pcuHr): 23.72 Cycle Time (s): 110
PRC Over All Lanes (%): -1.1 Total Delay Over All Lanes(pcuHr): 23.72

Stage Sequence Diagram

Scenario 19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)' (FG19: 'AM Peak 2033 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



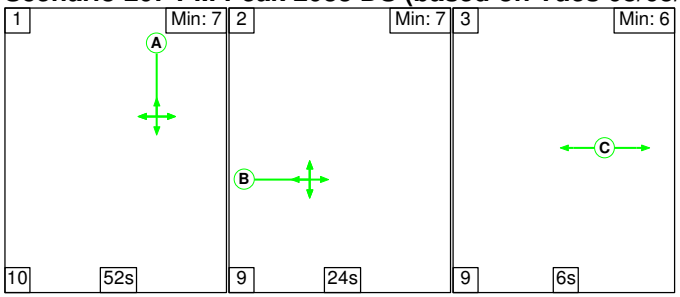
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**131.5%**	**44.5**	**215.3**	**260.3**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**131.5%**	**44.5**	**215.3**	**260.3**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	1078	1878	819	131.5%	22.5	131.3	153.9	513.9	40.8	131.3	172.1
2/1	Stoney Lane Left Ahead Right	B	412	1735	314	131.2%	10.1	51.0	61.3	535.9	17.2	51.0	68.2
3/1	A6 Main Road (S) Left Ahead Right	A	875	1886	823	106.3%	10.2	32.7	43.0	177.0	28.4	32.7	61.1
4/1	Salford Road Right Left Ahead	B	167	1710	388	43.1%	1.6	0.4	2.0	44.0	4.3	0.4	4.7
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -46.2 Total Delay for Signalled Lanes (pcuHr): 260.28 Cycle Time (s): 110
PRC Over All Lanes (%): -46.2 Total Delay Over All Lanes(pcuHr): 260.28

Stage Sequence Diagram

Scenario 20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)' (FG20: 'PM Peak 2033 DS (based on Tues 08/05/18 survey)', Plan 1: 'Ped in Each Cycle')



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**143.8%**	**49.2**	**259.4**	**309.2**	-	-	-	-
A6 Main Road/ Salford Road/Stoney Lane Signal Jun.	-	-	-	-	-	**143.8%**	**49.2**	**259.4**	**309.2**	-	-	-	-
1/1	A6 Main Road (N) Ahead Right Left	A	1200	1874	835	143.8%	28.8	184.2	213.2	639.6	47.8	184.2	232.1
2/1	Stoney Lane Left Ahead Right	B	458	1741	328	139.8%	12.7	66.9	79.9	627.9	20.4	66.9	87.3
3/1	A6 Main Road (S) Left Ahead Right	A	787	1845	820	96.0%	6.4	8.0	14.6	66.8	23.2	8.0	31.2
4/1	Salford Road Right Left Ahead	B	125	1753	370	33.7%	1.2	0.3	1.5	43.0	3.2	0.3	3.4
Ped Link: P1	Unnamed Ped Link	C	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -59.7 Total Delay for Signalled Lanes (pcuHr): 309.19 Cycle Time (s): 110
PRC Over All Lanes (%): -59.7 Total Delay Over All Lanes(pcuHr): 309.19

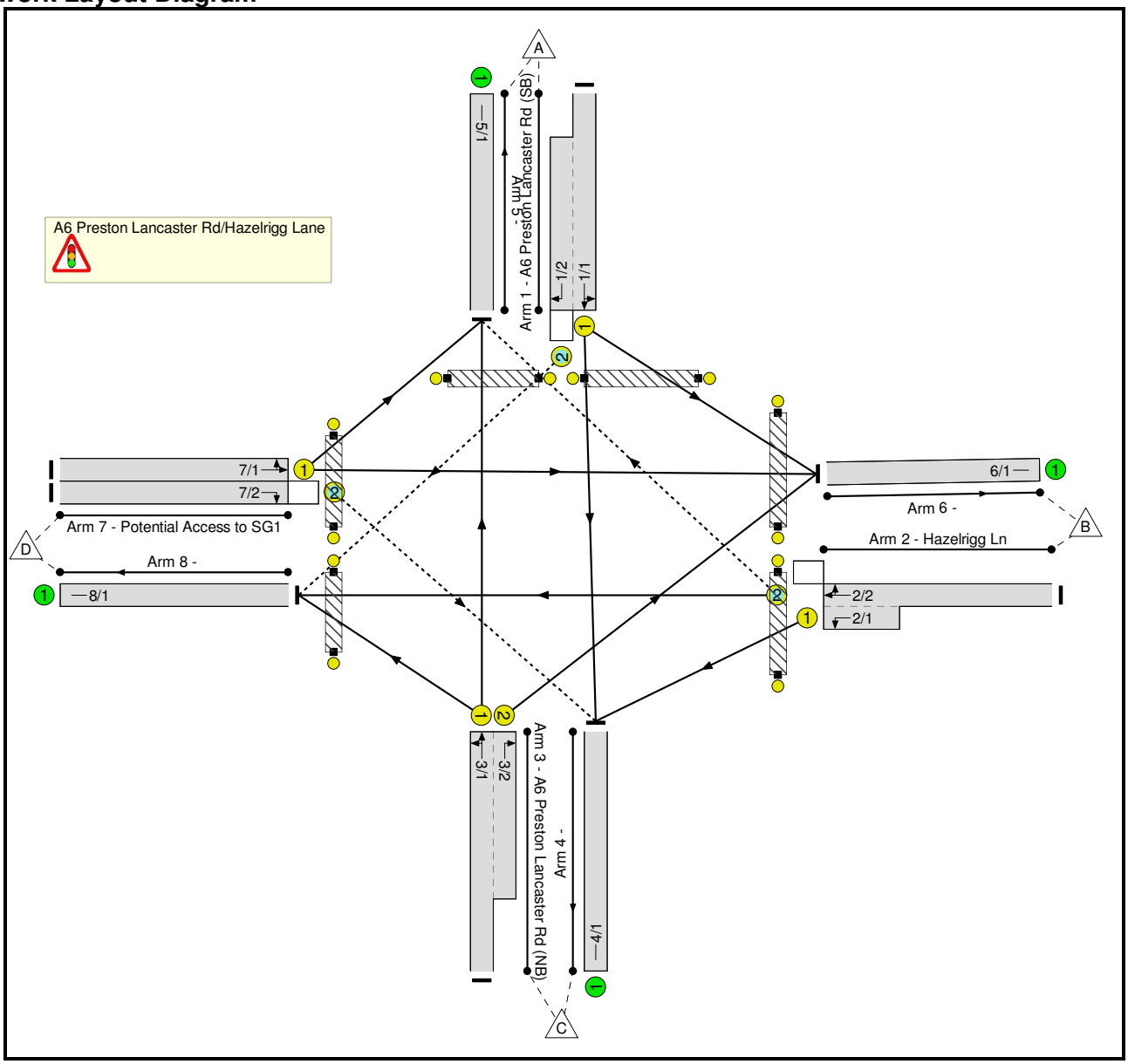
Appendix C – A6 Preston Lancaster Rd/Hazelrigg Ln Junction Capacity Assessment Results

Full Input Data And Results

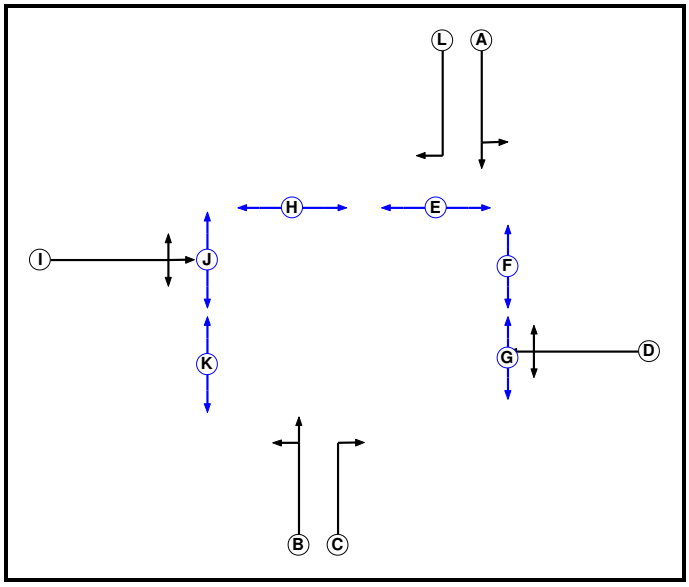
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	A6 Preston Lancaster Rd_Hazelrigg Lane (4-arm layout) 2018-11-21 (with mitigation).lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	4
D	Traffic		7	7
E	Pedestrian		6	6
F	Pedestrian		6	5
G	Pedestrian		6	6
H	Pedestrian		6	6
I	Traffic		7	7
J	Pedestrian		6	6
K	Pedestrian		6	6
L	Traffic		7	7

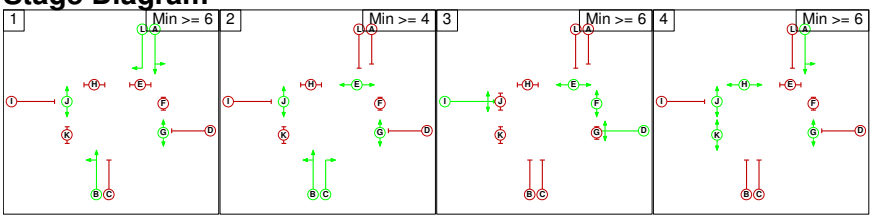
Phase Intergreens Matrix

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

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	A	Losing	2	2
1	3	B	Losing	3	3
2	1	C	Losing	3	3
2	3	B	Losing	3	3
2	3	C	Losing	3	3
2	4	B	Losing	9	9
2	4	C	Losing	3	3
3	1	F	Losing	3	3
3	2	F	Losing	1	1
3	4	D	Losing	2	2
3	4	F	Losing	3	3
4	3	H	Losing	3	3

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		7	9	7
	2	9		10	16
	3	9	7		10
	4	7	7	9	

Give-Way Lane Input Data

Junction: A6 Preston Lancaster Rd/Hazelrigg Lane

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)
1/2 (A6 Preston Lancaster Rd (SB))	8/1 (Right)	1439	0	3/1	1.09	All	2.00	-	0.50	2	2.00
2/2 (Hazelrigg Ln)	5/1 (Right)	1439	0	7/1	1.09	All	2.00	2.00	0.50	2	2.00
7/2 (Potential Access to SG1)	4/1 (Right)	1439	0	2/1	1.09	All	2.00	-	0.50	2	2.00
				2/2	1.09	To 8/1 (Ahead)					

Lane Input Data

Junction: A6 Preston Lancaster Rd/Hazelrigg Lane

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 (A6 Preston Lancaster Rd (SB))	U	A	2	3	60.0	Geom	-	3.10	0.00	Y	Arm 4 Ahead	Inf
											Arm 6 Left	15.91
1/2 (A6 Preston Lancaster Rd (SB))	O	L	2	3	14.0	Geom	-	3.10	0.00	Y	Arm 8 Right	Inf
2/1 (Hazelrigg Ln)	U	D	2	3	5.0	Geom	-	3.00	0.00	Y	Arm 4 Left	16.00
2/2 (Hazelrigg Ln)	O	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Right	12.00
											Arm 8 Ahead	Inf
3/1 (A6 Preston Lancaster Rd (NB))	U	B	2	3	60.0	Geom	-	3.02	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	Inf
3/2 (A6 Preston Lancaster Rd (NB))	U	C	2	3	11.0	Geom	-	3.00	0.00	Y	Arm 6 Right	11.75
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Potential Access to SG1)	U	I	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Left	20.00
											Arm 6 Ahead	Inf
7/2 (Potential Access to SG1)	O	I	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 4 Right	12.00
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak 2023 DS'	07:30	08:30	01:00	
2: 'PM Peak 2023 DS'	16:30	17:30	01:00	
3: 'AM Peak 2033 DS'	07:30	08:30	01:00	
4: 'PM Peak 2033 DS'	16:30	17:30	01:00	

Scenario 1: 'AM Peak 2023 DS' (FG1: 'AM Peak 2023 DS', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	35	701	3	739
	B	101	0	76	2	179
	C	835	210	0	5	1050
	D	9	5	13	0	27
	Tot.	945	250	790	10	1995

Traffic Lane Flows

Lane	Scenario 1: AM Peak 2023 DS
Junction: A6 Preston Lancaster Rd/Hazelrigg Lane	
1/1 (with short)	739(In) 736(Out)
1/2 (short)	3
2/1 (short)	76
2/2 (with short)	179(In) 103(Out)
3/1 (with short)	1050(In) 840(Out)
3/2 (short)	210
4/1	790
5/1	945
6/1	250
7/1	14
7/2	13
8/1	10

Lane Saturation Flows

Junction: A6 Preston Lancaster Rd/Hazelrigg Lane								
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 (A6 Preston Lancaster Rd (SB))	3.10	0.00	Y	Arm 4 Ahead	Inf	95.2 %	1916	1916
				Arm 6 Left	15.91	4.8 %		
1/2 (A6 Preston Lancaster Rd (SB))	3.10	0.00	Y	Arm 8 Right	Inf	100.0 %	1925	1925
2/1 (Hazelrigg Ln)	3.00	0.00	Y	Arm 4 Left	16.00	100.0 %	1751	1751
2/2 (Hazelrigg Ln)	3.00	0.00	Y	Arm 5 Right	12.00	98.1 %	1706	1706
				Arm 8 Ahead	Inf	1.9 %		
3/1 (A6 Preston Lancaster Rd (NB))	3.02	0.00	Y	Arm 5 Ahead	Inf	99.4 %	1917	1917
				Arm 8 Left	Inf	0.6 %		
3/2 (A6 Preston Lancaster Rd (NB))	3.00	0.00	Y	Arm 6 Right	11.75	100.0 %	1698	1698
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (Potential Access to SG1)	3.00	0.00	Y	Arm 5 Left	20.00	64.3 %	1827	1827
				Arm 6 Ahead	Inf	35.7 %		
7/2 (Potential Access to SG1)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Peak 2023 DS' (FG2: 'PM Peak 2023 DS', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

Origin \ Destination	A	B	C	D	Tot.
A	0	127	694	7	828
B	122	0	228	5	355
C	707	77	0	13	797
D	4	2	6	0	12
Tot.	833	206	928	25	1992

Traffic Lane Flows

Lane	Scenario 2: PM Peak 2023 DS
Junction: A6 Preston Lancaster Rd/Hazelrigg Lane	
1/1 (with short)	828(In) 821(Out)
1/2 (short)	7
2/1 (short)	228
2/2 (with short)	355(In) 127(Out)
3/1 (with short)	797(In) 720(Out)
3/2 (short)	77
4/1	928
5/1	833
6/1	206
7/1	6
7/2	6
8/1	25

Lane Saturation Flows

Junction: A6 Preston Lancaster Rd/Hazelrigg Lane								
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 (A6 Preston Lancaster Rd (SB))	3.10	0.00	Y	Arm 4 Ahead	Inf	84.5 %	1897	1897
				Arm 6 Left	15.91	15.5 %		
1/2 (A6 Preston Lancaster Rd (SB))	3.10	0.00	Y	Arm 8 Right	Inf	100.0 %	1925	1925
2/1 (Hazelrigg Ln)	3.00	0.00	Y	Arm 4 Left	16.00	100.0 %	1751	1751
2/2 (Hazelrigg Ln)	3.00	0.00	Y	Arm 5 Right	12.00	96.1 %	1710	1710
				Arm 8 Ahead	Inf	3.9 %		
3/1 (A6 Preston Lancaster Rd (NB))	3.02	0.00	Y	Arm 5 Ahead	Inf	98.2 %	1917	1917
				Arm 8 Left	Inf	1.8 %		
3/2 (A6 Preston Lancaster Rd (NB))	3.00	0.00	Y	Arm 6 Right	11.75	100.0 %	1698	1698
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (Potential Access to SG1)	3.00	0.00	Y	Arm 5 Left	20.00	66.7 %	1824	1824
				Arm 6 Ahead	Inf	33.3 %		
7/2 (Potential Access to SG1)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Peak 2033 DS' (FG3: 'AM Peak 2033 DS', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	95	889	21	1005
	B	140	0	97	14	251
	C	949	245	0	39	1233
	D	73	42	104	0	219
	Tot.	1162	382	1090	74	2708

Traffic Lane Flows

Lane	Scenario 3: AM Peak 2033 DS
Junction: A6 Preston Lancaster Rd/Hazelrigg Lane	
1/1 (with short)	1005(In) 984(Out)
1/2 (short)	21
2/1 (short)	97
2/2 (with short)	251(In) 154(Out)
3/1 (with short)	1233(In) 988(Out)
3/2 (short)	245
4/1	1090
5/1	1162
6/1	382
7/1	115
7/2	104
8/1	74

Lane Saturation Flows

Junction: A6 Preston Lancaster Rd/Hazelrigg Lane								
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 (A6 Preston Lancaster Rd (SB))	3.10	0.00	Y	Arm 4 Ahead	Inf	90.3 %	1908	1908
				Arm 6 Left	15.91	9.7 %		
1/2 (A6 Preston Lancaster Rd (SB))	3.10	0.00	Y	Arm 8 Right	Inf	100.0 %	1925	1925
2/1 (Hazelrigg Ln)	3.00	0.00	Y	Arm 4 Left	16.00	100.0 %	1751	1751
2/2 (Hazelrigg Ln)	3.00	0.00	Y	Arm 5 Right	12.00	90.9 %	1720	1720
				Arm 8 Ahead	Inf	9.1 %		
3/1 (A6 Preston Lancaster Rd (NB))	3.02	0.00	Y	Arm 5 Ahead	Inf	96.1 %	1917	1917
				Arm 8 Left	Inf	3.9 %		
3/2 (A6 Preston Lancaster Rd (NB))	3.00	0.00	Y	Arm 6 Right	11.75	100.0 %	1698	1698
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (Potential Access to SG1)	3.00	0.00	Y	Arm 5 Left	20.00	63.5 %	1828	1828
				Arm 6 Ahead	Inf	36.5 %		
7/2 (Potential Access to SG1)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Peak 2033 DS' (FG4: 'PM Peak 2033 DS', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	164	800	55	1019
	B	190	0	269	37	496
	C	889	95	0	102	1086
	D	32	18	45	0	95
	Tot.	1111	277	1114	194	2696

Traffic Lane Flows

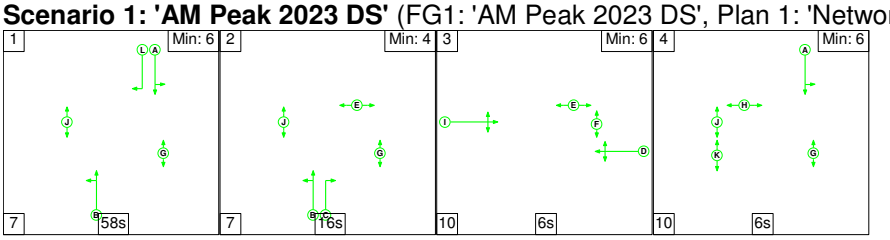
Lane	Scenario 4: PM Peak 2033 DS
Junction: A6 Preston Lancaster Rd/Hazelrigg Lane	
1/1 (with short)	1019(In) 964(Out)
1/2 (short)	55
2/1 (short)	269
2/2 (with short)	496(In) 227(Out)
3/1 (with short)	1086(In) 991(Out)
3/2 (short)	95
4/1	1114
5/1	1111
6/1	277
7/1	50
7/2	45
8/1	194

Lane Saturation Flows

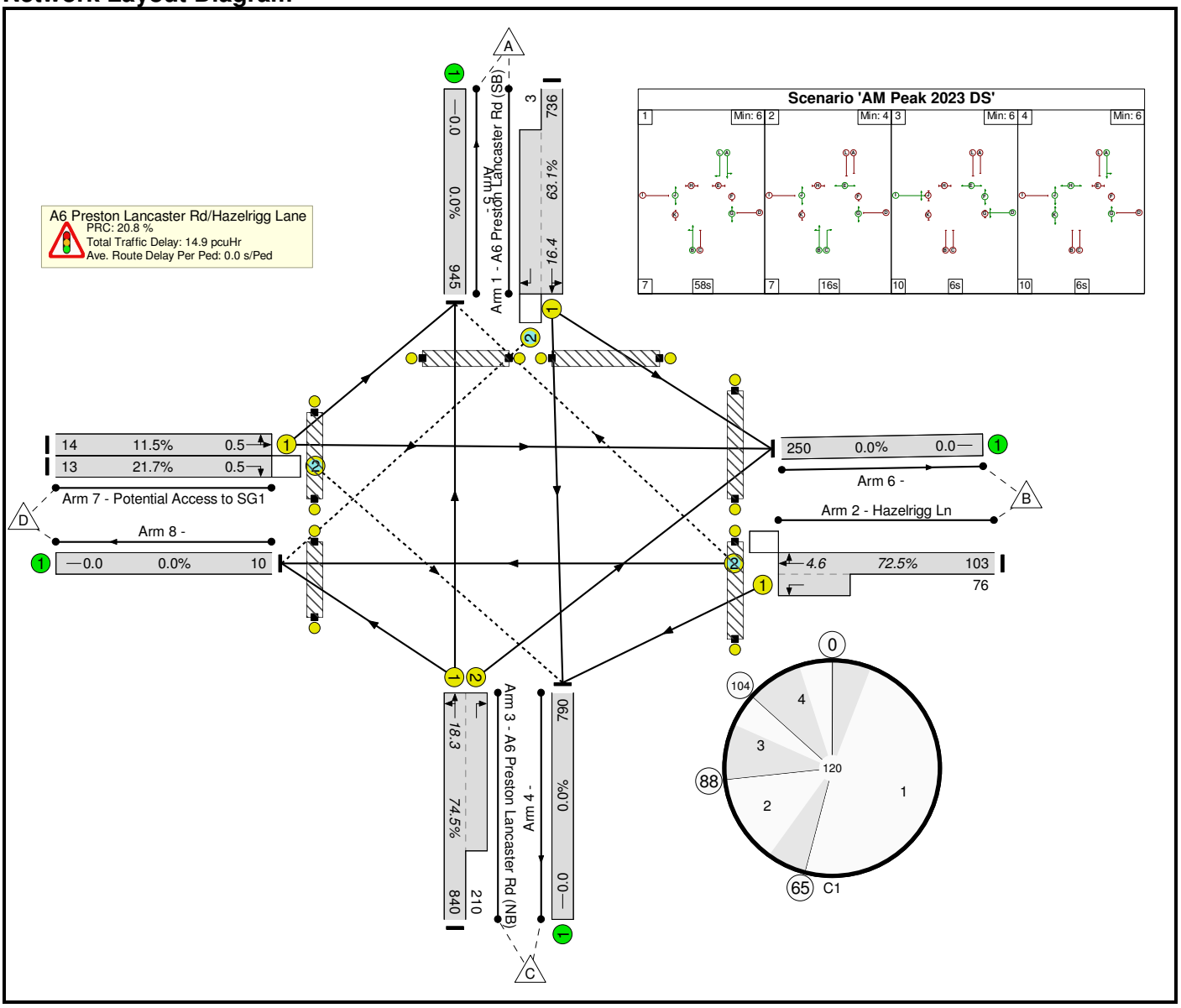
Junction: A6 Preston Lancaster Rd/Hazelrigg Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A6 Preston Lancaster Rd (SB))	3.10	0.00	Y	Arm 4 Ahead	Inf	83.0 %	1895	1895
				Arm 6 Left	15.91	17.0 %		
1/2 (A6 Preston Lancaster Rd (SB))	3.10	0.00	Y	Arm 8 Right	Inf	100.0 %	1925	1925
2/1 (Hazelrigg Ln)	3.00	0.00	Y	Arm 4 Left	16.00	100.0 %	1751	1751
2/2 (Hazelrigg Ln)	3.00	0.00	Y	Arm 5 Right	12.00	83.7 %	1734	1734
				Arm 8 Ahead	Inf	16.3 %		
3/1 (A6 Preston Lancaster Rd (NB))	3.02	0.00	Y	Arm 5 Ahead	Inf	89.7 %	1917	1917
				Arm 8 Left	Inf	10.3 %		
3/2 (A6 Preston Lancaster Rd (NB))	3.00	0.00	Y	Arm 6 Right	11.75	100.0 %	1698	1698
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1 (Potential Access to SG1)	3.00	0.00	Y	Arm 5 Left	20.00	64.0 %	1827	1827
				Arm 6 Ahead	Inf	36.0 %		
7/2 (Potential Access to SG1)	3.00	0.00	Y	Arm 4 Right	12.00	100.0 %	1702	1702
8/1	Infinite Saturation Flow						Inf	Inf

Stage Sequence Diagram

Scenario 1: 'AM Peak 2023 DS' (FG1: 'AM Peak 2023 DS', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



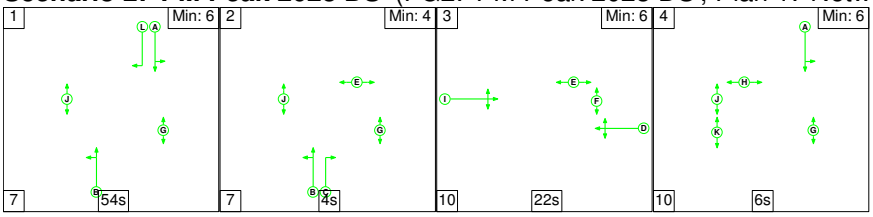
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**74.5%**	**11.1**	**3.8**	**14.9**	**-**	**-**	**-**	**-**
A6 Preston Lancaster Rd/Hazelrigg Lane	**-**	**-**	**-**	**-**	**-**	**74.5%**	**11.1**	**3.8**	**14.9**	**-**	**-**	**-**	**-**
1/1+1/2	A6 Preston Lancaster Rd (SB) Ahead Left Right	A L	739	1916:1925	1170	63.1%	3.1	0.9	3.9	19.2	15.5	0.9	16.4
2/2+2/1	Hazelrigg Ln Left Right Ahead	D	179	1706:1751	247	72.5%	2.6	1.3	4.0	79.7	3.3	1.3	4.6
3/1+3/2	A6 Preston Lancaster Rd (NB) Ahead Right Left	B C	1050	1917:1698	1409	74.5%	4.9	1.4	6.4	21.9	16.8	1.4	18.3
7/1	Potential Access to SG1 Left Ahead	I	14	1827	122	11.5%	0.2	0.1	0.3	69.4	0.4	0.1	0.5
7/2	Potential Access to SG1 Right	I	13	1702	60	21.7%	0.2	0.1	0.3	95.7	0.4	0.1	0.5
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	G	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	J	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

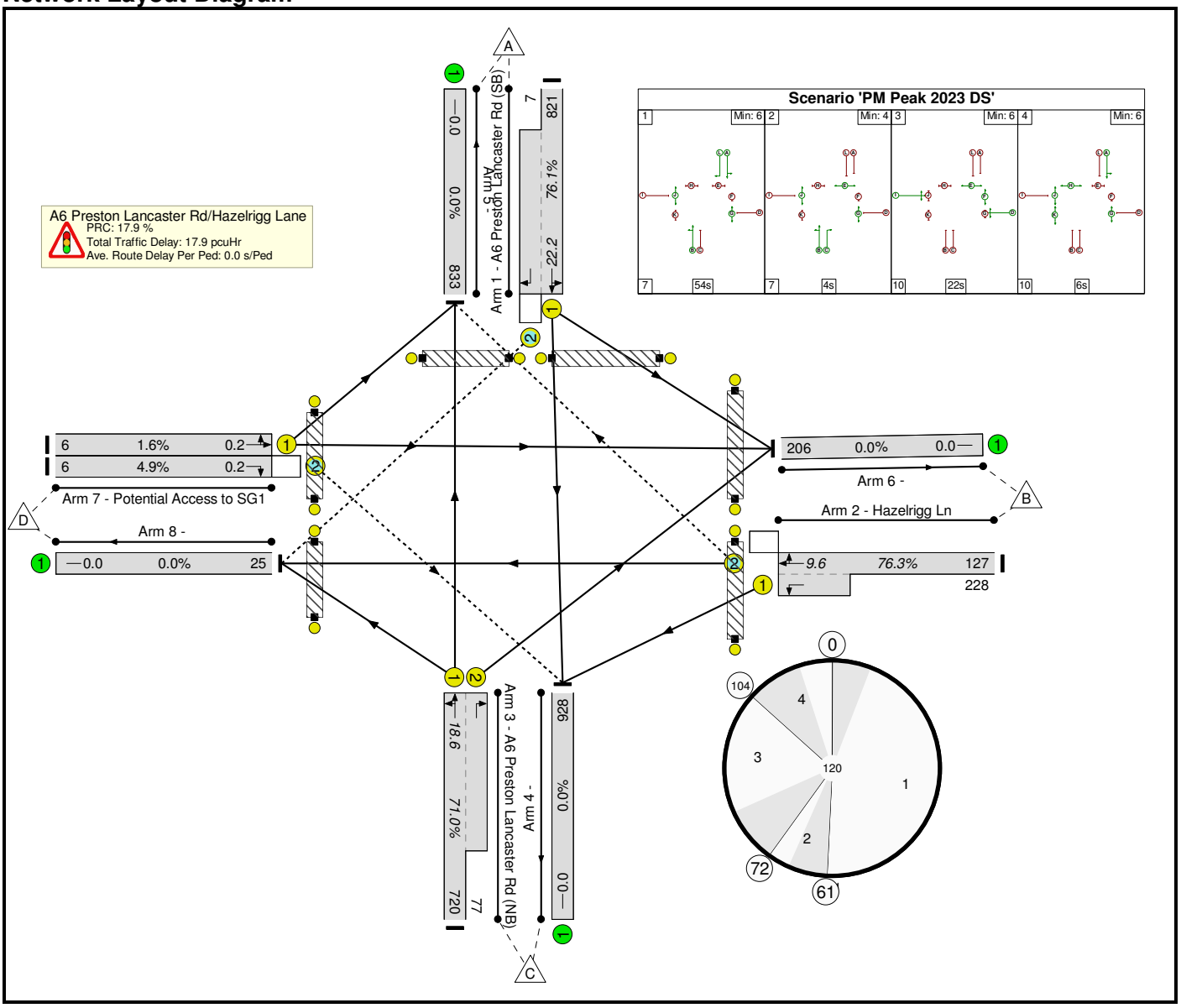
C1 PRC for Signalled Lanes (%): 20.8 Total Delay for Signalled Lanes (pcuHr): 14.91 Cycle Time (s): 120
PRC Over All Lanes (%): 20.8 Total Delay Over All Lanes(pcuHr): 14.91

Stage Sequence Diagram

Scenario 2: 'PM Peak 2023 DS' (FG2: 'PM Peak 2023 DS', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



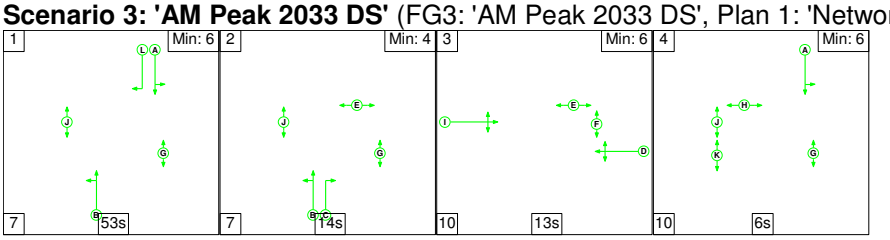
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**76.3%**	**13.4**	**4.4**	**17.9**	**-**	**-**	**-**	**-**
A6 Preston Lancaster Rd/Hazelrigg Lane	**-**	**-**	**-**	**-**	**-**	**76.3%**	**13.4**	**4.4**	**17.9**	**-**	**-**	**-**	**-**
1/1+1/2	A6 Preston Lancaster Rd (SB) Ahead Left Right	A L	828	1897:1925	1088	76.1%	4.4	1.6	6.0	26.3	20.6	1.6	22.2
2/2+2/1	Hazelrigg Ln Left Right Ahead	D	355	1710:1751	465	76.3%	4.2	1.6	5.7	58.2	8.1	1.6	9.6
3/1+3/2	A6 Preston Lancaster Rd (NB) Ahead Right Left	B C	797	1917:1698	1123	71.0%	4.7	1.2	5.9	26.7	17.4	1.2	18.6
7/1	Potential Access to SG1 Left Ahead	I	6	1824	365	1.6%	0.1	0.0	0.1	43.8	0.2	0.0	0.2
7/2	Potential Access to SG1 Right	I	6	1702	124	4.9%	0.1	0.0	0.1	64.5	0.2	0.0	0.2
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	G	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	J	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

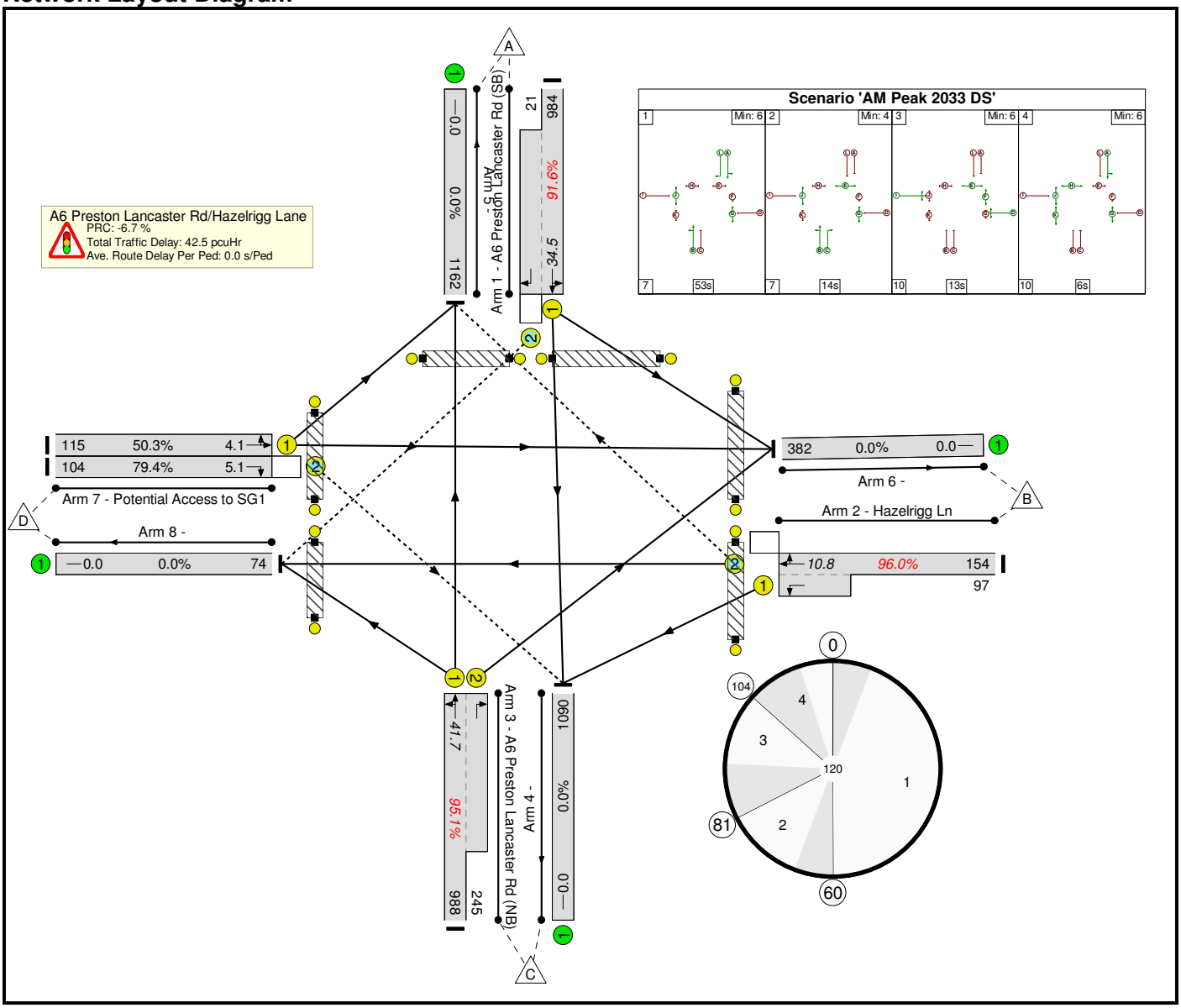
C1 PRC for Signalled Lanes (%): 17.9 Total Delay for Signalled Lanes (pcuHr): 17.86 Cycle Time (s): 120
PRC Over All Lanes (%): 17.9 Total Delay Over All Lanes(pcuHr): 17.86

Stage Sequence Diagram

Scenario 3: 'AM Peak 2033 DS' (FG3: 'AM Peak 2033 DS', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



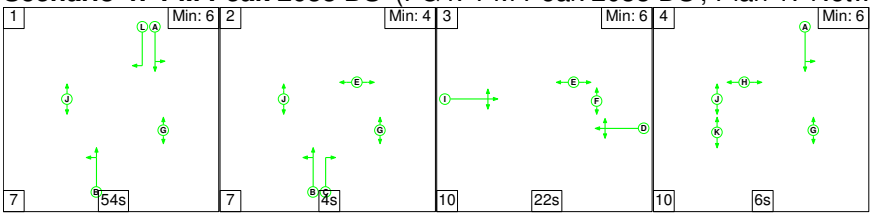
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**96.0%**	**21.2**	**20.7**	**42.5**	**-**	**-**	**-**	**-**
A6 Preston Lancaster Rd/Hazelrigg Lane	**-**	**-**	**-**	**-**	**-**	**96.0%**	**21.2**	**20.7**	**42.5**	**-**	**-**	**-**	**-**
1/1+1/2	A6 Preston Lancaster Rd (SB) Ahead Left Right	A L	1005	1908:1925	1097	91.6%	6.5	4.9	11.7	42.0	29.6	4.9	34.5
2/2+2/1	Hazelrigg Ln Left Right Ahead	D	251	1720:1751	261	96.0%	3.5	5.7	9.4	134.7	5.1	5.7	10.8
3/1+3/2	A6 Preston Lancaster Rd (NB) Ahead Right Left	B C	1233	1917:1698	1296	95.1%	8.2	7.8	16.0	46.7	33.9	7.8	41.7
7/1	Potential Access to SG1 Left Ahead	I	115	1828	228	50.3%	1.6	0.5	2.1	64.7	3.6	0.5	4.1
7/2	Potential Access to SG1 Right	I	104	1702	131	79.4%	1.5	1.7	3.3	115.3	3.4	1.7	5.1
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	G	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	J	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

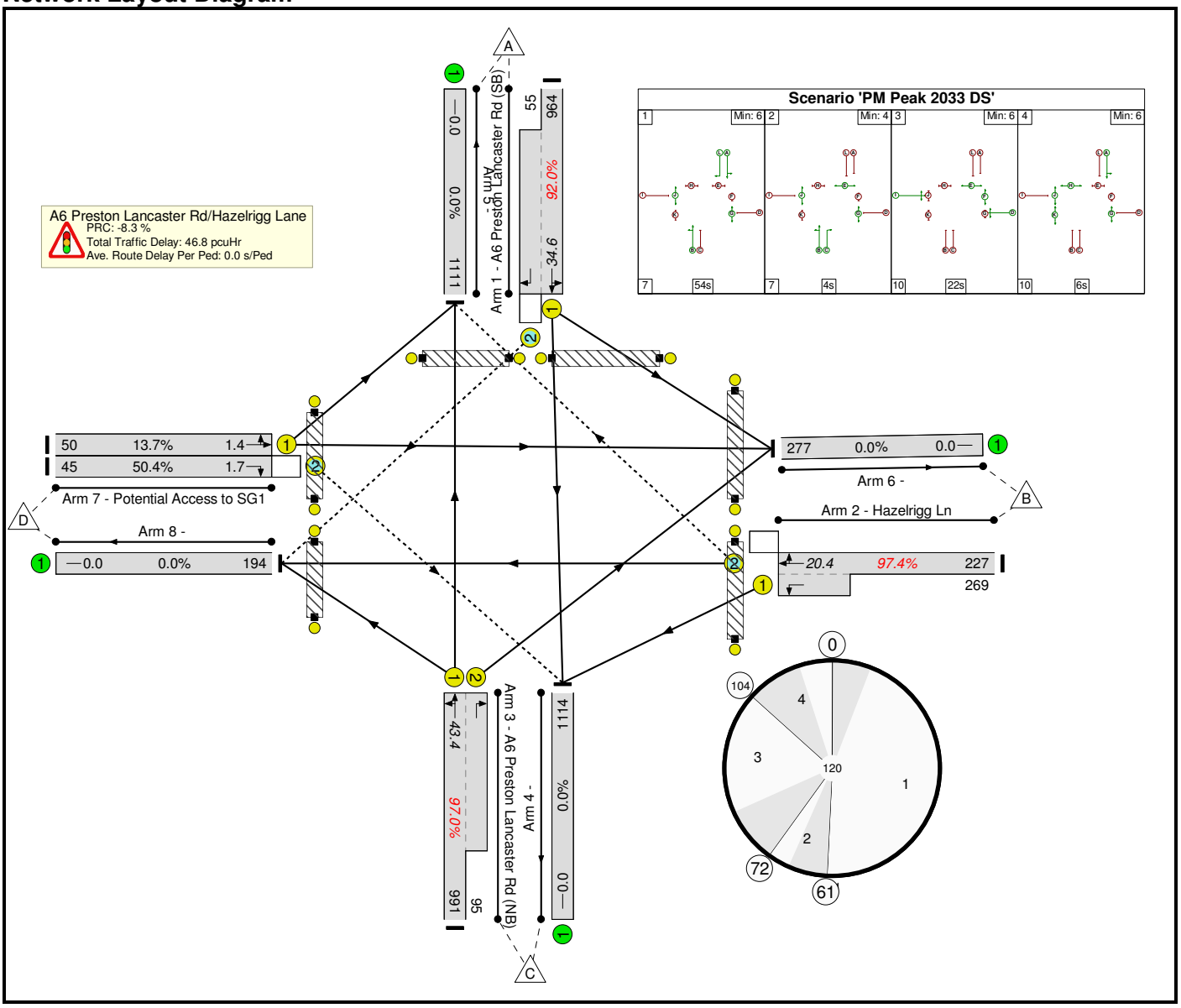
C1 PRC for Signalled Lanes (%): -6.7 Total Delay for Signalled Lanes (pcuHr): 42.52 Cycle Time (s): 120
PRC Over All Lanes (%): -6.7 Total Delay Over All Lanes(pcuHr): 42.52

Stage Sequence Diagram

Scenario 4: 'PM Peak 2033 DS' (FG4: 'PM Peak 2033 DS', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**97.4%**	**21.6**	**24.1**	**46.8**	**-**	**-**	**-**	**-**
A6 Preston Lancaster Rd/Hazelrigg Lane	**-**	**-**	**-**	**-**	**-**	**97.4%**	**21.6**	**24.1**	**46.8**	**-**	**-**	**-**	**-**
1/1+1/2	A6 Preston Lancaster Rd (SB) Ahead Left Right	A L	1019	1895:1925	1108	92.0%	6.4	5.1	12.3	43.5	29.5	5.1	34.6
2/2+2/1	Hazelrigg Ln Left Right Ahead	D	496	1734:1751	509	97.4%	6.2	8.3	14.6	106.0	12.0	8.3	20.4
3/1+3/2	A6 Preston Lancaster Rd (NB) Ahead Right Left	B C	1086	1917:1698	1120	97.0%	8.0	10.1	18.1	59.9	33.3	10.1	43.4
7/1	Potential Access to SG1 Left Ahead	I	50	1827	365	13.7%	0.5	0.1	0.6	45.2	1.4	0.1	1.4
7/2	Potential Access to SG1 Right	I	45	1702	89	50.4%	0.5	0.5	1.2	93.2	1.2	0.5	1.7
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P4	Unnamed Ped Link	G	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P5	Unnamed Ped Link	J	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P6	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -8.3 Total Delay for Signalled Lanes (pcuHr): 46.78 Cycle Time (s): 120
PRC Over All Lanes (%): -8.3 Total Delay Over All Lanes(pcuHr): 46.78

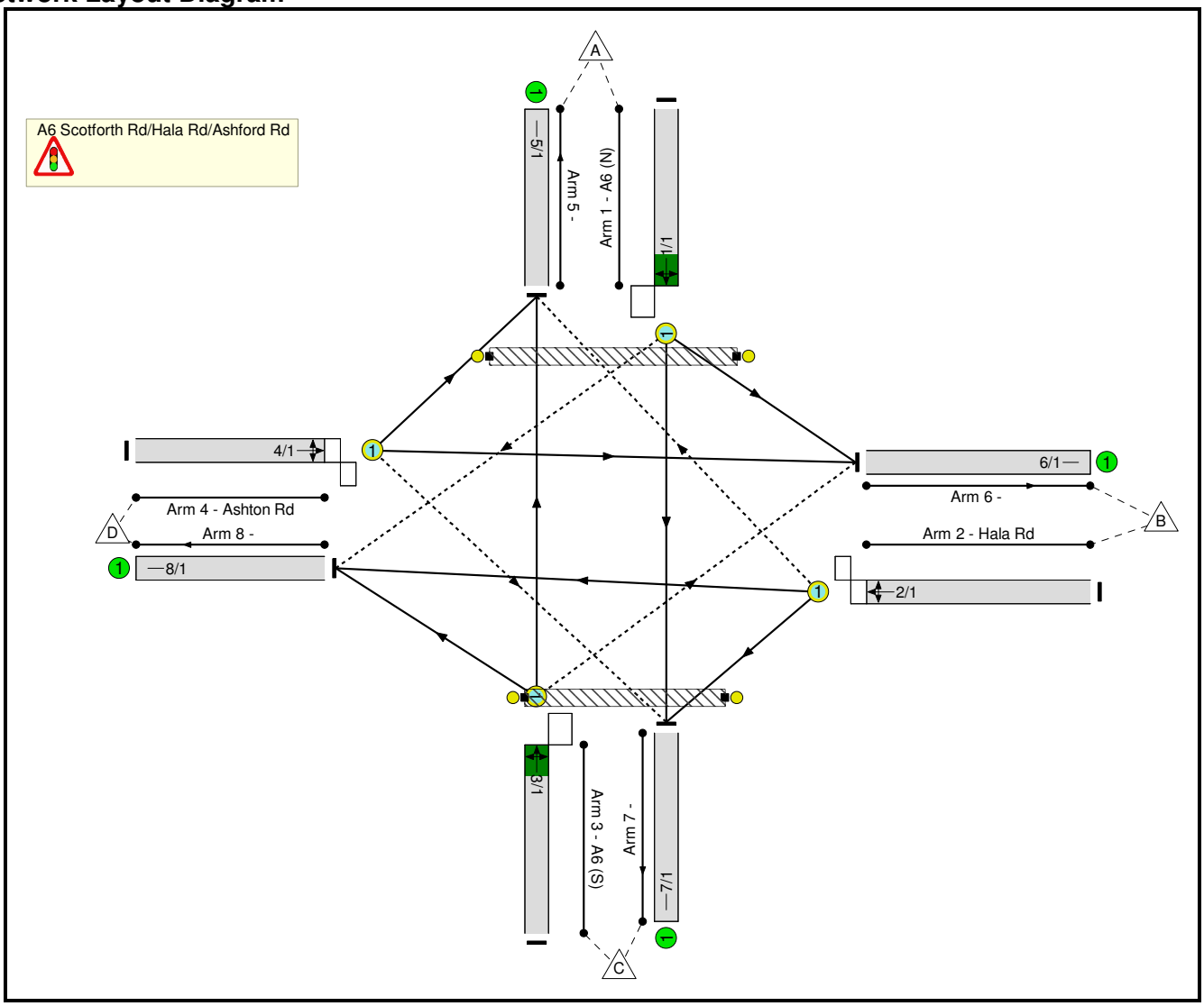
Appendix D – A6 Sctoforth Rd/Hala Rd/Ashford Rd Junction Capacity Assessment Results

Full Input Data And Results

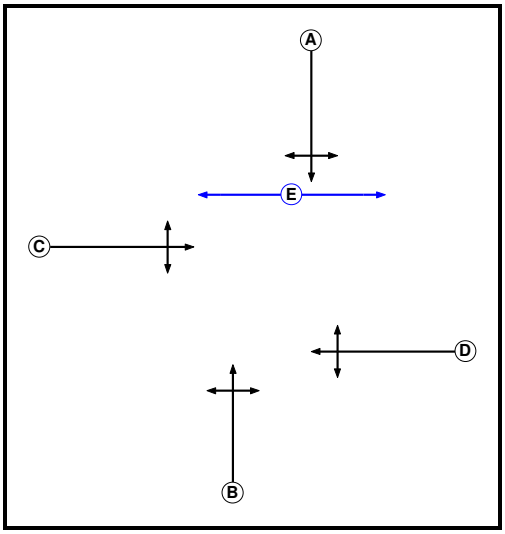
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	A6 Scotforth Rd_Hala Rd_Ashford Rd (2018-11-21) - Mitigation.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		7	7

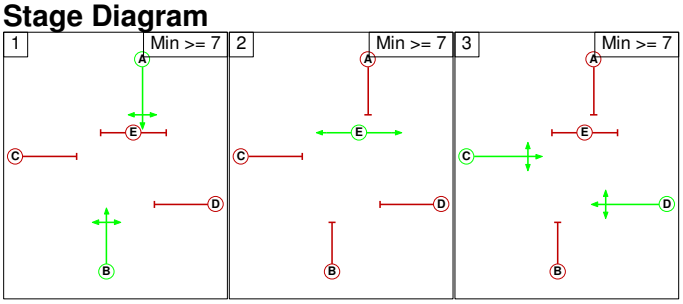
Phase Intergreens Matrix

Terminating Phase	Starting Phase A	B	C	D	E
A		-	6	6	8
B	-		6	6	8
C	7	7		-	8
D	7	7	-		8
E	10	10	8	8	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	E
3	C D

Stage Diagram



Phase Delays

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

Prohibited Stage Change

	To Stage		
	1	2	3
From Stage 1		8	6
From Stage 2	10		8
From Stage 3	7	8	

Give-Way Lane Input Data

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd

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 (A6 (N))	8/1 (Right)	1439	0	3/1	1.09	To 5/1 (Ahead) To 8/1 (Left)	2.00	2.00	0.50	2	2.00
2/1 (Hala Rd)	5/1 (Right)	1439	0	4/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	1.00	0.50	2	2.00
3/1 (A6 (S))	6/1 (Right)	1439	0	1/1	1.09	To 6/1 (Left) To 7/1 (Ahead)	2.00	2.00	0.50	2	2.00
4/1 (Ashton Rd)	7/1 (Right)	1439	0	2/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	1.00	0.50	2	2.00

Lane Input Data

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd

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 (A6 (N))	O	A	2	3	60.0	Geom	-	4.25	0.00	Y	Arm 6 Left	8.00
											Arm 7 Ahead	Inf
											Arm 8 Right	10.00
2/1 (Hala Rd)	O	D	2	3	60.0	Geom	-	3.20	0.00	Y	Arm 5 Right	10.00
											Arm 7 Left	10.00
											Arm 8 Ahead	Inf
											Arm 5 Ahead	Inf
3/1 (A6 (S))	O	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Right	10.00
											Arm 8 Left	17.00
											Arm 5 Left	12.00
4/1 (Ashton Rd)	O	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Right	10.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak Hour 2018 Surveyed Flows (Tues 16/10/18)'	07:30	08:30	01:00	
2: 'PM Peak Hour 2018 Surveyed Flows(Tues 16/10/18)'	16:30	17:30	01:00	
3: 'AM Peak 2023 DM'	07:30	08:30	01:00	
4: 'PM Peak 2023 DM'	16:30	17:30	01:00	
5: 'AM Peak 2023 DS'	07:30	08:30	01:00	
6: 'PM Peak 2023 DS'	16:30	17:30	01:00	
7: 'AM Peak 2033 DM'	07:30	08:30	01:00	
8: 'PM Peak 2033 DM'	16:30	17:30	01:00	
9: 'AM Peak 2033 DS'	07:30	08:30	01:00	
10: 'PM Peak 2033 DS'	07:30	08:30	01:00	
11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)'	07:30	08:30	01:00	
12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17'	16:30	17:30	01:00	
13: 'AM Peak 2023 DM (based on 2017 survey data)'	07:30	08:30	01:00	
14: 'PM Peak 2023 DM (based on 2017 survey data)'	16:30	17:30	01:00	
15: 'AM Peak 2023 DS (based on 2017 survey data)'	07:30	08:30	01:00	
16: 'PM Peak 2023 DS (based on 2017 survey data)'	16:30	17:30	01:00	
17: 'AM Peak 2033 DM (based on 2017 survey data)'	07:30	08:30	01:00	
18: 'PM Peak 2033 DM (based on 2017 survey data)'	16:30	17:30	01:00	
19: 'AM Peak 2033 DS (based on 2017 survey data)'	07:30	08:30	01:00	
20: 'PM Peak 2033 DS (based on 2017 survey data)'	07:30	08:30	01:00	

Scenario 1: 'AM Peak Hour 2018 Surveyed Year' (FG1: 'AM Peak Hour 2018 Surveyed Flows (Tues 16/10/18)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	37	689	19	745
	B	63	0	46	38	147
	C	548	16	0	41	605
	D	34	16	70	0	120
	Tot.	645	69	805	98	1617

Traffic Lane Flows

Lane	Scenario 1: AM Peak Hour 2018 Surveyed Year
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	745
2/1	147
3/1	605
4/1	120
5/1	645
6/1	69
7/1	805
8/1	98

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	5.0 %	2014	2014
				Arm 7 Ahead	Inf	92.5 %		
				Arm 8 Right	10.00	2.6 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	42.9 %	1741	1741
				Arm 7 Left	10.00	31.3 %		
				Arm 8 Ahead	Inf	25.9 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	90.6 %	1946	1946
				Arm 6 Right	10.00	2.6 %		
				Arm 8 Left	17.00	6.8 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	28.3 %	1750	1750
				Arm 6 Ahead	Inf	13.3 %		
				Arm 7 Right	10.00	58.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Peak Hour 2018 Surveyed Year' (FG2: 'PM Peak Hour 2018 Surveyed Flows(Tues 16/10/18)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	118	602	36	756
	B	69	0	55	45	169
	C	702	53	0	50	805
	D	31	52	52	0	135
	Tot.	802	223	709	131	1865

Traffic Lane Flows

Lane	Scenario 2: PM Peak Hour 2018 Surveyed Year
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	756
2/1	169
3/1	805
4/1	135
5/1	802
6/1	223
7/1	709
8/1	131

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd

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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	15.6 %	1968	1968
				Arm 7 Ahead	Inf	79.6 %		
				Arm 8 Right	10.00	4.8 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	40.8 %	1743	1743
				Arm 7 Left	10.00	32.5 %		
				Arm 8 Ahead	Inf	26.6 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	87.2 %	1935	1935
				Arm 6 Right	10.00	6.6 %		
				Arm 8 Left	17.00	6.2 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	23.0 %	1809	1809
				Arm 6 Ahead	Inf	38.5 %		
				Arm 7 Right	10.00	38.5 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Peak 2023 DM' (FG3: 'AM Peak 2023 DM', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	40	802	20	862
	B	68	0	50	41	159
	C	618	17	0	44	679
	D	36	18	75	0	129
	Tot.	722	75	927	105	1829

Traffic Lane Flows

Lane	Scenario 3: AM Peak 2023 DM
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	862
2/1	159
3/1	679
4/1	129
5/1	722
6/1	75
7/1	927
8/1	105

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd

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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	4.6 %	2015	2015
				Arm 7 Ahead	Inf	93.0 %		
				Arm 8 Right	10.00	2.3 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	42.8 %	1741	1741
				Arm 7 Left	10.00	31.4 %		
				Arm 8 Ahead	Inf	25.8 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	91.0 %	1947	1947
				Arm 6 Right	10.00	2.5 %		
				Arm 8 Left	17.00	6.5 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	27.9 %	1751	1751
				Arm 6 Ahead	Inf	14.0 %		
				Arm 7 Right	10.00	58.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Peak 2023 DM' (FG4: 'PM Peak 2023 DM', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	125	688	38	851
	B	74	0	59	48	181
	C	883	57	0	54	994
	D	33	56	56	0	145
	Tot.	990	238	803	140	2171

Traffic Lane Flows

Lane	Scenario 4: PM Peak 2023 DM
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	851
2/1	181
3/1	994
4/1	145
5/1	990
6/1	238
7/1	803
8/1	140

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	14.7 %	1972	1972
				Arm 7 Ahead	Inf	80.8 %		
				Arm 8 Right	10.00	4.5 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	40.9 %	1743	1743
				Arm 7 Left	10.00	32.6 %		
				Arm 8 Ahead	Inf	26.5 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	88.8 %	1939	1939
				Arm 6 Right	10.00	5.7 %		
				Arm 8 Left	17.00	5.4 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	22.8 %	1809	1809
				Arm 6 Ahead	Inf	38.6 %		
				Arm 7 Right	10.00	38.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'AM Peak 2023 DS' (FG5: 'AM Peak 2023 DS', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	39	999	20	1058
	B	67	0	49	41	157
	C	677	17	0	52	746
	D	36	17	96	0	149
	Tot.	780	73	1144	113	2110

Traffic Lane Flows

Lane	Scenario 5: AM Peak 2023 DS
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	1058
2/1	157
3/1	746
4/1	149
5/1	780
6/1	73
7/1	1144
8/1	113

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	3.7 %	2020	2020
				Arm 7 Ahead	Inf	94.4 %		
				Arm 8 Right	10.00	1.9 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	42.7 %	1742	1742
				Arm 7 Left	10.00	31.2 %		
				Arm 8 Ahead	Inf	26.1 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	90.8 %	1946	1946
				Arm 6 Right	10.00	2.3 %		
				Arm 8 Left	17.00	7.0 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	24.2 %	1744	1744
				Arm 6 Ahead	Inf	11.4 %		
				Arm 7 Right	10.00	64.4 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak 2023 DS' (FG6: 'PM Peak 2023 DS', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	124	767	38	929
	B	73	0	58	47	178
	C	1069	56	0	74	1199
	D	33	55	66	0	154
	Tot.	1175	235	891	159	2460

Traffic Lane Flows

Lane	Scenario 6: PM Peak 2023 DS
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	929
2/1	178
3/1	1199
4/1	154
5/1	1175
6/1	235
7/1	891
8/1	159

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	13.3 %	1978	1978
				Arm 7 Ahead	Inf	82.6 %		
				Arm 8 Right	10.00	4.1 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	41.0 %	1743	1743
				Arm 7 Left	10.00	32.6 %		
				Arm 8 Ahead	Inf	26.4 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	89.2 %	1941	1941
				Arm 6 Right	10.00	4.7 %		
				Arm 8 Left	17.00	6.2 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	21.4 %	1801	1801
				Arm 6 Ahead	Inf	35.7 %		
				Arm 7 Right	10.00	42.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: 'AM Peak 2033 DM' (FG7: 'AM Peak 2033 DM', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	43	861	22	926
	B	73	0	54	44	171
	C	676	19	0	48	743
	D	39	19	81	0	139
	Tot.	788	81	996	114	1979

Traffic Lane Flows

Lane	Scenario 7: AM Peak 2033 DM
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	926
2/1	171
3/1	743
4/1	139
5/1	788
6/1	81
7/1	996
8/1	114

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	4.6 %	2015	2015
				Arm 7 Ahead	Inf	93.0 %		
				Arm 8 Right	10.00	2.4 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	42.7 %	1741	1741
				Arm 7 Left	10.00	31.6 %		
				Arm 8 Ahead	Inf	25.7 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	91.0 %	1946	1946
				Arm 6 Right	10.00	2.6 %		
				Arm 8 Left	17.00	6.5 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	28.1 %	1751	1751
				Arm 6 Ahead	Inf	13.7 %		
				Arm 7 Right	10.00	58.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: 'PM Peak 2033 DM' (FG8: 'PM Peak 2033 DM', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	135	737	41	913
	B	79	0	63	51	193
	C	970	61	0	58	1089
	D	36	60	60	0	156
	Tot.	1085	256	860	150	2351

Traffic Lane Flows

Lane	Scenario 8: PM Peak 2033 DM
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	913
2/1	193
3/1	1089
4/1	156
5/1	1085
6/1	256
7/1	860
8/1	150

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd

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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	14.8 %	1972	1972
				Arm 7 Ahead	Inf	80.7 %		
				Arm 8 Right	10.00	4.5 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	40.9 %	1743	1743
				Arm 7 Left	10.00	32.6 %		
				Arm 8 Ahead	Inf	26.4 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	89.1 %	1940	1940
				Arm 6 Right	10.00	5.6 %		
				Arm 8 Left	17.00	5.3 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	23.1 %	1808	1808
				Arm 6 Ahead	Inf	38.5 %		
				Arm 7 Right	10.00	38.5 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 9: 'AM Peak 2033 DS' (FG9: 'AM Peak 2033 DS', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	41	1139	21	1201
	B	71	0	52	43	166
	C	869	18	0	86	973
	D	38	18	194	0	250
	Tot.	978	77	1385	150	2590

Traffic Lane Flows

Lane	Scenario 9: AM Peak 2033 DS
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	1201
2/1	166
3/1	973
4/1	250
5/1	978
6/1	77
7/1	1385
8/1	150

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	3.4 %	2022	2022
				Arm 7 Ahead	Inf	94.8 %		
				Arm 8 Right	10.00	1.7 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	42.8 %	1741	1741
				Arm 7 Left	10.00	31.3 %		
				Arm 8 Ahead	Inf	25.9 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	89.3 %	1944	1944
				Arm 6 Right	10.00	1.8 %		
				Arm 8 Left	17.00	8.8 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	15.2 %	1731	1731
				Arm 6 Ahead	Inf	7.2 %		
				Arm 7 Right	10.00	77.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 10: 'PM Peak 2033 DS' (FG10: 'PM Peak 2033 DS', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	129	920	39	1088
	B	76	0	60	49	185
	C	1239	59	0	159	1457
	D	34	57	110	0	201
	Tot.	1349	245	1090	247	2931

Traffic Lane Flows

Lane	Scenario 10: PM Peak 2033 DS
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	1088
2/1	185
3/1	1457
4/1	201
5/1	1349
6/1	245
7/1	1090
8/1	247

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	11.9 %	1985	1985
				Arm 7 Ahead	Inf	84.6 %		
				Arm 8 Right	10.00	3.6 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	41.1 %	1743	1743
				Arm 7 Left	10.00	32.4 %		
				Arm 8 Ahead	Inf	26.5 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	85.0 %	1935	1935
				Arm 6 Right	10.00	4.0 %		
				Arm 8 Left	17.00	10.9 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	16.9 %	1781	1781
				Arm 6 Ahead	Inf	28.4 %		
				Arm 7 Right	10.00	54.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)' (FG11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	49	553	23	625
	B	75	0	41	48	164
	C	626	26	0	48	700
	D	27	24	63	0	114
	Tot.	728	99	657	119	1603

Traffic Lane Flows

Lane	Scenario 11: AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	625
2/1	164
3/1	700
4/1	114
5/1	728
6/1	99
7/1	657
8/1	119

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd

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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	7.8 %	2000	2000
				Arm 7 Ahead	Inf	88.5 %		
				Arm 8 Right	10.00	3.7 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	45.7 %	1749	1749
				Arm 7 Left	10.00	25.0 %		
				Arm 8 Ahead	Inf	29.3 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	89.4 %	1942	1942
				Arm 6 Right	10.00	3.7 %		
				Arm 8 Left	17.00	6.9 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	23.7 %	1766	1766
				Arm 6 Ahead	Inf	21.1 %		
				Arm 7 Right	10.00	55.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17' (FG12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	99	555	31	685
	B	69	0	43	54	166
	C	743	57	0	75	875
	D	32	41	67	0	140
	Tot.	844	197	665	160	1866

Traffic Lane Flows

Lane	Scenario 12: PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	685
2/1	166
3/1	875
4/1	140
5/1	844
6/1	197
7/1	665
8/1	160

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	14.5 %	1973	1973
				Arm 7 Ahead	Inf	81.0 %		
				Arm 8 Right	10.00	4.5 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	41.6 %	1757	1757
				Arm 7 Left	10.00	25.9 %		
				Arm 8 Ahead	Inf	32.5 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	84.9 %	1932	1932
				Arm 6 Right	10.00	6.5 %		
				Arm 8 Left	17.00	8.6 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	22.9 %	1786	1786
				Arm 6 Ahead	Inf	29.3 %		
				Arm 7 Right	10.00	47.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 13: 'AM Peak 2023 DM (based on 2017 survey data)' (FG13: 'AM Peak 2023 DM (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	53	657	25	735
	B	80	0	44	51	175
	C	702	28	0	52	782
	D	29	26	68	0	123
	Tot.	811	107	769	128	1815

Traffic Lane Flows

Lane	Scenario 13: AM Peak 2023 DM (based on 2017 survey data)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	735
2/1	175
3/1	782
4/1	123
5/1	811
6/1	107
7/1	769
8/1	128

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd

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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	7.2 %	2003	2003
				Arm 7 Ahead	Inf	89.4 %		
				Arm 8 Right	10.00	3.4 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	45.7 %	1749	1749
				Arm 7 Left	10.00	25.1 %		
				Arm 8 Ahead	Inf	29.1 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	89.8 %	1943	1943
				Arm 6 Right	10.00	3.6 %		
				Arm 8 Left	17.00	6.6 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	23.6 %	1766	1766
				Arm 6 Ahead	Inf	21.1 %		
				Arm 7 Right	10.00	55.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 14: 'PM Peak 2023 DM (based on 2017 survey data)' (FG14: 'PM Peak 2023 DM (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	105	638	33	776
	B	73	0	45	57	175
	C	926	61	0	80	1067
	D	35	43	72	0	150
	Tot.	1034	209	755	170	2168

Traffic Lane Flows

Lane	Scenario 14: PM Peak 2023 DM (based on 2017 survey data)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	776
2/1	175
3/1	1067
4/1	150
5/1	1034
6/1	209
7/1	755
8/1	170

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	13.5 %	1977	1977
				Arm 7 Ahead	Inf	82.2 %		
				Arm 8 Right	10.00	4.3 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	41.7 %	1757	1757
				Arm 7 Left	10.00	25.7 %		
				Arm 8 Ahead	Inf	32.6 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	86.8 %	1936	1936
				Arm 6 Right	10.00	5.7 %		
				Arm 8 Left	17.00	7.5 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	23.3 %	1784	1784
				Arm 6 Ahead	Inf	28.7 %		
				Arm 7 Right	10.00	48.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 15: 'AM Peak 2023 DS (based on 2017 survey data)' (FG15: 'AM Peak 2023 DS (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	52	856	25	933
	B	79	0	43	51	173
	C	760	28	0	59	847
	D	29	26	89	0	144
	Tot.	868	106	988	135	2097

Traffic Lane Flows

Lane	Scenario 15: AM Peak 2023 DS (based on 2017 survey data)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	933
2/1	173
3/1	847
4/1	144
5/1	868
6/1	106
7/1	988
8/1	135

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd

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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	5.6 %	2011	2011
				Arm 7 Ahead	Inf	91.7 %		
				Arm 8 Right	10.00	2.7 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	45.7 %	1750	1750
				Arm 7 Left	10.00	24.9 %		
				Arm 8 Ahead	Inf	29.5 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	89.7 %	1943	1943
				Arm 6 Right	10.00	3.3 %		
				Arm 8 Left	17.00	7.0 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	20.1 %	1758	1758
				Arm 6 Ahead	Inf	18.1 %		
				Arm 7 Right	10.00	61.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 16: 'PM Peak 2023 DS (based on 2017 survey data)' (FG16: 'PM Peak 2023 DS (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	104	717	33	854
	B	72	0	45	56	173
	C	1112	60	0	99	1271
	D	34	43	82	0	159
	Tot.	1218	207	844	188	2457

Traffic Lane Flows

Lane	Scenario 16: PM Peak 2023 DS (based on 2017 survey data)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	854
2/1	173
3/1	1271
4/1	159
5/1	1218
6/1	207
7/1	844
8/1	188

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	12.2 %	1983	1983
				Arm 7 Ahead	Inf	84.0 %		
				Arm 8 Right	10.00	3.9 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	41.6 %	1757	1757
				Arm 7 Left	10.00	26.0 %		
				Arm 8 Ahead	Inf	32.4 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	87.5 %	1938	1938
				Arm 6 Right	10.00	4.7 %		
				Arm 8 Left	17.00	7.8 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	21.4 %	1780	1780
				Arm 6 Ahead	Inf	27.0 %		
				Arm 7 Right	10.00	51.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 17: 'AM Peak 2033 DM (based on 2017 survey data)' (FG17: 'AM Peak 2033 DM (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	57	704	27	788
	B	87	0	47	55	189
	C	767	30	0	56	853
	D	32	28	73	0	133
	Tot.	886	115	824	138	1963

Traffic Lane Flows

Lane	Scenario 17: AM Peak 2033 DM (based on 2017 survey data)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	788
2/1	189
3/1	853
4/1	133
5/1	886
6/1	115
7/1	824
8/1	138

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	7.2 %	2003	2003
				Arm 7 Ahead	Inf	89.3 %		
				Arm 8 Right	10.00	3.4 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	46.0 %	1749	1749
				Arm 7 Left	10.00	24.9 %		
				Arm 8 Ahead	Inf	29.1 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	89.9 %	1943	1943
				Arm 6 Right	10.00	3.5 %		
				Arm 8 Left	17.00	6.6 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	24.1 %	1766	1766
				Arm 6 Ahead	Inf	21.1 %		
				Arm 7 Right	10.00	54.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 18: 'PM Peak 2033 DM (based on 2017 survey data)' (FG18: 'PM Peak 2033 DM (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	113	683	36	832
	B	79	0	49	61	189
	C	1017	66	0	86	1169
	D	37	47	77	0	161
	Tot.	1133	226	809	183	2351

Traffic Lane Flows

Lane	Scenario 18: PM Peak 2033 DM (based on 2017 survey data)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	832
2/1	189
3/1	1169
4/1	161
5/1	1133
6/1	226
7/1	809
8/1	183

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	13.6 %	1977	1977
				Arm 7 Ahead	Inf	82.1 %		
				Arm 8 Right	10.00	4.3 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	41.8 %	1757	1757
				Arm 7 Left	10.00	25.9 %		
				Arm 8 Ahead	Inf	32.3 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	87.0 %	1936	1936
				Arm 6 Right	10.00	5.6 %		
				Arm 8 Left	17.00	7.4 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	23.0 %	1786	1786
				Arm 6 Ahead	Inf	29.2 %		
				Arm 7 Right	10.00	47.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 19: 'AM Peak 2033 DS (based on 2017 survey data)' (FG19: 'AM Peak 2033 DS (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	55	989	26	1070
	B	83	0	46	53	182
	C	957	29	0	94	1080
	D	31	27	186	0	244
	Tot.	1071	111	1221	173	2576

Traffic Lane Flows

Lane	Scenario 19: AM Peak 2033 DS (based on 2017 survey data)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	1070
2/1	182
3/1	1080
4/1	244
5/1	1071
6/1	111
7/1	1221
8/1	173

Lane Saturation Flows

Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
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 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	5.1 %	2013	2013
				Arm 7 Ahead	Inf	92.4 %		
				Arm 8 Right	10.00	2.4 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	45.6 %	1749	1749
				Arm 7 Left	10.00	25.3 %		
				Arm 8 Ahead	Inf	29.1 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	88.6 %	1942	1942
				Arm 6 Right	10.00	2.7 %		
				Arm 8 Left	17.00	8.7 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	12.7 %	1739	1739
				Arm 6 Ahead	Inf	11.1 %		
				Arm 7 Right	10.00	76.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 20: 'PM Peak 2033 DS (based on 2017 survey data)' (FG20: 'PM Peak 2033 DS (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')

Traffic Flows, Desired

Desired Flow :

Origin	Destination					
		A	B	C	D	Tot.
	A	0	109	868	34	1011
	B	76	0	47	59	182
	C	1284	63	0	186	1533
	D	36	45	126	0	207
	Tot.	1396	217	1041	279	2933

Traffic Lane Flows

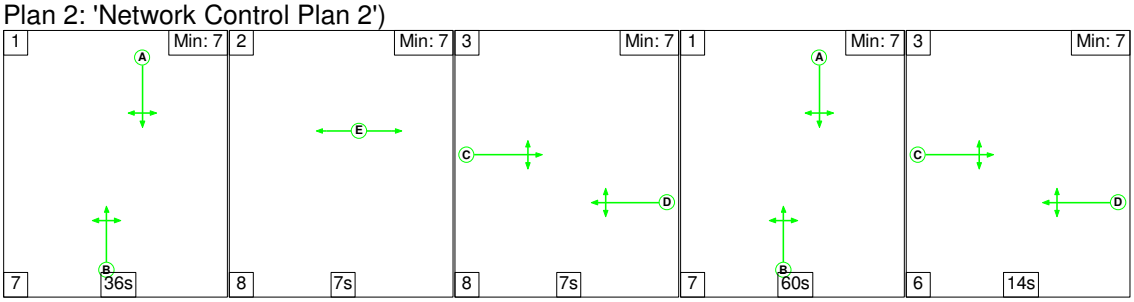
Lane	Scenario 20: PM Peak 2033 DS (based on 2017 survey data)
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd	
1/1	1011
2/1	182
3/1	1533
4/1	207
5/1	1396
6/1	217
7/1	1041
8/1	279

Lane Saturation Flows

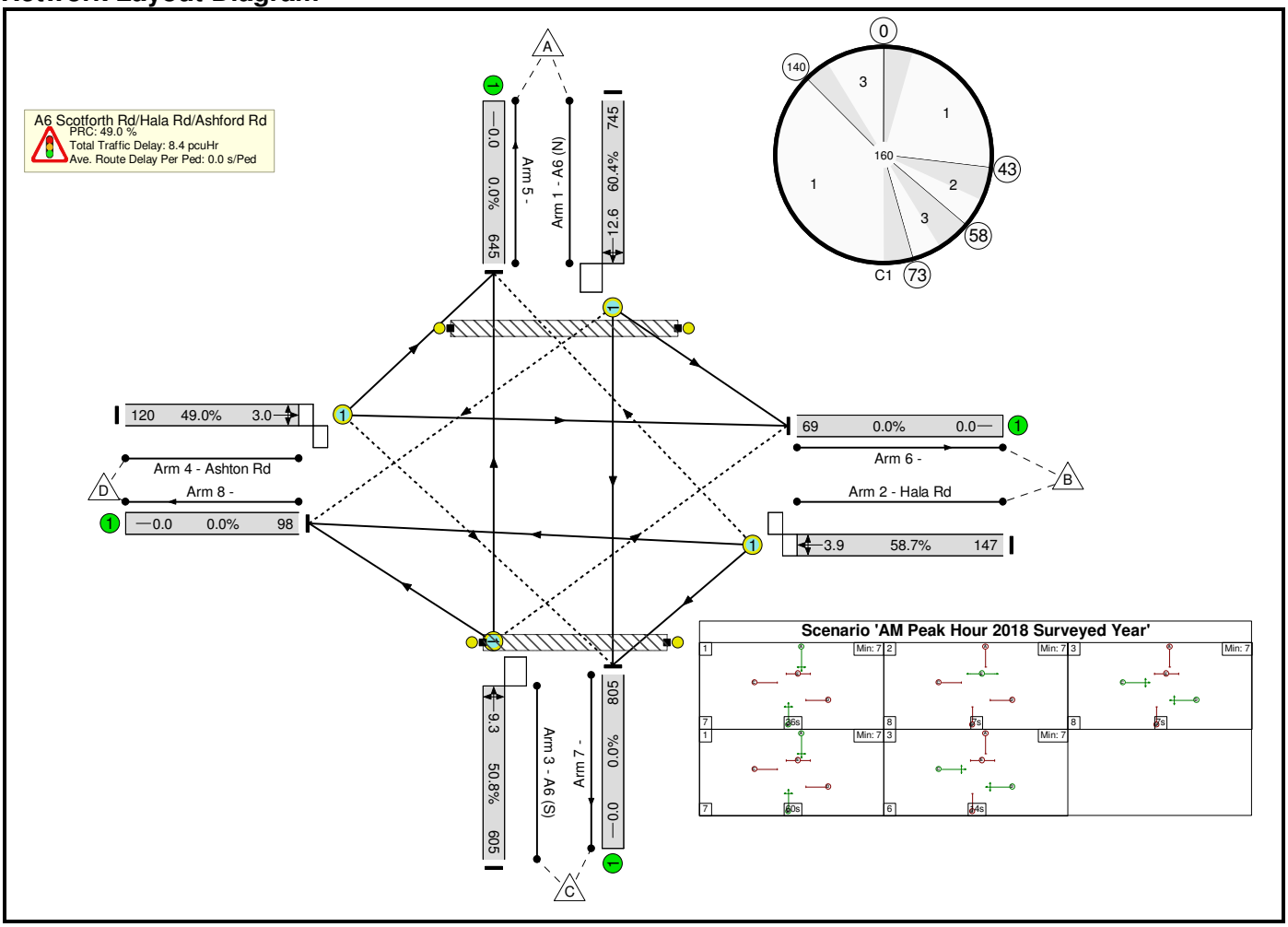
Junction: A6 Scotforth Rd/Hala Rd/Ashford Rd								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A6 (N))	4.25	0.00	Y	Arm 6 Left	8.00	10.8 %	1990	1990
				Arm 7 Ahead	Inf	85.9 %		
				Arm 8 Right	10.00	3.4 %		
2/1 (Hala Rd)	3.20	0.00	Y	Arm 5 Right	10.00	41.8 %	1757	1757
				Arm 7 Left	10.00	25.8 %		
				Arm 8 Ahead	Inf	32.4 %		
3/1 (A6 (S))	3.50	0.00	Y	Arm 5 Ahead	Inf	83.8 %	1932	1932
				Arm 6 Right	10.00	4.1 %		
				Arm 8 Left	17.00	12.1 %		
4/1 (Ashton Rd)	3.50	0.00	Y	Arm 5 Left	12.00	17.4 %	1765	1765
				Arm 6 Ahead	Inf	21.7 %		
				Arm 7 Right	10.00	60.9 %		
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Stage Sequence Diagram

Scenario 1: 'AM Peak Hour 2018 Surveyed Year' (FG1: 'AM Peak Hour 2018 Surveyed Flows (Tues 16/10/18)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



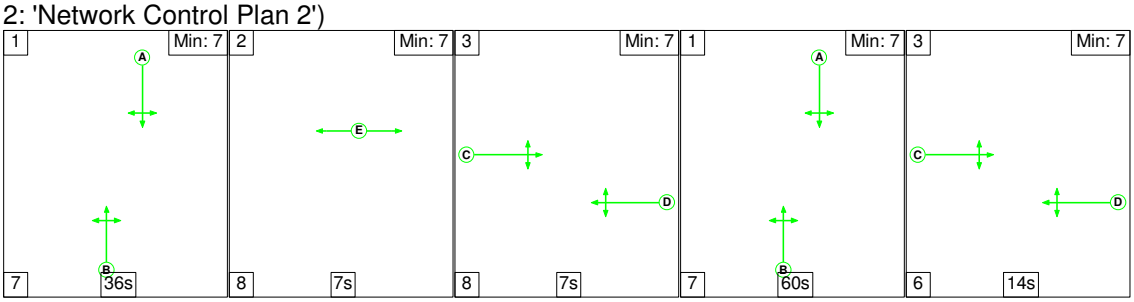
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**60.4%**	**5.9**	**2.5**	**8.4**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**60.4%**	**5.9**	**2.5**	**8.4**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	745	2014	1234	60.4%	2.0	0.8	2.8	13.6	11.8	0.8	12.6
2/1	Hala Rd Right Left Ahead	D	147	1741	250	58.7%	1.3	0.7	2.0	49.5	3.2	0.7	3.9
3/1	A6 (S) Ahead Right Left	B	605	1946	1192	50.8%	1.5	0.5	2.0	12.2	8.7	0.5	9.3
4/1	Ashton Rd Left Ahead Right	C	120	1750	245	49.0%	1.1	0.5	1.6	47.0	2.6	0.5	3.0
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

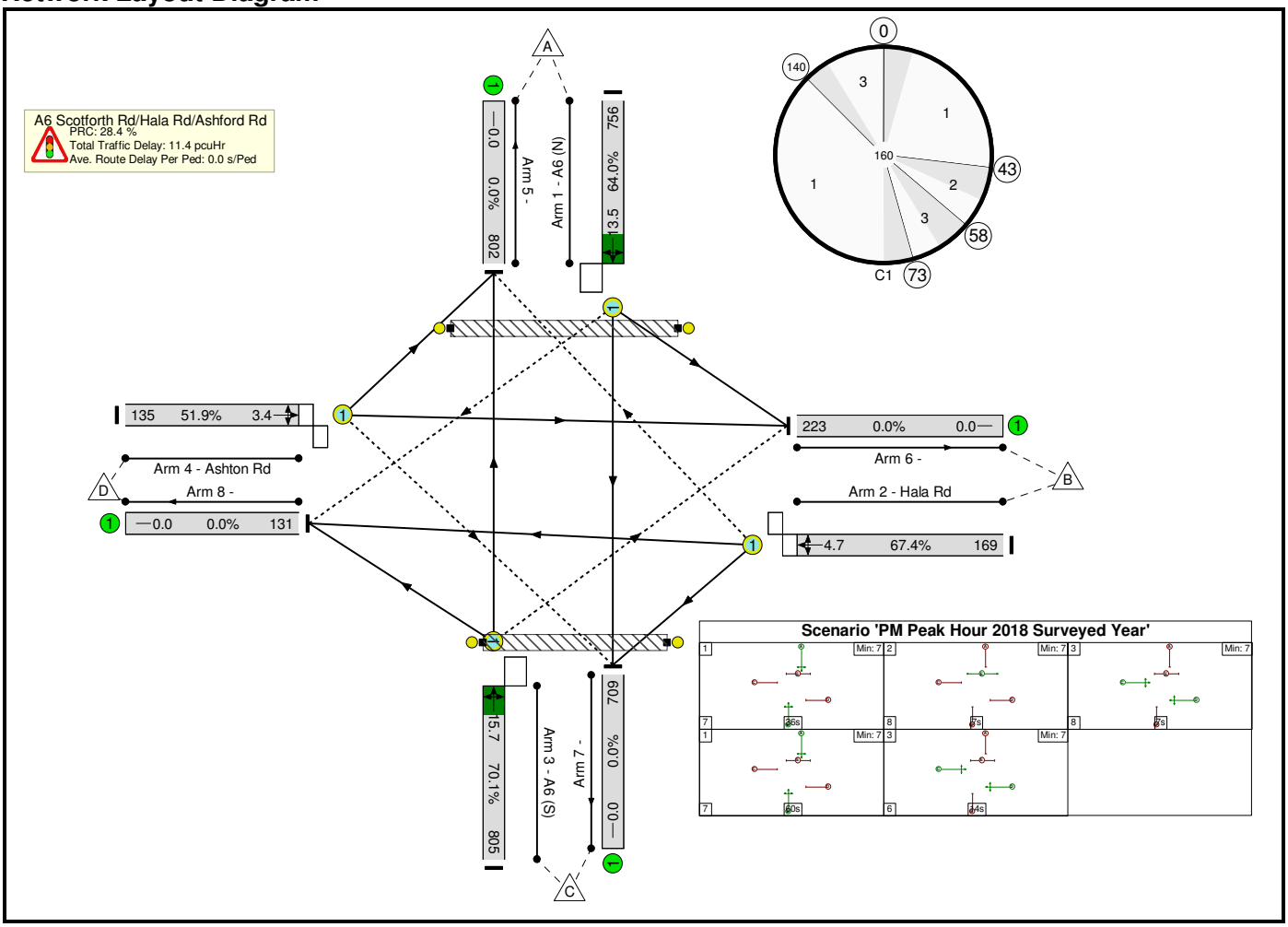
C1 PRC for Signalled Lanes (%): 49.0 Total Delay for Signalled Lanes (pcuHr): 8.44 Cycle Time (s): 160
PRC Over All Lanes (%): 49.0 Total Delay Over All Lanes(pcuHr): 8.44

Stage Sequence Diagram

Scenario 2: 'PM Peak Hour 2018 Surveyed Year' (FG2: 'PM Peak Hour 2018 Surveyed Flows(Tues 16/10/18)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



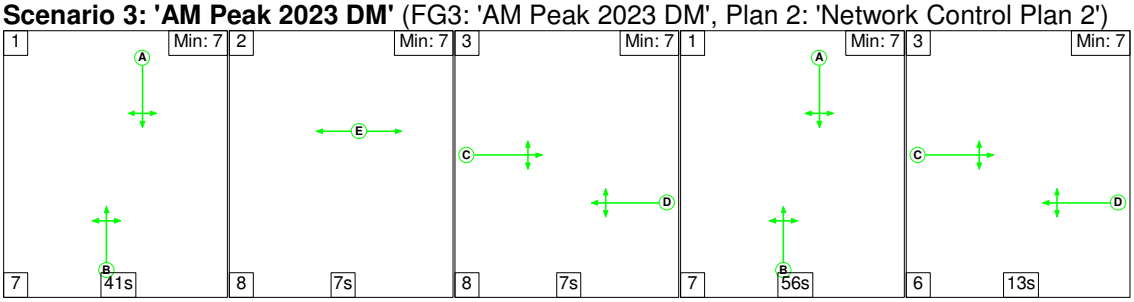
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**70.1%**	**7.6**	**3.6**	**11.4**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**70.1%**	**7.6**	**3.6**	**11.4**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	756	1968	1181	64.0%	2.2	0.9	3.2	15.4	12.6	0.9	13.5
2/1	Hala Rd Right Left Ahead	D	169	1743	251	67.4%	1.5	1.0	2.6	55.0	3.7	1.0	4.7
3/1	A6 (S) Ahead Right Left	B	805	1935	1149	70.1%	2.6	1.2	3.9	17.3	14.5	1.2	15.7
4/1	Ashton Rd Left Ahead Right	C	135	1809	260	51.9%	1.2	0.5	1.7	46.5	2.9	0.5	3.4
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

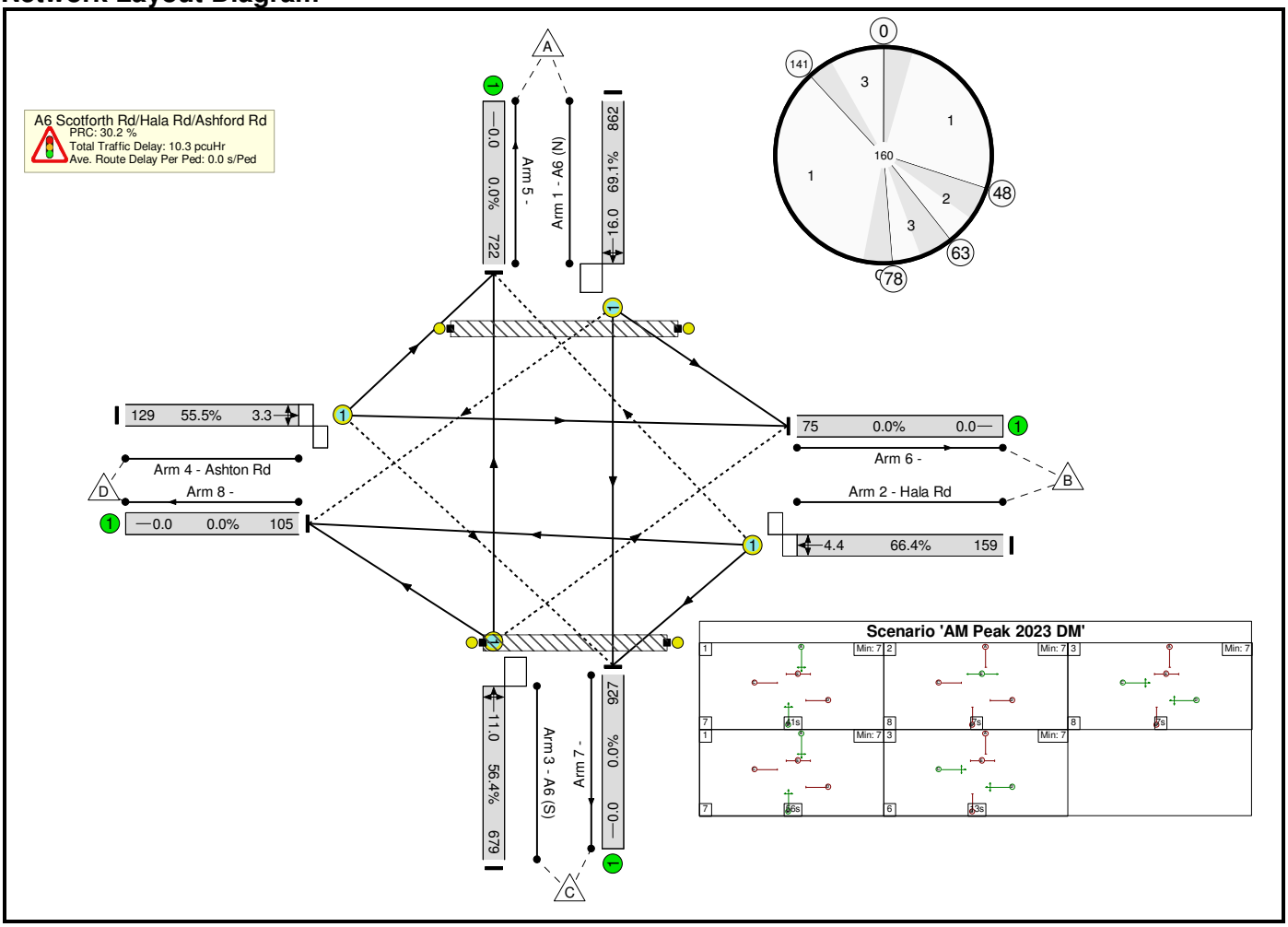
C1 PRC for Signalled Lanes (%): 28.4 Total Delay for Signalled Lanes (pcuHr): 11.42 Cycle Time (s): 160
PRC Over All Lanes (%): 28.4 Total Delay Over All Lanes(pcuHr): 11.42

Stage Sequence Diagram

Scenario 3: 'AM Peak 2023 DM' (FG3: 'AM Peak 2023 DM', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



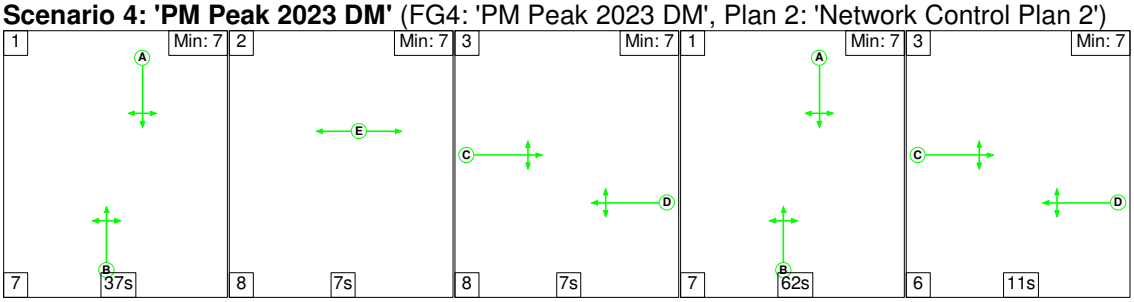
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**69.1%**	**6.9**	**3.3**	**10.3**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**69.1%**	**6.9**	**3.3**	**10.3**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	862	2015	1247	69.1%	2.5	1.1	3.7	15.2	14.8	1.1	16.0
2/1	Hala Rd Right Left Ahead	D	159	1741	239	66.4%	1.4	1.0	2.4	54.9	3.4	1.0	4.4
3/1	A6 (S) Ahead Right Left	B	679	1947	1205	56.4%	1.7	0.6	2.4	12.9	10.4	0.6	11.0
4/1	Ashton Rd Left Ahead Right	C	129	1751	232	55.5%	1.2	0.6	1.8	50.5	2.7	0.6	3.3
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

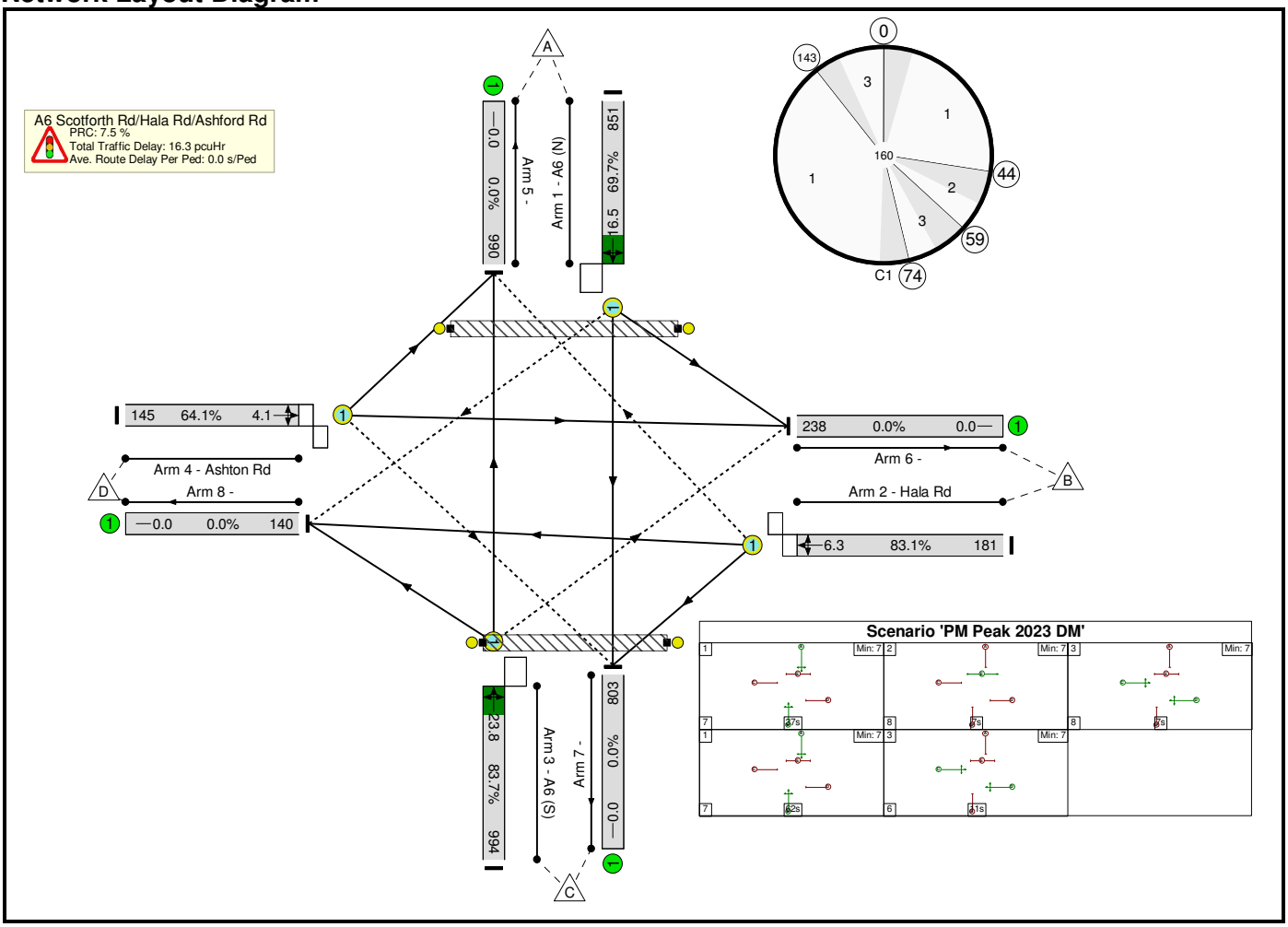
C1 PRC for Signalled Lanes (%): 30.2 Total Delay for Signalled Lanes (pcuHr): 10.31 Cycle Time (s): 160
PRC Over All Lanes (%): 30.2 Total Delay Over All Lanes(pcuHr): 10.31

Stage Sequence Diagram

Scenario 4: 'PM Peak 2023 DM' (FG4: 'PM Peak 2023 DM', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



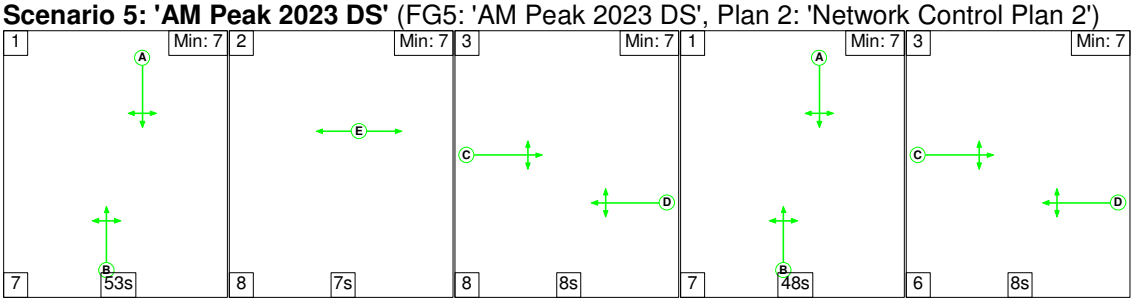
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**83.7%**	**9.2**	**6.7**	**16.3**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**83.7%**	**9.2**	**6.7**	**16.3**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	851	1972	1220	69.7%	2.5	1.1	3.9	16.4	15.4	1.1	16.5
2/1	Hala Rd Right Left Ahead	D	181	1743	218	83.1%	1.7	2.2	4.0	78.9	4.1	2.2	6.3
3/1	A6 (S) Ahead Right Left	B	994	1939	1188	83.7%	3.6	2.5	6.2	22.5	21.3	2.5	23.8
4/1	Ashton Rd Left Ahead Right	C	145	1809	226	64.1%	1.3	0.9	2.2	55.6	3.2	0.9	4.1
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

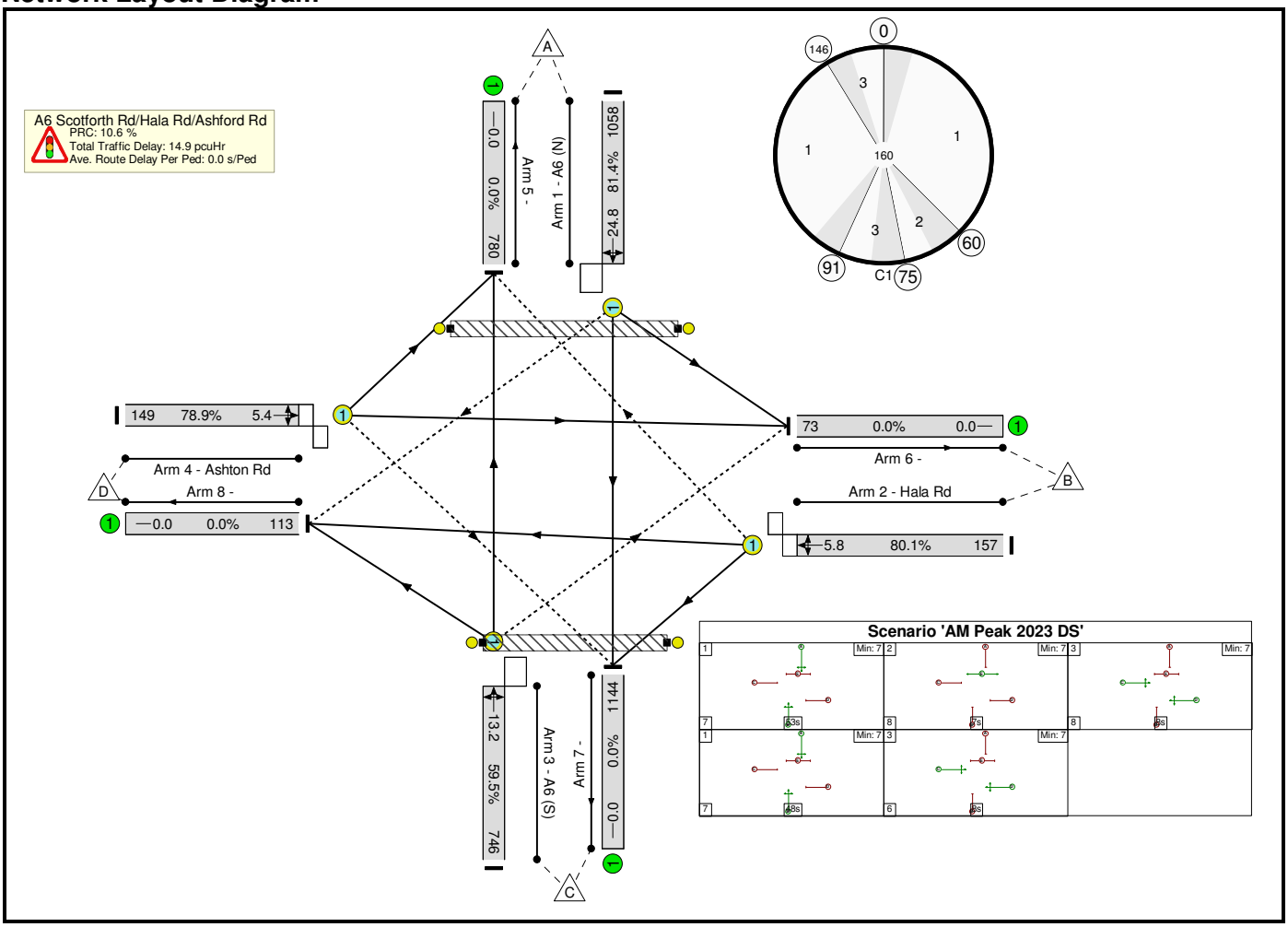
C1 PRC for Signalled Lanes (%): 7.5 Total Delay for Signalled Lanes (pcuHr): 16.29 Cycle Time (s): 160
PRC Over All Lanes (%): 7.5 Total Delay Over All Lanes(pcuHr): 16.29

Stage Sequence Diagram

Scenario 5: 'AM Peak 2023 DS' (FG5: 'AM Peak 2023 DS', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



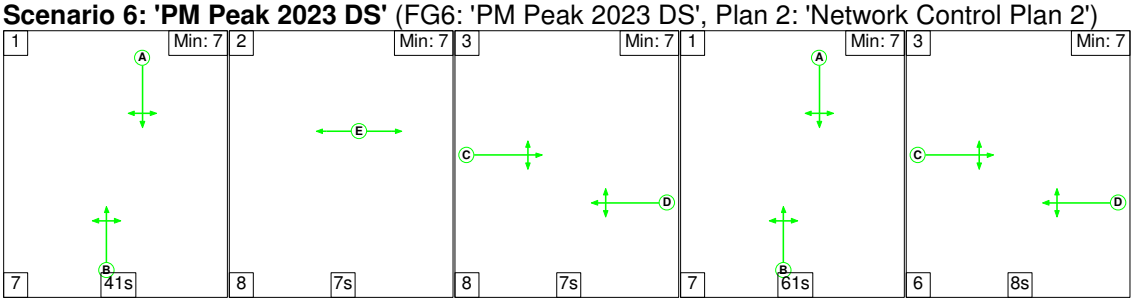
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**81.4%**	**8.3**	**6.4**	**14.9**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**81.4%**	**8.3**	**6.4**	**14.9**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	1058	2020	1300	81.4%	3.4	2.1	5.6	19.0	22.6	2.1	24.8
2/1	Hala Rd Right Left Ahead	D	157	1742	196	80.1%	1.5	1.8	3.4	77.9	3.9	1.8	5.8
3/1	A6 (S) Ahead Right Left	B	746	1946	1253	59.5%	1.9	0.7	2.7	12.9	12.4	0.7	13.2
4/1	Ashton Rd Left Ahead Right	C	149	1744	189	78.9%	1.5	1.7	3.3	78.6	3.7	1.7	5.4
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

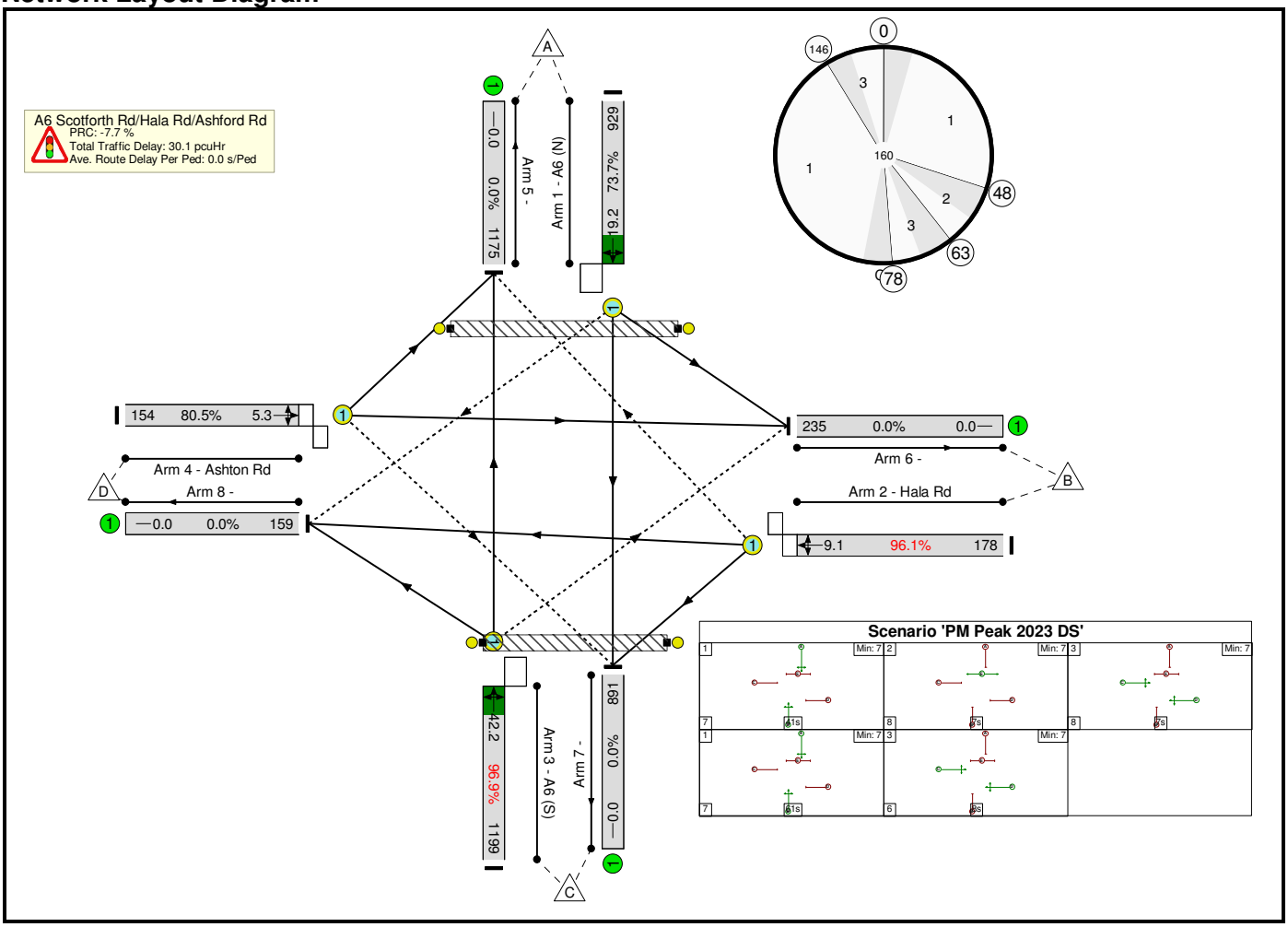
C1 PRC for Signalled Lanes (%): 10.6 Total Delay for Signalled Lanes (pcuHr): 14.91 Cycle Time (s): 160
PRC Over All Lanes (%): 10.6 Total Delay Over All Lanes(pcuHr): 14.91

Stage Sequence Diagram

Scenario 6: 'PM Peak 2023 DS' (FG6: 'PM Peak 2023 DS', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



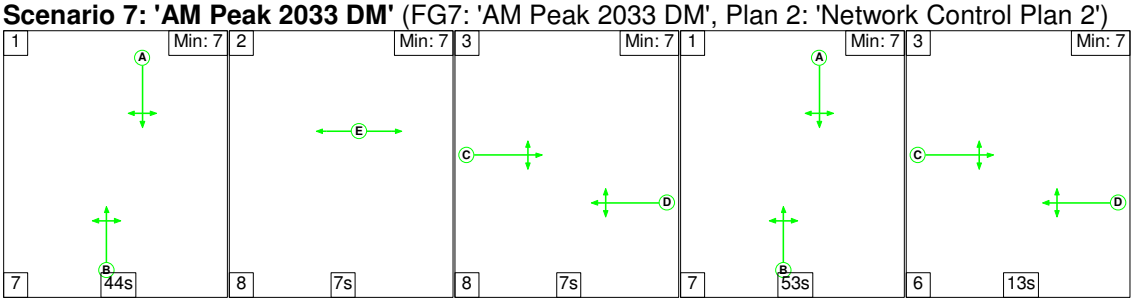
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**96.9%**	**10.9**	**18.6**	**30.1**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**96.9%**	**10.9**	**18.6**	**30.1**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	929	1978	1261	73.7%	2.8	1.4	4.5	17.3	17.8	1.4	19.2
2/1	Hala Rd Right Left Ahead	D	178	1743	185	96.1%	1.8	5.1	6.9	139.7	4.0	5.1	9.1
3/1	A6 (S) Ahead Right Left	B	1199	1941	1237	96.9%	4.9	10.2	15.3	45.8	32.0	10.2	42.2
4/1	Ashton Rd Left Ahead Right	C	154	1801	191	80.5%	1.5	1.9	3.4	79.7	3.4	1.9	5.3
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

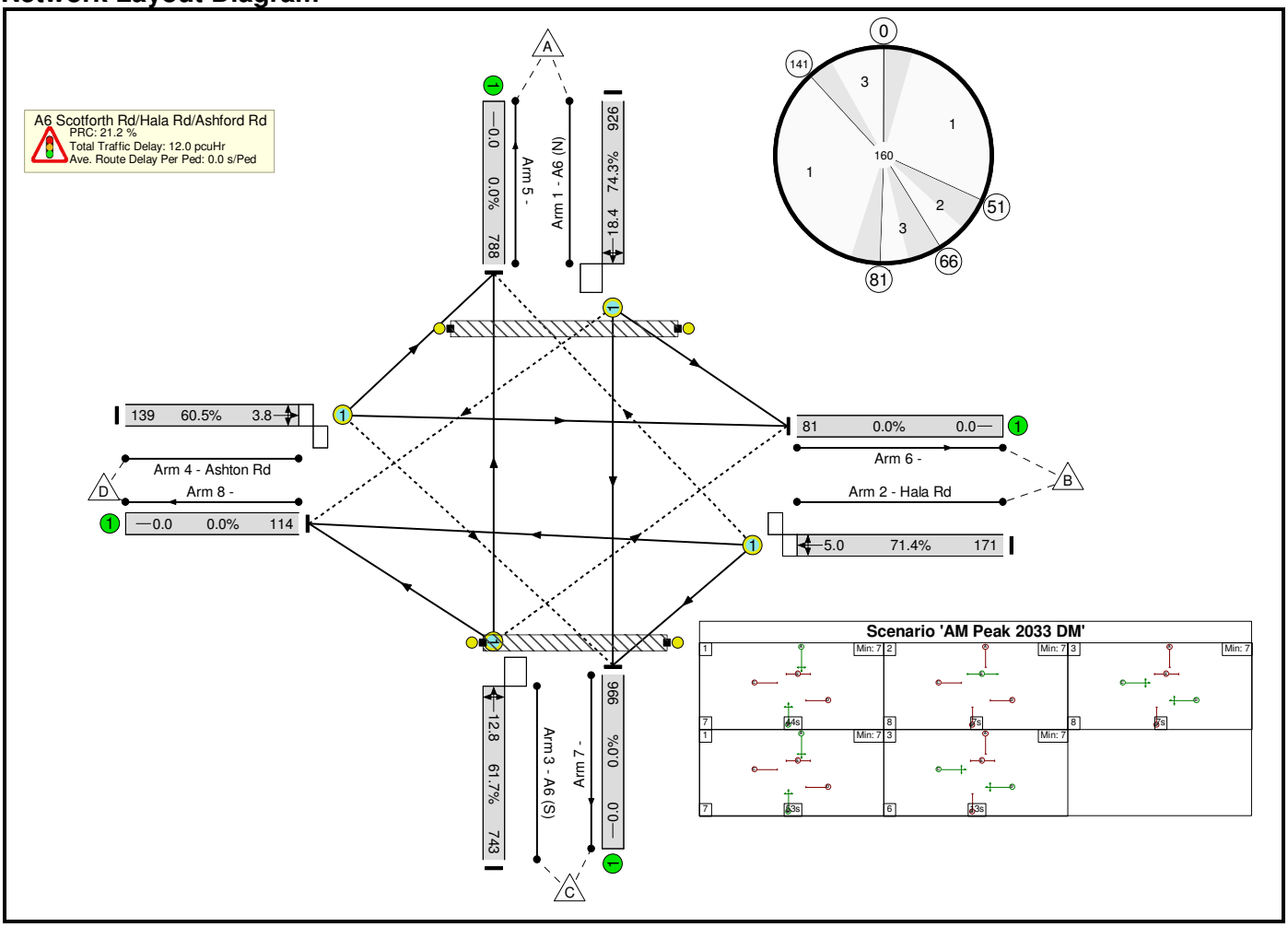
C1 PRC for Signalled Lanes (%): -7.7 Total Delay for Signalled Lanes (pcuHr): 30.06 Cycle Time (s): 160
PRC Over All Lanes (%): -7.7 Total Delay Over All Lanes(pcuHr): 30.06

Stage Sequence Diagram

Scenario 7: 'AM Peak 2033 DM' (FG7: 'AM Peak 2033 DM', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



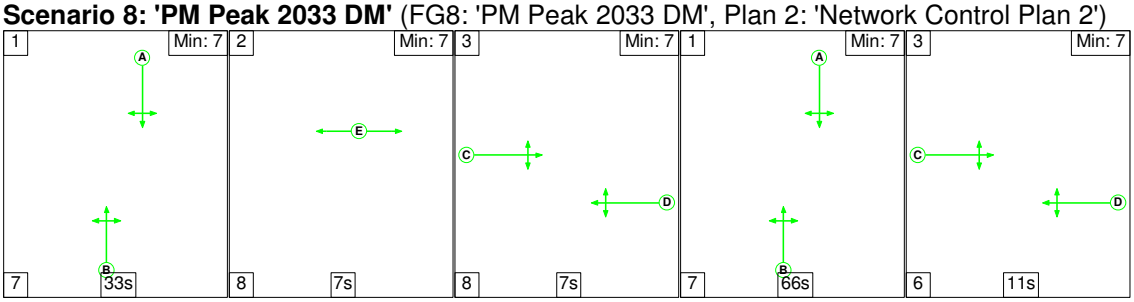
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**74.3%**	**7.7**	**4.2**	**12.0**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**74.3%**	**7.7**	**4.2**	**12.0**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	926	2015	1247	74.3%	2.9	1.4	4.3	16.8	17.0	1.4	18.4
2/1	Hala Rd Right Left Ahead	D	171	1741	239	71.4%	1.6	1.2	2.8	58.9	3.8	1.2	5.0
3/1	A6 (S) Ahead Right Left	B	743	1946	1204	61.7%	2.0	0.8	2.9	13.9	12.0	0.8	12.8
4/1	Ashton Rd Left Ahead Right	C	139	1751	230	60.5%	1.3	0.8	2.1	53.2	3.1	0.8	3.8
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

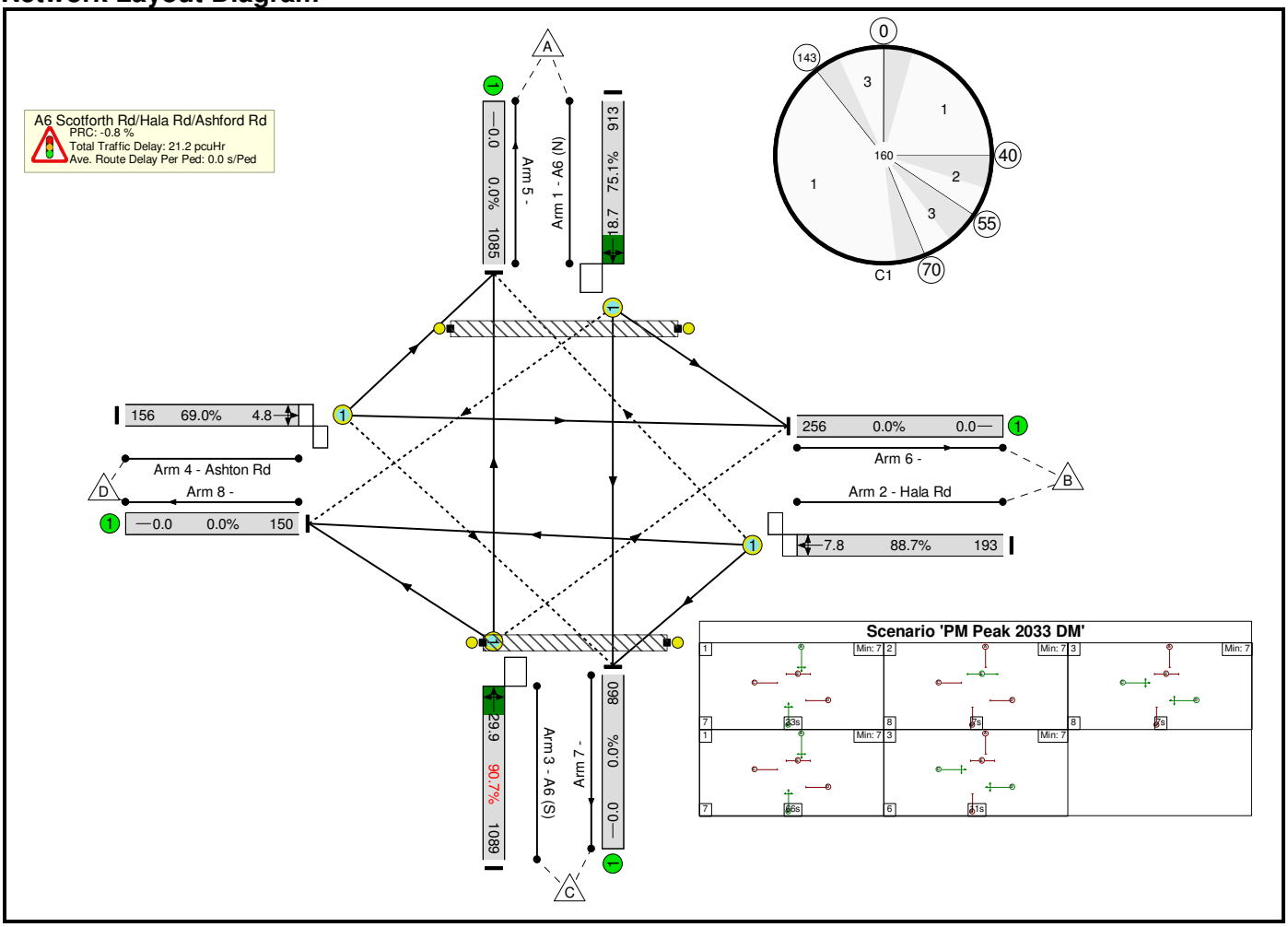
C1 PRC for Signalled Lanes (%): 21.2 Total Delay for Signalled Lanes (pcuHr): 12.04 Cycle Time (s): 160
PRC Over All Lanes (%): 21.2 Total Delay Over All Lanes(pcuHr): 12.04

Stage Sequence Diagram

Scenario 8: 'PM Peak 2033 DM' (FG8: 'PM Peak 2033 DM', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



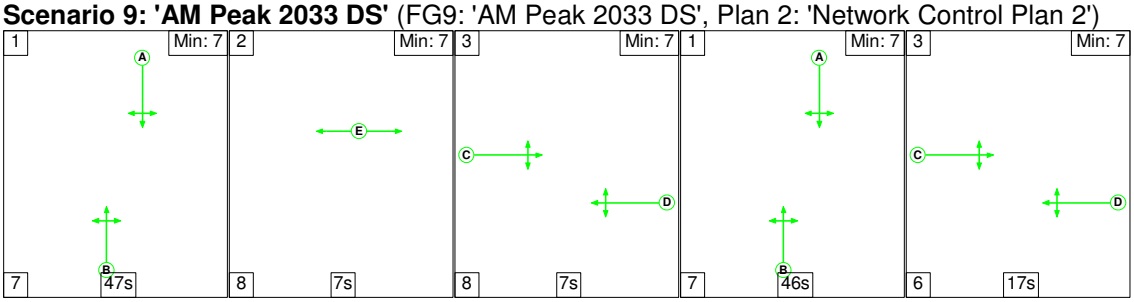
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**90.7%**	**10.4**	**10.2**	**21.2**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**90.7%**	**10.4**	**10.2**	**21.2**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	913	1972	1216	75.1%	2.9	1.5	4.6	18.3	17.2	1.5	18.7
2/1	Hala Rd Right Left Ahead	D	193	1743	218	88.7%	1.9	3.1	5.1	94.3	4.7	3.1	7.8
3/1	A6 (S) Ahead Right Left	B	1089	1940	1200	90.7%	4.2	4.5	8.9	29.4	25.4	4.5	29.9
4/1	Ashton Rd Left Ahead Right	C	156	1808	226	69.0%	1.5	1.1	2.6	59.6	3.7	1.1	4.8
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

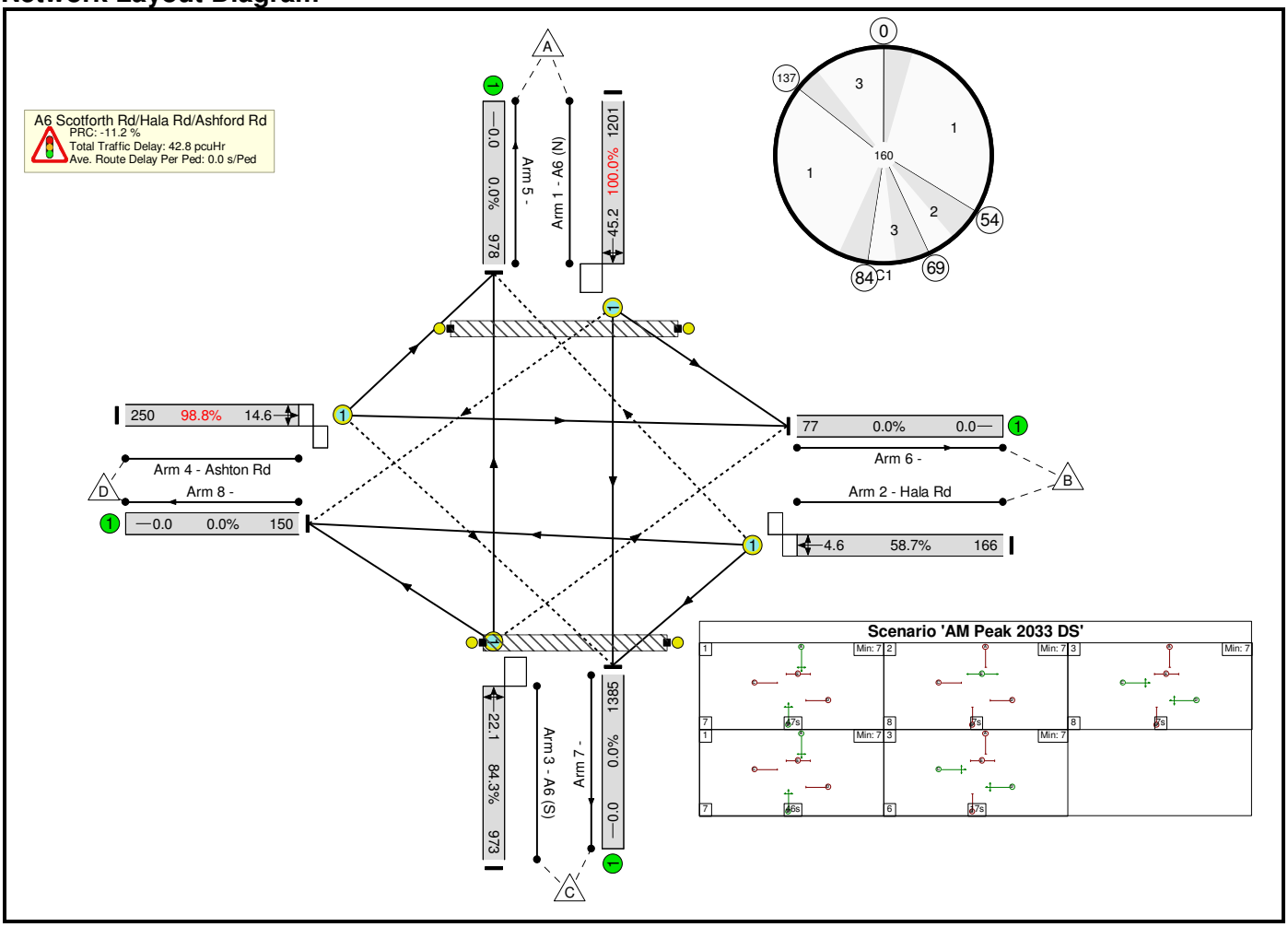
C1 PRC for Signalled Lanes (%): -0.8 Total Delay for Signalled Lanes (pcuHr): 21.17 Cycle Time (s): 160
PRC Over All Lanes (%): -0.8 Total Delay Over All Lanes(pcuHr): 21.17

Stage Sequence Diagram

Scenario 9: 'AM Peak 2033 DS' (FG9: 'AM Peak 2033 DS', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



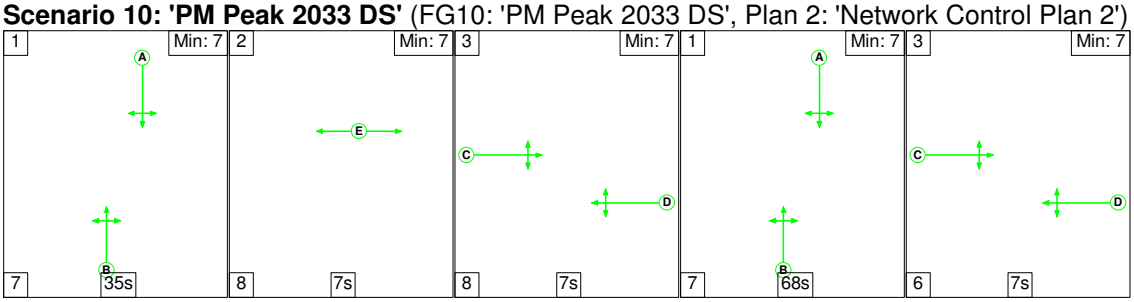
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**100.0%**	**14.5**	**27.9**	**42.8**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**100.0%**	**14.5**	**27.9**	**42.8**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	1201	2022	1201	100.0%	6.1	17.4	23.6	70.8	27.7	17.4	45.2
2/1	Hala Rd Right Left Ahead	D	166	1741	283	58.7%	1.5	0.7	2.2	47.1	3.9	0.7	4.6
3/1	A6 (S) Ahead Right Left	B	973	1944	1154	84.3%	3.6	2.6	6.4	23.5	19.5	2.6	22.1
4/1	Ashton Rd Left Ahead Right	C	250	1731	253	98.8%	3.3	7.2	10.6	153.2	7.4	7.2	14.6
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

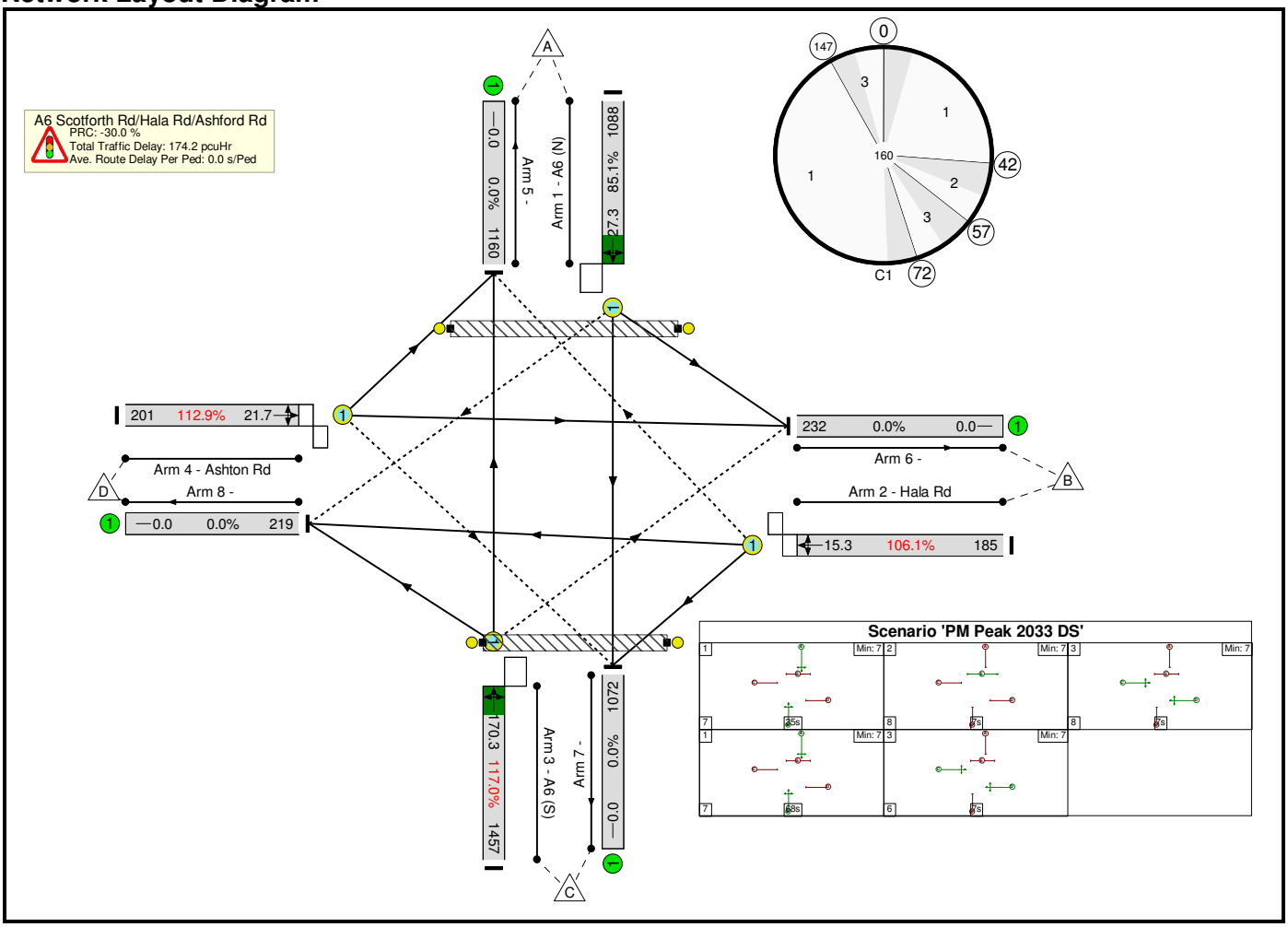
C1 PRC for Signalled Lanes (%): -11.2 Total Delay for Signalled Lanes (pcuHr): 42.78 Cycle Time (s): 160
PRC Over All Lanes (%): -11.2 Total Delay Over All Lanes(pcuHr): 42.78

Stage Sequence Diagram

Scenario 10: 'PM Peak 2033 DS' (FG10: 'PM Peak 2033 DS', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



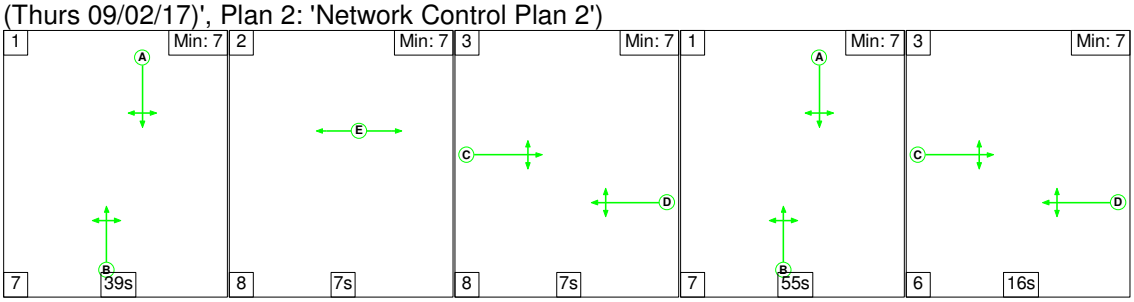
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**117.0%**	**36.9**	**136.6**	**174.2**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**117.0%**	**36.9**	**136.6**	**174.2**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	1088	1985	1278	85.1%	3.7	2.8	6.8	22.6	24.5	2.8	27.3
2/1	Hala Rd Right Left Ahead	D	185	1743	174	106.1%	2.9	10.0	12.9	251.2	5.3	10.0	15.3
3/1	A6 (S) Ahead Right Left	B	1457	1935	1246	117.0%	26.2	109.0	135.5	334.7	61.3	109.0	170.3
4/1	Ashton Rd Left Ahead Right	C	201	1781	178	112.9%	4.1	14.8	19.0	340.6	6.8	14.8	21.7
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

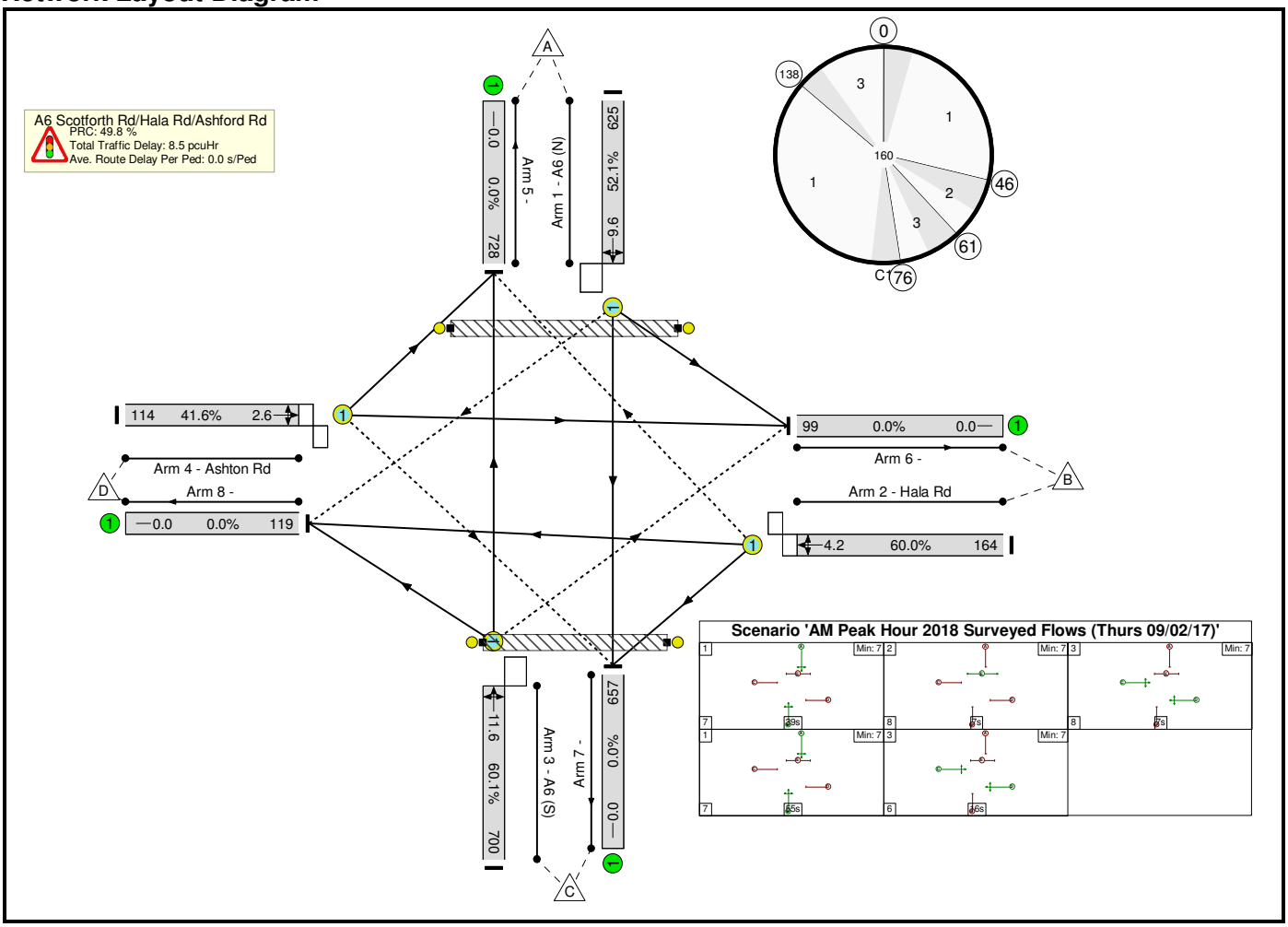
C1 PRC for Signalled Lanes (%): -30.0 Total Delay for Signalled Lanes (pcuHr): 174.24 Cycle Time (s): 160
PRC Over All Lanes (%): -30.0 Total Delay Over All Lanes(pcuHr): 174.24

Stage Sequence Diagram

Scenario 11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)' (FG11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



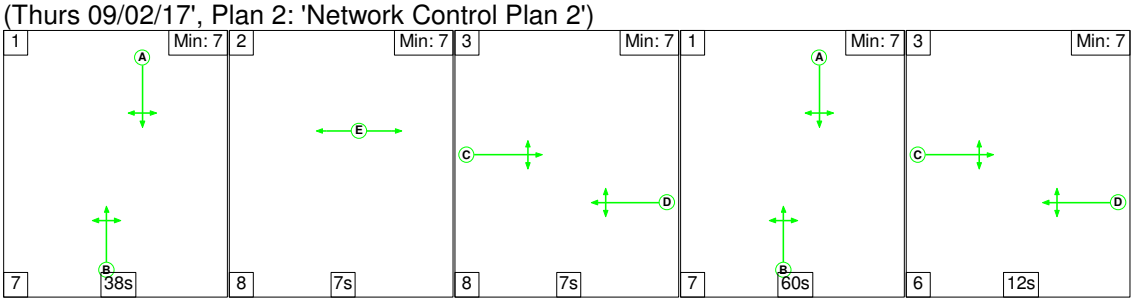
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**60.1%**	**6.0**	**2.4**	**8.5**	**-**	**-**	**-**	**-**
A6 Scotforth Rd/Hala Rd/Ashford Rd	**-**	**-**	**-**	**-**	**-**	**60.1%**	**6.0**	**2.4**	**8.5**	**-**	**-**	**-**	**-**
1/1	A6 (N) Left Ahead Right	A	625	2000	1200	52.1%	1.6	0.5	2.2	12.8	9.0	0.5	9.6
2/1	Hala Rd Right Left Ahead	D	164	1749	273	60.0%	1.4	0.7	2.2	48.1	3.4	0.7	4.2
3/1	A6 (S) Ahead Right Left	B	700	1942	1165	60.1%	2.0	0.7	2.8	14.2	10.9	0.7	11.6
4/1	Ashton Rd Left Ahead Right	C	114	1766	274	41.6%	1.0	0.4	1.3	42.3	2.3	0.4	2.6
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

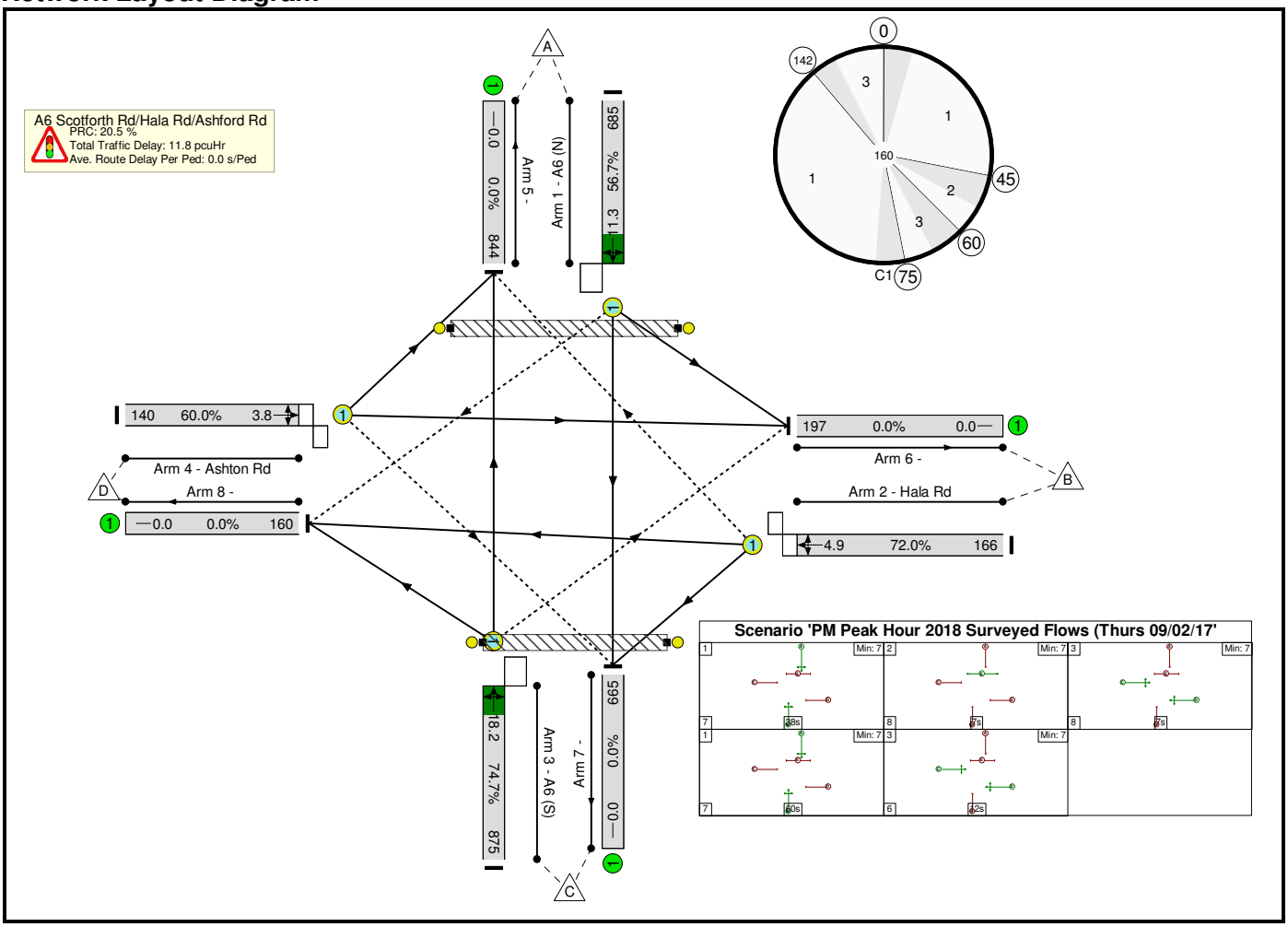
C1 PRC for Signalled Lanes (%): 49.8 Total Delay for Signalled Lanes (pcuHr): 8.52 Cycle Time (s): 160
PRC Over All Lanes (%): 49.8 Total Delay Over All Lanes(pcuHr): 8.52

Stage Sequence Diagram

Scenario 12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17' (FG12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



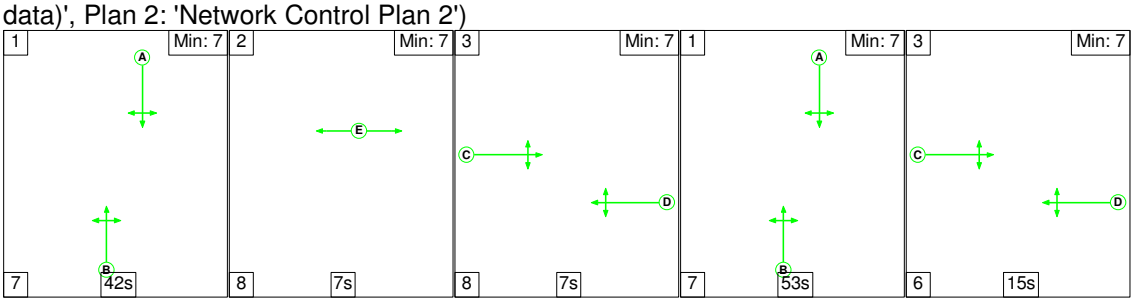
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**74.7%**	**7.5**	**4.1**	**11.8**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**74.7%**	**7.5**	**4.1**	**11.8**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	685	1973	1208	56.7%	1.8	0.7	2.6	13.6	10.7	0.7	11.3
2/1	Hala Rd Right Left Ahead	D	166	1757	231	72.0%	1.5	1.2	2.8	60.8	3.6	1.2	4.9
3/1	A6 (S) Ahead Right Left	B	875	1932	1171	74.7%	2.9	1.5	4.4	18.1	16.8	1.5	18.2
4/1	Ashton Rd Left Ahead Right	C	140	1786	233	60.0%	1.3	0.7	2.0	52.6	3.0	0.7	3.8
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

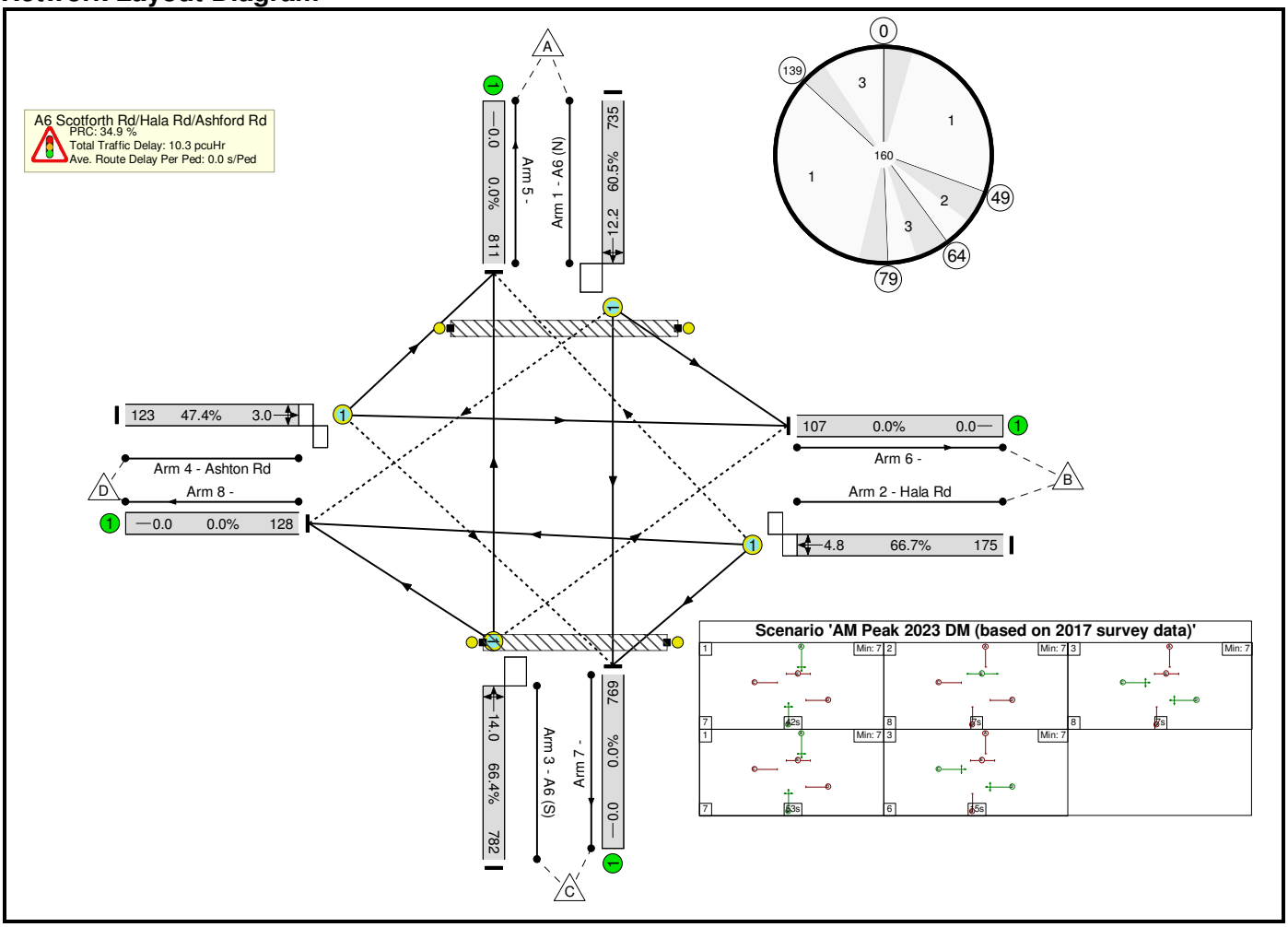
C1 PRC for Signalled Lanes (%): 20.5 Total Delay for Signalled Lanes (pcuHr): 11.84 Cycle Time (s): 160
PRC Over All Lanes (%): 20.5 Total Delay Over All Lanes(pcuHr): 11.84

Stage Sequence Diagram

Scenario 13: 'AM Peak 2023 DM (based on 2017 survey data)' (FG13: 'AM Peak 2023 DM (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



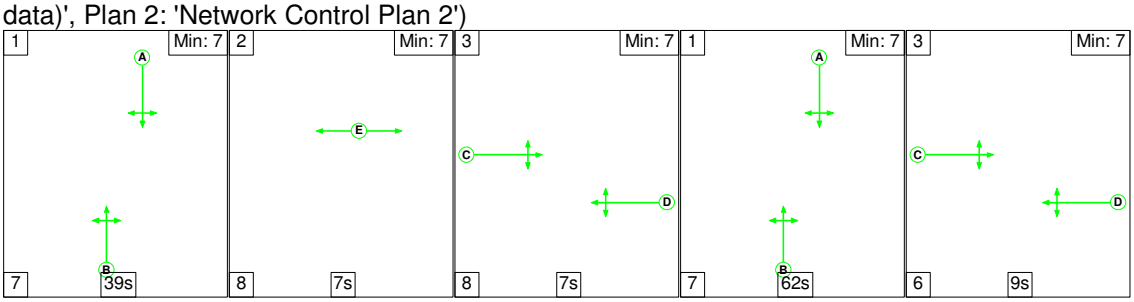
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**66.7%**	**7.0**	**3.2**	**10.3**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**66.7%**	**7.0**	**3.2**	**10.3**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	735	2003	1214	60.5%	2.0	0.8	2.9	14.0	11.4	0.8	12.2
2/1	Hala Rd Right Left Ahead	D	175	1749	262	66.7%	1.6	1.0	2.6	52.8	3.8	1.0	4.8
3/1	A6 (S) Ahead Right Left	B	782	1943	1178	66.4%	2.3	1.0	3.3	15.3	13.0	1.0	14.0
4/1	Ashton Rd Left Ahead Right	C	123	1766	260	47.4%	1.1	0.4	1.5	45.0	2.6	0.4	3.0
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

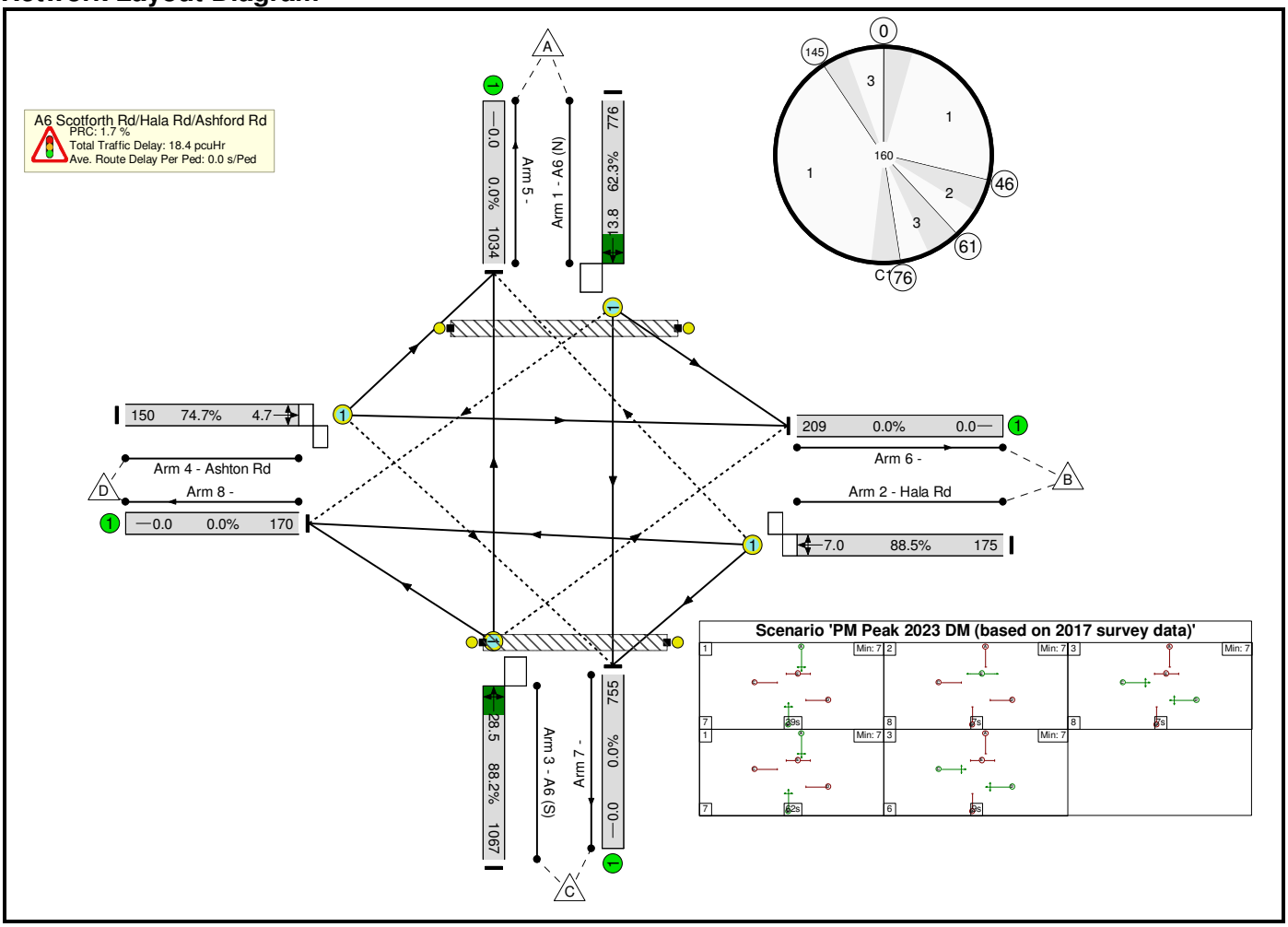
C1 PRC for Signalled Lanes (%): 34.9 Total Delay for Signalled Lanes (pcuHr): 10.30 Cycle Time (s): 160
PRC Over All Lanes (%): 34.9 Total Delay Over All Lanes(pcuHr): 10.30

Stage Sequence Diagram

Scenario 14: 'PM Peak 2023 DM (based on 2017 survey data)' (FG14: 'PM Peak 2023 DM (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



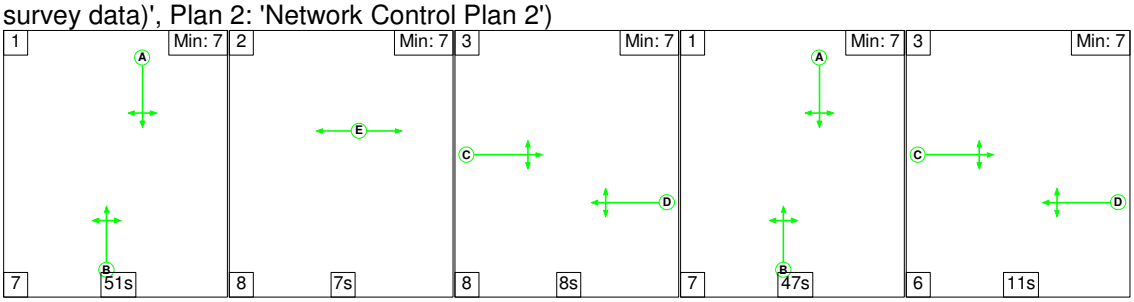
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**88.5%**	**9.2**	**8.8**	**18.4**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**88.5%**	**9.2**	**8.8**	**18.4**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	776	1977	1245	62.3%	2.1	0.8	3.1	14.4	12.9	0.8	13.8
2/1	Hala Rd Right Left Ahead	D	175	1757	198	88.5%	1.7	3.0	4.8	98.2	4.0	3.0	7.0
3/1	A6 (S) Ahead Right Left	B	1067	1936	1210	88.2%	4.0	3.6	7.6	25.7	24.9	3.6	28.5
4/1	Ashton Rd Left Ahead Right	C	150	1784	201	74.7%	1.4	1.4	2.9	69.3	3.3	1.4	4.7
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

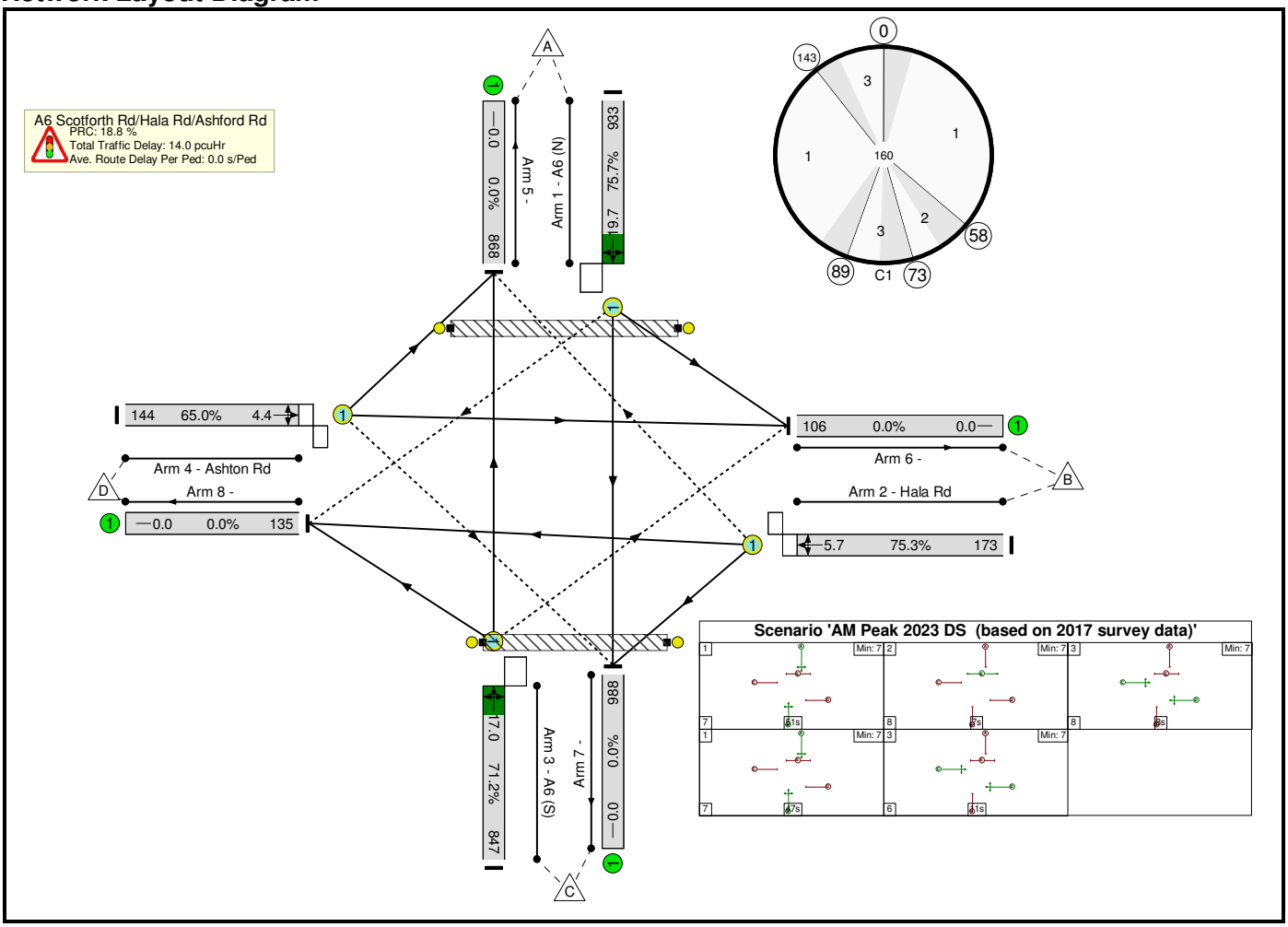
C1 PRC for Signalled Lanes (%): 1.7 Total Delay for Signalled Lanes (pcuHr): 18.37 Cycle Time (s): 160
PRC Over All Lanes (%): 1.7 Total Delay Over All Lanes(pcuHr): 18.37

Stage Sequence Diagram

Scenario 15: 'AM Peak 2023 DS (based on 2017 survey data)' (FG15: 'AM Peak 2023 DS (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



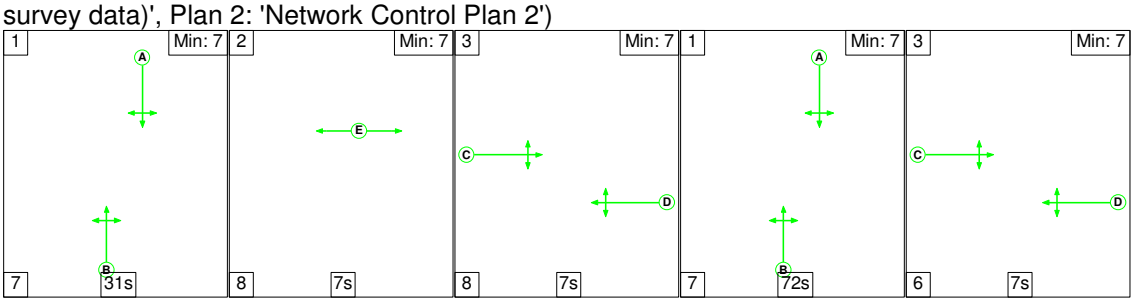
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**75.7%**	**8.7**	**5.1**	**14.0**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**75.7%**	**8.7**	**5.1**	**14.0**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	933	2011	1232	75.7%	3.1	1.5	4.7	18.0	18.1	1.5	19.7
2/1	Hala Rd Right Left Ahead	D	173	1750	230	75.3%	1.6	1.5	3.1	64.8	4.2	1.5	5.7
3/1	A6 (S) Ahead Right Left	B	847	1943	1190	71.2%	2.6	1.2	4.0	16.8	15.8	1.2	17.0
4/1	Ashton Rd Left Ahead Right	C	144	1758	222	65.0%	1.3	0.9	2.3	57.6	3.5	0.9	4.4
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

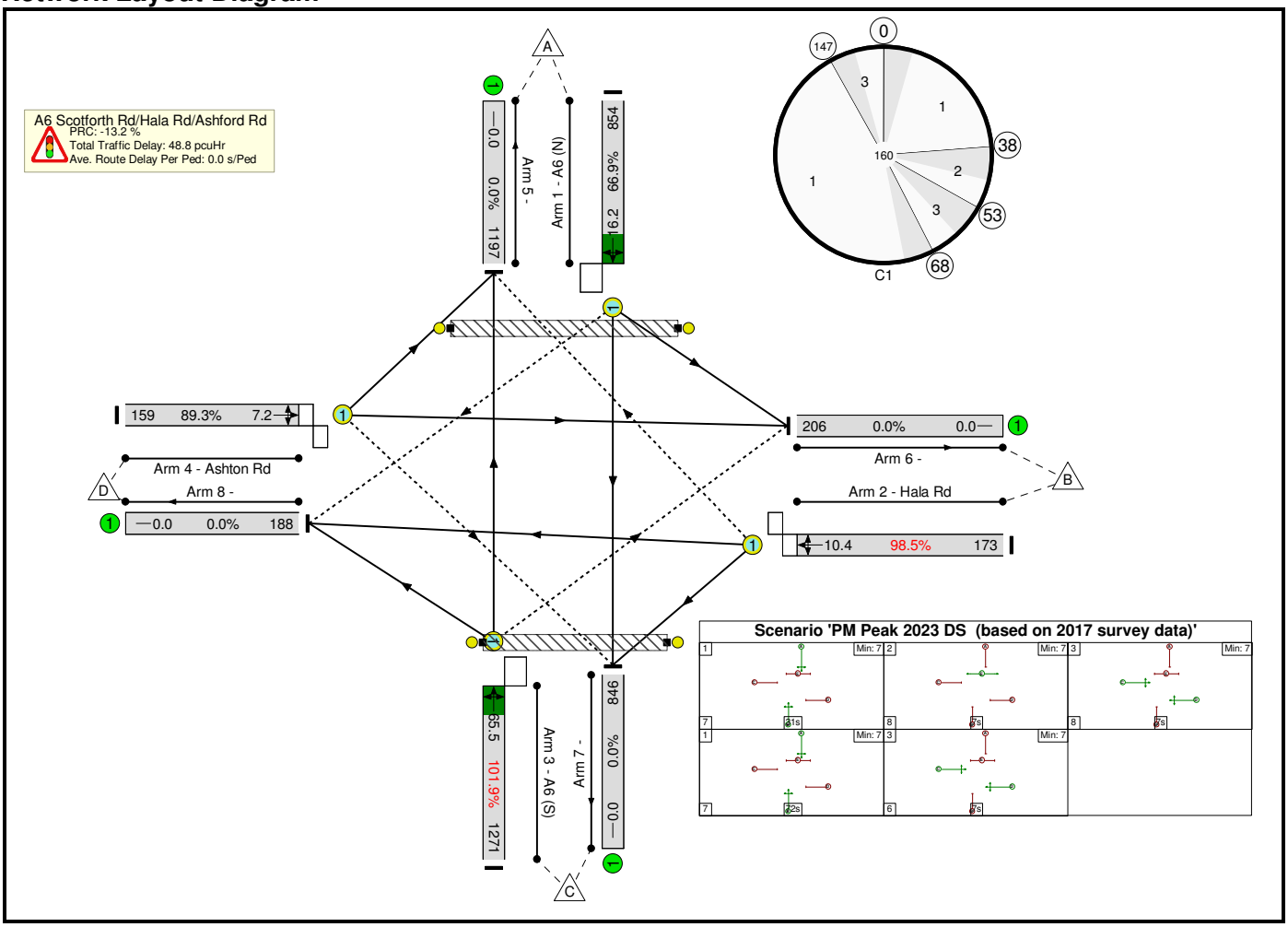
C1 PRC for Signalled Lanes (%): 18.8 Total Delay for Signalled Lanes (pcuHr): 14.04 Cycle Time (s): 160
PRC Over All Lanes (%): 18.8 Total Delay Over All Lanes(pcuHr): 14.04

Stage Sequence Diagram

Scenario 16: 'PM Peak 2023 DS (based on 2017 survey data)' (FG16: 'PM Peak 2023 DS (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



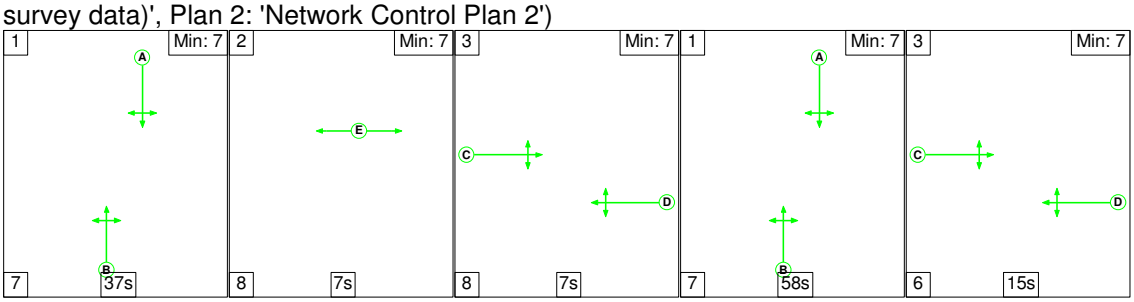
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**101.9%**	**13.6**	**34.7**	**48.8**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**101.9%**	**13.6**	**34.7**	**48.8**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	854	1983	1276	66.9%	2.3	1.0	3.6	15.4	15.2	1.0	16.2
2/1	Hala Rd Right Left Ahead	D	173	1757	176	98.5%	2.0	5.9	8.0	165.5	4.4	5.9	10.4
3/1	A6 (S) Ahead Right Left	B	1271	1938	1248	101.9%	7.7	24.6	32.4	91.7	40.8	24.6	65.5
4/1	Ashton Rd Left Ahead Right	C	159	1780	178	89.3%	1.7	3.1	4.9	110.0	4.1	3.1	7.2
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

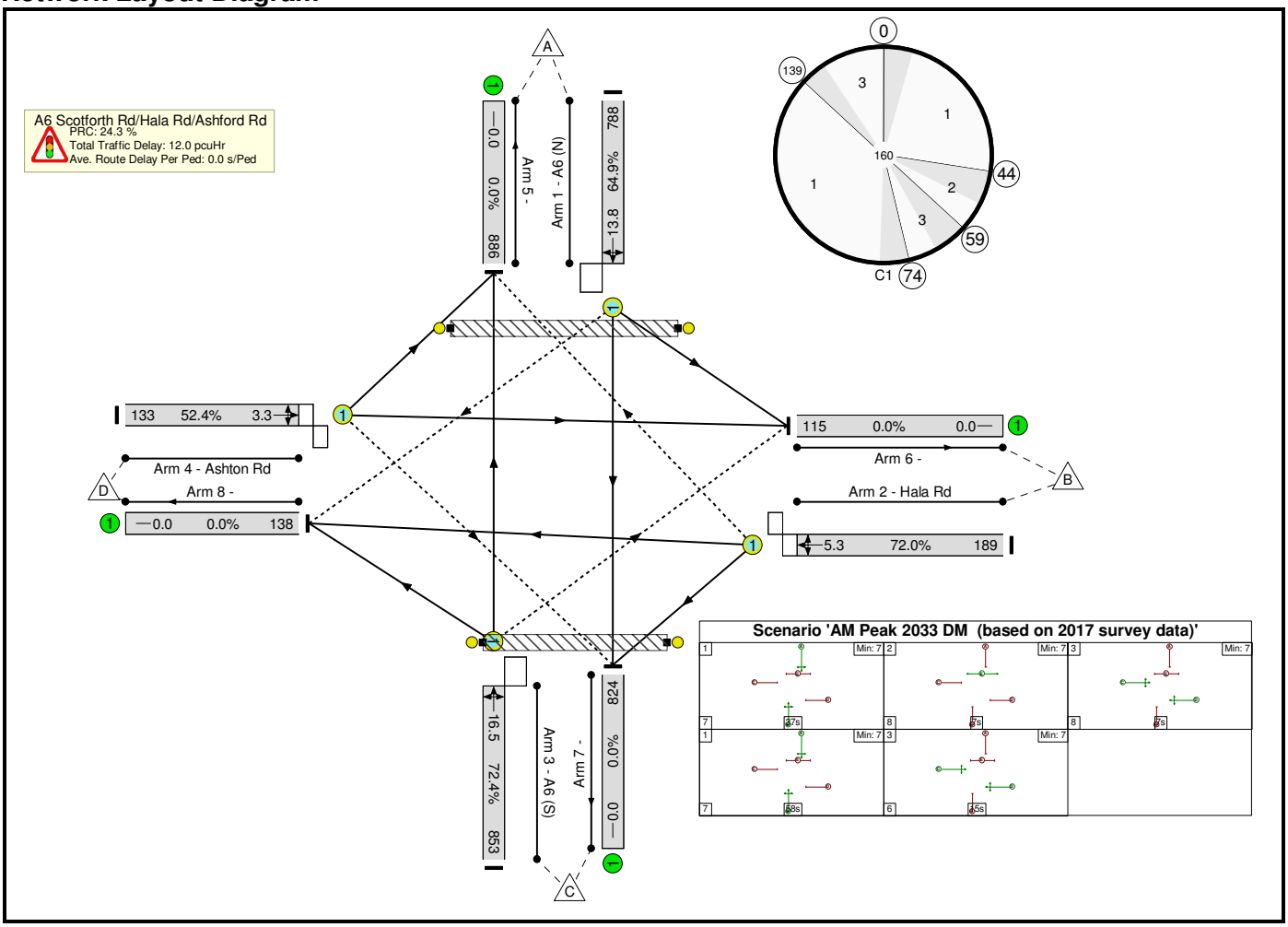
C1 PRC for Signalled Lanes (%): -13.2 Total Delay for Signalled Lanes (pcuHr): 48.82 Cycle Time (s): 160
PRC Over All Lanes (%): -13.2 Total Delay Over All Lanes(pcuHr): 48.82

Stage Sequence Diagram

Scenario 17: 'AM Peak 2033 DM (based on 2017 survey data)' (FG17: 'AM Peak 2033 DM (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



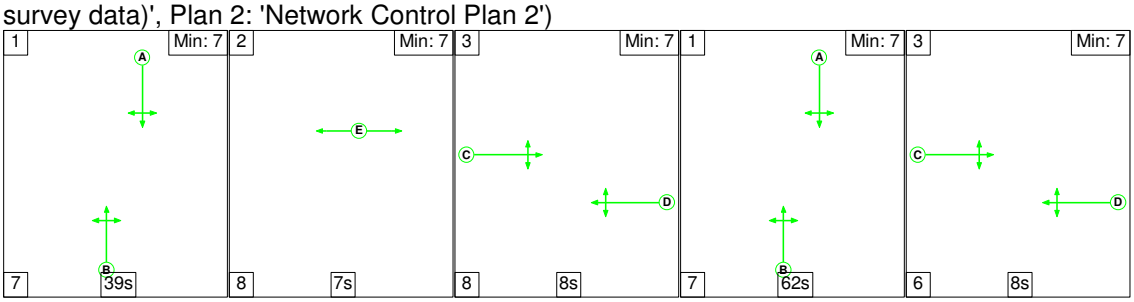
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**72.4%**	**7.8**	**4.0**	**12.0**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**72.4%**	**7.8**	**4.0**	**12.0**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	788	2003	1214	64.9%	2.3	0.9	3.3	15.0	12.9	0.9	13.8
2/1	Hala Rd Right Left Ahead	D	189	1749	262	72.0%	1.7	1.2	3.0	56.7	4.1	1.2	5.3
3/1	A6 (S) Ahead Right Left	B	853	1943	1178	72.4%	2.7	1.3	4.0	17.0	15.2	1.3	16.5
4/1	Ashton Rd Left Ahead Right	C	133	1766	254	52.4%	1.2	0.5	1.7	46.9	2.8	0.5	3.3
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

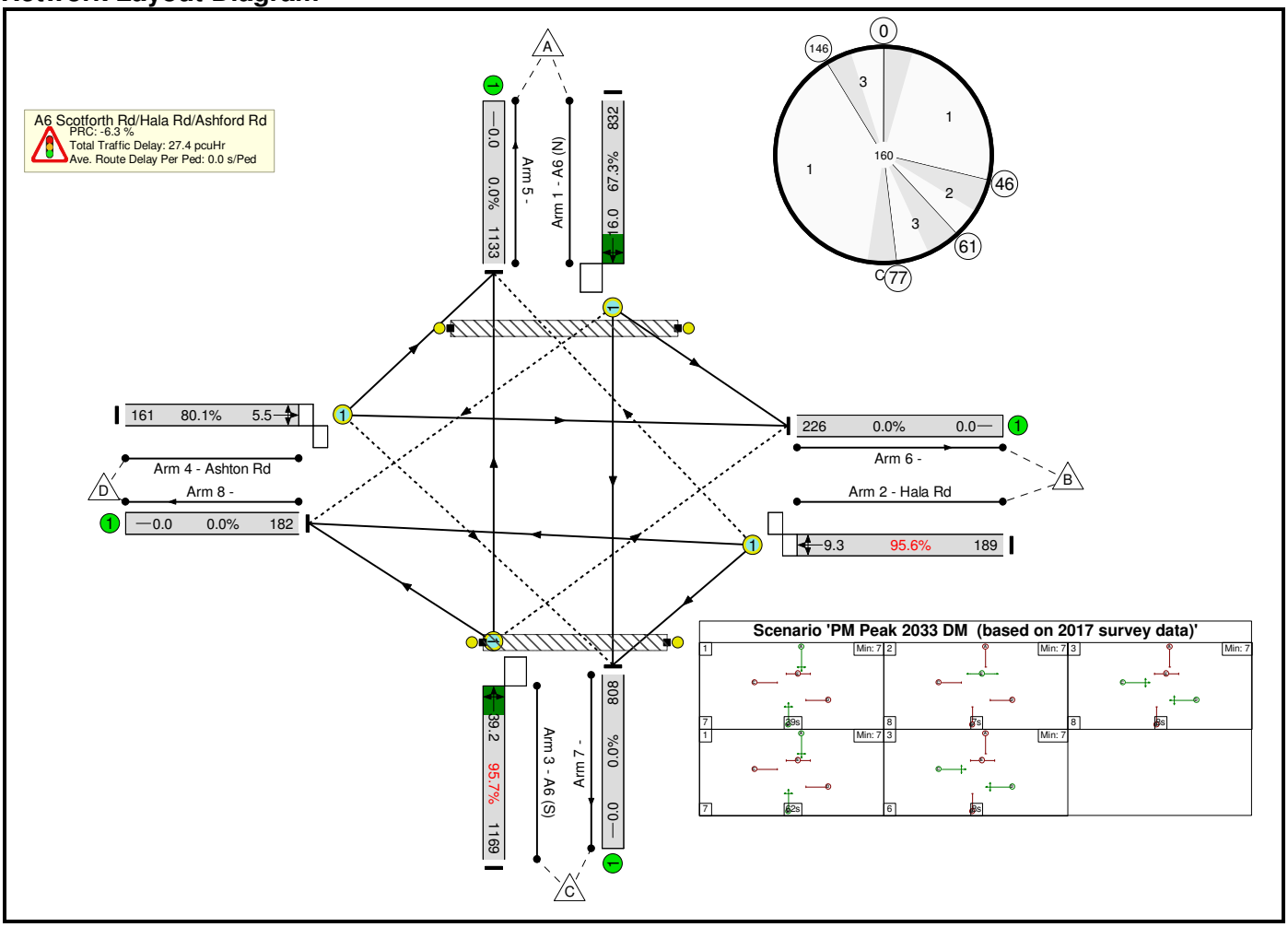
C1 PRC for Signalled Lanes (%): 24.3 Total Delay for Signalled Lanes (pcuHr): 12.03 Cycle Time (s): 160
PRC Over All Lanes (%): 24.3 Total Delay Over All Lanes(pcuHr): 12.03

Stage Sequence Diagram

Scenario 18: 'PM Peak 2033 DM (based on 2017 survey data)' (FG18: 'PM Peak 2033 DM (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



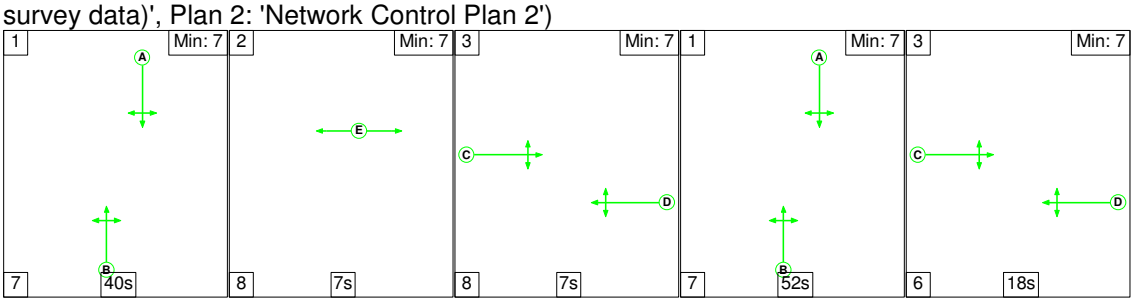
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**95.7%**	**10.6**	**16.3**	**27.4**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**95.7%**	**10.6**	**16.3**	**27.4**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	832	1977	1237	67.3%	2.4	1.0	3.7	16.0	15.0	1.0	16.0
2/1	Hala Rd Right Left Ahead	D	189	1757	198	95.6%	1.9	5.0	6.9	132.0	4.3	5.0	9.3
3/1	A6 (S) Ahead Right Left	B	1169	1936	1222	95.7%	4.8	8.4	13.3	41.0	30.8	8.4	39.2
4/1	Ashton Rd Left Ahead Right	C	161	1786	201	80.1%	1.6	1.8	3.4	77.0	3.6	1.8	5.5
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

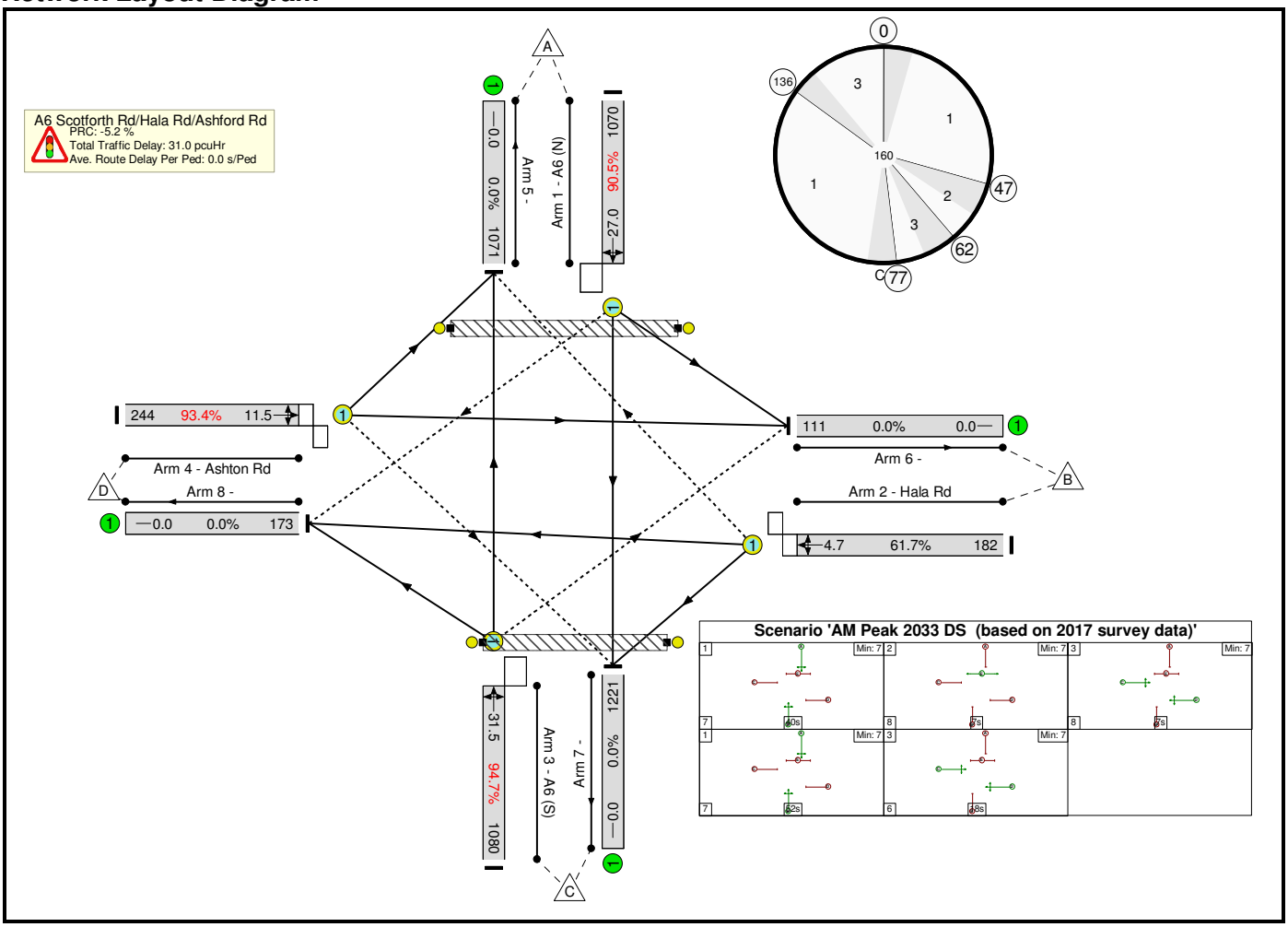
C1 PRC for Signalled Lanes (%): -6.3 Total Delay for Signalled Lanes (pcuHr): 27.38 Cycle Time (s): 160
PRC Over All Lanes (%): -6.3 Total Delay Over All Lanes(pcuHr): 27.38

Stage Sequence Diagram

Scenario 19: 'AM Peak 2033 DS (based on 2017 survey data)' (FG19: 'AM Peak 2033 DS (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



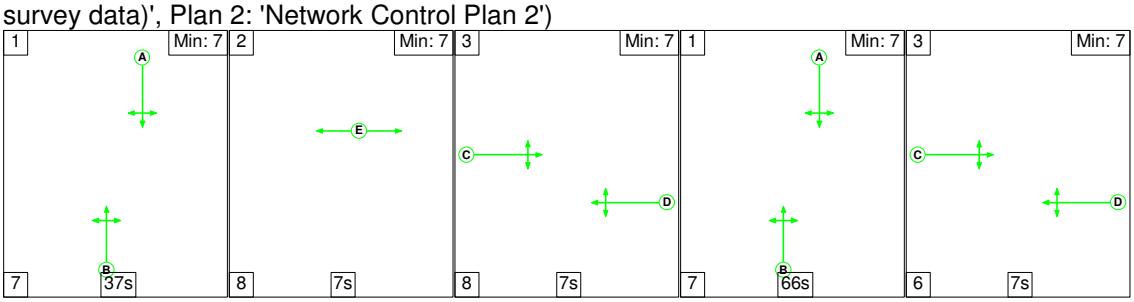
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**94.7%**	**13.5**	**17.0**	**31.0**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**94.7%**	**13.5**	**17.0**	**31.0**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	1070	2013	1183	90.5%	4.4	4.4	8.9	30.0	22.6	4.4	27.0
2/1	Hala Rd Right Left Ahead	D	182	1749	295	61.7%	1.6	0.8	2.4	47.0	3.9	0.8	4.7
3/1	A6 (S) Ahead Right Left	B	1080	1942	1141	94.7%	4.6	7.2	12.0	39.9	24.3	7.2	31.5
4/1	Ashton Rd Left Ahead Right	C	244	1739	261	93.4%	2.9	4.6	7.7	113.3	6.9	4.6	11.5
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

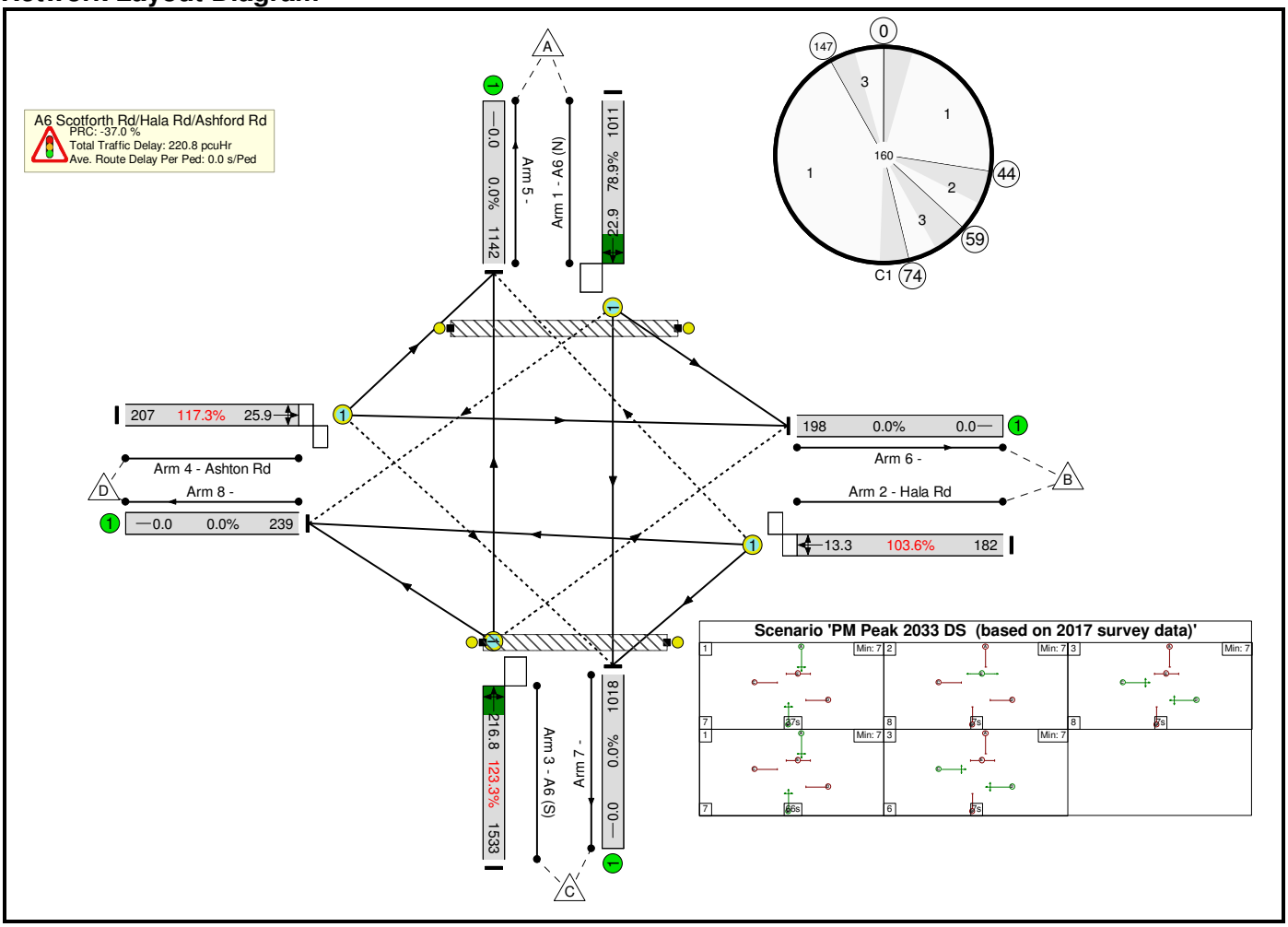
C1 PRC for Signalled Lanes (%): -5.2 Total Delay for Signalled Lanes (pcuHr): 30.95 Cycle Time (s): 160
PRC Over All Lanes (%): -5.2 Total Delay Over All Lanes(pcuHr): 30.95

Stage Sequence Diagram

Scenario 20: 'PM Peak 2033 DS (based on 2017 survey data)' (FG20: 'PM Peak 2033 DS (based on 2017 survey data)', Plan 2: 'Network Control Plan 2')



Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**123.3%**	**44.5**	**175.7**	**220.8**	-	-	-	-
A6 Scotforth Rd/Hala Rd/Ashford Rd	-	-	-	-	-	**123.3%**	**44.5**	**175.7**	**220.8**	-	-	-	-
1/1	A6 (N) Left Ahead Right	A	1011	1990	1281	78.9%	3.2	1.8	5.3	18.9	21.1	1.8	22.9
2/1	Hala Rd Right Left Ahead	D	182	1757	176	103.6%	2.5	8.5	11.0	217.4	4.8	8.5	13.3
3/1	A6 (S) Ahead Right Left	B	1533	1932	1244	123.3%	33.9	147.2	181.3	425.8	69.6	147.2	216.8
4/1	Ashton Rd Left Ahead Right	C	207	1765	177	117.3%	5.0	18.1	23.2	402.9	7.8	18.1	25.9
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -37.0 Total Delay for Signalled Lanes (pcuHr): 220.79 Cycle Time (s): 160
PRC Over All Lanes (%): -37.0 Total Delay Over All Lanes(pcuHr): 220.79

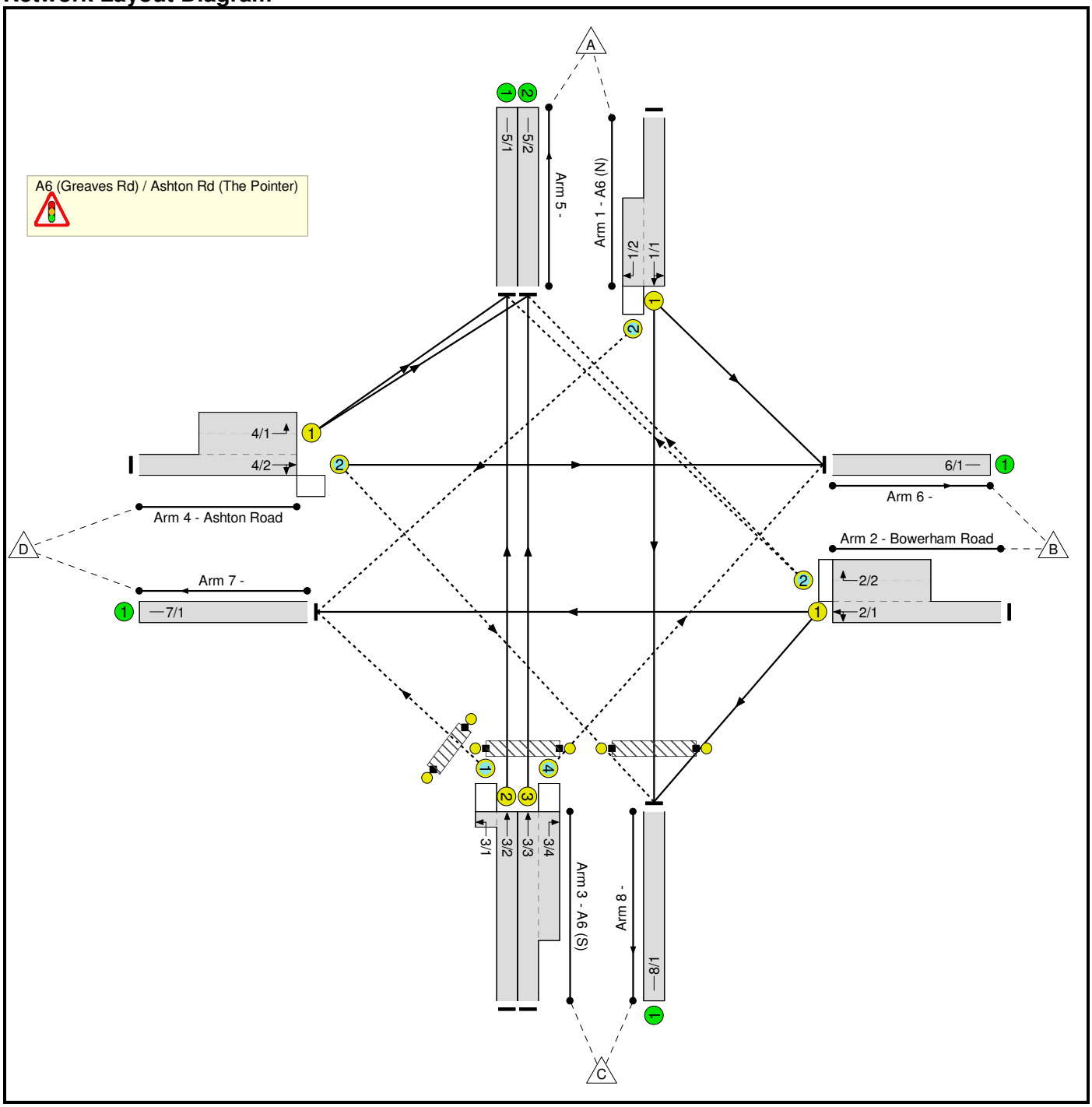
Appendix E – A6 Greaves Rd/Ashton Rd (The Pointer Roundabout) Junction Capacity Assessment Results

Full Input Data And Results

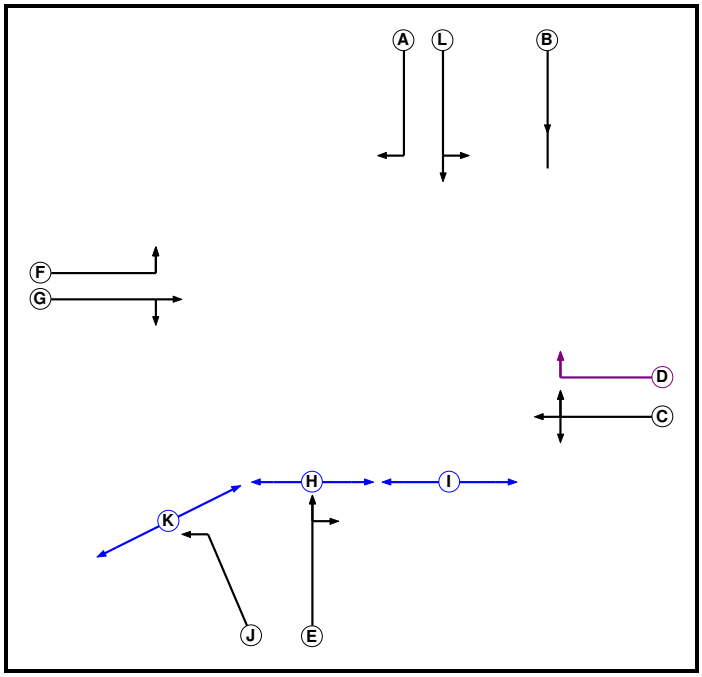
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	J05 Signlised Option V5.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Ind. Arrow	C	4	4
E	Traffic		7	7
F	Traffic		7	7
G	Traffic		7	7
H	Pedestrian		6	6
I	Pedestrian		5	5
J	Traffic		7	7
K	Pedestrian		5	5
L	Traffic		7	7

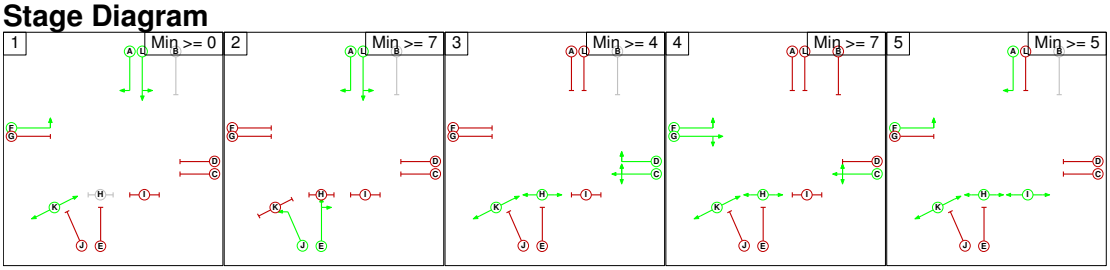
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L
A		-	6	6	-	-	6	-	-	-	-	-
B	-		-	-	-	-	6	-	-	-	-	-
C	6	-		-	-	-	-	-	7	-	-	6
D	6	-	-		-	6	6	-	-	-	-	6
E	-	-	-	-		6	-	5	5	-	-	-
F	-	-	-	6	6		-	-	-	-	-	-
G	6	6	-	6	-	-		-	7	-	-	-
H	-	-	-	-	11	-	-		-	-	-	-
I	-	-	6	-	6	-	6	-		-	-	6
J	-	-	-	-	-	-	-	-	-		5	-
K	-	-	-	-	-	-	-	-	-	5		-
L	-	-	6	6	-	-	-	-	6	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A F K L
2	A E J L
3	C D H K
4	C F G H K
5	A F H I K

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		6	6	6	6
2	6		6	6	6
3	6	11		6	7
4	6	11	6		7
5	6	11	6	6	

Give-Way Lane Input Data

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)

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)
1/2 (A6 (N))	7/1 (Right)	1439	0	3/2	1.09	All	2.00	-	0.50	2	2.00
				3/3	1.09	All					
	5/1 (Right)	1439	0	4/1	1.09	All					
2/2 (Bowerham Road)				4/2	1.09	To 6/1 (Ahead)					
	5/2 (Right)	1439	0	4/1	1.09	All	2.00	-	0.50	1	2.00
				4/2	1.09	To 6/1 (Ahead)					
3/1 (A6 (S))	7/1 (Left)	715	0	1/2	0.22	All	2.00	-	0.50	2	2.00
3/4 (A6 (S))	6/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
4/2 (Ashton Road)	8/1 (Right)	1439	0	2/1	1.09	All	2.00	2.00	0.50	2	2.00

Lane Input Data

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)

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 (A6 (N))	U	L	2	3	60.0	Geom	-	4.00	0.00	Y	Arm 6 Left	Inf
											Arm 8 Ahead	Inf
1/2 (A6 (N))	O	A	2	3	6.3	Geom	-	3.00	0.00	N	Arm 7 Right	16.57
2/1 (Bowerham Road)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 7 Ahead	Inf
											Arm 8 Left	30.00
2/2 (Bowerham Road)	O	C D	2	3	7.0	User	3400	-	-	-	-	-
3/1 (A6 (S))	O	J	2	3	1.1	Geom	-	3.00	0.00	Y	Arm 7 Left	25.10
3/2 (A6 (S))	U	E	2	3	60.0	Geom	-	3.25	0.00	Y	Arm 5 Ahead	Inf
3/3 (A6 (S))	U	E	2	3	60.0	Geom	-	3.25	0.00	N	Arm 5 Ahead	Inf
3/4 (A6 (S))	O	E	2	3	9.2	Geom	-	3.15	0.00	Y	Arm 6 Right	25.80
4/1 (Ashton Road)	U	F	2	3	7.0	User	3900	-	-	-	-	-
4/2 (Ashton Road)	O	G	2	3	60.0	Geom	-	4.50	0.00	Y	Arm 6 Ahead	Inf
											Arm 8 Right	Inf
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak Hour 2018 Surveyed Flows (Tues 16/10/18)'	08:00	09:00	01:00	
2: 'PM Peak Hour 2018 Surveyed Flows(Tues 16/10/18)'	16:15	17:15	01:00	
3: 'AM Peak 2023 DM (based on Tues 16/10/18)'	08:00	09:00	01:00	
4: 'PM Peak 2023 DM (based on Tues 16/10/18)'	16:15	17:15	01:00	
5: 'AM Peak 2023 DS (based on Tues 16/10/18)'	08:00	09:00	01:00	
6: 'PM Peak 2023 DS (based on Tues 16/10/18)'	16:15	17:15	01:00	
7: 'AM Peak 2033 DM (based on Tues 16/10/18)'	08:00	09:00	01:00	
8: 'PM Peak 2033 DM (based on Tues 16/10/18)'	16:15	17:15	01:00	
9: 'AM Peak 2033 DS (based on Tues 16/10/18)'	08:00	09:00	01:00	
10: 'PM Peak 2033 DS (based on Tues 16/10/18)'	16:15	17:15	01:00	
11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)'	08:00	09:00	01:00	
12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17'	16:15	17:15	01:00	
13: 'AM Peak 2023 DM (based on 2017 survey data)'	08:00	09:00	01:00	
14: 'PM Peak 2023 DM (based on 2017 survey data)'	16:15	17:15	01:00	
15: 'AM Peak 2023 DS (based on 2017 survey data)'	08:00	09:00	01:00	
16: 'PM Peak 2023 DS (based on 2017 survey data)'	16:15	17:15	01:00	
17: 'AM Peak 2033 DM (based on 2017 survey data)'	08:00	09:00	01:00	
18: 'PM Peak 2033 DM (based on 2017 survey data)'	16:15	17:15	01:00	
19: 'AM Peak 2033 DS (based on 2017 survey data)'	08:00	09:00	01:00	
20: 'PM Peak 2033 DS (based on 2017 survey data)'	16:15	17:15	01:00	

Scenario 1: 'AM Peak Hour 2018 Surveyed Year (Tues 16/10/18)' (FG1: 'AM Peak Hour 2018 Surveyed Flows (Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	147	399	427	973
	B	262	0	62	224	548
	C	336	89	0	86	511
	D	312	221	91	0	624
	Tot.	910	457	552	737	2656

Traffic Lane Flows

Lane	Scenario 1: AM Peak Hour 2018 Surveyed Year (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	973(In) 546(Out)
1/2 (short)	427
2/1 (with short)	548(In) 286(Out)
2/2 (short)	262
3/1 (short)	86
3/2 (with short)	200(In) 114(Out)
3/3 (with short)	311(In) 222(Out)
3/4 (short)	89
4/1 (short)	312
4/2 (with short)	624(In) 312(Out)
5/1	401
5/2	509
6/1	457
7/1	737
8/1	552

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	26.9 %	2015	2015
				Arm 8 Ahead	Inf	73.1 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	78.3 %	1944	1944
				Arm 8 Left	30.00	21.7 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	70.8 %	2065	2065
				Arm 8 Right	Inf	29.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Peak Hour 2018 Surveyed Year (Tues 16/10/18)' (FG2: 'PM Peak Hour 2018 Surveyed Flows(Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	193	499	263	955
	B	242	0	45	99	386
	C	451	88	0	22	561
	D	335	215	88	0	638
	Tot.	1028	496	632	384	2540

Traffic Lane Flows

Lane	Scenario 2: PM Peak Hour 2018 Surveyed Year (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	955(In) 692(Out)
1/2 (short)	263
2/1 (with short)	386(In) 144(Out)
2/2 (short)	242
3/1 (short)	22
3/2 (with short)	209(In) 187(Out)
3/3 (with short)	352(In) 264(Out)
3/4 (short)	88
4/1 (short)	335
4/2 (with short)	638(In) 303(Out)
5/1	475
5/2	553
6/1	496
7/1	384
8/1	632

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	27.9 %	2015	2015
				Arm 8 Ahead	Inf	72.1 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	68.8 %	1935	1935
				Arm 8 Left	30.00	31.3 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	71.0 %	2065	2065
				Arm 8 Right	Inf	29.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Peak 2023 DM (Tues 16/10/18)' (FG3: 'AM Peak 2023 DM (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	159	429	496	1084
	B	292	0	66	248	606
	C	382	95	0	92	569
	D	349	238	97	0	684
	Tot.	1023	492	592	836	2943

Traffic Lane Flows

Lane	Scenario 3: AM Peak 2023 DM (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1084(In) 588(Out)
1/2 (short)	496
2/1 (with short)	606(In) 314(Out)
2/2 (short)	292
3/1 (short)	92
3/2 (with short)	221(In) 129(Out)
3/3 (with short)	348(In) 253(Out)
3/4 (short)	95
4/1 (short)	349
4/2 (with short)	684(In) 335(Out)
5/1	449
5/2	574
6/1	492
7/1	836
8/1	592

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	27.0 %	2015	2015
				Arm 8 Ahead	Inf	73.0 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	79.0 %	1945	1945
				Arm 8 Left	30.00	21.0 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	71.0 %	2065	2065
				Arm 8 Right	Inf	29.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Peak 2023 DM (Tues 16/10/18)' (FG4: 'PM Peak 2023 DM (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	210	536	304	1050
	B	279	0	48	106	433
	C	568	94	0	23	685
	D	388	233	94	0	715
	Tot.	1235	537	678	433	2883

Traffic Lane Flows

Lane	Scenario 4: PM Peak 2023 DM (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1050(In) 746(Out)
1/2 (short)	304
2/1 (with short)	433(In) 154(Out)
2/2 (short)	279
3/1 (short)	23
3/2 (with short)	270(In) 247(Out)
3/3 (with short)	415(In) 321(Out)
3/4 (short)	94
4/1 (short)	388
4/2 (with short)	715(In) 327(Out)
5/1	581
5/2	654
6/1	537
7/1	433
8/1	678

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	28.2 %	2015	2015
				Arm 8 Ahead	Inf	71.8 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	68.8 %	1935	1935
				Arm 8 Left	30.00	31.2 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	71.3 %	2065	2065
				Arm 8 Right	Inf	28.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'AM Peak 2023 DS (Tues 16/10/18)' (FG5: 'AM Peak 2023 DS (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	158	425	512	1095
	B	318	0	66	246	630
	C	433	94	0	91	618
	D	393	238	96	0	727
	Tot.	1144	490	587	849	3070

Traffic Lane Flows

Lane	Scenario 5: AM Peak 2023 DS (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1095(In) 583(Out)
1/2 (short)	512
2/1 (with short)	630(In) 312(Out)
2/2 (short)	318
3/1 (short)	91
3/2 (with short)	244(In) 153(Out)
3/3 (with short)	374(In) 280(Out)
3/4 (short)	94
4/1 (short)	393
4/2 (with short)	727(In) 334(Out)
5/1	508
5/2	636
6/1	490
7/1	849
8/1	587

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	27.1 %	2015	2015
				Arm 8 Ahead	Inf	72.9 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	78.8 %	1944	1944
				Arm 8 Left	30.00	21.2 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	71.3 %	2065	2065
				Arm 8 Right	Inf	28.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak 2023 DS (Tues 16/10/18)' (FG6: 'PM Peak 2023 DS (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	208	529	347	1084
	B	291	0	47	106	444
	C	658	92	0	23	773
	D	410	234	92	0	736
	Tot.	1359	534	668	476	3037

Traffic Lane Flows

Lane	Scenario 6: PM Peak 2023 DS (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1084(In) 737(Out)
1/2 (short)	347
2/1 (with short)	444(In) 153(Out)
2/2 (short)	291
3/1 (short)	23
3/2 (with short)	317(In) 294(Out)
3/3 (with short)	456(In) 364(Out)
3/4 (short)	92
4/1 (short)	410
4/2 (with short)	736(In) 326(Out)
5/1	645
5/2	714
6/1	534
7/1	476
8/1	668

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	28.2 %	2015	2015
				Arm 8 Ahead	Inf	71.8 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	69.3 %	1935	1935
				Arm 8 Left	30.00	30.7 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	71.8 %	2065	2065
				Arm 8 Right	Inf	28.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: 'AM Peak 2033 DM (Tues 16/10/18)' (FG7: 'AM Peak 2033 DM (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	174	465	538	1177
	B	316	0	71	267	654
	C	423	103	0	99	625
	D	378	256	105	0	739
	Tot.	1117	533	641	904	3195

Traffic Lane Flows

Lane	Scenario 7: AM Peak 2033 DM (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1177(In) 639(Out)
1/2 (short)	538
2/1 (with short)	654(In) 338(Out)
2/2 (short)	316
3/1 (short)	99
3/2 (with short)	246(In) 147(Out)
3/3 (with short)	379(In) 276(Out)
3/4 (short)	103
4/1 (short)	378
4/2 (with short)	739(In) 361(Out)
5/1	494
5/2	623
6/1	533
7/1	904
8/1	641

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	27.2 %	2015	2015
				Arm 8 Ahead	Inf	72.8 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	79.0 %	1945	1945
				Arm 8 Left	30.00	21.0 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	70.9 %	2065	2065
				Arm 8 Right	Inf	29.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: 'PM Peak 2033 DM (Tues 16/10/18)' (FG8: 'PM Peak 2033 DM (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	227	577	329	1133
	B	304	0	51	115	470
	C	637	101	0	25	763
	D	421	250	101	0	772
	Tot.	1362	578	729	469	3138

Traffic Lane Flows

Lane	Scenario 8: PM Peak 2033 DM (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1133(In) 804(Out)
1/2 (short)	329
2/1 (with short)	470(In) 166(Out)
2/2 (short)	304
3/1 (short)	25
3/2 (with short)	343(In) 318(Out)
3/3 (with short)	420(In) 319(Out)
3/4 (short)	101
4/1 (short)	421
4/2 (with short)	772(In) 351(Out)
5/1	680
5/2	682
6/1	578
7/1	469
8/1	729

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	28.2 %	2015	2015
				Arm 8 Ahead	Inf	71.8 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	69.3 %	1935	1935
				Arm 8 Left	30.00	30.7 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	71.2 %	2065	2065
				Arm 8 Right	Inf	28.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 9: 'AM Peak 2033 DS (Tues 16/10/18)' (FG9: 'AM Peak 2033 DS (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	168	448	584	1200
	B	349	0	69	260	678
	C	573	99	0	96	768
	D	490	257	101	0	848
	Tot.	1412	524	618	940	3494

Traffic Lane Flows

Lane	Scenario 9: AM Peak 2033 DS (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1200(In) 616(Out)
1/2 (short)	584
2/1 (with short)	678(In) 329(Out)
2/2 (short)	349
3/1 (short)	96
3/2 (with short)	332(In) 236(Out)
3/3 (with short)	436(In) 337(Out)
3/4 (short)	99
4/1 (short)	490
4/2 (with short)	848(In) 358(Out)
5/1	656
5/2	756
6/1	524
7/1	940
8/1	618

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	27.3 %	2015	2015
				Arm 8 Ahead	Inf	72.7 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	79.0 %	1945	1945
				Arm 8 Left	30.00	21.0 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	71.8 %	2065	2065
				Arm 8 Right	Inf	28.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 10: 'PM Peak 2033 DS (Tues 16/10/18)' (FG10: 'PM Peak 2033 DS (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	218	553	436	1207
	B	320	0	49	115	484
	C	778	96	0	24	898
	D	478	253	96	0	827
	Tot.	1576	567	698	575	3416

Traffic Lane Flows

Lane	Scenario 10: PM Peak 2033 DS (Tues 16/10/18)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1207(In) 771(Out)
1/2 (short)	436
2/1 (with short)	484(In) 164(Out)
2/2 (short)	320
3/1 (short)	24
3/2 (with short)	382(In) 358(Out)
3/3 (with short)	516(In) 420(Out)
3/4 (short)	96
4/1 (short)	478
4/2 (with short)	827(In) 349(Out)
5/1	757
5/2	819
6/1	567
7/1	575
8/1	698

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	28.3 %	2015	2015
				Arm 8 Ahead	Inf	71.7 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	70.1 %	1936	1936
				Arm 8 Left	30.00	29.9 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	72.5 %	2065	2065
				Arm 8 Right	Inf	27.5 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)' (FG11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	213	400	375	988
	B	288	0	45	259	592
	C	425	51	0	64	540
	D	385	129	86	0	600
	Tot.	1098	393	531	698	2720

Traffic Lane Flows

Lane	Scenario 11: AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	988(In) 613(Out)
1/2 (short)	375
2/1 (with short)	592(In) 304(Out)
2/2 (short)	288
3/1 (short)	64
3/2 (with short)	231(In) 167(Out)
3/3 (with short)	309(In) 258(Out)
3/4 (short)	51
4/1 (short)	385
4/2 (with short)	600(In) 215(Out)
5/1	503
5/2	595
6/1	393
7/1	698
8/1	531

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	34.7 %	2015	2015
				Arm 8 Ahead	Inf	65.3 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	85.2 %	1951	1951
				Arm 8 Left	30.00	14.8 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	60.0 %	2065	2065
				Arm 8 Right	Inf	40.0 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17' (FG12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination					
		A	B	C	D	Tot.
Origin	A	0	223	419	271	913
	B	255	0	66	165	486
	C	469	54	0	26	549
	D	373	125	84	0	582
	Tot.	1097	402	569	462	2530

Traffic Lane Flows

Lane	Scenario 12: PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	913(In) 642(Out)
1/2 (short)	271
2/1 (with short)	486(In) 231(Out)
2/2 (short)	255
3/1 (short)	26
3/2 (with short)	227(In) 201(Out)
3/3 (with short)	322(In) 268(Out)
3/4 (short)	54
4/1 (short)	373
4/2 (with short)	582(In) 209(Out)
5/1	515
5/2	582
6/1	402
7/1	462
8/1	569

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	34.7 %	2015	2015
				Arm 8 Ahead	Inf	65.3 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	71.4 %	1937	1937
				Arm 8 Left	30.00	28.6 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	59.8 %	2065	2065
				Arm 8 Right	Inf	40.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 13: 'AM Peak 2023 DM (based on 2017 survey data)' (FG13: 'AM Peak 2023 DM (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	231	430	440	1101
	B	320	0	48	287	655
	C	477	55	0	69	601
	D	427	140	92	0	659
	Tot.	1224	426	570	796	3016

Traffic Lane Flows

Lane	Scenario 13: AM Peak 2023 DM (based on 2017 survey data)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1101(In) 661(Out)
1/2 (short)	440
2/1 (with short)	655(In) 335(Out)
2/2 (short)	320
3/1 (short)	69
3/2 (with short)	259(In) 190(Out)
3/3 (with short)	342(In) 287(Out)
3/4 (short)	55
4/1 (short)	427
4/2 (with short)	659(In) 232(Out)
5/1	563
5/2	661
6/1	426
7/1	796
8/1	570

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	34.9 %	2015	2015
				Arm 8 Ahead	Inf	65.1 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	85.7 %	1951	1951
				Arm 8 Left	30.00	14.3 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	60.3 %	2065	2065
				Arm 8 Right	Inf	39.7 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 14: 'PM Peak 2023 DM (based on 2017 survey data)' (FG14: 'PM Peak 2023 DM (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	242	450	312	1004
	B	293	0	70	176	539
	C	587	57	0	28	672
	D	428	138	89	0	655
	Tot.	1308	437	609	516	2870

Traffic Lane Flows

Lane	Scenario 14: PM Peak 2023 DM (based on 2017 survey data)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1004(In) 692(Out)
1/2 (short)	312
2/1 (with short)	539(In) 246(Out)
2/2 (short)	293
3/1 (short)	28
3/2 (with short)	287(In) 259(Out)
3/3 (with short)	385(In) 328(Out)
3/4 (short)	57
4/1 (short)	428
4/2 (with short)	655(In) 227(Out)
5/1	620
5/2	688
6/1	437
7/1	516
8/1	609

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	35.0 %	2015	2015
				Arm 8 Ahead	Inf	65.0 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	71.5 %	1937	1937
				Arm 8 Left	30.00	28.5 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	60.8 %	2065	2065
				Arm 8 Right	Inf	39.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 15: 'AM Peak 2023 DS (based on 2017 survey data)' (FG15: 'AM Peak 2023 DS (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	228	425	457	1110
	B	346	0	48	284	678
	C	527	54	0	68	649
	D	470	141	91	0	702
	Tot.	1343	423	564	809	3139

Traffic Lane Flows

Lane	Scenario 15: AM Peak 2023 DS (based on 2017 survey data)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1110(In) 653(Out)
1/2 (short)	457
2/1 (with short)	678(In) 332(Out)
2/2 (short)	346
3/1 (short)	68
3/2 (with short)	282(In) 214(Out)
3/3 (with short)	367(In) 313(Out)
3/4 (short)	54
4/1 (short)	470
4/2 (with short)	702(In) 232(Out)
5/1	622
5/2	721
6/1	423
7/1	809
8/1	564

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	34.9 %	2015	2015
				Arm 8 Ahead	Inf	65.1 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	85.5 %	1951	1951
				Arm 8 Left	30.00	14.5 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	60.8 %	2065	2065
				Arm 8 Right	Inf	39.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 16: 'PM Peak 2023 DS (based on 2017 survey data)' (FG16: 'PM Peak 2023 DS (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	239	445	356	1040
	B	305	0	69	175	549
	C	677	57	0	28	762
	D	449	140	88	0	677
	Tot.	1431	436	602	559	3028

Traffic Lane Flows

Lane	Scenario 16: PM Peak 2023 DS (based on 2017 survey data)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1040(In) 684(Out)
1/2 (short)	356
2/1 (with short)	549(In) 244(Out)
2/2 (short)	305
3/1 (short)	28
3/2 (with short)	333(In) 305(Out)
3/3 (with short)	429(In) 372(Out)
3/4 (short)	57
4/1 (short)	449
4/2 (with short)	677(In) 228(Out)
5/1	682
5/2	749
6/1	436
7/1	559
8/1	602

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	34.9 %	2015	2015
				Arm 8 Ahead	Inf	65.1 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	71.7 %	1938	1938
				Arm 8 Left	30.00	28.3 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	61.4 %	2065	2065
				Arm 8 Right	Inf	38.6 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 17: 'AM Peak 2033 DM (based on 2017 survey data)' (FG17: 'AM Peak 2033 DM (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	251	466	478	1195
	B	347	0	52	308	707
	C	526	59	0	74	659
	D	462	151	100	0	713
	Tot.	1335	461	618	860	3274

Traffic Lane Flows

Lane	Scenario 17: AM Peak 2033 DM (based on 2017 survey data)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1195(In) 717(Out)
1/2 (short)	478
2/1 (with short)	707(In) 360(Out)
2/2 (short)	347
3/1 (short)	74
3/2 (with short)	285(In) 211(Out)
3/3 (with short)	374(In) 315(Out)
3/4 (short)	59
4/1 (short)	462
4/2 (with short)	713(In) 251(Out)
5/1	616
5/2	719
6/1	461
7/1	860
8/1	618

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	35.0 %	2015	2015
				Arm 8 Ahead	Inf	65.0 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	85.6 %	1951	1951
				Arm 8 Left	30.00	14.4 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	60.2 %	2065	2065
				Arm 8 Right	Inf	39.8 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 18: 'PM Peak 2033 DM (based on 2017 survey data)' (FG18: 'PM Peak 2033 DM (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	261	485	338	1084
	B	319	0	75	190	584
	C	657	62	0	30	749
	D	464	148	96	0	708
	Tot.	1440	471	656	558	3125

Traffic Lane Flows

Lane	Scenario 18: PM Peak 2033 DM (based on 2017 survey data)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1084(In) 746(Out)
1/2 (short)	338
2/1 (with short)	584(In) 265(Out)
2/2 (short)	319
3/1 (short)	30
3/2 (with short)	324(In) 294(Out)
3/3 (with short)	425(In) 363(Out)
3/4 (short)	62
4/1 (short)	464
4/2 (with short)	708(In) 244(Out)
5/1	686
5/2	754
6/1	471
7/1	558
8/1	656

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	35.0 %	2015	2015
				Arm 8 Ahead	Inf	65.0 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	71.7 %	1938	1938
				Arm 8 Left	30.00	28.3 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	60.7 %	2065	2065
				Arm 8 Right	Inf	39.3 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 19: 'AM Peak 2033 DS (based on 2017 survey data)' (FG19: 'AM Peak 2033 DS (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	242	449	526	1217
	B	378	0	50	299	727
	C	672	57	0	72	801
	D	571	156	96	0	823
	Tot.	1621	455	595	897	3568

Traffic Lane Flows

Lane	Scenario 19: AM Peak 2033 DS (based on 2017 survey data)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1217(In) 691(Out)
1/2 (short)	526
2/1 (with short)	727(In) 349(Out)
2/2 (short)	378
3/1 (short)	72
3/2 (with short)	362(In) 290(Out)
3/3 (with short)	439(In) 382(Out)
3/4 (short)	57
4/1 (short)	571
4/2 (with short)	823(In) 252(Out)
5/1	764
5/2	857
6/1	455
7/1	897
8/1	595

Lane Saturation Flows

Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
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 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	35.0 %	2015	2015
				Arm 8 Ahead	Inf	65.0 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	85.7 %	1951	1951
				Arm 8 Left	30.00	14.3 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	61.9 %	2065	2065
				Arm 8 Right	Inf	38.1 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 20: 'PM Peak 2033 DS (based on 2017 survey data)' (FG20: 'PM Peak 2033 DS (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	251	465	444	1160
	B	335	0	72	187	594
	C	797	59	0	29	885
	D	519	155	92	0	766
	Tot.	1651	465	629	660	3405

Traffic Lane Flows

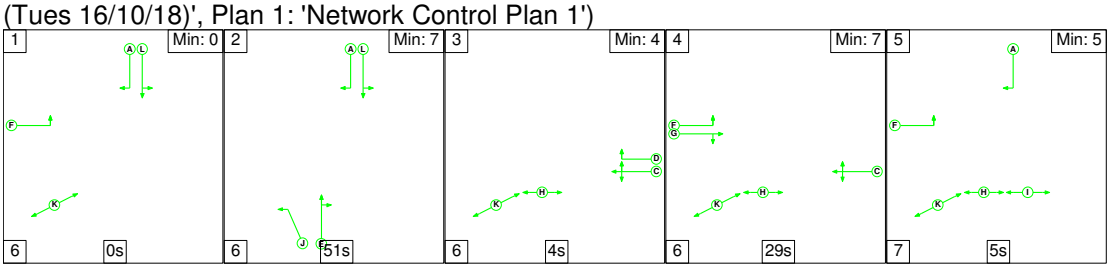
Lane	Scenario 20: PM Peak 2033 DS (based on 2017 survey data)
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)	
1/1 (with short)	1160(In) 716(Out)
1/2 (short)	444
2/1 (with short)	594(In) 259(Out)
2/2 (short)	335
3/1 (short)	29
3/2 (with short)	396(In) 367(Out)
3/3 (with short)	489(In) 430(Out)
3/4 (short)	59
4/1 (short)	519
4/2 (with short)	766(In) 247(Out)
5/1	794
5/2	857
6/1	465
7/1	660
8/1	629

Lane Saturation Flows

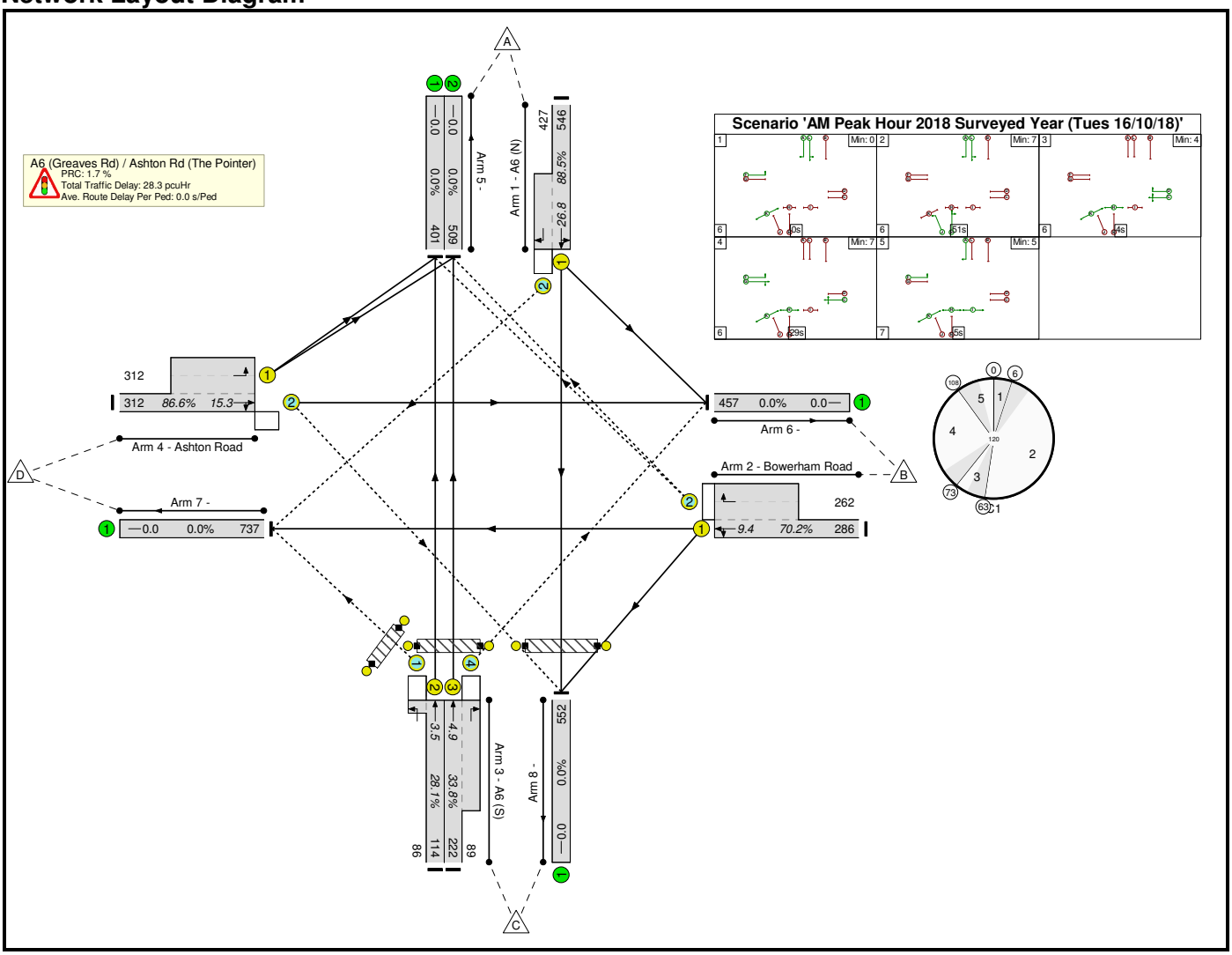
Junction: A6 (Greaves Rd) / Ashton Rd (The Pointer)								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (A6 (N))	4.00	0.00	Y	Arm 6 Left	Inf	35.1 %	2015	2015
				Arm 8 Ahead	Inf	64.9 %		
1/2 (A6 (N))	3.00	0.00	N	Arm 7 Right	16.57	100.0 %	1884	1884
2/1 (Bowerham Road)	3.50	0.00	Y	Arm 7 Ahead	Inf	72.2 %	1938	1938
				Arm 8 Left	30.00	27.8 %		
2/2 (Bowerham Road Lane 2)	This lane uses a directly entered Saturation Flow						3400	3400
3/1 (A6 (S))	3.00	0.00	Y	Arm 7 Left	25.10	100.0 %	1807	1807
3/2 (A6 (S))	3.25	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1940	1940
3/3 (A6 (S))	3.25	0.00	N	Arm 5 Ahead	Inf	100.0 %	2080	2080
3/4 (A6 (S))	3.15	0.00	Y	Arm 6 Right	25.80	100.0 %	1824	1824
4/1 (Ashton Road Lane 1)	This lane uses a directly entered Saturation Flow						3900	3900
4/2 (Ashton Road)	4.50	0.00	Y	Arm 6 Ahead	Inf	62.8 %	2065	2065
				Arm 8 Right	Inf	37.2 %		
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Stage Sequence Diagram

Scenario 1: 'AM Peak Hour 2018 Surveyed Year (Tues 16/10/18)' (FG1: 'AM Peak Hour 2018 Surveyed Flows (Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



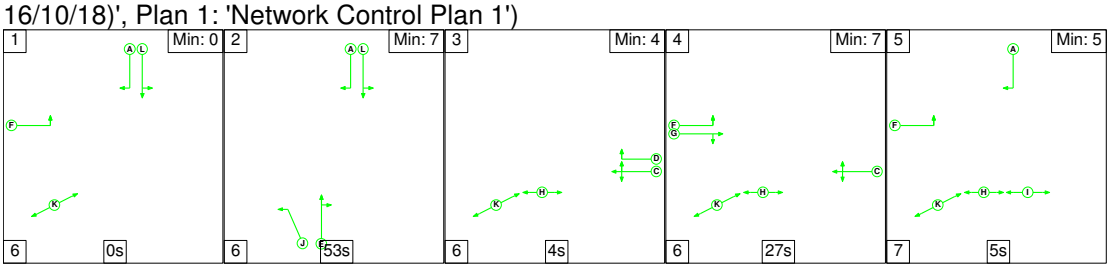
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**88.5%**	**19.4**	**8.3**	**28.3**	**-**	**-**	**-**	**-**
A6 (Greaves Rd) / Ashton Rd (The Pointer)	**-**	**-**	**-**	**-**	**-**	**88.5%**	**19.4**	**8.3**	**28.3**	**-**	**-**	**-**	**-**
1/1+1/2	A6 (N) Left Right Ahead	L A	973	2015:1884	1100	88.5%	6.1	3.6	9.8	36.2	23.2	3.6	26.8
2/1+2/2	Bowerham Road Right Ahead Left	C	548	1944:3400	781	70.2%	4.6	1.2	6.0	39.4	8.2	1.2	9.4
3/2+3/1	A6 (S) Ahead Left	E J	200	1940:1807	711	28.1%	1.1	0.2	1.4	24.5	3.3	0.2	3.5
3/3+3/4	A6 (S) Ahead Right	E	311	2080:1824	919	33.8%	1.8	0.3	2.5	28.4	4.7	0.3	4.9
4/2+4/1	Ashton Road Left Ahead Right	G F	624	2065:3900	721	86.6%	5.7	3.0	8.7	50.5	12.2	3.0	15.3
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

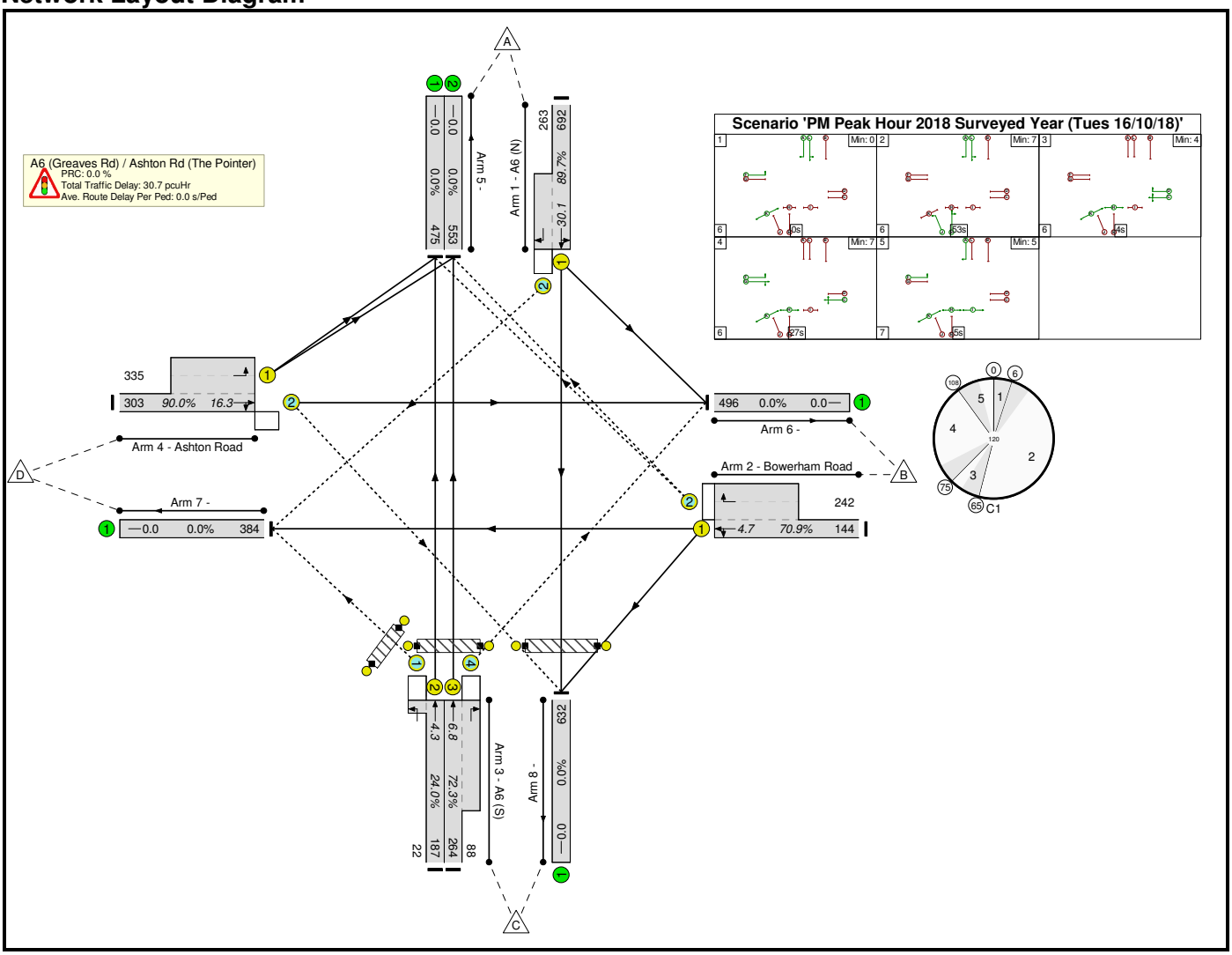
C1 PRC for Signalled Lanes (%): 1.7 Total Delay for Signalled Lanes (pcuHr): 28.34 Cycle Time (s): 120
PRC Over All Lanes (%): 1.7 Total Delay Over All Lanes(pcuHr): 28.34

Stage Sequence Diagram

Scenario 2: 'PM Peak Hour 2018 Surveyed Year (Tues 16/10/18)' (FG2: 'PM Peak Hour 2018 Surveyed Flows(Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



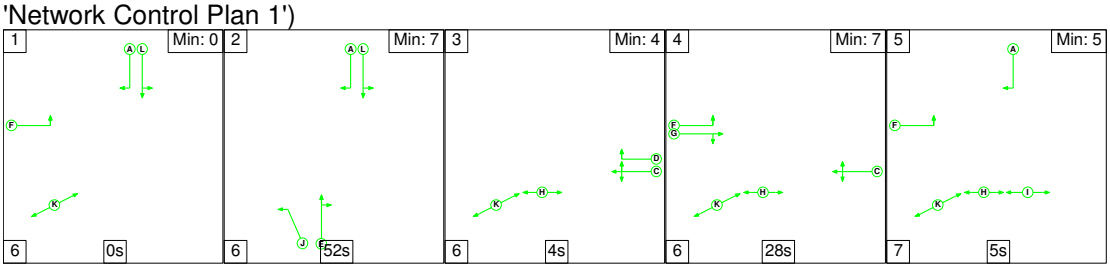
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**90.0%**	**18.9**	**10.7**	**30.7**	**-**	**-**	**-**	**-**
A6 (Greaves Rd) / Ashton Rd (The Pointer)	**-**	**-**	**-**	**-**	**-**	**90.0%**	**18.9**	**10.7**	**30.7**	**-**	**-**	**-**	**-**
1/1+1/2	A6 (N) Left Right Ahead	L A	955	2015:1884	1064	89.7%	6.4	4.1	10.5	39.7	26.0	4.1	30.1
2/1+2/2	Bowerham Road Right Ahead Left	C	386	1935:3400	544	70.9%	3.2	1.2	4.7	43.4	3.5	1.2	4.7
3/2+3/1	A6 (S) Ahead Left	E J	209	1940:1807	870	24.0%	1.2	0.2	1.3	22.9	4.1	0.2	4.3
3/3+3/4	A6 (S) Ahead Right	E	352	2080:1824	487	72.3%	2.1	1.3	4.1	42.4	5.5	1.3	6.8
4/2+4/1	Ashton Road Left Ahead Right	G F	638	2065:3900	709	90.0%	6.0	4.0	10.0	56.6	12.3	4.0	16.3
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

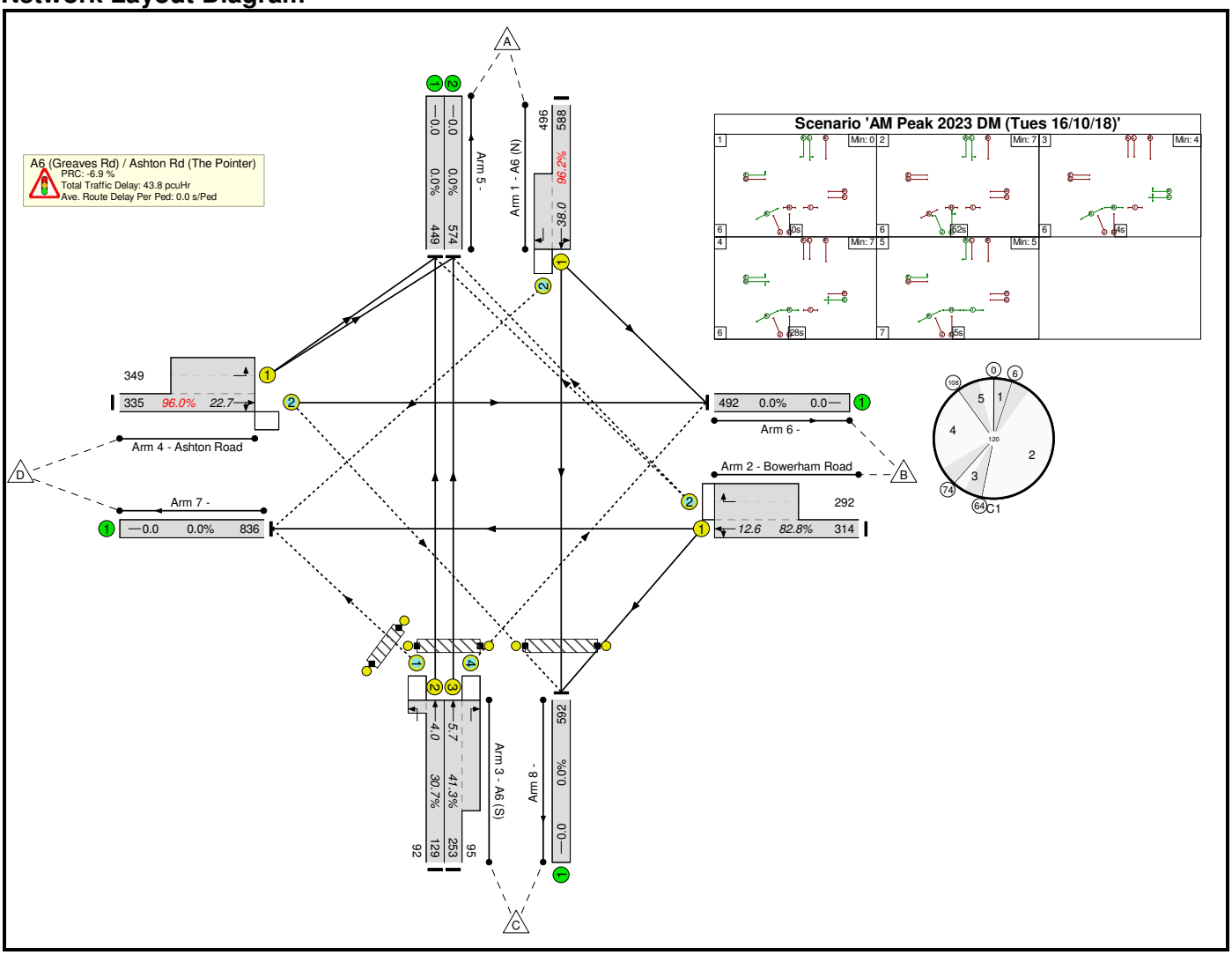
C1 PRC for Signalled Lanes (%): 0.0 Total Delay for Signalled Lanes (pcuHr): 30.70 Cycle Time (s): 120
PRC Over All Lanes (%): 0.0 Total Delay Over All Lanes(pcuHr): 30.70

Stage Sequence Diagram

Scenario 3: 'AM Peak 2023 DM (Tues 16/10/18)' (FG3: 'AM Peak 2023 DM (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



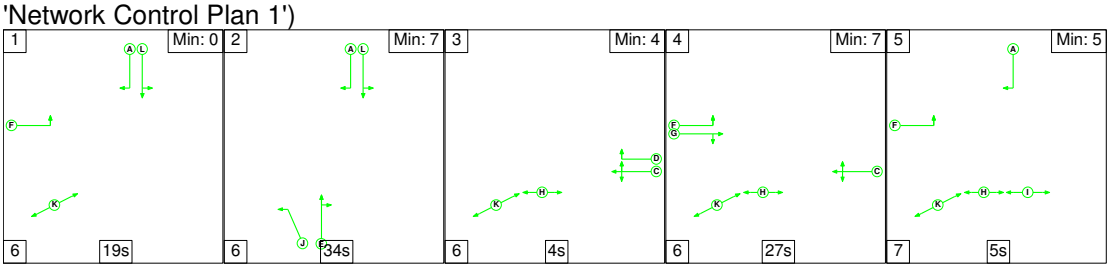
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**96.2%**	**23.2**	**19.6**	**43.8**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**96.2%**	**23.2**	**19.6**	**43.8**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1084	2015:1884	1127	96.2%	7.2	9.0	16.3	54.2	29.0	9.0	38.0
2/1+2/2	Bowerham Road Right Ahead Left	C	606	1945:3400	732	82.8%	6.1	2.3	8.8	52.4	10.3	2.3	12.6
3/2+3/1	A6 (S) Ahead Left	E J	221	1940:1807	719	30.7%	1.2	0.2	1.5	24.2	3.8	0.2	4.0
3/3+3/4	A6 (S) Ahead Right	E	348	2080:1824	842	41.3%	2.0	0.4	2.7	28.2	5.3	0.4	5.7
4/2+4/1	Ashton Road Left Ahead Right	G F	684	2065:3900	713	96.0%	6.6	7.7	14.4	75.7	14.9	7.7	22.7
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

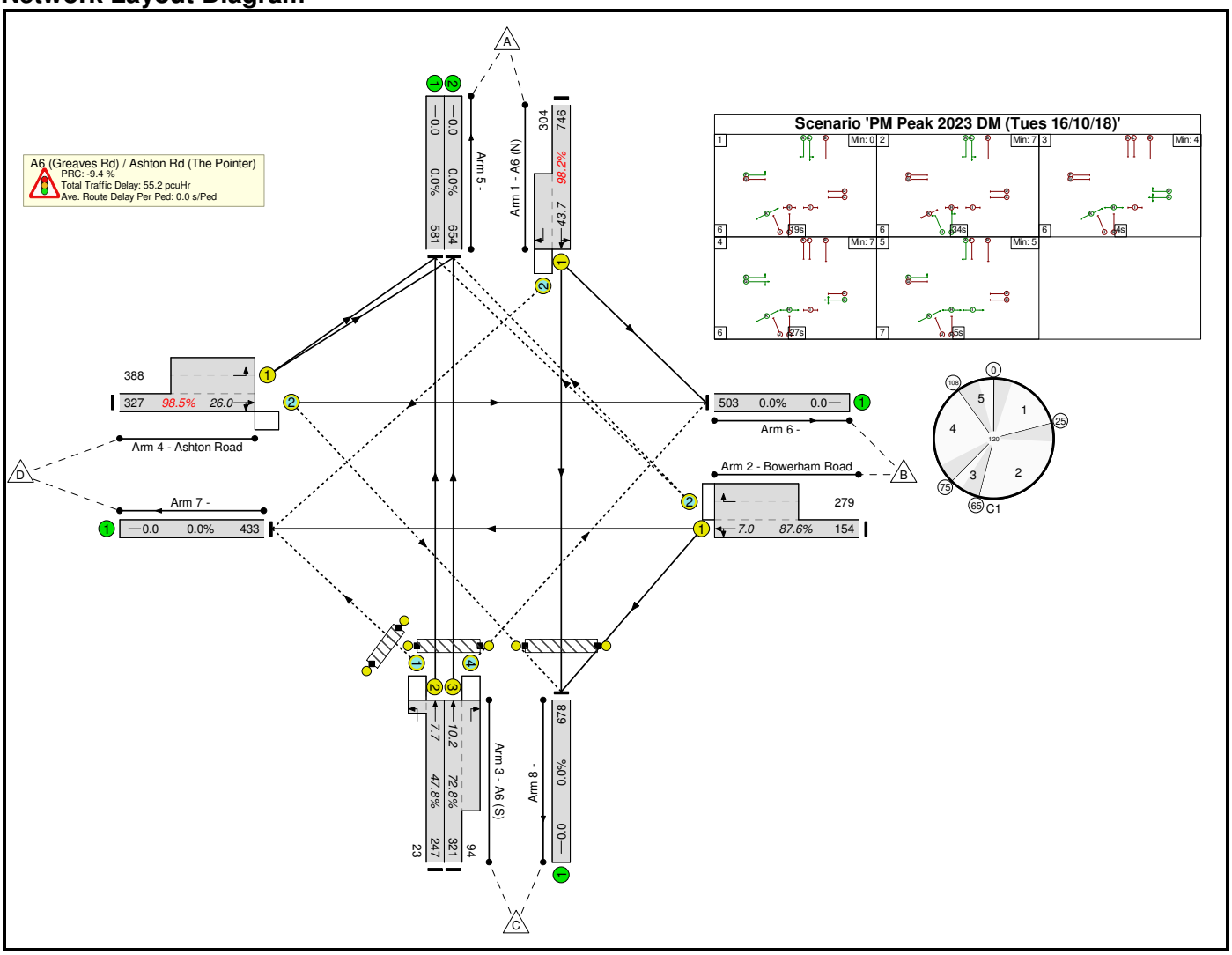
C1 PRC for Signalled Lanes (%): -6.9 Total Delay for Signalled Lanes (pcuHr): 43.75 Cycle Time (s): 120
PRC Over All Lanes (%): -6.9 Total Delay Over All Lanes(pcuHr): 43.75

Stage Sequence Diagram

Scenario 4: 'PM Peak 2023 DM (Tues 16/10/18)' (FG4: 'PM Peak 2023 DM (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



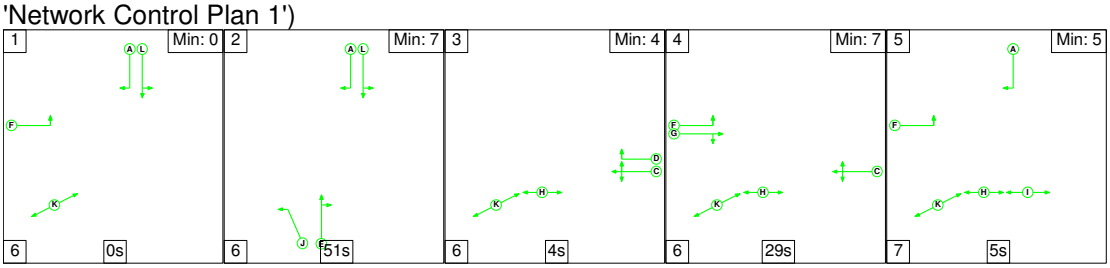
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**98.5%**	**25.8**	**28.1**	**55.2**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**98.5%**	**25.8**	**28.1**	**55.2**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1050	2015:1884	1069	98.2%	7.9	12.2	20.5	70.2	31.6	12.2	43.7
2/1+2/2	Bowerham Road Right Ahead Left	C	433	1935:3400	494	87.6%	3.8	3.2	7.3	60.8	3.8	3.2	7.0
3/2+3/1	A6 (S) Ahead Left	E J	270	1940:1807	565	47.8%	2.6	0.5	3.1	41.0	7.2	0.5	7.7
3/3+3/4	A6 (S) Ahead Right	E	415	2080:1824	570	72.8%	5.8	1.3	7.7	66.9	8.9	1.3	10.2
4/2+4/1	Ashton Road Left Ahead Right	G F	715	2065:3900	726	98.5%	5.8	10.9	16.7	83.9	15.1	10.9	26.0
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

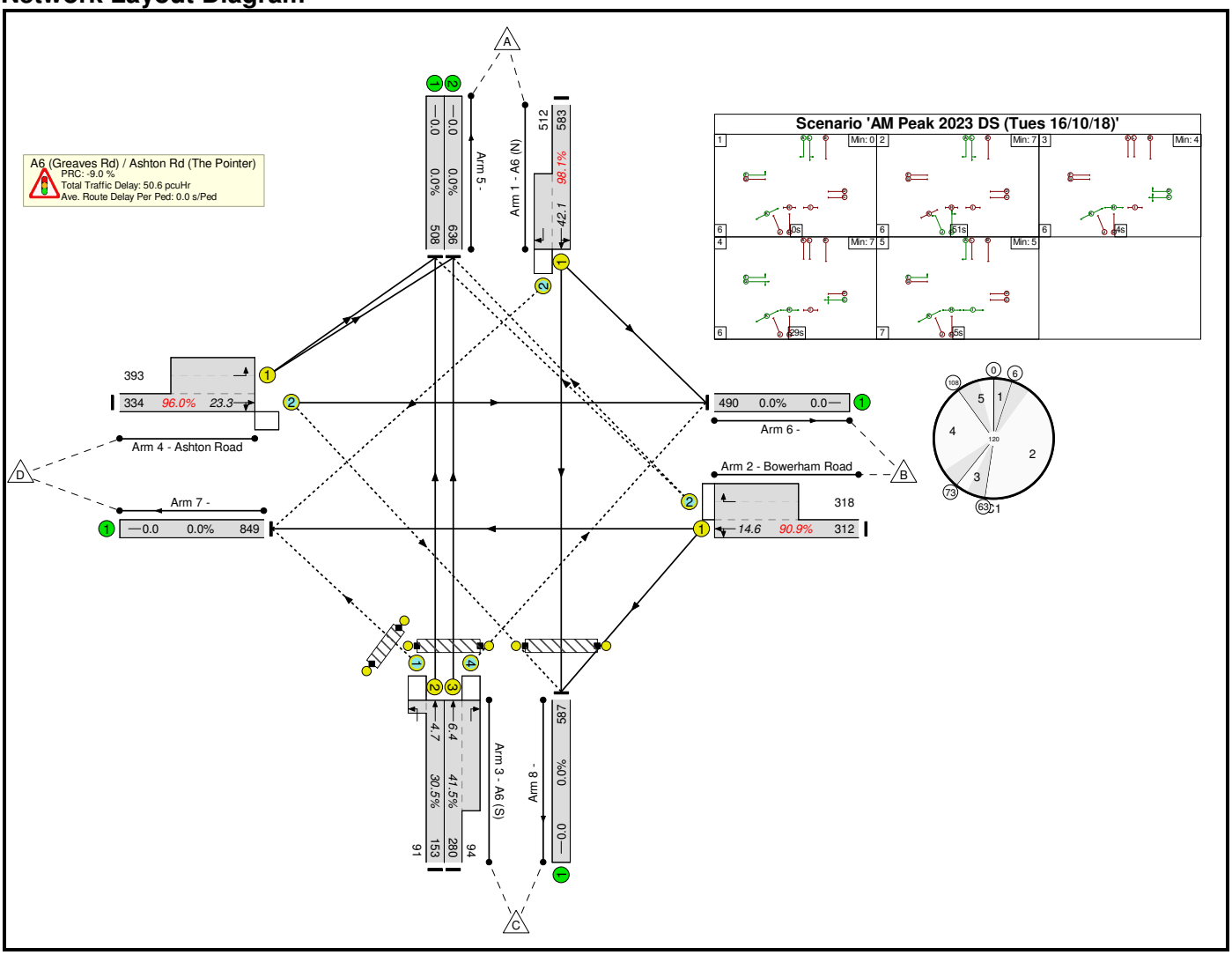
C1 PRC for Signalled Lanes (%): -9.4 Total Delay for Signalled Lanes (pcuHr): 55.23 Cycle Time (s): 120
PRC Over All Lanes (%): -9.4 Total Delay Over All Lanes(pcuHr): 55.23

Stage Sequence Diagram

Scenario 5: 'AM Peak 2023 DS (Tues 16/10/18)' (FG5: 'AM Peak 2023 DS (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



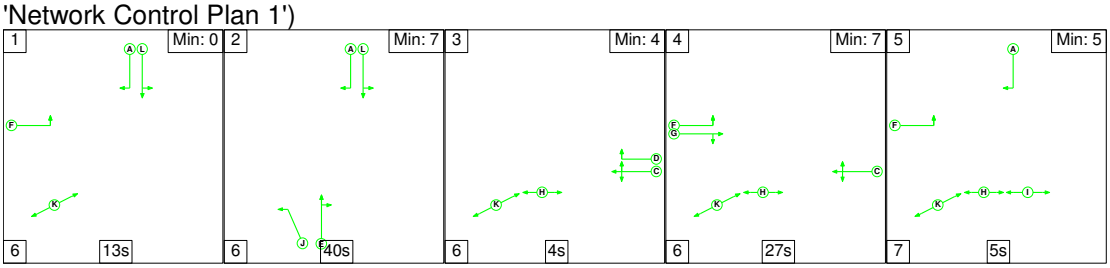
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**98.1%**	**24.4**	**24.9**	**50.6**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**98.1%**	**24.4**	**24.9**	**50.6**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1095	2015:1884	1116	98.1%	7.6	12.0	20.0	65.9	30.1	12.0	42.1
2/1+2/2	Bowerham Road Right Ahead Left	C	630	1944:3400	693	90.9%	6.4	4.4	11.2	63.8	10.2	4.4	14.6
3/2+3/1	A6 (S) Ahead Left	E J	244	1940:1807	801	30.5%	1.4	0.2	1.7	24.7	4.5	0.2	4.7
3/3+3/4	A6 (S) Ahead Right	E	374	2080:1824	902	41.5%	2.3	0.4	2.9	28.4	6.1	0.4	6.4
4/2+4/1	Ashton Road Left Ahead Right	G F	727	2065:3900	757	96.0%	6.8	7.9	14.7	72.9	15.4	7.9	23.3
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

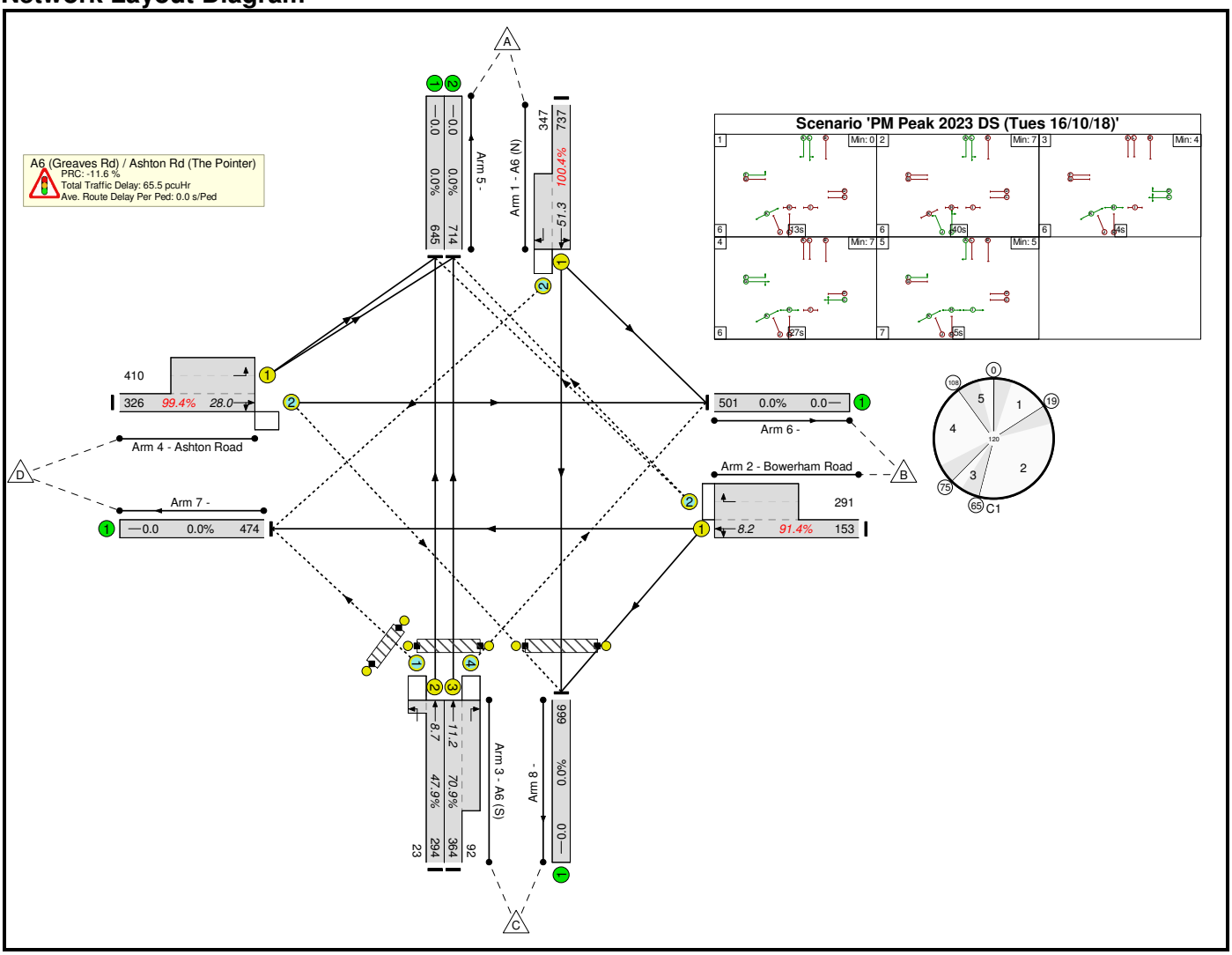
C1 PRC for Signalled Lanes (%): -9.0 Total Delay for Signalled Lanes (pcuHr): 50.55 Cycle Time (s): 120
PRC Over All Lanes (%): -9.0 Total Delay Over All Lanes(pcuHr): 50.55

Stage Sequence Diagram

Scenario 6: 'PM Peak 2023 DS (Tues 16/10/18)' (FG6: 'PM Peak 2023 DS (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



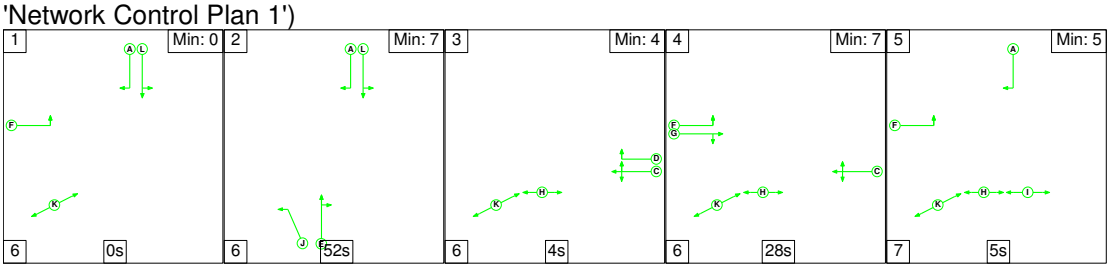
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**100.4%**	**27.7**	**36.2**	**65.5**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**100.4%**	**27.7**	**36.2**	**65.5**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1084	2015:1884	1079	100.4%	9.2	17.7	27.5	91.3	33.6	17.7	51.3
2/1+2/2	Bowerham Road Right Ahead Left	C	444	1935:3400	486	91.4%	3.9	4.4	8.7	70.3	3.8	4.4	8.2
3/2+3/1	A6 (S) Ahead Left	E J	317	1940:1807	661	47.9%	2.7	0.5	3.2	36.2	8.2	0.5	8.7
3/3+3/4	A6 (S) Ahead Right	E	456	2080:1824	643	70.9%	5.6	1.2	7.5	59.2	10.0	1.2	11.2
4/2+4/1	Ashton Road Left Ahead Right	G F	736	2065:3900	741	99.4%	6.2	12.4	18.7	91.3	15.5	12.4	28.0
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

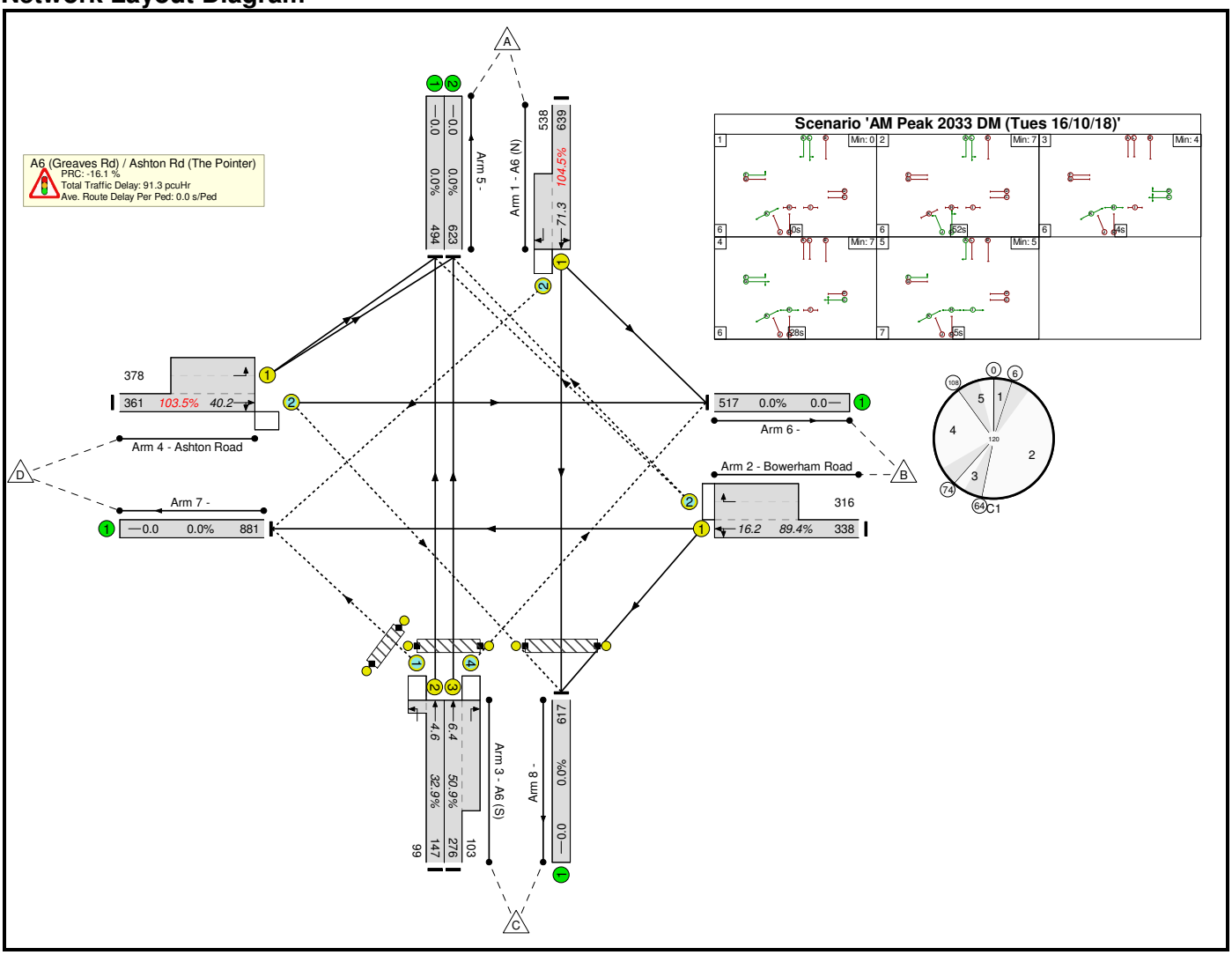
C1 PRC for Signalled Lanes (%): -11.6 Total Delay for Signalled Lanes (pcuHr): 65.53 Cycle Time (s): 120
PRC Over All Lanes (%): -11.6 Total Delay Over All Lanes(pcuHr): 65.53

Stage Sequence Diagram

Scenario 7: 'AM Peak 2033 DM (Tues 16/10/18)' (FG7: 'AM Peak 2033 DM (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



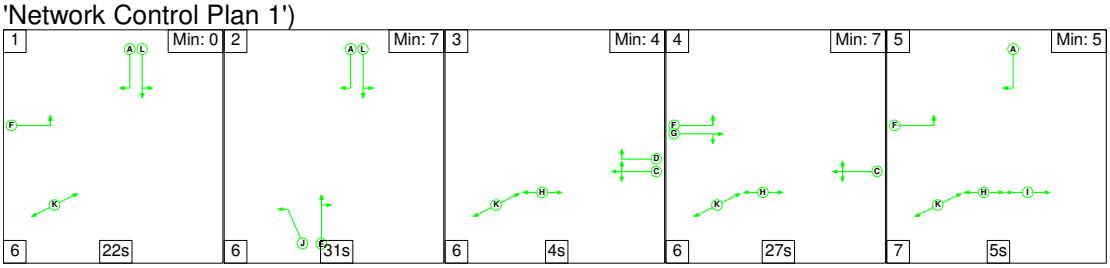
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**104.5%**	**30.1**	**59.9**	**91.3**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**104.5%**	**30.1**	**59.9**	**91.3**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1177	2015:1884	1126	104.5%	11.2	34.0	45.5	139.2	37.3	34.0	71.3
2/1+2/2	Bowerham Road Right Ahead Left	C	654	1945:3400	732	89.4%	7.4	3.8	11.7	64.2	12.3	3.8	16.2
3/2+3/1	A6 (S) Ahead Left	E J	246	1940:1807	747	32.9%	1.4	0.2	1.7	24.5	4.4	0.2	4.6
3/3+3/4	A6 (S) Ahead Right	E	379	2080:1824	745	50.9%	2.2	0.5	3.2	30.1	5.9	0.5	6.4
4/2+4/1	Ashton Road Left Ahead Right	G F	739	2065:3900	714	103.5%	7.9	21.3	29.3	142.7	19.0	21.3	40.2
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

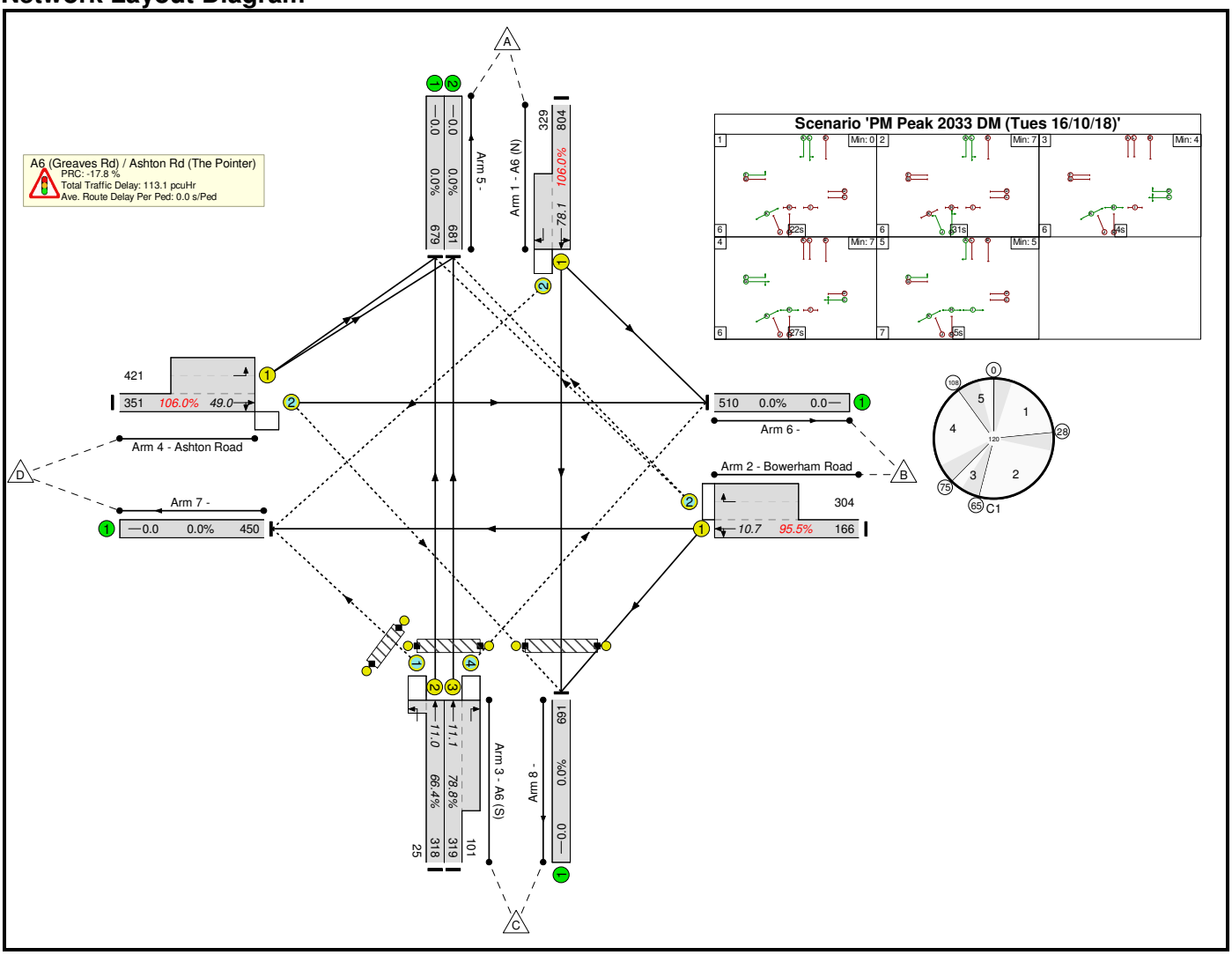
C1 PRC for Signalled Lanes (%): -16.1 Total Delay for Signalled Lanes (pcuHr): 91.29 Cycle Time (s): 120
PRC Over All Lanes (%): -16.1 Total Delay Over All Lanes(pcuHr): 91.29

Stage Sequence Diagram

Scenario 8: 'PM Peak 2033 DM (Tues 16/10/18)' (FG8: 'PM Peak 2033 DM (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



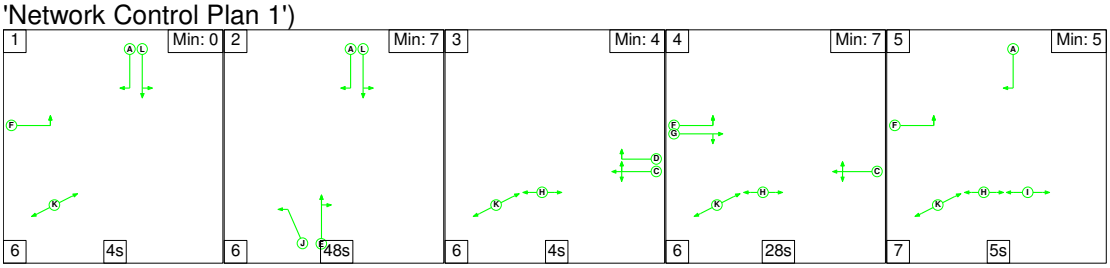
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**106.0%**	**34.6**	**77.1**	**113.1**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**106.0%**	**34.6**	**77.1**	**113.1**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1133	2015:1884	1069	106.0%	12.9	39.2	52.5	166.8	38.9	39.2	78.1
2/1+2/2	Bowerham Road Right Ahead Left	C	470	1935:3400	492	95.5%	4.3	6.6	11.3	86.9	4.1	6.6	10.7
3/2+3/1	A6 (S) Ahead Left	E J	343	1940:1807	517	66.4%	3.7	1.0	4.7	49.4	10.0	1.0	11.0
3/3+3/4	A6 (S) Ahead Right	E	420	2080:1824	533	78.8%	6.5	1.8	8.9	76.0	9.3	1.8	11.1
4/2+4/1	Ashton Road Left Ahead Right	G F	772	2065:3900	729	106.0%	7.2	28.5	35.7	166.5	20.5	28.5	49.0
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

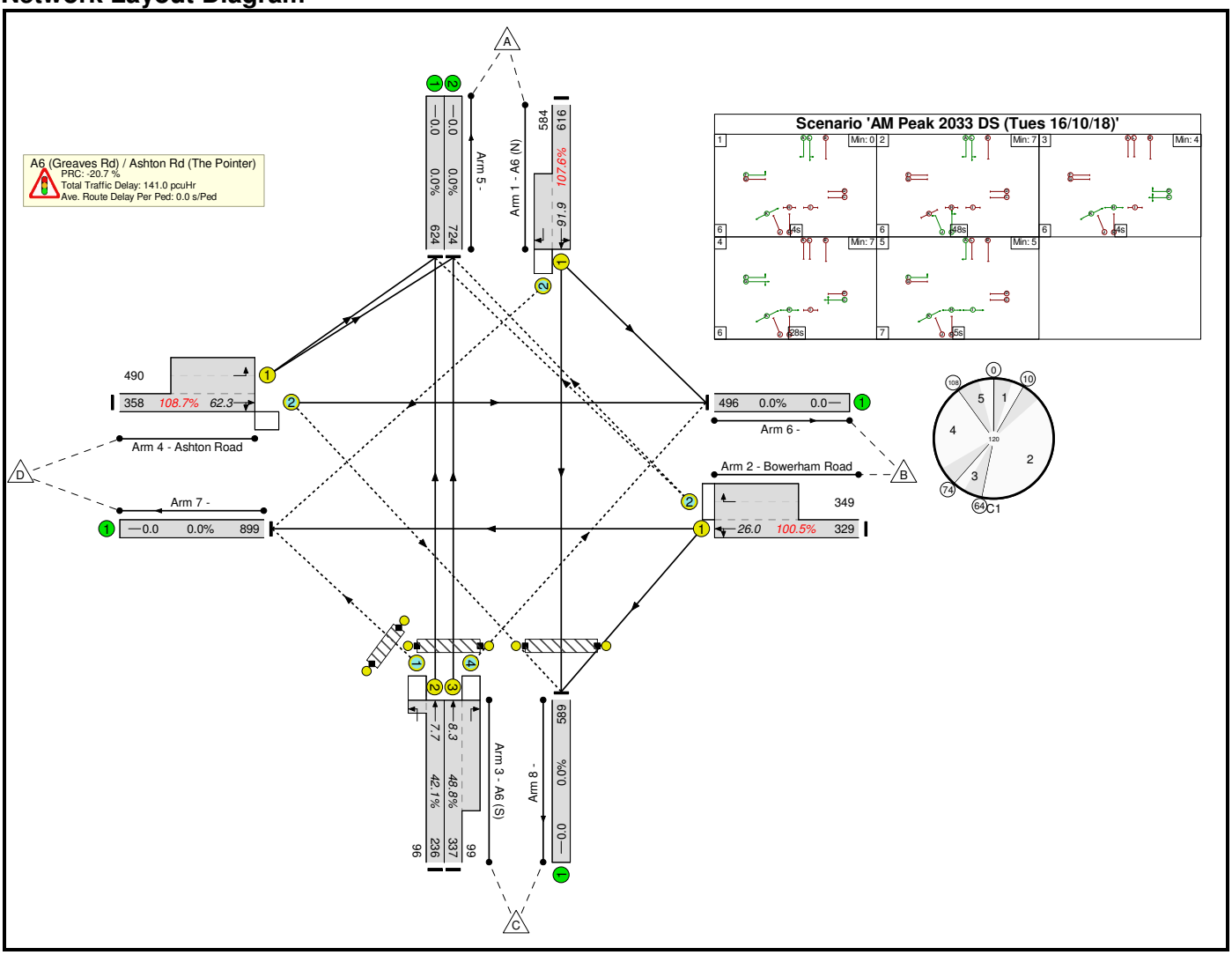
C1 PRC for Signalled Lanes (%): -17.8 Total Delay for Signalled Lanes (pcuHr): 113.13 Cycle Time (s): 120
PRC Over All Lanes (%): -17.8 Total Delay Over All Lanes(pcuHr): 113.13

Stage Sequence Diagram

Scenario 9: 'AM Peak 2033 DS (Tues 16/10/18)' (FG9: 'AM Peak 2033 DS (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



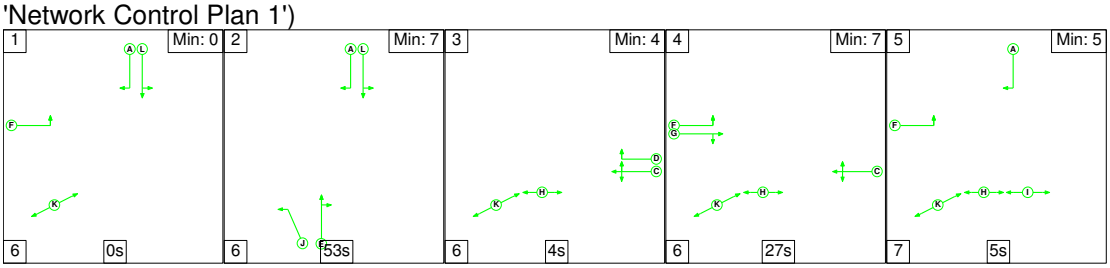
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**108.7%**	**36.9**	**102.5**	**141.0**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**108.7%**	**36.9**	**102.5**	**141.0**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1200	2015:1884	1115	107.6%	14.3	48.6	63.6	190.7	43.3	48.6	91.9
2/1+2/2	Bowerham Road Right Ahead Left	C	678	1945:3400	675	100.5%	8.0	13.8	22.4	118.9	12.2	13.8	26.0
3/2+3/1	A6 (S) Ahead Left	E J	332	1940:1807	789	42.1%	2.3	0.4	2.7	28.8	7.3	0.4	7.7
3/3+3/4	A6 (S) Ahead Right	E	436	2080:1824	893	48.8%	3.0	0.5	3.7	30.4	7.9	0.5	8.3
4/2+4/1	Ashton Road Left Ahead Right	G F	848	2065:3900	780	108.7%	9.4	39.2	48.7	206.9	23.1	39.2	62.3
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

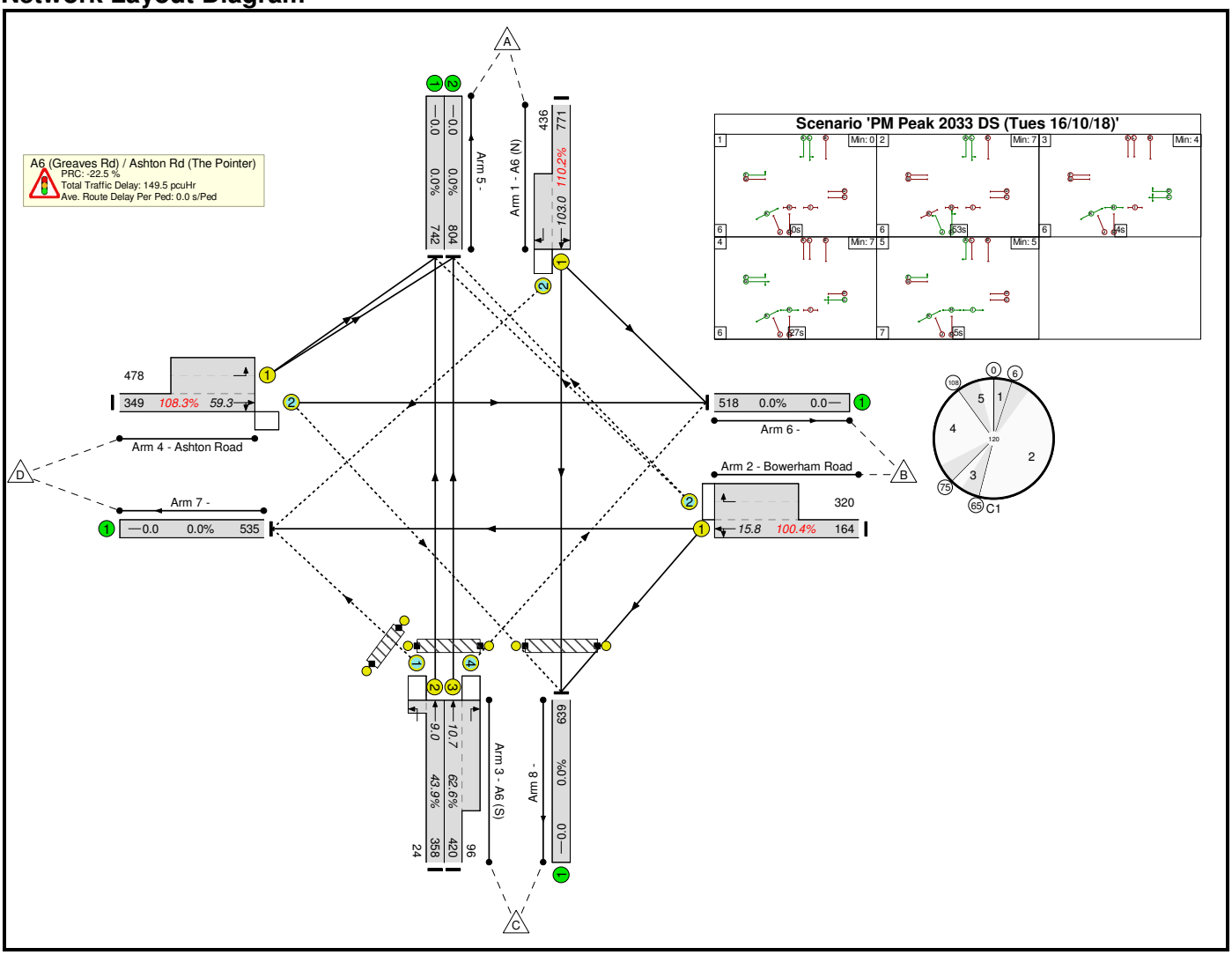
C1 PRC for Signalled Lanes (%): -20.7 Total Delay for Signalled Lanes (pcuHr): 141.01 Cycle Time (s): 120
PRC Over All Lanes (%): -20.7 Total Delay Over All Lanes(pcuHr): 141.01

Stage Sequence Diagram

Scenario 10: 'PM Peak 2033 DS (Tues 16/10/18)' (FG10: 'PM Peak 2033 DS (based on Tues 16/10/18)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



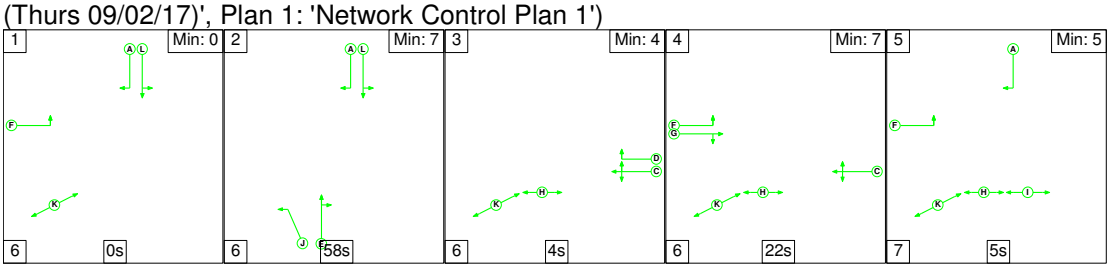
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**110.2%**	**36.7**	**110.8**	**149.5**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**110.2%**	**36.7**	**110.8**	**149.5**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1207	2015:1884	1095	110.2%	16.5	60.9	78.1	233.0	42.1	60.9	103.0
2/1+2/2	Bowerham Road Right Ahead Left	C	484	1936:3400	482	100.4%	4.5	11.5	16.5	123.1	4.3	11.5	15.8
3/2+3/1	A6 (S) Ahead Left	E J	382	1940:1807	870	43.9%	2.4	0.4	2.8	26.2	8.6	0.4	9.0
3/3+3/4	A6 (S) Ahead Right	E	516	2080:1824	825	62.6%	3.6	0.8	5.4	37.5	9.9	0.8	10.7
4/2+4/1	Ashton Road Left Ahead Right	G F	827	2065:3900	764	108.3%	9.6	37.1	46.7	203.2	22.2	37.1	59.3
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

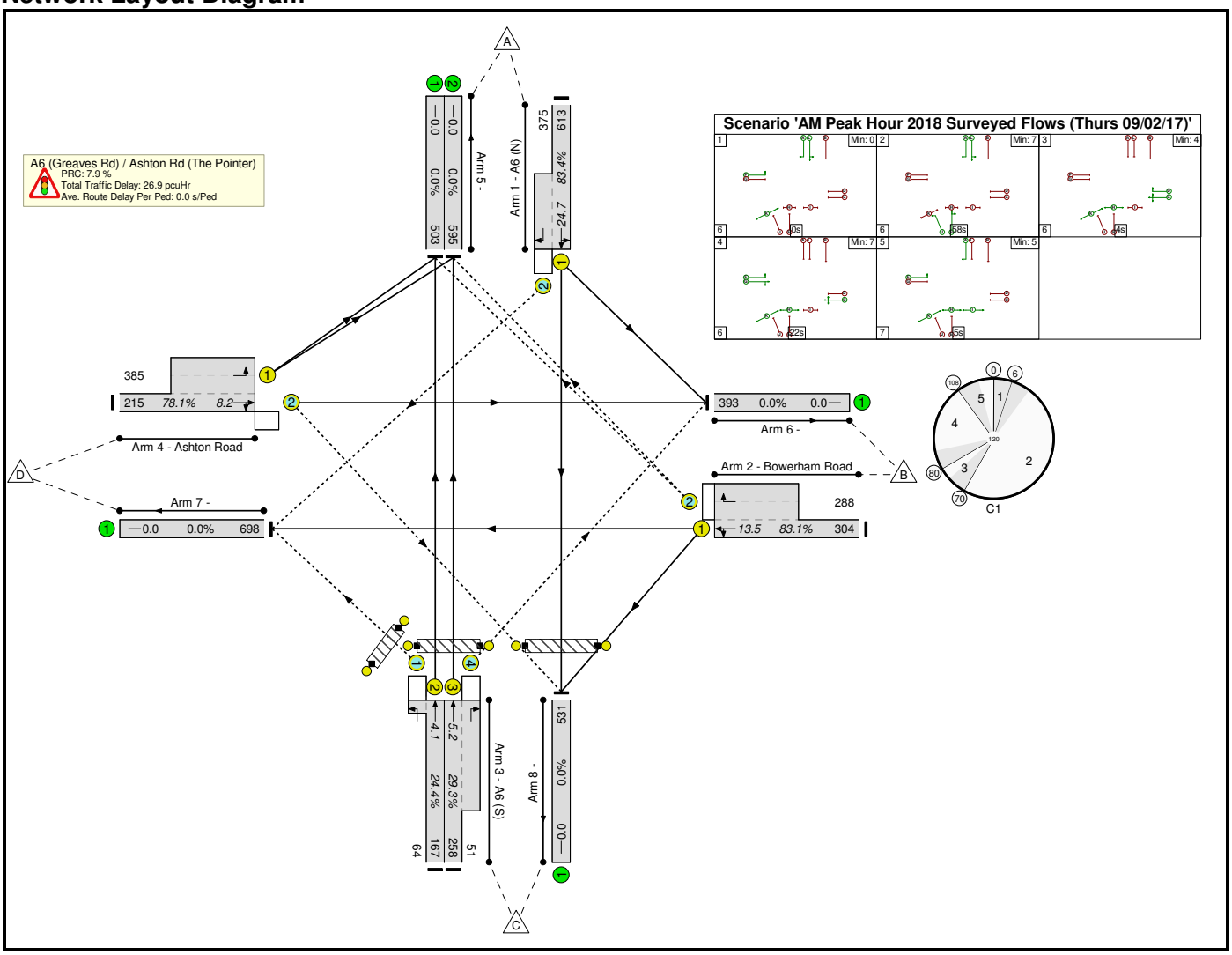
C1 PRC for Signalled Lanes (%): -22.5 Total Delay for Signalled Lanes (pcuHr): 149.49 Cycle Time (s): 120
PRC Over All Lanes (%): -22.5 Total Delay Over All Lanes(pcuHr): 149.49

Stage Sequence Diagram

Scenario 11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)' (FG11: 'AM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



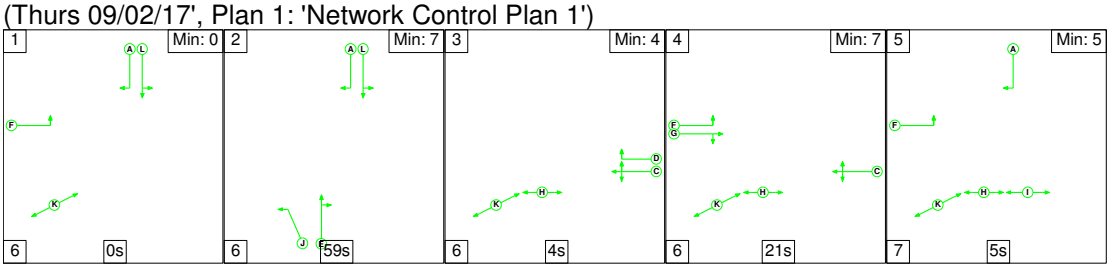
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**83.4%**	**19.5**	**6.9**	**26.9**	**-**	**-**	**-**	**-**
A6 (Greaves Rd) / Ashton Rd (The Pointer)	**-**	**-**	**-**	**-**	**-**	**83.4%**	**19.5**	**6.9**	**26.9**	**-**	**-**	**-**	**-**
1/1+1/2	A6 (N) Left Right Ahead	L A	988	2015:1884	1185	83.4%	5.1	2.5	7.6	27.6	22.2	2.5	24.7
2/1+2/2	Bowerham Road Right Ahead Left	C	592	1951:3400	712	83.1%	6.1	2.4	8.6	52.2	11.1	2.4	13.5
3/2+3/1	A6 (S) Ahead Left	E J	231	1940:1807	948	24.4%	1.1	0.2	1.3	19.7	3.9	0.2	4.1
3/3+3/4	A6 (S) Ahead Right	E	309	2080:1824	1056	29.3%	1.5	0.2	1.9	22.3	4.9	0.2	5.2
4/2+4/1	Ashton Road Left Ahead Right	G F	600	2065:3900	768	78.1%	5.7	1.7	7.6	45.6	6.4	1.7	8.2
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

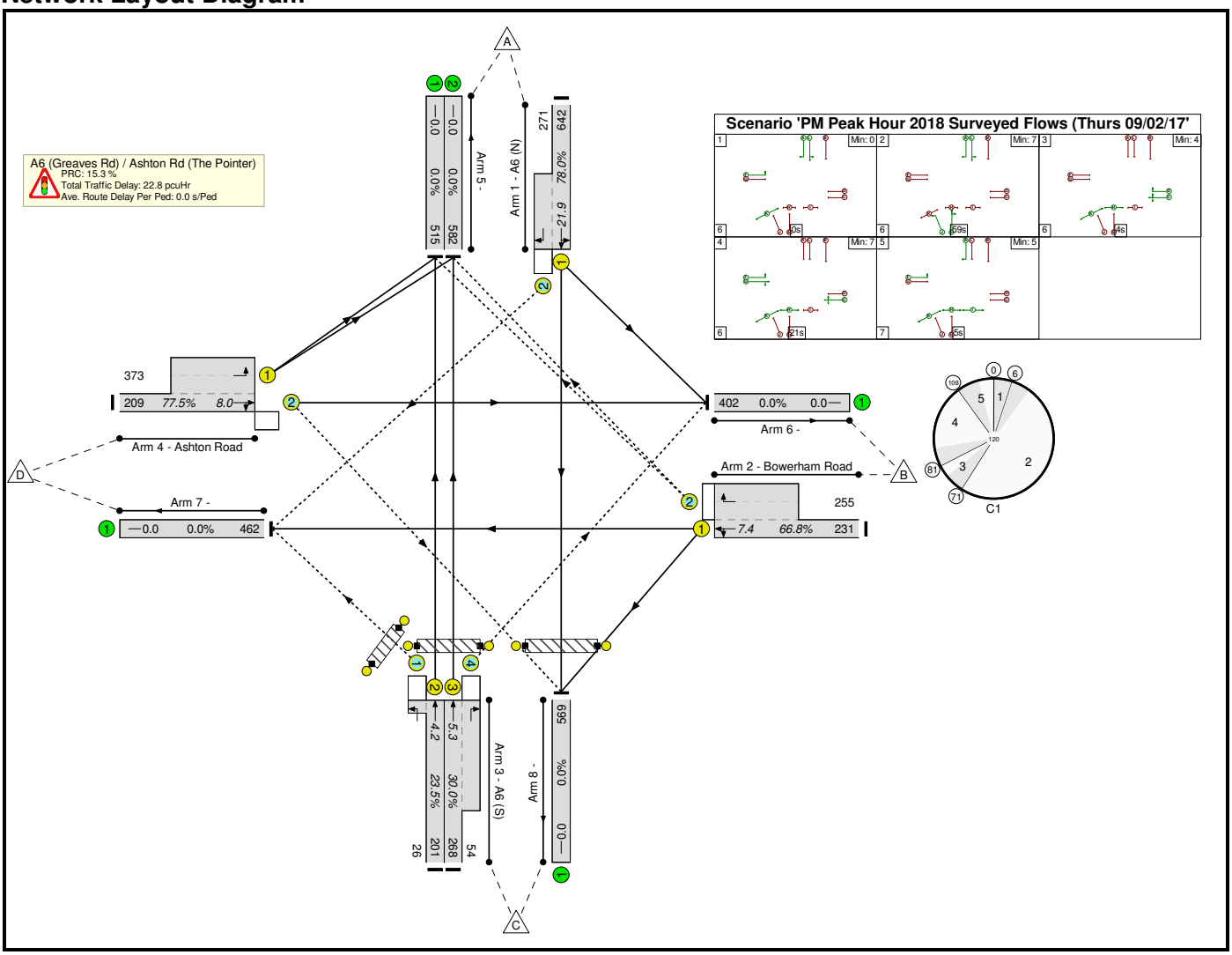
C1 PRC for Signalled Lanes (%): 7.9 Total Delay for Signalled Lanes (pcuHr): 26.95 Cycle Time (s): 120
PRC Over All Lanes (%): 7.9 Total Delay Over All Lanes(pcuHr): 26.95

Stage Sequence Diagram

Scenario 12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17' (FG12: 'PM Peak Hour 2018 Surveyed Flows (Thurs 09/02/17', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



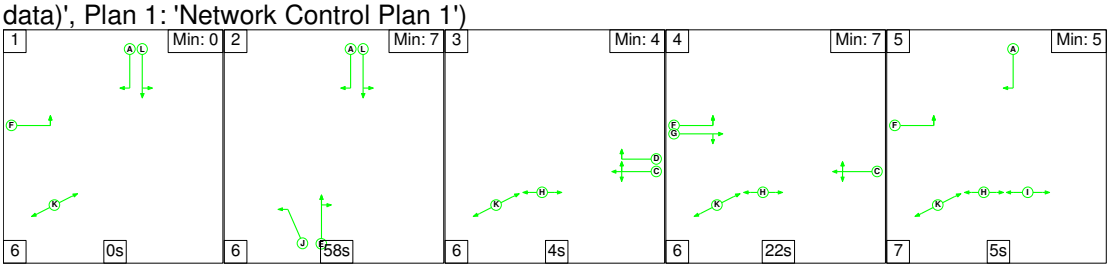
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**78.0%**	**17.6**	**4.8**	**22.8**	**-**	**-**	**-**	**-**
A6 (Greaves Rd) / Ashton Rd (The Pointer)	**-**	**-**	**-**	**-**	**-**	**78.0%**	**17.6**	**4.8**	**22.8**	**-**	**-**	**-**	**-**
1/1+1/2	A6 (N) Left Right Ahead	L A	913	2015:1884	1170	78.0%	4.6	1.8	6.3	25.0	20.2	1.8	21.9
2/1+2/2	Bowerham Road Right Ahead Left	C	486	1937:3400	728	66.8%	4.8	1.0	5.9	43.6	6.4	1.0	7.4
3/2+3/1	A6 (S) Ahead Left	E J	227	1940:1807	966	23.5%	1.1	0.2	1.2	19.3	4.1	0.2	4.2
3/3+3/4	A6 (S) Ahead Right	E	322	2080:1824	1074	30.0%	1.5	0.2	2.1	23.0	5.1	0.2	5.3
4/2+4/1	Ashton Road Left Ahead Right	G F	582	2065:3900	751	77.5%	5.6	1.7	7.3	45.4	6.3	1.7	8.0
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

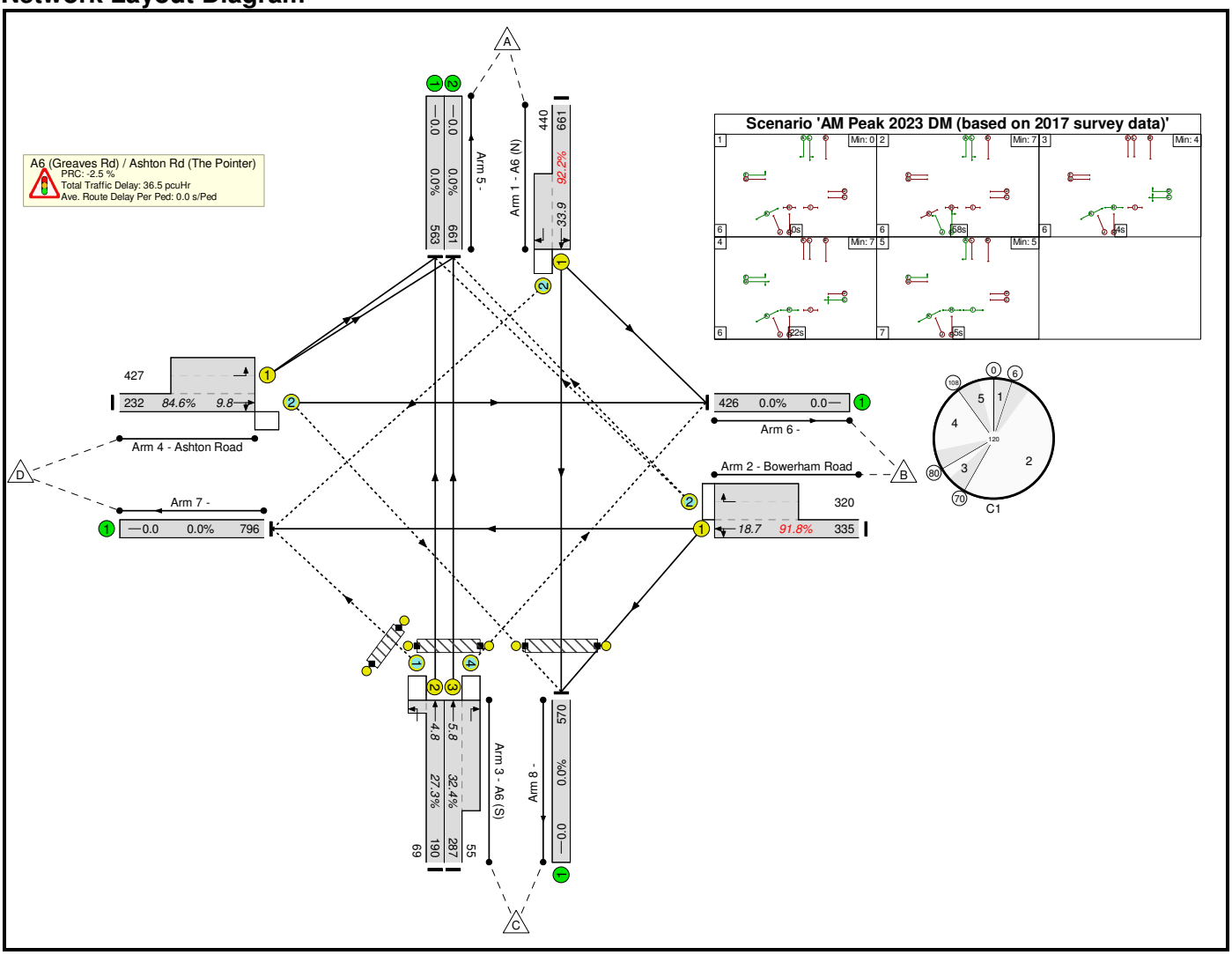
C1 PRC for Signalled Lanes (%): 15.3 Total Delay for Signalled Lanes (pcuHr): 22.84 Cycle Time (s): 120
PRC Over All Lanes (%): 15.3 Total Delay Over All Lanes(pcuHr): 22.84

Stage Sequence Diagram

Scenario 13: 'AM Peak 2023 DM (based on 2017 survey data)' (FG13: 'AM Peak 2023 DM (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**92.2%**	**22.6**	**13.2**	**36.5**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**92.2%**	**22.6**	**13.2**	**36.5**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1101	2015:1884	1194	92.2%	6.3	5.3	11.7	38.4	28.5	5.3	33.9
2/1+2/2	Bowerham Road Right Ahead Left	C	655	1951:3400	714	91.8%	7.0	4.8	12.0	66.1	13.9	4.8	18.7
3/2+3/1	A6 (S) Ahead Left	E J	259	1940:1807	948	27.3%	1.3	0.2	1.4	20.1	4.6	0.2	4.8
3/3+3/4	A6 (S) Ahead Right	E	342	2080:1824	1055	32.4%	1.7	0.2	2.1	22.3	5.6	0.2	5.8
4/2+4/1	Ashton Road Left Ahead Right	G F	659	2065:3900	779	84.6%	6.4	2.6	9.2	50.1	7.2	2.6	9.8
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

C1

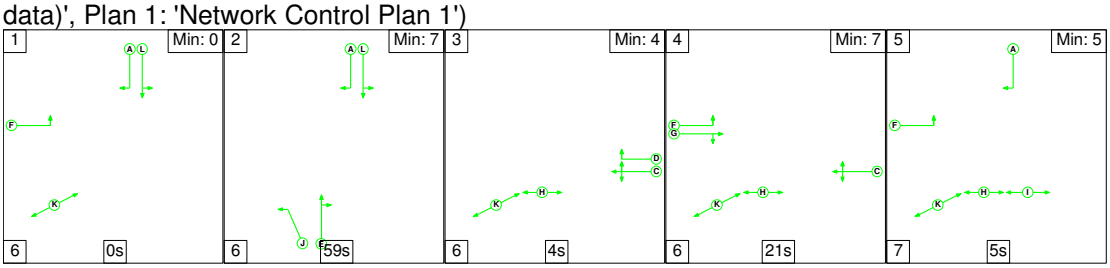
PRC for Signalled Lanes (%): -2.5
PRC Over All Lanes (%): -2.5

Total Delay for Signalled Lanes (pcuHr): 36.52
Total Delay Over All Lanes(pcuHr): 36.52

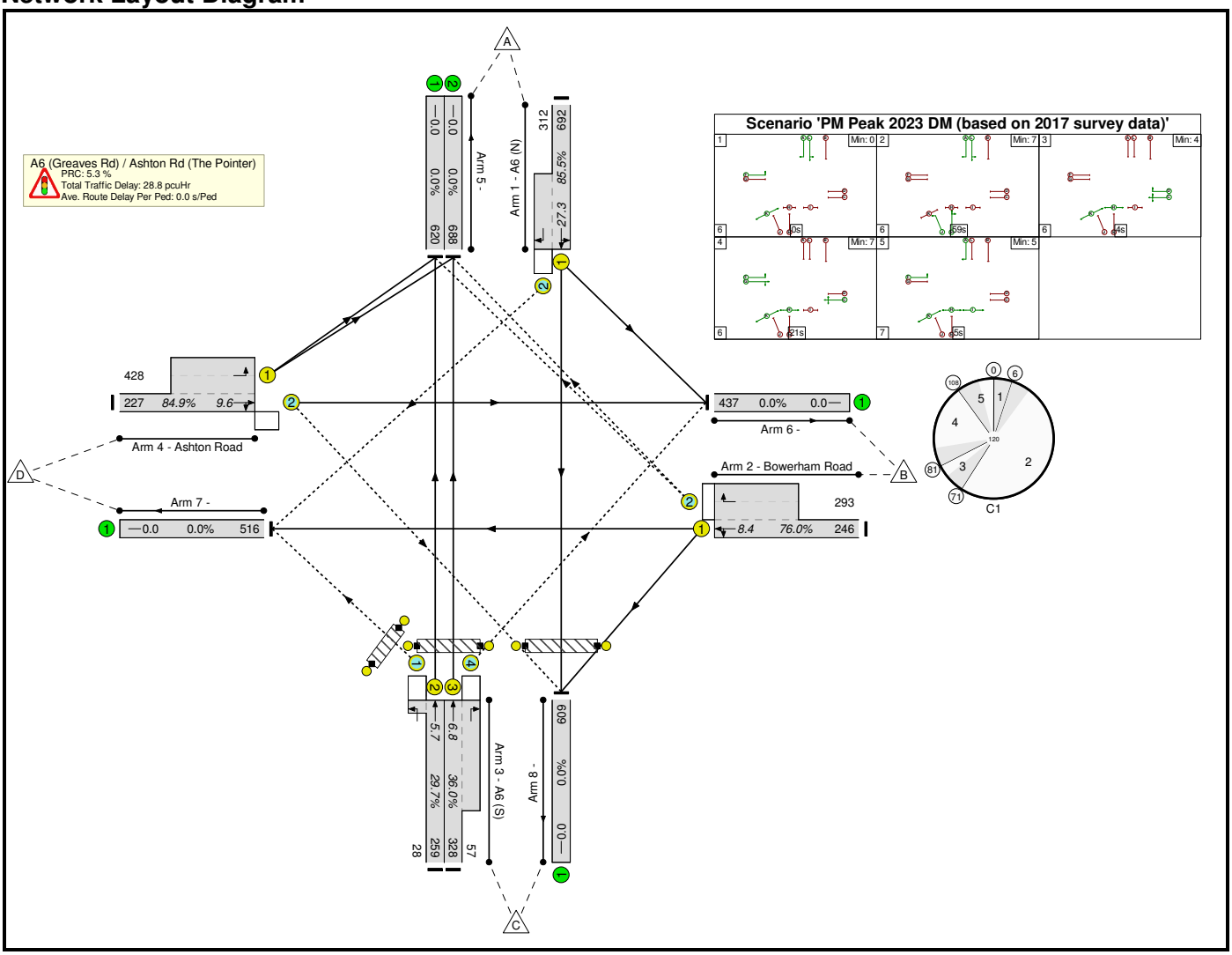
Cycle Time (s): 120

Stage Sequence Diagram

Scenario 14: 'PM Peak 2023 DM (based on 2017 survey data)' (FG14: 'PM Peak 2023 DM (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



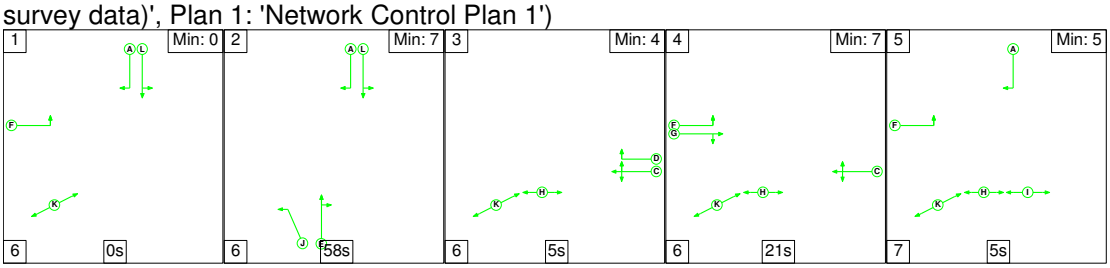
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**85.5%**	**20.5**	**7.6**	**28.8**	**-**	**-**	**-**	**-**
A6 (Greaves Rd) / Ashton Rd (The Pointer)	**-**	**-**	**-**	**-**	**-**	**85.5%**	**20.5**	**7.6**	**28.8**	**-**	**-**	**-**	**-**
1/1+1/2	A6 (N) Left Right Ahead	L A	1004	2015:1884	1175	85.5%	5.4	2.8	8.4	30.1	24.5	2.8	27.3
2/1+2/2	Bowerham Road Right Ahead Left	C	539	1937:3400	709	76.0%	5.4	1.6	7.1	47.1	6.8	1.6	8.4
3/2+3/1	A6 (S) Ahead Left	E J	287	1940:1807	966	29.7%	1.4	0.2	1.6	20.2	5.5	0.2	5.7
3/3+3/4	A6 (S) Ahead Right	E	385	2080:1824	1068	36.0%	1.9	0.3	2.6	24.4	6.5	0.3	6.8
4/2+4/1	Ashton Road Left Ahead Right	G F	655	2065:3900	772	84.9%	6.4	2.7	9.2	50.3	6.9	2.7	9.6
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

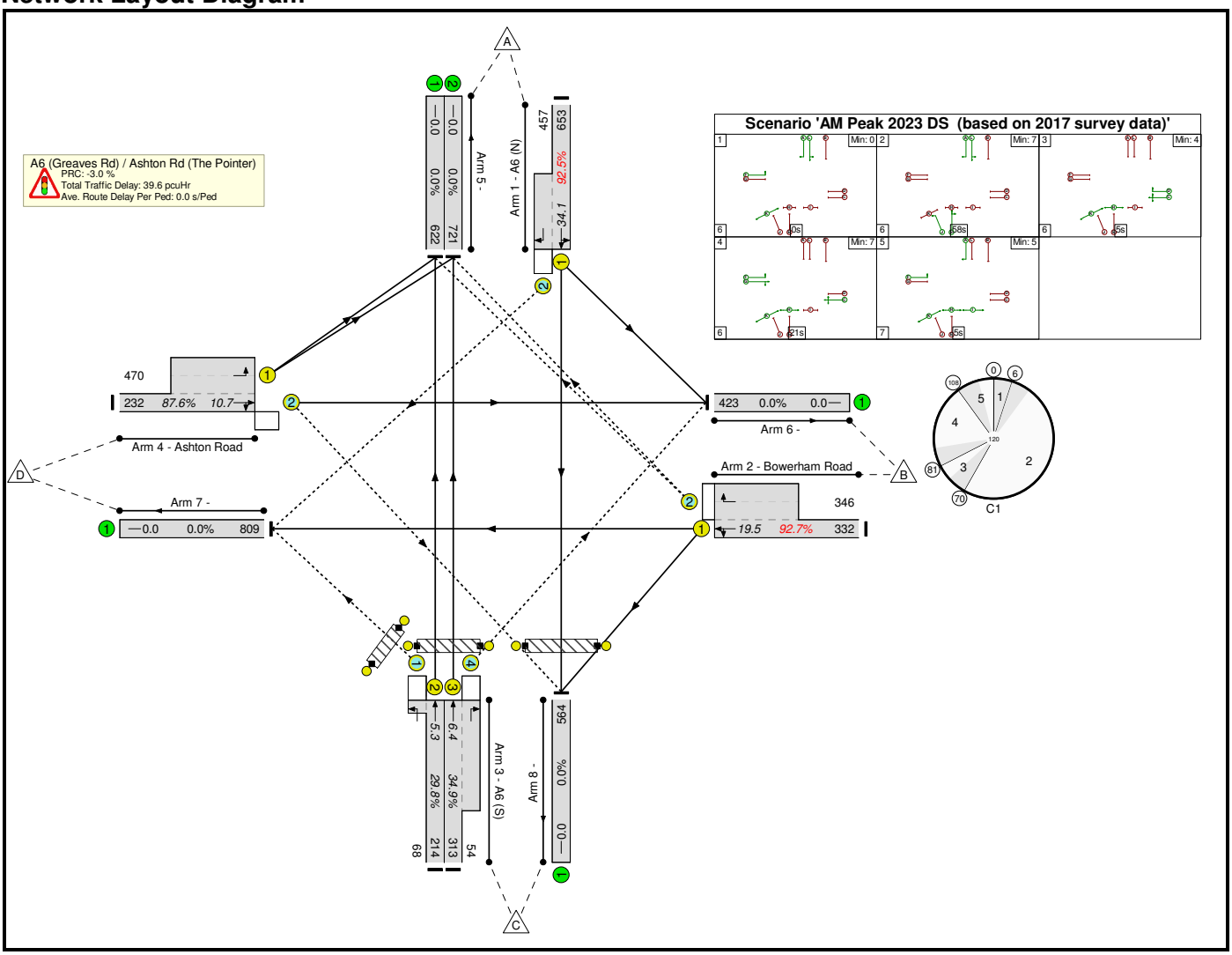
C1 PRC for Signalled Lanes (%): 5.3 Total Delay for Signalled Lanes (pcuHr): 28.83 Cycle Time (s): 120
PRC Over All Lanes (%): 5.3 Total Delay Over All Lanes(pcuHr): 28.83

Stage Sequence Diagram

Scenario 15: 'AM Peak 2023 DS (based on 2017 survey data)' (FG15: 'AM Peak 2023 DS (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



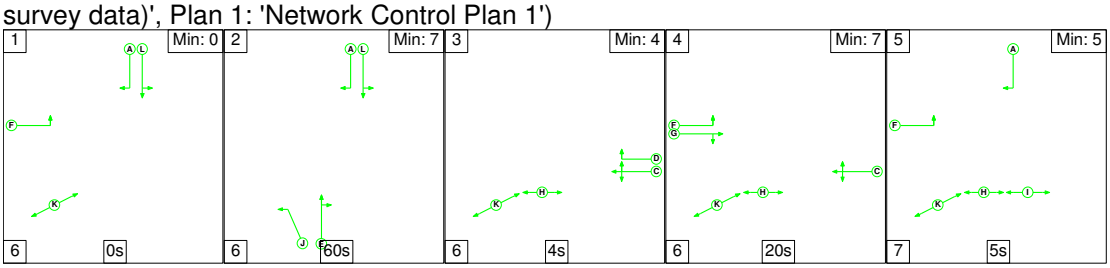
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**92.7%**	**24.1**	**14.6**	**39.6**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**92.7%**	**24.1**	**14.6**	**39.6**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1110	2015:1884	1200	92.5%	6.3	5.5	12.2	39.5	28.6	5.5	34.1
2/1+2/2	Bowerham Road Right Ahead Left	C	678	1951:3400	731	92.7%	7.7	5.3	13.3	70.5	14.2	5.3	19.5
3/2+3/1	A6 (S) Ahead Left	E J	282	1940:1807	948	29.8%	1.4	0.2	1.6	20.5	5.1	0.2	5.3
3/3+3/4	A6 (S) Ahead Right	E	367	2080:1824	1051	34.9%	1.8	0.3	2.3	22.1	6.2	0.3	6.4
4/2+4/1	Ashton Road Left Ahead Right	G F	702	2065:3900	801	87.6%	6.9	3.3	10.3	53.0	7.4	3.3	10.7
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

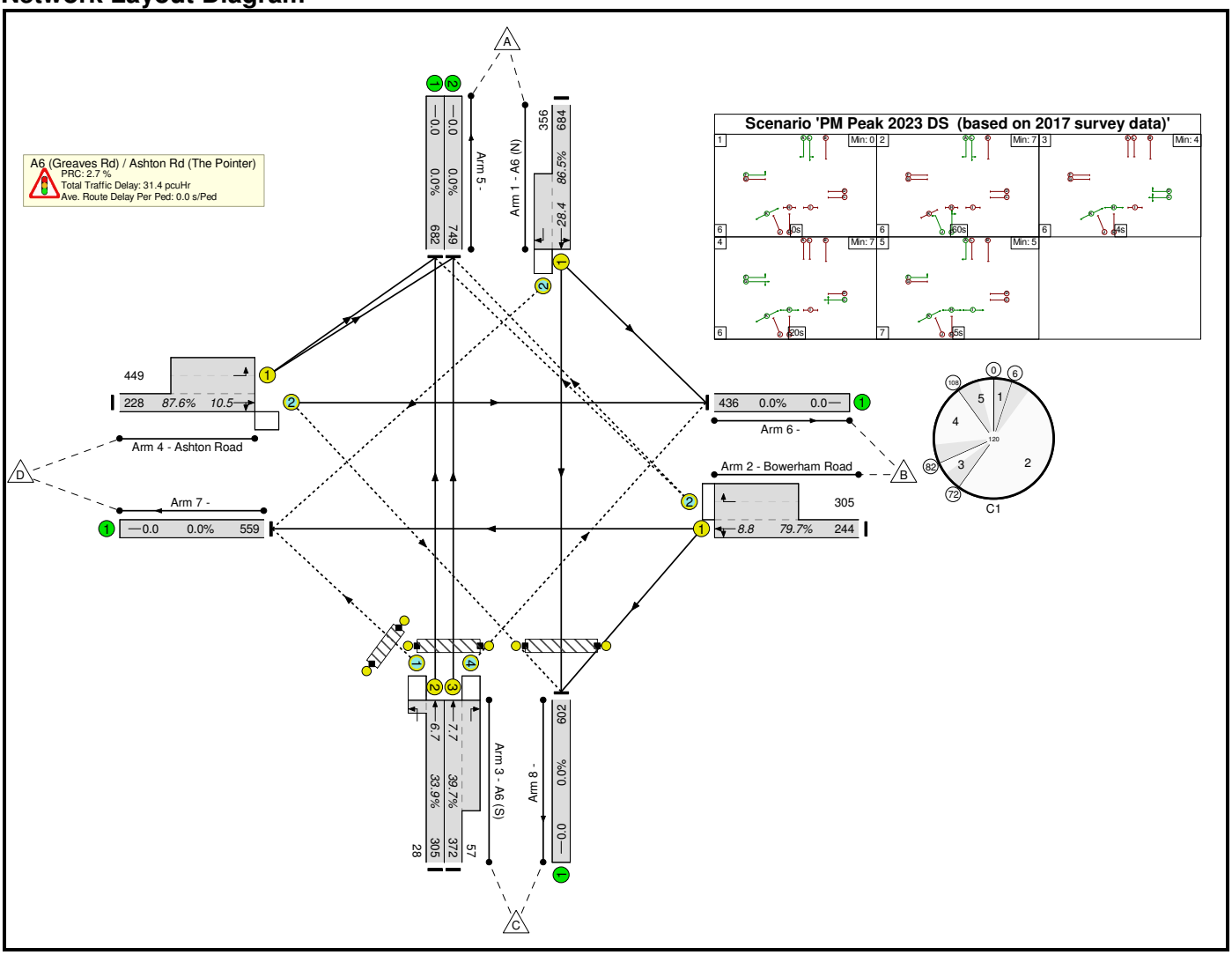
C1 PRC for Signalled Lanes (%): -3.0 Total Delay for Signalled Lanes (pcuHr): 39.64 Cycle Time (s): 120
PRC Over All Lanes (%): -3.0 Total Delay Over All Lanes(pcuHr): 39.64

Stage Sequence Diagram

Scenario 16: 'PM Peak 2023 DS (based on 2017 survey data)' (FG16: 'PM Peak 2023 DS (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



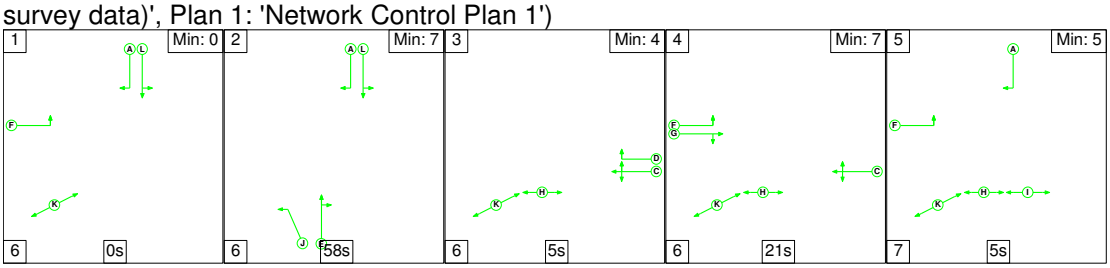
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**87.6%**	**21.5**	**8.9**	**31.4**	**-**	**-**	**-**	**-**
A6 (Greaves Rd) / Ashton Rd (The Pointer)	**-**	**-**	**-**	**-**	**-**	**87.6%**	**21.5**	**8.9**	**31.4**	**-**	**-**	**-**	**-**
1/1+1/2	A6 (N) Left Right Ahead	L A	1040	2015:1884	1202	86.5%	5.4	3.1	8.9	30.9	25.3	3.1	28.4
2/1+2/2	Bowerham Road Right Ahead Left	C	549	1938:3400	689	79.7%	5.6	1.9	7.7	50.2	6.8	1.9	8.8
3/2+3/1	A6 (S) Ahead Left	E J	333	1940:1807	983	33.9%	1.6	0.3	1.9	20.2	6.5	0.3	6.7
3/3+3/4	A6 (S) Ahead Right	E	429	2080:1824	1081	39.7%	2.1	0.3	2.8	23.5	7.3	0.3	7.7
4/2+4/1	Ashton Road Left Ahead Right	G F	677	2065:3900	773	87.6%	6.8	3.3	10.1	54.0	7.2	3.3	10.5
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

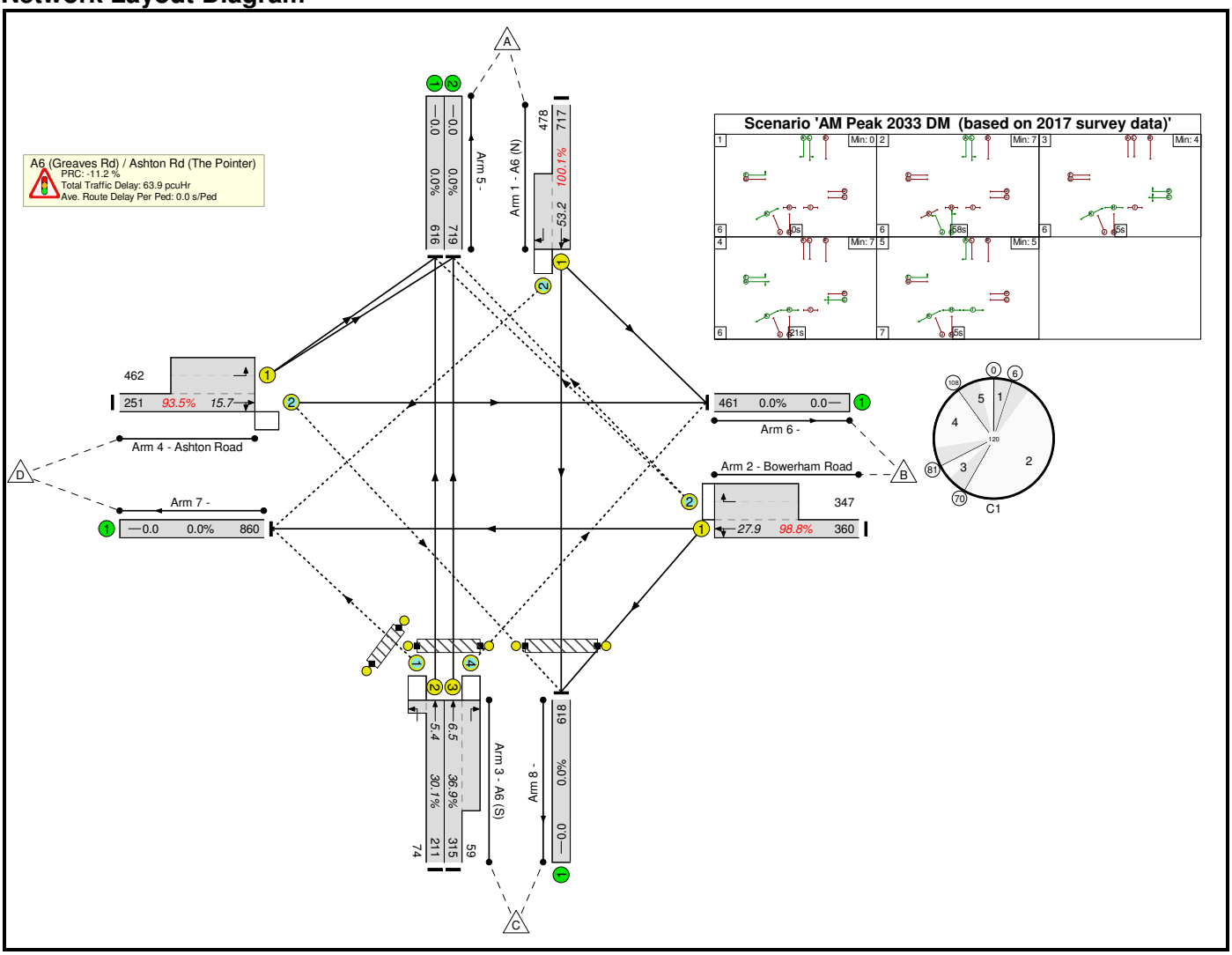
C1 PRC for Signalled Lanes (%): 2.7 Total Delay for Signalled Lanes (pcuHr): 31.41 Cycle Time (s): 120
PRC Over All Lanes (%): 2.7 Total Delay Over All Lanes(pcuHr): 31.41

Stage Sequence Diagram

Scenario 17: 'AM Peak 2033 DM (based on 2017 survey data)' (FG17: 'AM Peak 2033 DM (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



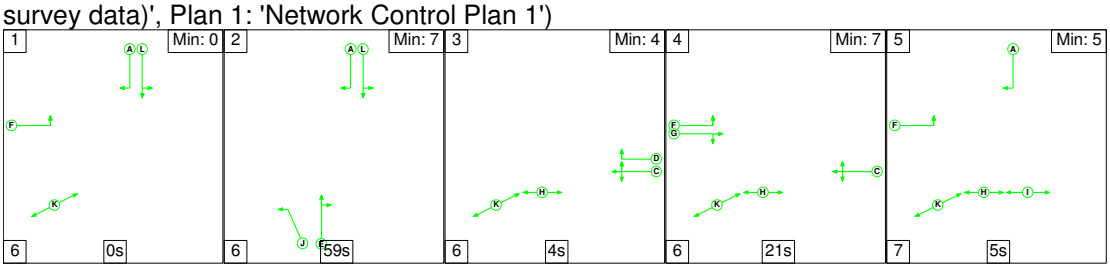
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**100.1%**	**27.6**	**35.2**	**63.9**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**100.1%**	**27.6**	**35.2**	**63.9**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1195	2015:1884	1194	100.1%	7.7	17.6	25.6	77.1	35.7	17.6	53.2
2/1+2/2	Bowerham Road Right Ahead Left	C	707	1951:3400	716	98.8%	9.5	11.3	21.1	107.4	16.6	11.3	27.9
3/2+3/1	A6 (S) Ahead Left	E J	285	1940:1807	948	30.1%	1.4	0.2	1.6	20.5	5.2	0.2	5.4
3/3+3/4	A6 (S) Ahead Right	E	374	2080:1824	1014	36.9%	1.9	0.3	2.4	22.9	6.2	0.3	6.5
4/2+4/1	Ashton Road Left Ahead Right	G F	713	2065:3900	762	93.5%	7.1	5.8	13.2	66.5	9.9	5.8	15.7
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

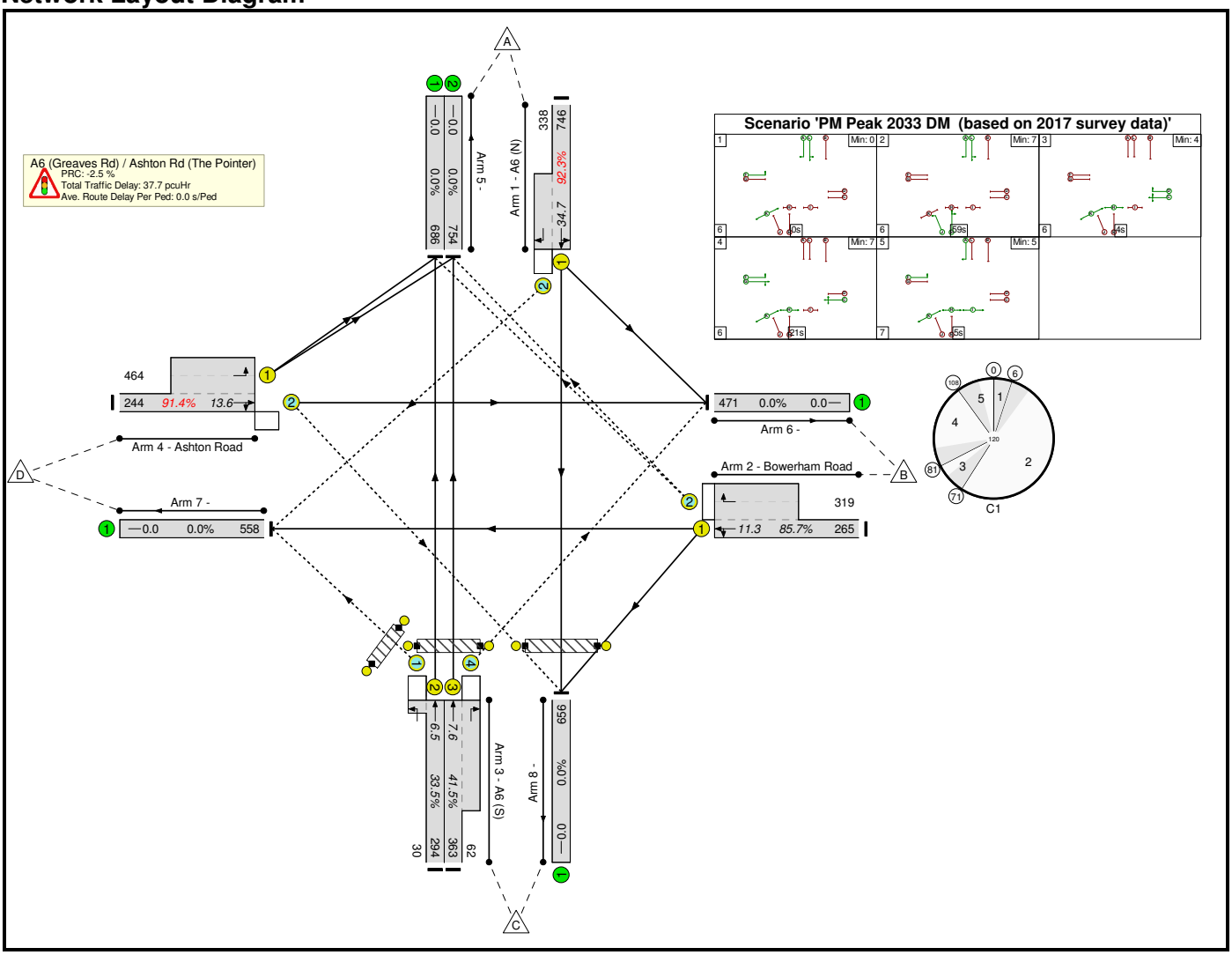
C1 PRC for Signalled Lanes (%): -11.2 Total Delay for Signalled Lanes (pcuHr): 63.86 Cycle Time (s): 120
PRC Over All Lanes (%): -11.2 Total Delay Over All Lanes(pcuHr): 63.86

Stage Sequence Diagram

Scenario 18: 'PM Peak 2033 DM (based on 2017 survey data)' (FG18: 'PM Peak 2033 DM (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



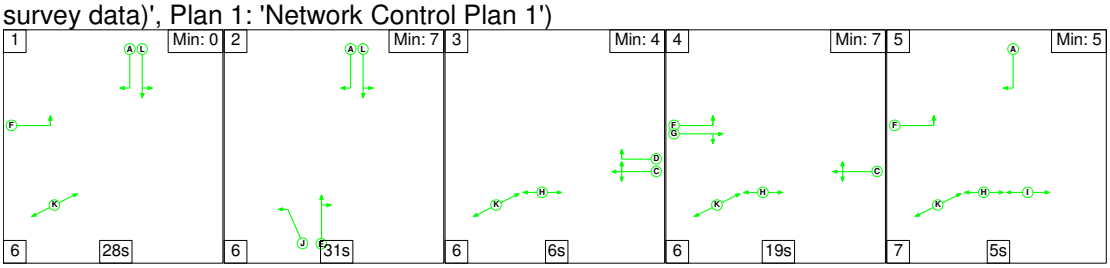
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**92.3%**	**23.1**	**13.4**	**37.7**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**92.3%**	**23.1**	**13.4**	**37.7**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1084	2015:1884	1175	92.3%	6.4	5.3	12.0	40.0	29.4	5.3	34.7
2/1+2/2	Bowerham Road Right Ahead Left	C	584	1938:3400	681	85.7%	5.9	2.8	9.0	55.2	8.5	2.8	11.3
3/2+3/1	A6 (S) Ahead Left	E J	324	1940:1807	966	33.5%	1.6	0.3	1.9	20.7	6.3	0.3	6.5
3/3+3/4	A6 (S) Ahead Right	E	425	2080:1824	1025	41.5%	2.1	0.4	3.1	26.4	7.3	0.4	7.6
4/2+4/1	Ashton Road Left Ahead Right	G F	708	2065:3900	775	91.4%	7.1	4.6	11.8	59.8	9.0	4.6	13.6
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

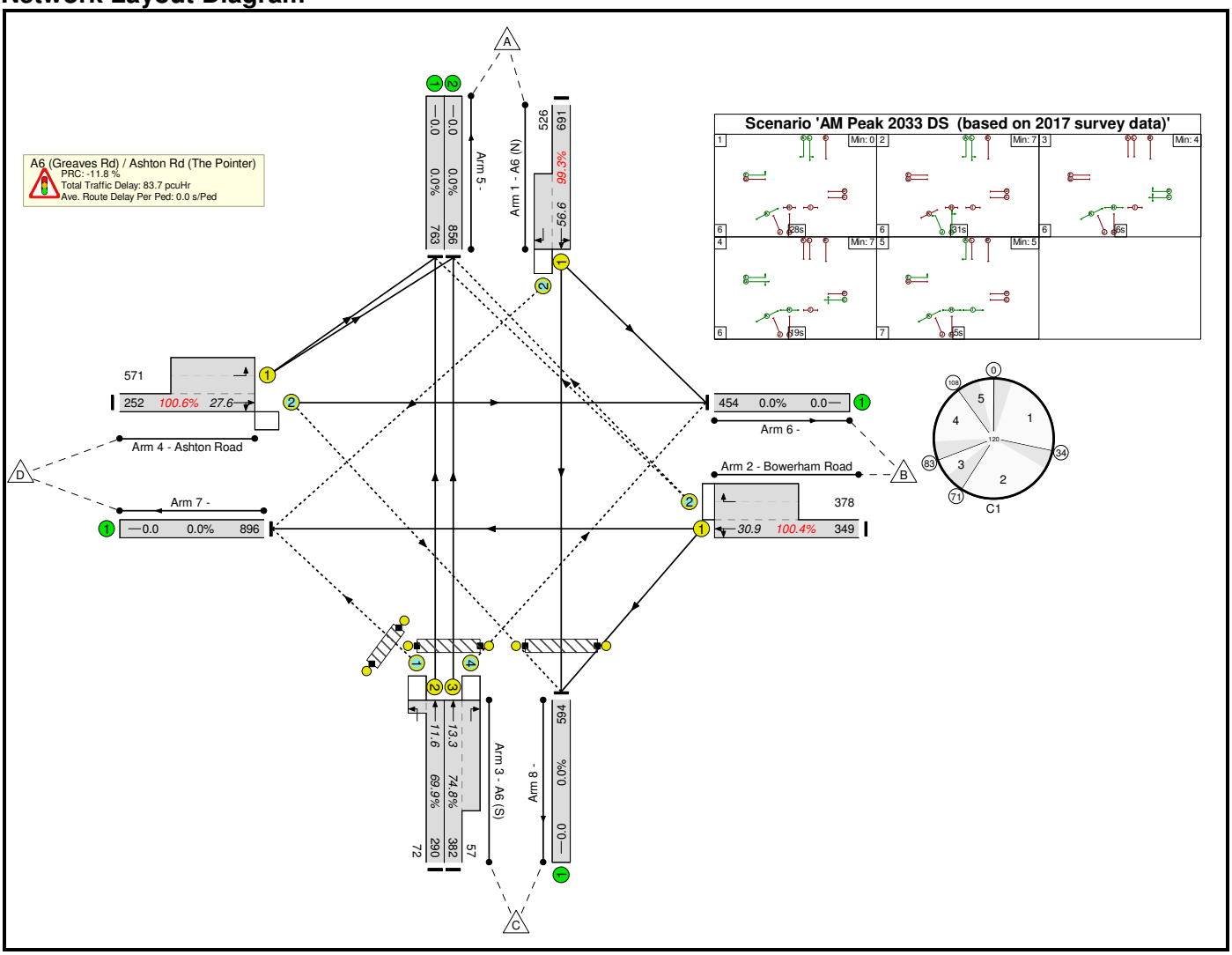
C1 PRC for Signalled Lanes (%): -2.5 Total Delay for Signalled Lanes (pcuHr): 37.71 Cycle Time (s): 120
PRC Over All Lanes (%): -2.5 Total Delay Over All Lanes(pcuHr): 37.71

Stage Sequence Diagram

Scenario 19: 'AM Peak 2033 DS (based on 2017 survey data)' (FG19: 'AM Peak 2033 DS (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



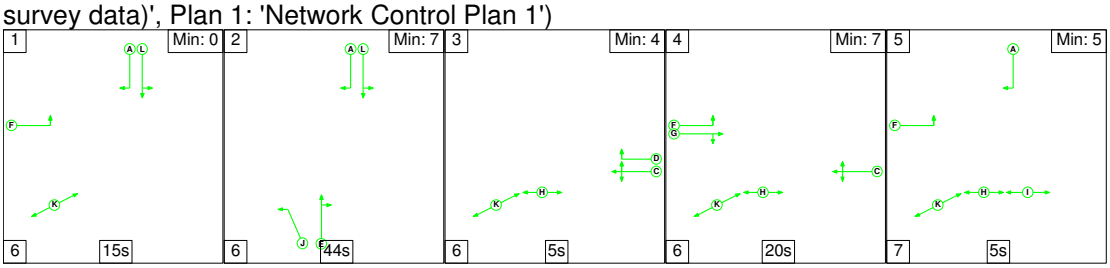
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**100.6%**	**34.7**	**47.9**	**83.7**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**100.6%**	**34.7**	**47.9**	**83.7**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1217	2015:1884	1225	99.3%	9.9	15.5	25.9	76.6	41.1	15.5	56.6
2/1+2/2	Bowerham Road Right Ahead Left	C	727	1951:3400	724	100.4%	10.4	14.2	24.9	123.1	16.7	14.2	30.9
3/2+3/1	A6 (S) Ahead Left	E J	362	1940:1807	518	69.9%	4.0	1.1	5.1	50.7	10.5	1.1	11.6
3/3+3/4	A6 (S) Ahead Right	E	439	2080:1824	587	74.8%	4.8	1.5	6.3	52.0	11.8	1.5	13.3
4/2+4/1	Ashton Road Left Ahead Right	G F	823	2065:3900	818	100.6%	5.8	15.6	21.5	94.2	12.0	15.6	27.6
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

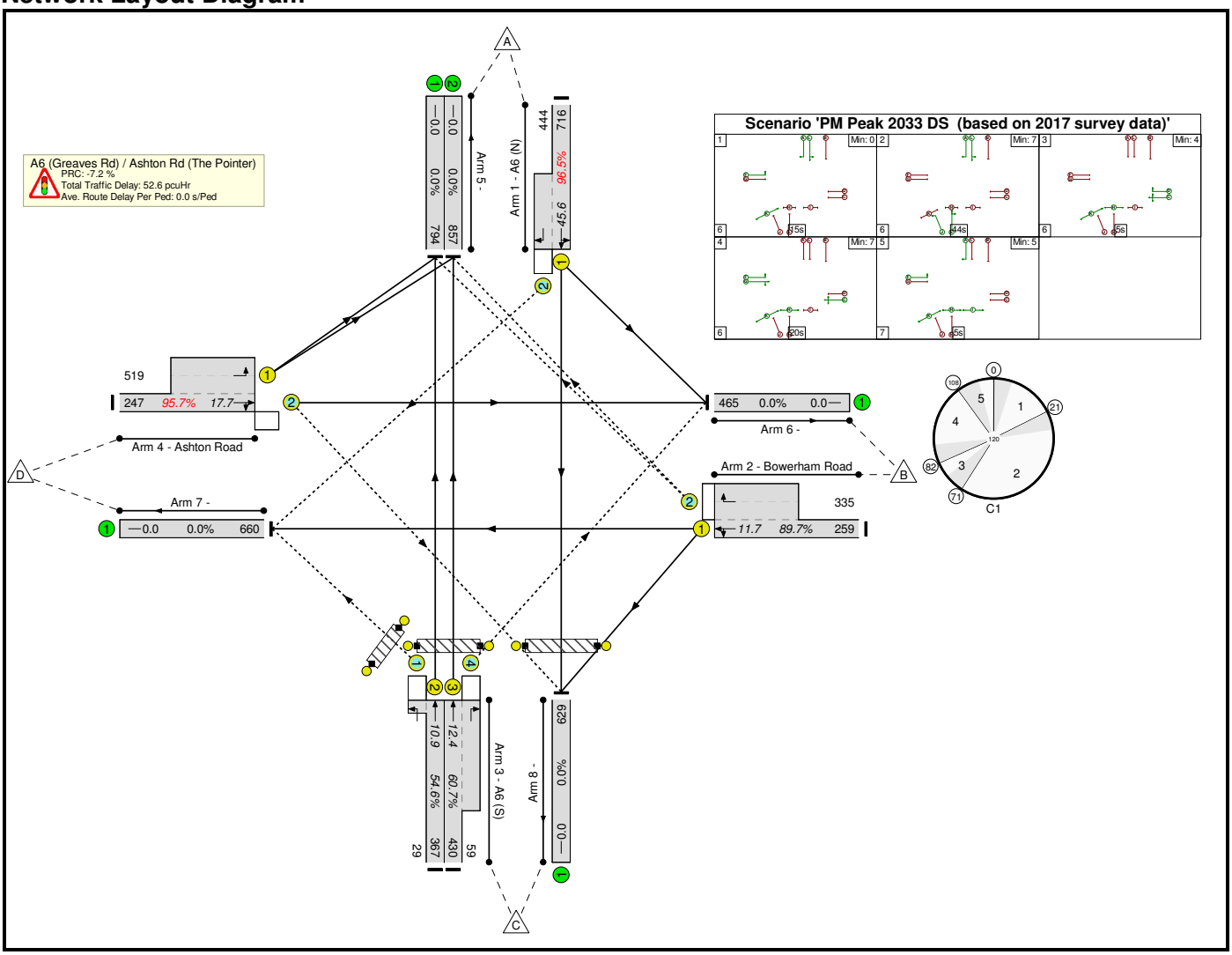
C1 PRC for Signalled Lanes (%): -11.8 Total Delay for Signalled Lanes (pcuHr): 83.75 Cycle Time (s): 120
PRC Over All Lanes (%): -11.8 Total Delay Over All Lanes(pcuHr): 83.75

Stage Sequence Diagram

Scenario 20: 'PM Peak 2033 DS (based on 2017 survey data)' (FG20: 'PM Peak 2033 DS (based on 2017 survey data)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**96.5%**	**29.0**	**22.5**	**52.6**	-	-	-	-
A6 (Greaves Rd) / Ashton Rd (The Pointer)	-	-	-	-	-	**96.5%**	**29.0**	**22.5**	**52.6**	-	-	-	-
1/1+1/2	A6 (N) Left Right Ahead	L A	1160	2015:1884	1202	96.5%	9.5	9.5	19.7	61.0	36.1	9.5	45.6
2/1+2/2	Bowerham Road Right Ahead Left	C	594	1938:3400	662	89.7%	6.0	3.9	10.1	61.5	7.8	3.9	11.7
3/2+3/1	A6 (S) Ahead Left	E J	396	1940:1807	726	54.6%	3.2	0.6	3.8	34.8	10.3	0.6	10.9
3/3+3/4	A6 (S) Ahead Right	E	489	2080:1824	805	60.7%	4.0	0.8	5.0	36.8	11.6	0.8	12.4
4/2+4/1	Ashton Road Left Ahead Right	G F	766	2065:3900	800	95.7%	6.3	7.7	14.0	65.9	10.0	7.7	17.7
Ped Link: P1	Unnamed Ped Link	H	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	I	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P3	Unnamed Ped Link	K	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): -7.2 Total Delay for Signalled Lanes (pcuHr): 52.63 Cycle Time (s): 120
PRC Over All Lanes (%): -7.2 Total Delay Over All Lanes(pcuHr): 52.63

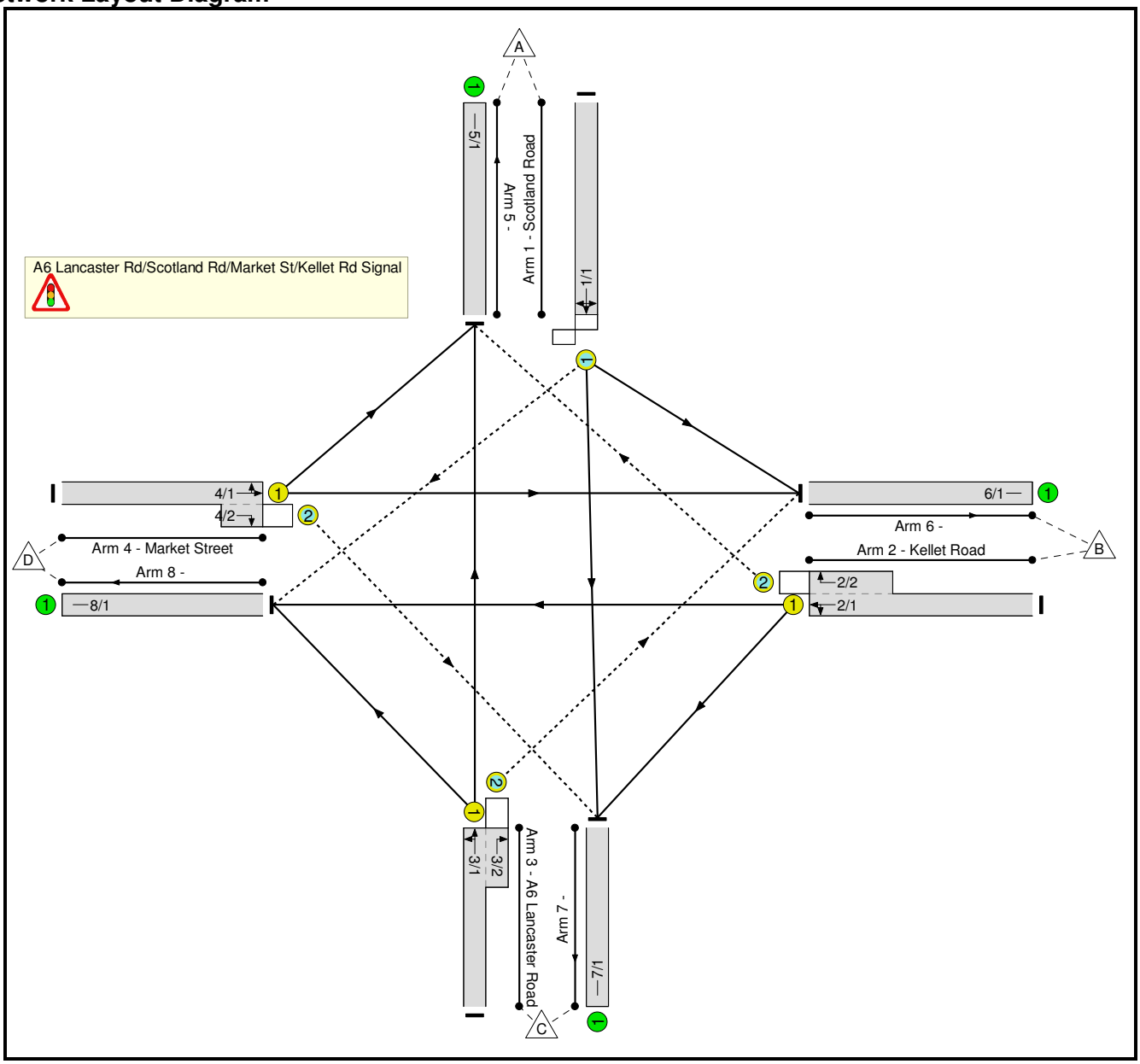
Appendix F – A6 Lancaster Rd/Scotland Rd/Market St Junction Capacity Assessment Results

Full Input Data And Results

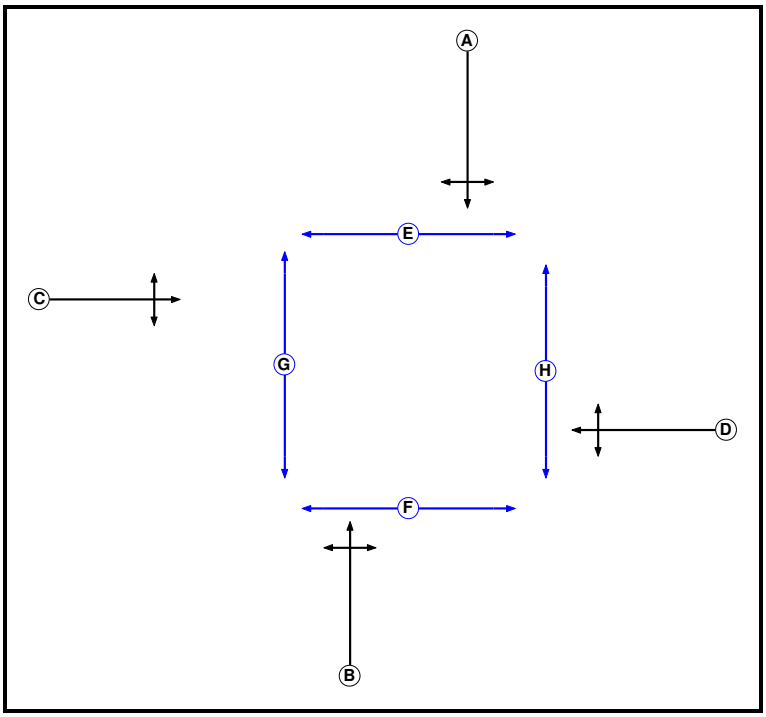
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	A6 Lancaster Rd_Scotland Rd_Market St_Kellet Rd Signal 2018-11-21 (Mitigation).lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

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

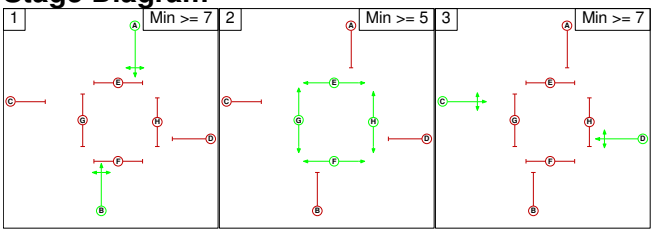
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H
A		-	6	6	8	8	8	8
B	-		6	6	8	8	8	8
C	6	6		-	8	8	8	8
D	6	6	-		8	8	8	8
E	5	5	5	5		-	-	-
F	5	5	5	5	-		-	-
G	5	5	5	5	-	-		-
H	5	5	5	5	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

From Stage \ To Stage	1	2	3
1		8	6
2	5		5
3	6	8	

Give-Way Lane Input Data

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal

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 (Scotland Road)	8/1 (Right)	1439	0	3/1	1.09	All	2.00	1.00	0.50	2	1.00
2/2 (Kellet Road)	5/1 (Right)	1439	0	4/1	1.09	To 5/1 (Left) To 6/1 (Ahead)	2.00	-	0.50	2	2.00
3/2 (A6 Lancaster Road)	6/1 (Right)	1439	0	1/1	1.09	To 6/1 (Left) To 7/1 (Ahead)	2.00	-	0.50	2	2.00
4/2 (Market Street)	7/1 (Right)	1439	0	2/1	1.09	To 7/1 (Left) To 8/1 (Ahead)	2.00	-	0.50	2	2.00

Lane Input Data

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal

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 (Scotland Road)	O	A	2	3	60.0	Geom	-	2.75	0.00	Y	Arm 6 Left	4.15
											Arm 7 Ahead	Inf
											Arm 8 Right	11.44
2/1 (Kellet Road)	U	D	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Left	8.89
											Arm 8 Ahead	Inf
2/2 (Kellet Road)	O	D	2	3	5.6	Geom	-	3.00	0.00	Y	Arm 5 Right	5.40
3/1 (A6 Lancaster Road)	U	B	2	3	60.0	Geom	-	2.85	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	7.06
3/2 (A6 Lancaster Road)	O	B	2	3	4.0	Geom	-	2.64	0.00	Y	Arm 6 Right	10.85
4/1 (Market Street)	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	10.71
											Arm 6 Ahead	Inf
4/2 (Market Street)	O	C	2	3	2.8	Geom	-	2.50	0.00	Y	Arm 7 Right	7.50
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak 2017 Surveyed Flows (Thurs 30/11/17)'	08:00	09:00	01:00	
2: 'PM Peak 2017 Surveyed Flows (Thurs 30/11/17)'	16:00	17:00	01:00	
3: 'AM Peak 2023 DM (base on Survey Thurs 30/11/17)'	08:00	09:00	01:00	
4: 'PM Peak 2023 DM (base on Survey Thurs 30/11/17)'	16:00	17:00	01:00	
5: 'AM Peak 2023 DS (base on Survey Thurs 30/11/17)'	08:00	09:00	01:00	
6: 'PM Peak 2023 DS (base on Survey Thurs 30/11/17)'	16:00	17:00	01:00	
7: 'AM Peak 2033 DM (base on Survey Thurs 30/11/17)'	08:00	09:00	01:00	
8: 'PM Peak 2033 DM (base on Survey Thurs 30/11/17)'	16:00	17:00	01:00	
9: 'AM Peak 2033 DS (base on Survey Thurs 30/11/17)'	08:00	09:00	01:00	
10: 'PM Peak 2033 DS (base on Survey Thurs 30/11/17)'	16:00	17:00	01:00	

Scenario 1: 'AM Peak 2017 Surveyed Flows (Thurs 30/11/17)' (FG1: 'AM Peak 2017 Surveyed Flows (Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	30	227	93	350
	B	47	0	41	170	258
	C	355	247	0	19	621
	D	160	172	111	0	443
	Tot.	562	449	379	282	1672

Traffic Lane Flows

Lane	Scenario 1: AM Peak 2017 Surveyed Flows (Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	350
2/1 (with short)	258(In) 211(Out)
2/2 (short)	47
3/1 (with short)	621(In) 374(Out)
3/2 (short)	247
4/1 (with short)	443(In) 332(Out)
4/2 (short)	111
5/1	562
6/1	449
7/1	379
8/1	282

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	8.6 %	1773	1773
				Arm 7 Ahead	Inf	64.9 %		
				Arm 8 Right	11.44	26.6 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	19.4 %	1854	1854
				Arm 8 Ahead	Inf	80.6 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	94.9 %	1880	1880
				Arm 8 Left	7.06	5.1 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	48.2 %	1841	1841
				Arm 6 Ahead	Inf	51.8 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Peak 2017 Surveyed Flows (Thurs 30/11/17)' (FG2: 'PM Peak 2017 Surveyed Flows (Thurs

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	55	377	212	644
	B	35	0	31	120	186
	C	352	184	0	15	551
	D	95	120	109	0	324
	Tot.	482	359	517	347	1705

Traffic Lane Flows

Lane	Scenario 2: PM Peak 2017 Surveyed Flows (Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	644
2/1 (with short)	186(In) 151(Out)
2/2 (short)	35
3/1 (with short)	551(In) 367(Out)
3/2 (short)	184
4/1 (with short)	324(In) 215(Out)
4/2 (short)	109
5/1	482
6/1	359
7/1	517
8/1	347

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	8.5 %	1760	1760
				Arm 7 Ahead	Inf	58.5 %		
				Arm 8 Right	11.44	32.9 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	20.5 %	1851	1851
				Arm 8 Ahead	Inf	79.5 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	95.9 %	1884	1884
				Arm 8 Left	7.06	4.1 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	44.2 %	1850	1850
				Arm 6 Ahead	Inf	55.8 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Peak 2023 DM (base on Survey Thurs 30/11/17)' (FG3: 'AM Peak 2023 DM (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	49	245	100	394
	B	55	0	44	182	281
	C	381	264	0	20	665
	D	171	184	119	0	474
	Tot.	607	497	408	302	1814

Traffic Lane Flows

Lane	Scenario 3: AM Peak 2023 DM (base on Survey Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	394
2/1 (with short)	281(In) 226(Out)
2/2 (short)	55
3/1 (with short)	665(In) 401(Out)
3/2 (short)	264
4/1 (with short)	474(In) 355(Out)
4/2 (short)	119
5/1	607
6/1	497
7/1	408
8/1	302

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	12.4 %	1753	1753
				Arm 7 Ahead	Inf	62.2 %		
				Arm 8 Right	11.44	25.4 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	19.5 %	1854	1854
				Arm 8 Ahead	Inf	80.5 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	95.0 %	1880	1880
				Arm 8 Left	7.06	5.0 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	48.2 %	1841	1841
				Arm 6 Ahead	Inf	51.8 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Peak 2023 DM (base on Survey Thurs 30/11/17)' (FG4: 'PM Peak 2023 DM (base on Survey Thurs

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	75	408	226	709
	B	42	0	33	128	203
	C	381	196	0	16	593
	D	101	128	116	0	345
	Tot.	524	399	557	370	1850

Traffic Lane Flows

Lane	Scenario 4: PM Peak 2023 DM (base on Survey Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	709
2/1 (with short)	203(In) 161(Out)
2/2 (short)	42
3/1 (with short)	593(In) 397(Out)
3/2 (short)	196
4/1 (with short)	345(In) 229(Out)
4/2 (short)	116
5/1	524
6/1	399
7/1	557
8/1	370

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	10.6 %	1750	1750
				Arm 7 Ahead	Inf	57.5 %		
				Arm 8 Right	11.44	31.9 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	20.5 %	1851	1851
				Arm 8 Ahead	Inf	79.5 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	96.0 %	1884	1884
				Arm 8 Left	7.06	4.0 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	44.1 %	1851	1851
				Arm 6 Ahead	Inf	55.9 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'AM Peak 2023 DS (base on Survey Thurs 30/11/17)' (FG5: 'AM Peak 2023 DS (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	88	251	98	437
	B	71	0	43	180	294
	C	377	262	0	20	659
	D	169	182	118	0	469
	Tot.	617	532	412	298	1859

Traffic Lane Flows

Lane	Scenario 5: AM Peak 2023 DS (base on Survey Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	437
2/1 (with short)	294(In) 223(Out)
2/2 (short)	71
3/1 (with short)	659(In) 397(Out)
3/2 (short)	262
4/1 (with short)	469(In) 351(Out)
4/2 (short)	118
5/1	617
6/1	532
7/1	412
8/1	298

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	20.1 %	1715	1715
				Arm 7 Ahead	Inf	57.4 %		
				Arm 8 Right	11.44	22.4 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	19.3 %	1855	1855
				Arm 8 Ahead	Inf	80.7 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	95.0 %	1880	1880
				Arm 8 Left	7.06	5.0 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	48.1 %	1841	1841
				Arm 6 Ahead	Inf	51.9 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak 2023 DS (base on Survey Thurs 30/11/17)' (FG6: 'PM Peak 2023 DS (base on Survey Thurs

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	106	408	223	737
	B	52	0	33	126	211
	C	378	193	0	16	587
	D	100	126	115	0	341
	Tot.	530	425	556	365	1876

Traffic Lane Flows

Lane	Scenario 6: PM Peak 2023 DS (base on Survey Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	737
2/1 (with short)	211(In) 159(Out)
2/2 (short)	52
3/1 (with short)	587(In) 394(Out)
3/2 (short)	193
4/1 (with short)	341(In) 226(Out)
4/2 (short)	115
5/1	530
6/1	425
7/1	556
8/1	365

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	14.4 %	1731	1731
				Arm 7 Ahead	Inf	55.4 %		
				Arm 8 Right	11.44	30.3 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	20.8 %	1850	1850
				Arm 8 Ahead	Inf	79.2 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	95.9 %	1884	1884
				Arm 8 Left	7.06	4.1 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	44.2 %	1850	1850
				Arm 6 Ahead	Inf	55.8 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: 'AM Peak 2033 DM (base on Survey Thurs 30/11/17)' (FG7: 'AM Peak 2033 DM (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	54	264	107	425
	B	60	0	47	196	303
	C	411	285	0	22	718
	D	185	199	128	0	512
	Tot.	656	538	439	325	1958

Traffic Lane Flows

Lane	Scenario 7: AM Peak 2033 DM (base on Survey Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	425
2/1 (with short)	303(In) 243(Out)
2/2 (short)	60
3/1 (with short)	718(In) 433(Out)
3/2 (short)	285
4/1 (with short)	512(In) 384(Out)
4/2 (short)	128
5/1	656
6/1	538
7/1	439
8/1	325

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	12.7 %	1752	1752
				Arm 7 Ahead	Inf	62.1 %		
				Arm 8 Right	11.44	25.2 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	19.3 %	1854	1854
				Arm 8 Ahead	Inf	80.7 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	94.9 %	1880	1880
				Arm 8 Left	7.06	5.1 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	48.2 %	1841	1841
				Arm 6 Ahead	Inf	51.8 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: 'PM Peak 2033 DM (base on Survey Thurs 30/11/17)' (FG8: 'PM Peak 2033 DM (base on Survey Thurs

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	83	439	243	765
	B	46	0	36	138	220
	C	410	211	0	17	638
	D	109	138	125	0	372
	Tot.	565	432	600	398	1995

Traffic Lane Flows

Lane	Scenario 8: PM Peak 2033 DM (base on Survey Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	765
2/1 (with short)	220(In) 174(Out)
2/2 (short)	46
3/1 (with short)	638(In) 427(Out)
3/2 (short)	211
4/1 (with short)	372(In) 247(Out)
4/2 (short)	125
5/1	565
6/1	432
7/1	600
8/1	398

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	10.8 %	1749	1749
				Arm 7 Ahead	Inf	57.4 %		
				Arm 8 Right	11.44	31.8 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	20.7 %	1850	1850
				Arm 8 Ahead	Inf	79.3 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	96.0 %	1884	1884
				Arm 8 Left	7.06	4.0 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	44.1 %	1851	1851
				Arm 6 Ahead	Inf	55.9 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 9: 'AM Peak 2033 DS (base on Survey Thurs 30/11/17)' (FG9: 'AM Peak 2033 DS (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	122	277	103	502
	B	115	0	46	189	350
	C	398	275	0	21	694
	D	178	191	123	0	492
	Tot.	691	588	446	313	2038

Traffic Lane Flows

Lane	Scenario 9: AM Peak 2033 DS (base on Survey Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	502
2/1 (with short)	350(In) 235(Out)
2/2 (short)	115
3/1 (with short)	694(In) 419(Out)
3/2 (short)	275
4/1 (with short)	492(In) 369(Out)
4/2 (short)	123
5/1	691
6/1	588
7/1	446
8/1	313

Lane Saturation Flows

Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
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 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	24.3 %	1695	1695
				Arm 7 Ahead	Inf	55.2 %		
				Arm 8 Right	11.44	20.5 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	19.6 %	1854	1854
				Arm 8 Ahead	Inf	80.4 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	95.0 %	1880	1880
				Arm 8 Left	7.06	5.0 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	48.2 %	1841	1841
				Arm 6 Ahead	Inf	51.8 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 10: 'PM Peak 2033 DS (base on Survey Thurs 30/11/17)' (FG10: 'PM Peak 2033 DS (base on Survey

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	169	435	233	837
	B	79	0	34	132	245
	C	398	202	0	16	616
	D	104	132	120	0	356
	Tot.	581	503	589	381	2054

Traffic Lane Flows

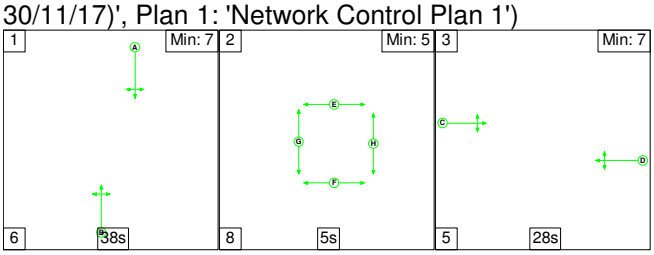
Lane	Scenario 10: PM Peak 2033 DS (base on Survey Thurs 30/11/17)
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	
1/1	837
2/1 (with short)	245(In) 166(Out)
2/2 (short)	79
3/1 (with short)	616(In) 414(Out)
3/2 (short)	202
4/1 (with short)	356(In) 236(Out)
4/2 (short)	120
5/1	581
6/1	503
7/1	589
8/1	381

Lane Saturation Flows

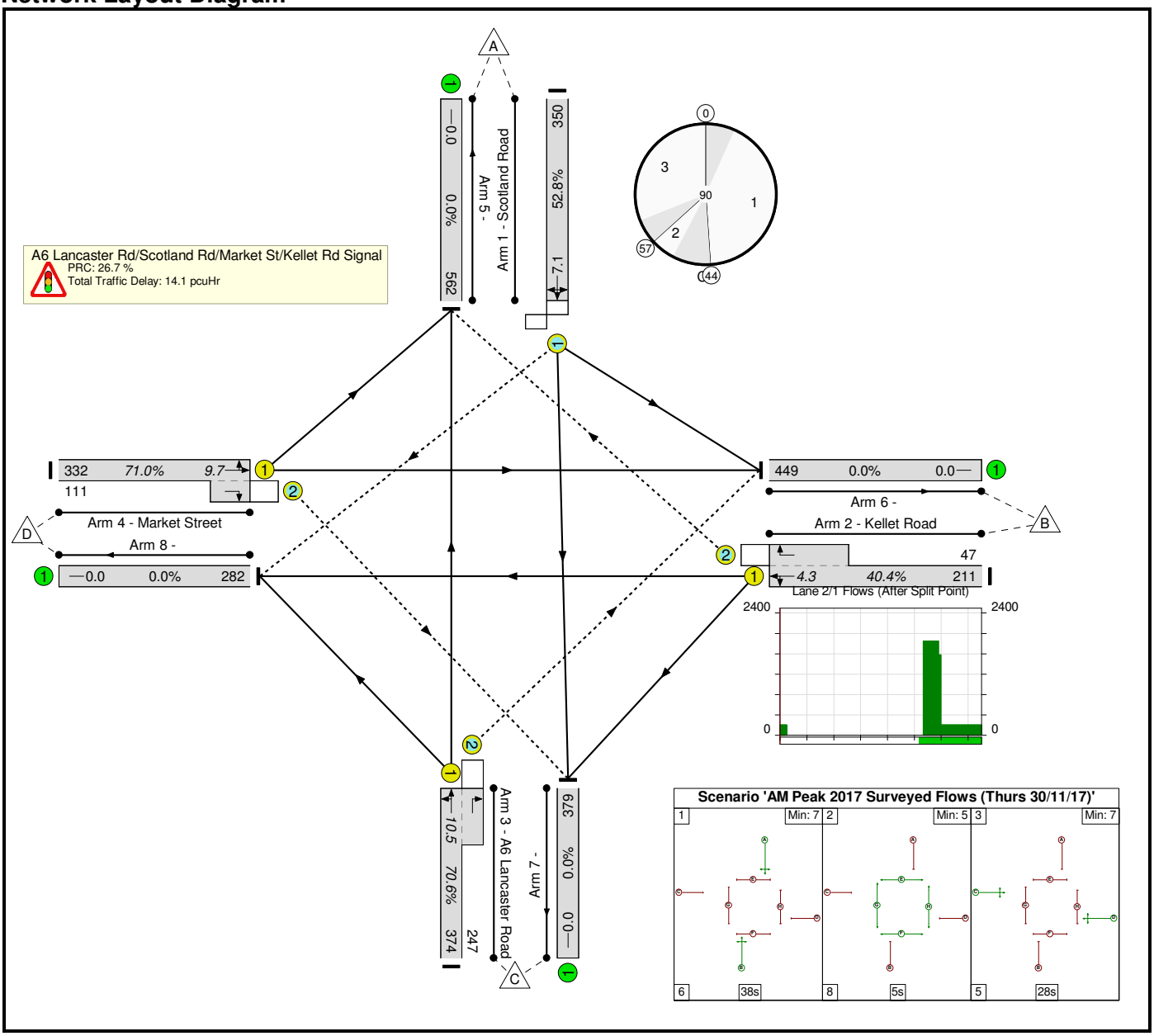
Junction: A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Scotland Road)	2.75	0.00	Y	Arm 6 Left	4.15	20.2 %	1704	1704
				Arm 7 Ahead	Inf	52.0 %		
				Arm 8 Right	11.44	27.8 %		
2/1 (Kellet Road)	3.00	0.00	Y	Arm 7 Left	8.89	20.5 %	1851	1851
				Arm 8 Ahead	Inf	79.5 %		
2/2 (Kellet Road)	3.00	0.00	Y	Arm 5 Right	5.40	100.0 %	1499	1499
3/1 (A6 Lancaster Road)	2.85	0.00	Y	Arm 5 Ahead	Inf	96.1 %	1885	1885
				Arm 8 Left	7.06	3.9 %		
3/2 (A6 Lancaster Road)	2.64	0.00	Y	Arm 6 Right	10.85	100.0 %	1651	1651
4/1 (Market Street)	3.50	0.00	Y	Arm 5 Left	10.71	44.1 %	1851	1851
				Arm 6 Ahead	Inf	55.9 %		
4/2 (Market Street)	2.50	0.00	Y	Arm 7 Right	7.50	100.0 %	1554	1554
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Stage Sequence Diagram

Scenario 1: 'AM Peak 2017 Surveyed Flows (Thurs 30/11/17)' (FG1: 'AM Peak 2017 Surveyed Flows (Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



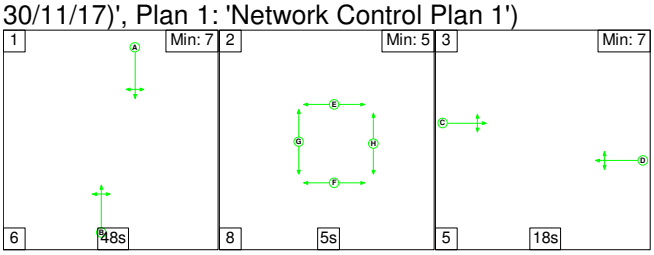
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**71.0%**	**9.9**	**3.3**	**14.1**	**-**	**-**	**-**	**-**
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	**-**	**-**	**-**	**-**	**-**	**71.0%**	**9.9**	**3.3**	**14.1**	**-**	**-**	**-**	**-**
1/1	Scotland Road Left Ahead Right	A	350	1773	663	52.8%	1.8	0.6	2.5	26.1	6.5	0.6	7.1
2/1+2/2	Kellet Road Right Left Ahead	D	258	1854:1499	638	40.4%	1.6	0.3	2.2	30.2	4.0	0.3	4.3
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	621	1880:1651	879	70.6%	3.3	1.2	4.9	28.5	9.3	1.2	10.5
4/1+4/2	Market Street Left Ahead Right	C	443	1841:1554	624	71.0%	3.2	1.2	4.5	36.4	8.5	1.2	9.7

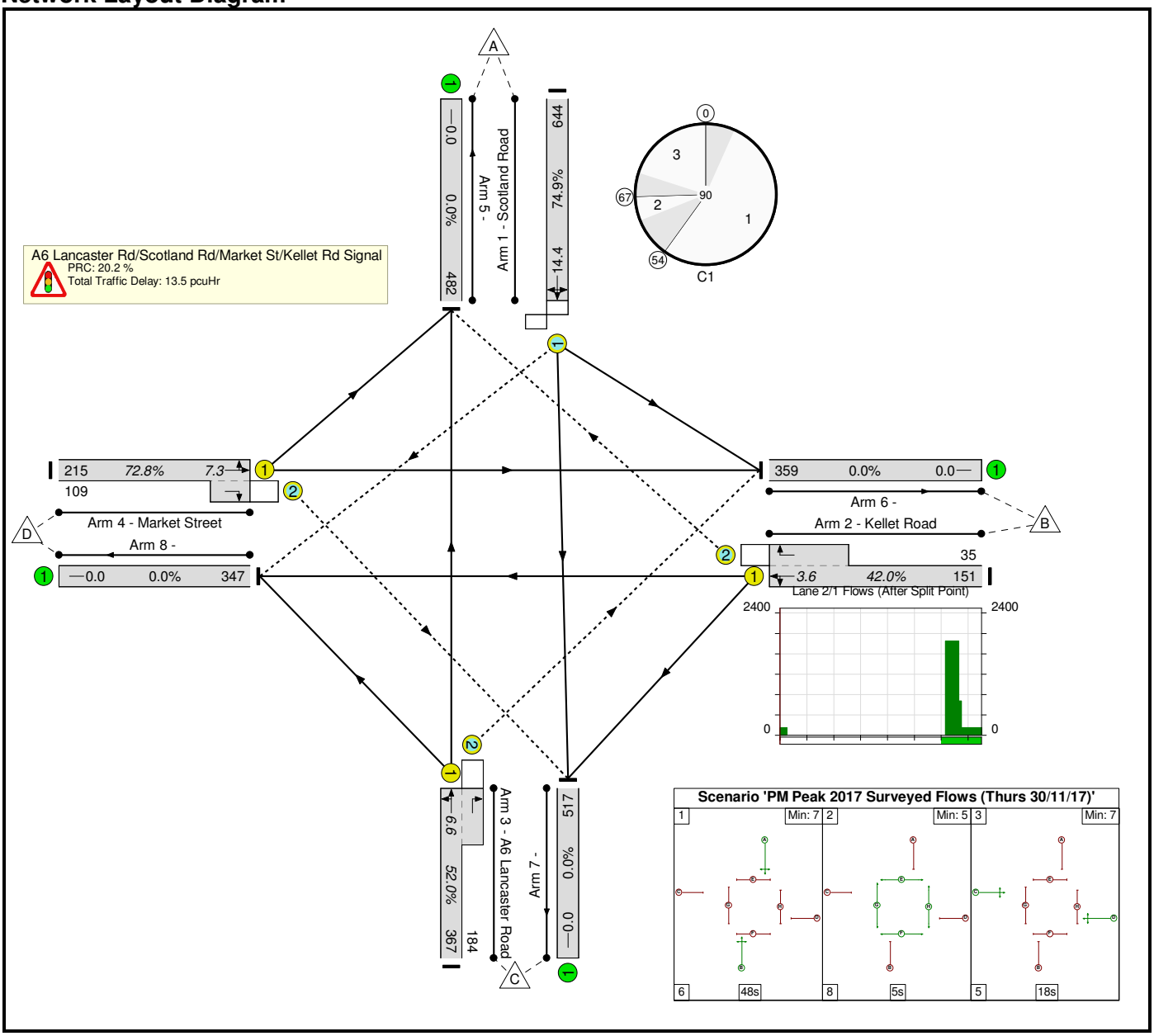
C1 PRC for Signalled Lanes (%): 26.7 Total Delay for Signalled Lanes (pcuHr): 14.10 Cycle Time (s): 90
PRC Over All Lanes (%): 26.7 Total Delay Over All Lanes(pcuHr): 14.10

Stage Sequence Diagram

Scenario 2: 'PM Peak 2017 Surveyed Flows (Thurs 30/11/17)' (FG2: 'PM Peak 2017 Surveyed Flows (Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



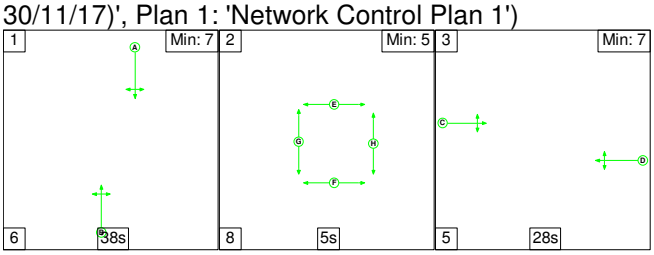
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**74.9%**	**9.3**	**3.7**	**13.5**	**-**	**-**	**-**	**-**
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	**-**	**-**	**-**	**-**	**-**	**74.9%**	**9.3**	**3.7**	**13.5**	**-**	**-**	**-**	**-**
1/1	Scotland Road Left Ahead Right	A	644	1760	860	74.9%	3.1	1.5	4.7	26.5	12.9	1.5	14.4
2/1+2/2	Kellet Road Right Left Ahead	D	186	1851:1499	443	42.0%	1.6	0.4	2.0	38.9	3.2	0.4	3.6
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	551	1884:1651	1060	52.0%	1.8	0.5	2.4	15.9	6.1	0.5	6.6
4/1+4/2	Market Street Left Ahead Right	C	324	1850:1554	445	72.8%	2.9	1.3	4.3	48.0	6.0	1.3	7.3

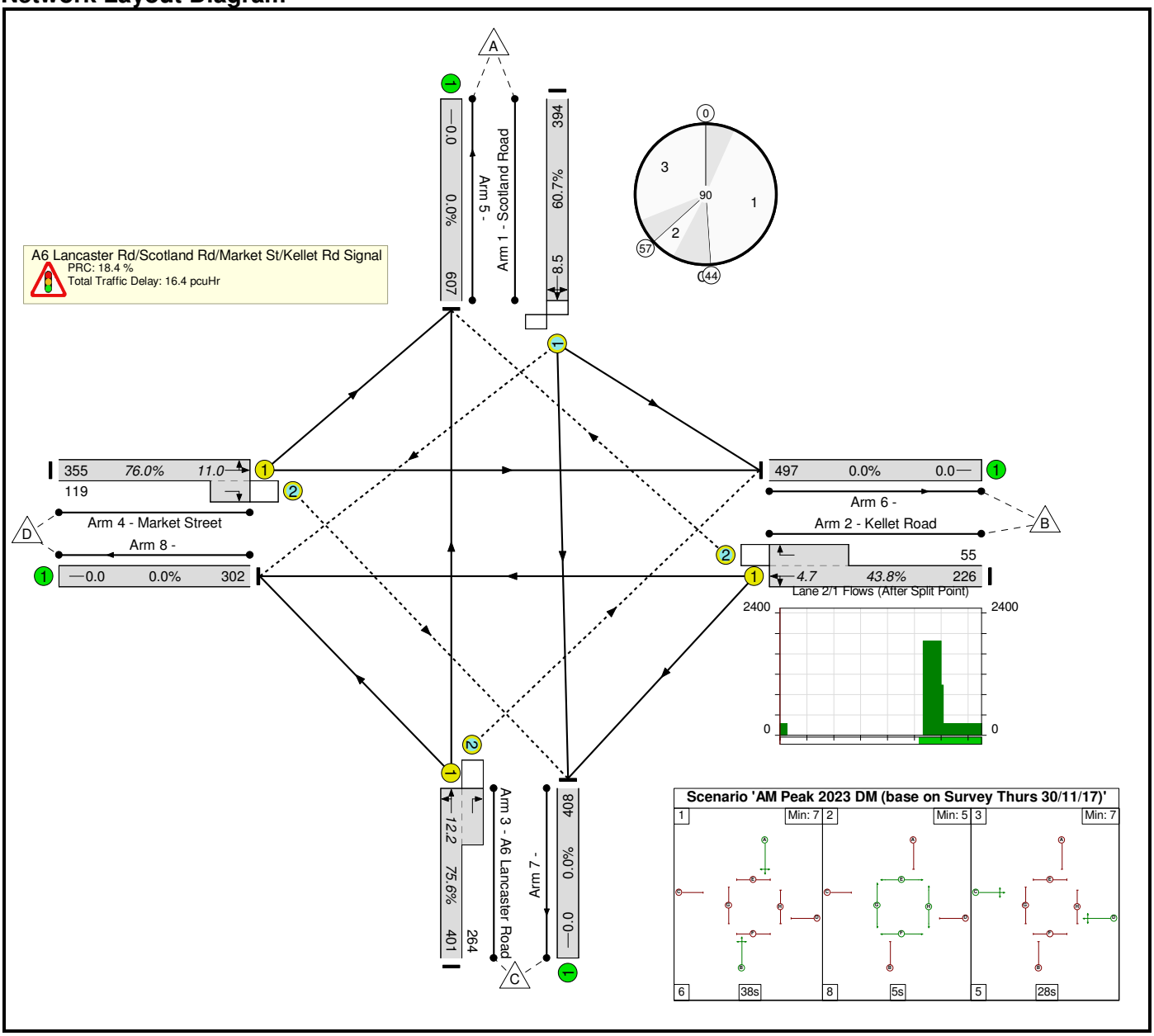
C1 PRC for Signalled Lanes (%): 20.2 Total Delay for Signalled Lanes (pcuHr): 13.50 Cycle Time (s): 90
PRC Over All Lanes (%): 20.2 Total Delay Over All Lanes(pcuHr): 13.50

Stage Sequence Diagram

Scenario 3: 'AM Peak 2023 DM (base on Survey Thurs 30/11/17)' (FG3: 'AM Peak 2023 DM (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



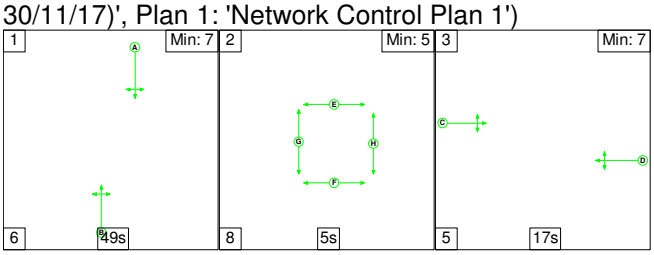
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**76.0%**	**11.1**	**4.2**	**16.4**	**-**	**-**	**-**	**-**
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	**-**	**-**	**-**	**-**	**-**	**76.0%**	**11.1**	**4.2**	**16.4**	**-**	**-**	**-**	**-**
1/1	Scotland Road Left Ahead Right	A	394	1753	649	60.7%	2.1	0.8	3.1	28.3	7.8	0.8	8.5
2/1+2/2	Kellet Road Right Left Ahead	D	281	1854:1499	642	43.8%	1.8	0.4	2.4	31.2	4.3	0.4	4.7
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	665	1880:1651	879	75.6%	3.7	1.5	5.8	31.2	10.7	1.5	12.2
4/1+4/2	Market Street Left Ahead Right	C	474	1841:1554	624	76.0%	3.5	1.6	5.1	39.0	9.5	1.6	11.0

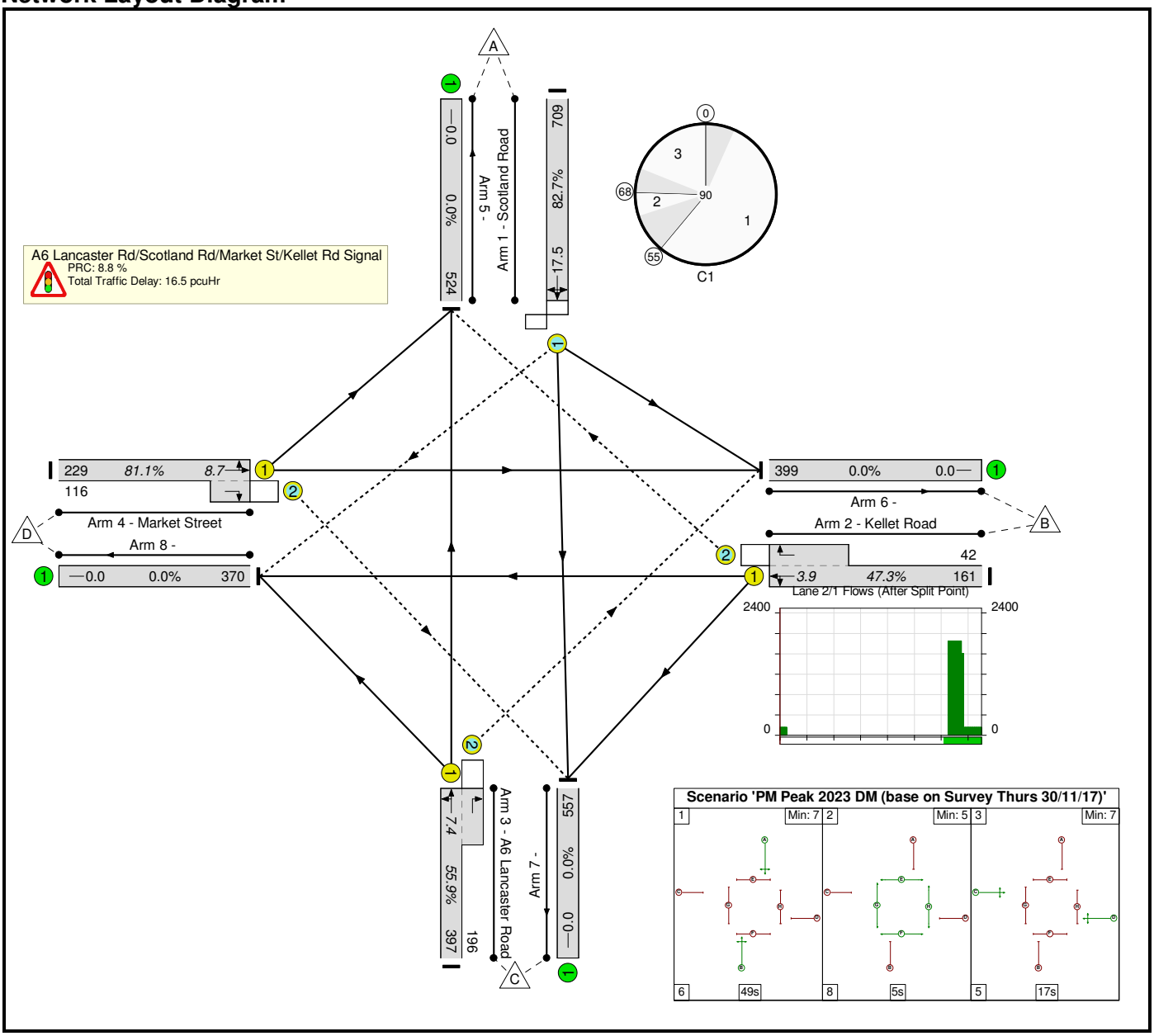
C1 PRC for Signalled Lanes (%): 18.4 Total Delay for Signalled Lanes (pcuHr): 16.43 Cycle Time (s): 90
PRC Over All Lanes (%): 18.4 Total Delay Over All Lanes(pcuHr): 16.43

Stage Sequence Diagram

Scenario 4: 'PM Peak 2023 DM (base on Survey Thurs 30/11/17)' (FG4: 'PM Peak 2023 DM (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



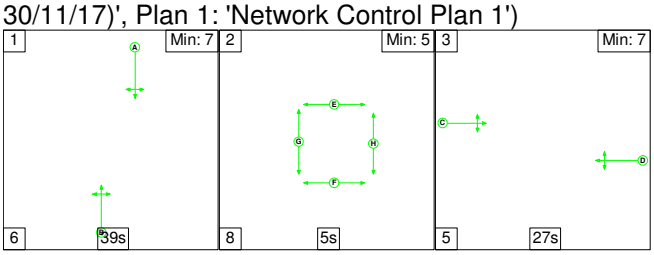
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**82.7%**	**10.4**	**5.4**	**16.5**	**-**	**-**	**-**	**-**
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	**-**	**-**	**-**	**-**	**-**	**82.7%**	**10.4**	**5.4**	**16.5**	**-**	**-**	**-**	**-**
1/1	Scotland Road Left Ahead Right	A	709	1750	857	82.7%	3.6	2.3	6.1	31.1	15.2	2.3	17.5
2/1+2/2	Kellet Road Right Left Ahead	D	203	1851:1499	429	47.3%	1.8	0.4	2.3	41.2	3.5	0.4	3.9
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	593	1884:1651	1061	55.9%	1.9	0.6	2.6	16.1	6.8	0.6	7.4
4/1+4/2	Market Street Left Ahead Right	C	345	1851:1554	425	81.1%	3.2	2.0	5.4	56.2	6.6	2.0	8.7

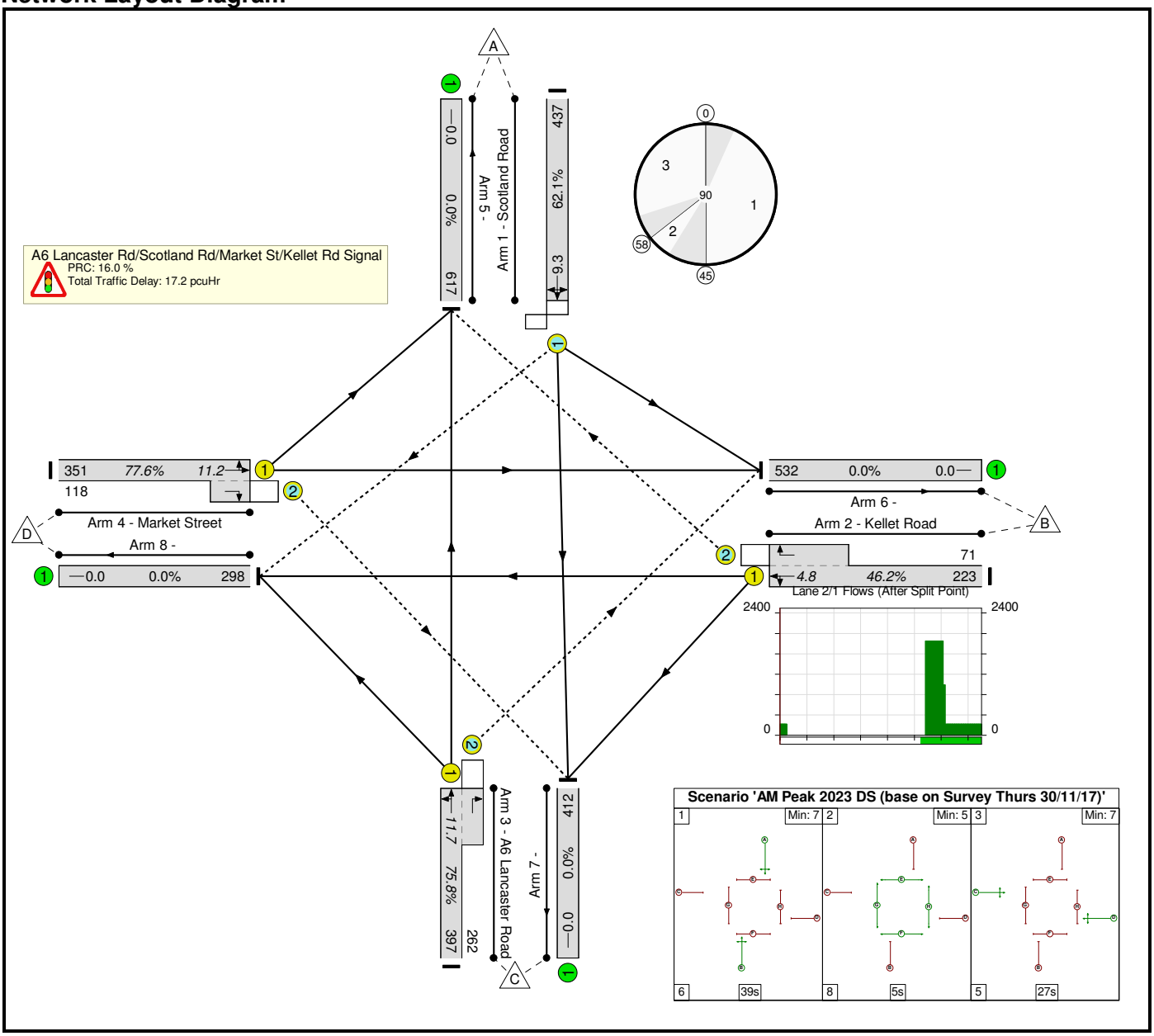
C1 PRC for Signalled Lanes (%): 8.8 Total Delay for Signalled Lanes (pcuHr): 16.48 Cycle Time (s): 90
PRC Over All Lanes (%): 8.8 Total Delay Over All Lanes(pcuHr): 16.48

Stage Sequence Diagram

Scenario 5: 'AM Peak 2023 DS (base on Survey Thurs 30/11/17)' (FG5: 'AM Peak 2023 DS (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



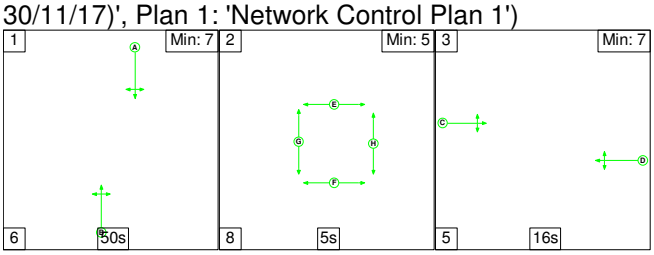
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**77.6%**	**11.4**	**4.5**	**17.2**	-	-	-	-
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	-	-	-	-	-	**77.6%**	**11.4**	**4.5**	**17.2**	-	-	-	-
1/1	Scotland Road Left Ahead Right	A	437	1715	704	62.1%	2.3	0.8	3.3	27.2	8.5	0.8	9.3
2/1+2/2	Kellet Road Right Left Ahead	D	294	1855:1499	636	46.2%	1.9	0.4	2.7	33.0	4.3	0.4	4.8
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	659	1880:1651	869	75.8%	3.7	1.5	5.8	31.7	10.2	1.5	11.7
4/1+4/2	Market Street Left Ahead Right	C	469	1841:1554	604	77.6%	3.5	1.7	5.3	41.0	9.5	1.7	11.2

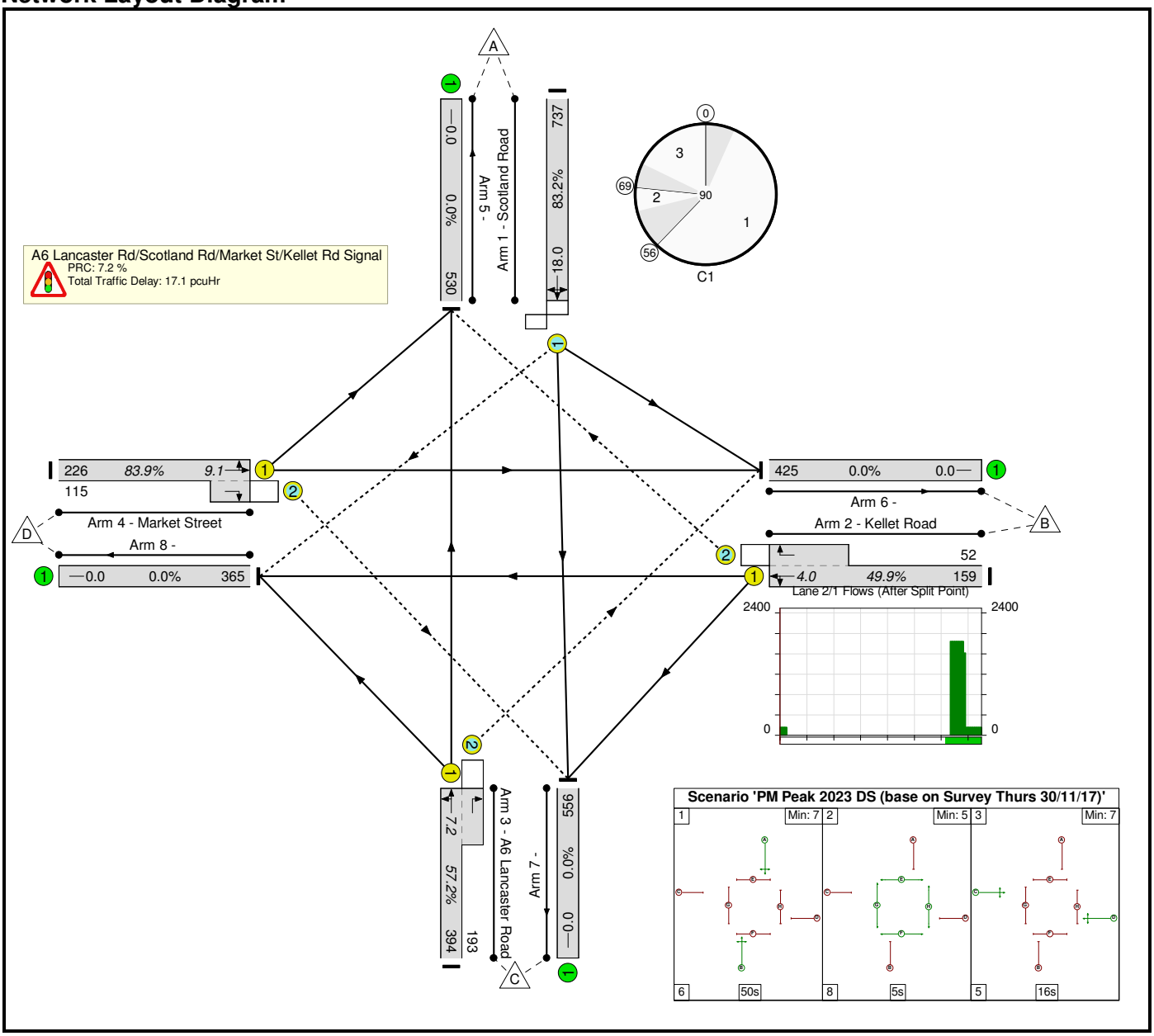
C1 PRC for Signalled Lanes (%): 16.0 Total Delay for Signalled Lanes (pcuHr): 17.16 Cycle Time (s): 90
PRC Over All Lanes (%): 16.0 Total Delay Over All Lanes(pcuHr): 17.16

Stage Sequence Diagram

Scenario 6: 'PM Peak 2023 DS (base on Survey Thurs 30/11/17)' (FG6: 'PM Peak 2023 DS (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



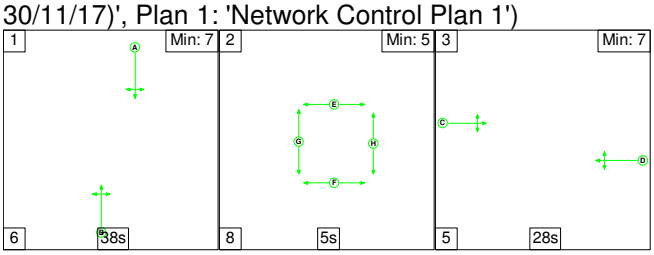
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**83.9%**	**10.4**	**6.0**	**17.1**	**-**	**-**	**-**	**-**
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	**-**	**-**	**-**	**-**	**-**	**83.9%**	**10.4**	**6.0**	**17.1**	**-**	**-**	**-**	**-**
1/1	Scotland Road Left Ahead Right	A	737	1731	886	83.2%	3.6	2.4	6.2	30.1	15.6	2.4	18.0
2/1+2/2	Kellet Road Right Left Ahead	D	211	1850:1499	423	49.9%	1.9	0.5	2.5	43.0	3.5	0.5	4.0
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	587	1884:1651	1027	57.2%	1.7	0.7	2.6	15.9	6.5	0.7	7.2
4/1+4/2	Market Street Left Ahead Right	C	341	1850:1554	406	83.9%	3.2	2.4	5.8	61.4	6.6	2.4	9.1

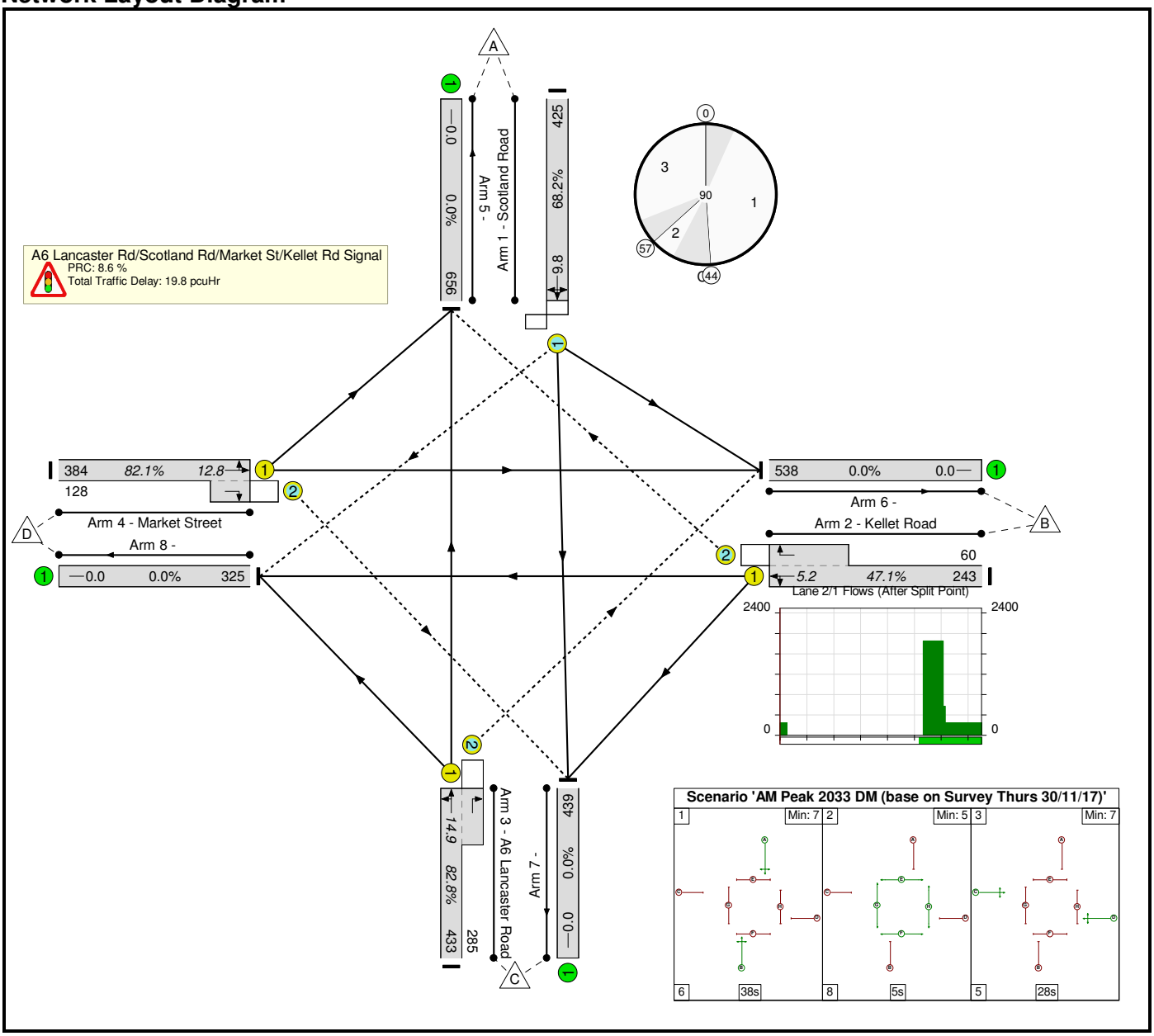
C1 PRC for Signalled Lanes (%): 7.2 Total Delay for Signalled Lanes (pcuHr): 17.10 Cycle Time (s): 90
PRC Over All Lanes (%): 7.2 Total Delay Over All Lanes(pcuHr): 17.10

Stage Sequence Diagram

Scenario 7: 'AM Peak 2033 DM (base on Survey Thurs 30/11/17)' (FG7: 'AM Peak 2033 DM (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



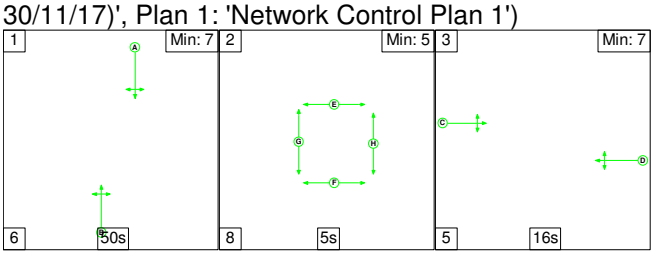
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	**-**	**-**	**-**	**-**	**-**	**82.8%**	**12.4**	**6.1**	**19.8**	**-**	**-**	**-**	**-**
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	**-**	**-**	**-**	**-**	**-**	**82.8%**	**12.4**	**6.1**	**19.8**	**-**	**-**	**-**	**-**
1/1	Scotland Road Left Ahead Right	A	425	1752	623	68.2%	2.4	1.1	3.7	31.2	8.7	1.1	9.8
2/1+2/2	Kellet Road Right Left Ahead	D	303	1854:1499	643	47.1%	2.0	0.4	2.7	32.2	4.7	0.4	5.2
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	718	1880:1651	867	82.8%	4.2	2.3	7.2	36.0	12.5	2.3	14.9
4/1+4/2	Market Street Left Ahead Right	C	512	1841:1554	624	82.1%	3.8	2.2	6.2	43.6	10.6	2.2	12.8

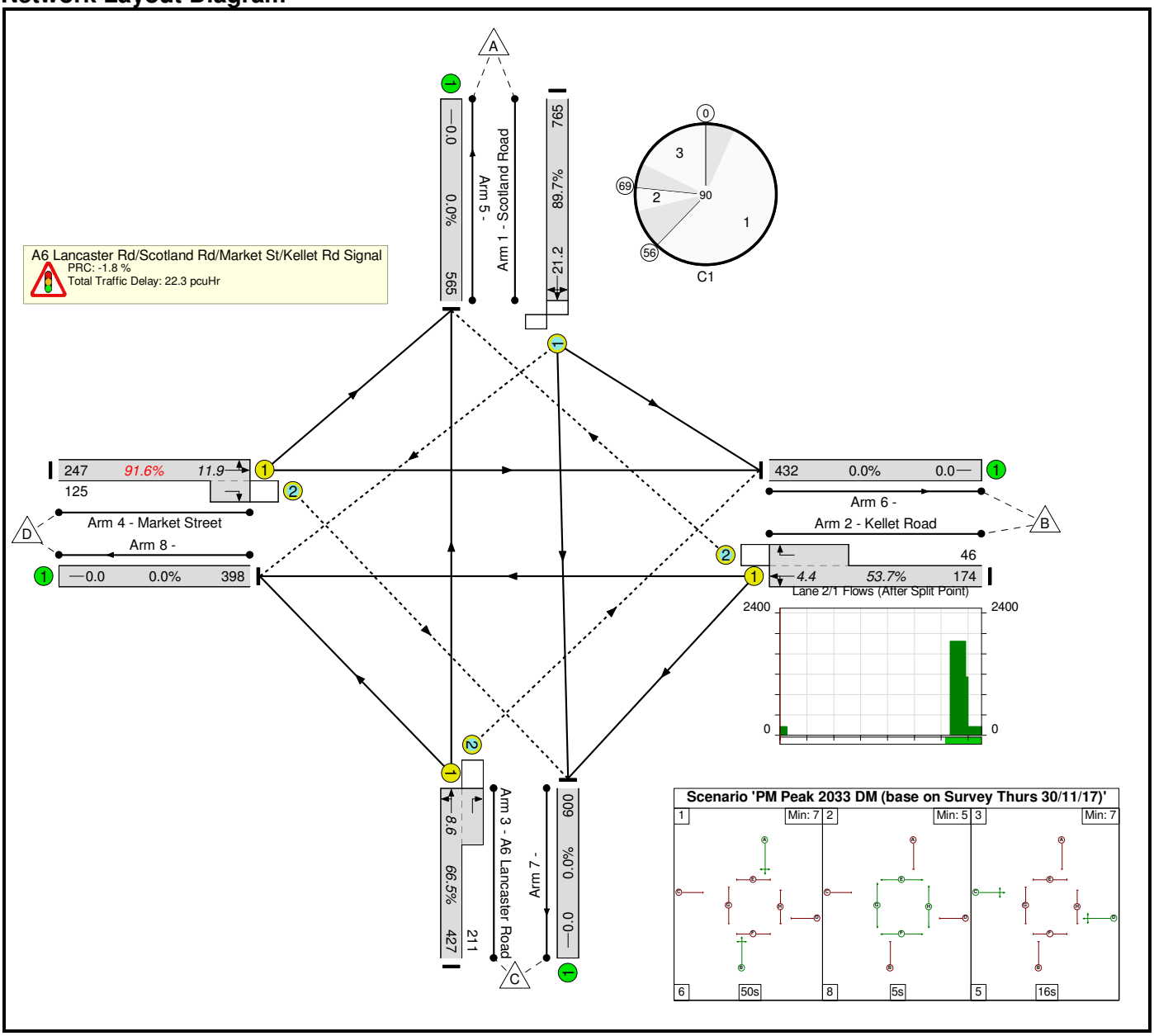
C1 PRC for Signalled Lanes (%): 8.6 Total Delay for Signalled Lanes (pcuHr): 19.76 Cycle Time (s): 90
PRC Over All Lanes (%): 8.6 Total Delay Over All Lanes(pcuHr): 19.76

Stage Sequence Diagram

Scenario 8: 'PM Peak 2033 DM (base on Survey Thurs 30/11/17)' (FG8: 'PM Peak 2033 DM (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**91.6%**	**11.6**	**9.9**	**22.3**	-	-	-	-
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	-	-	-	-	-	**91.6%**	**11.6**	**9.9**	**22.3**	-	-	-	-
1/1	Scotland Road Left Ahead Right	A	765	1749	853	89.7%	4.1	4.0	8.3	39.2	17.2	4.0	21.2
2/1+2/2	Kellet Road Right Left Ahead	D	220	1850:1499	410	53.7%	2.0	0.6	2.7	44.1	3.9	0.6	4.4
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	638	1884:1651	959	66.5%	2.0	1.0	3.2	17.8	7.6	1.0	8.6
4/1+4/2	Market Street Left Ahead Right	C	372	1851:1554	406	91.6%	3.6	4.3	8.1	78.7	7.6	4.3	11.9

C1

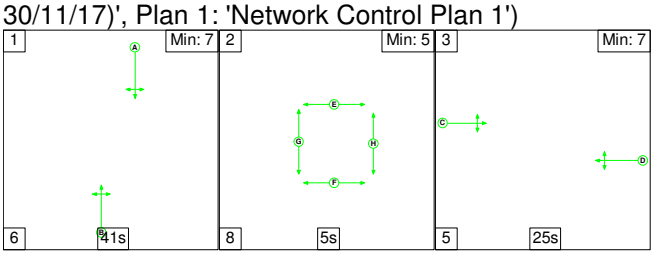
PRC for Signalled Lanes (%): -1.8
PRC Over All Lanes (%): -1.8

Total Delay for Signalled Lanes (pcuHr): 22.30
Total Delay Over All Lanes(pcuHr): 22.30

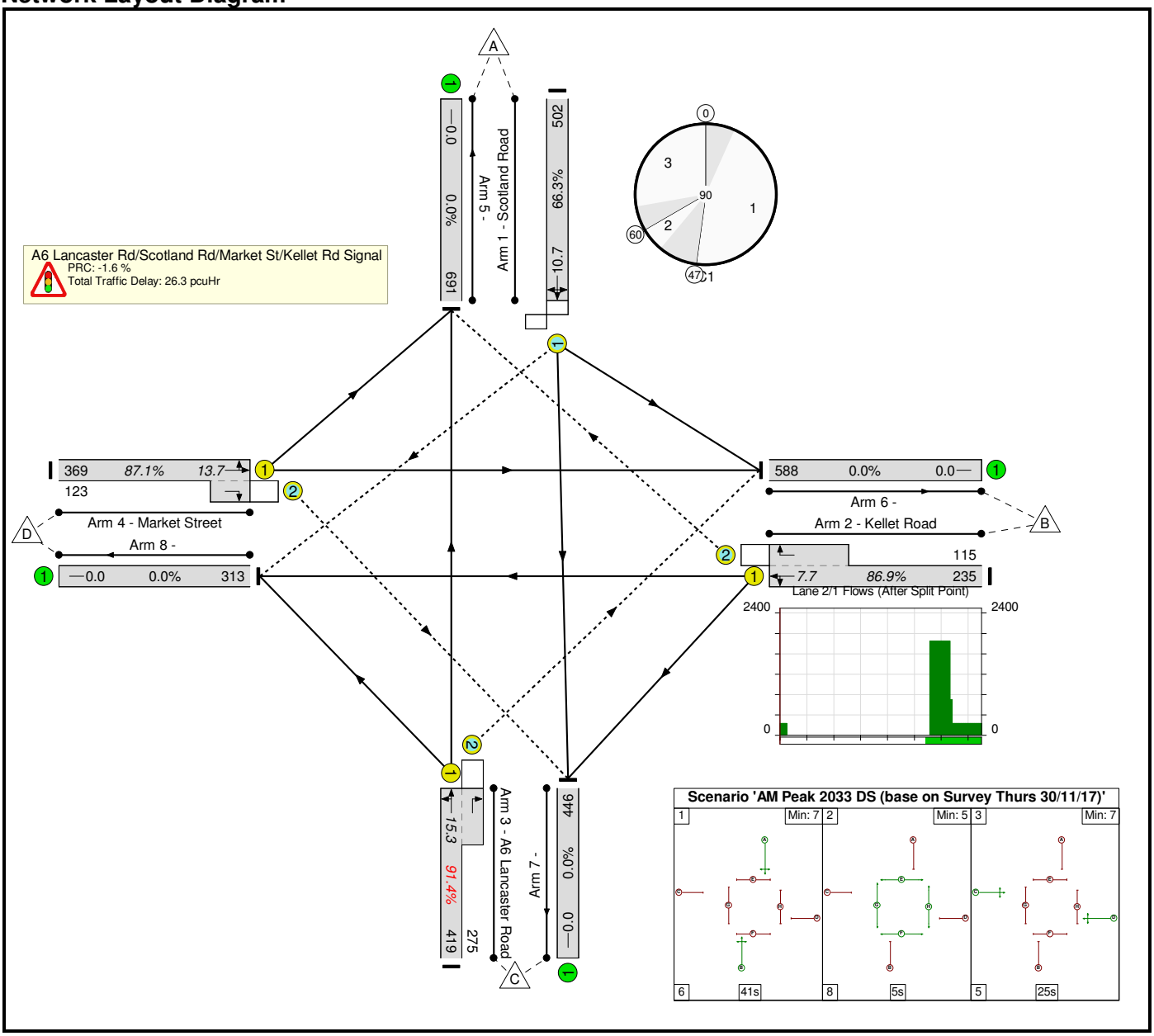
Cycle Time (s): 90

Stage Sequence Diagram

Scenario 9: 'AM Peak 2033 DS (base on Survey Thurs 30/11/17)' (FG9: 'AM Peak 2033 DS (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



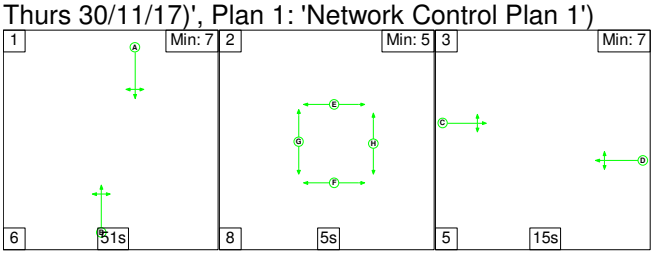
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**91.4%**	**13.0**	**11.7**	**26.3**	-	-	-	-
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	-	-	-	-	-	**91.4%**	**13.0**	**11.7**	**26.3**	-	-	-	-
1/1	Scotland Road Left Ahead Right	A	502	1695	757	66.3%	2.6	1.0	3.7	26.7	9.8	1.0	10.7
2/1+2/2	Kellet Road Right Left Ahead	D	350	1854:1499	403	86.9%	2.6	3.0	6.1	62.7	4.8	3.0	7.7
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	694	1880:1651	759	91.4%	3.8	4.7	9.2	47.9	10.7	4.7	15.3
4/1+4/2	Market Street Left Ahead Right	C	492	1841:1554	565	87.1%	4.0	3.1	7.3	53.2	10.5	3.1	13.7

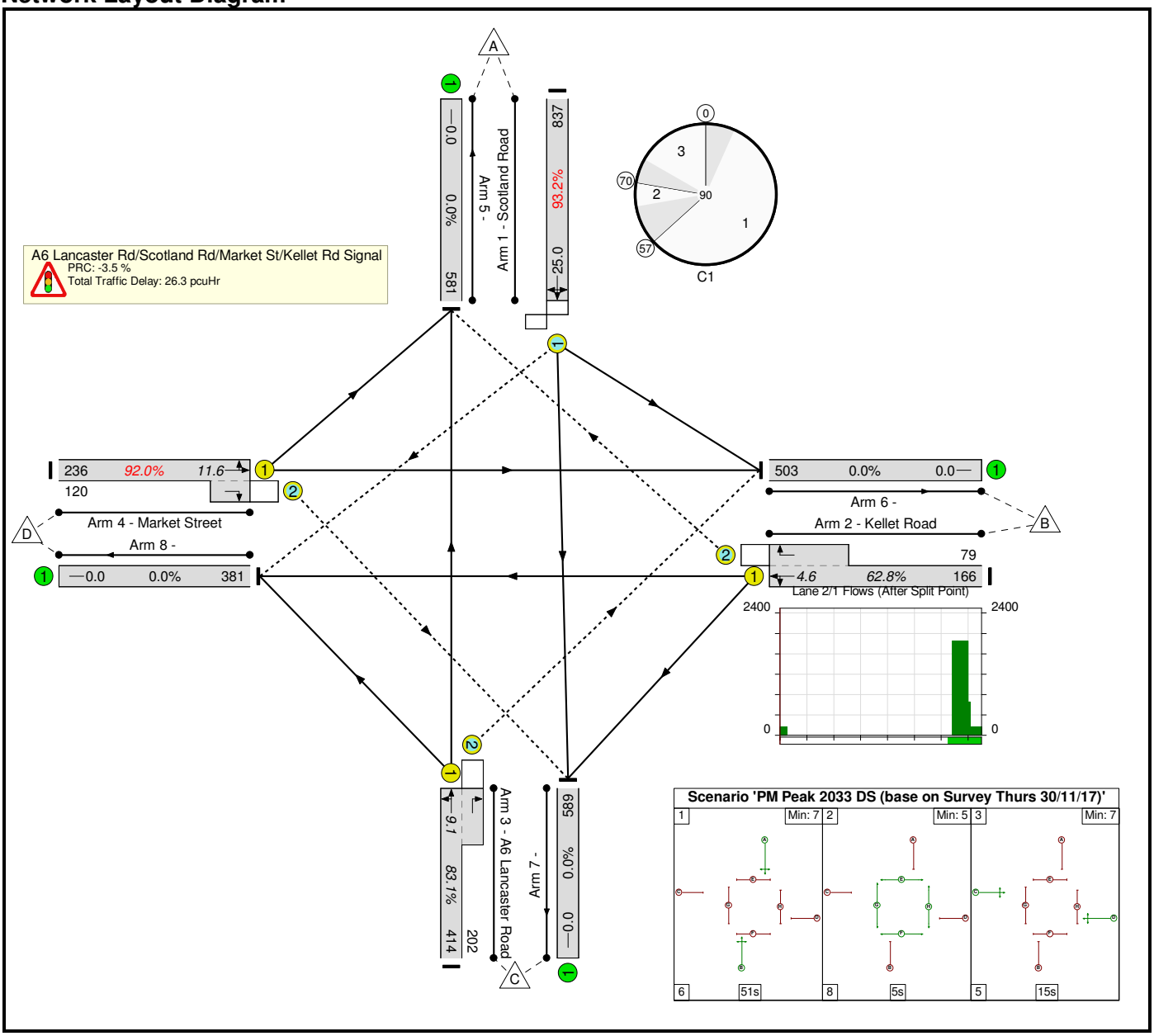
C1 PRC for Signalled Lanes (%): -1.6 Total Delay for Signalled Lanes (pcuHr): 26.32 Cycle Time (s): 90
PRC Over All Lanes (%): -1.6 Total Delay Over All Lanes(pcuHr): 26.32

Stage Sequence Diagram

Scenario 10: 'PM Peak 2033 DS (base on Survey Thurs 30/11/17)' (FG10: 'PM Peak 2033 DS (base on Survey Thurs 30/11/17)', Plan 1: 'Network Control Plan 1')



Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**93.2%**	**11.9**	**13.4**	**26.3**	-	-	-	-
A6 Lancaster Rd/Scotland Rd/Market St/Kellet Rd Signal	-	-	-	-	-	**93.2%**	**11.9**	**13.4**	**26.3**	-	-	-	-
1/1	Scotland Road Left Ahead Right	A	837	1704	898	93.2%	4.3	5.7	10.3	44.3	19.3	5.7	25.0
2/1+2/2	Kellet Road Right Left Ahead	D	245	1851:1499	390	62.8%	2.2	0.8	3.3	49.2	3.7	0.8	4.6
3/1+3/2	A6 Lancaster Road Ahead Right Left	B	616	1885:1651	741	83.1%	1.8	2.4	4.5	26.5	6.8	2.4	9.1
4/1+4/2	Market Street Left Ahead Right	C	356	1851:1554	387	92.0%	3.5	4.5	8.1	82.2	7.2	4.5	11.6

C1

PRC for Signalled Lanes (%): -3.5
PRC Over All Lanes (%): -3.5

Total Delay for Signalled Lanes (pcuHr): 26.31
Total Delay Over All Lanes(pcuHr): 26.31

Cycle Time (s): 90

Appendix G – Kellet Rd/Back Lane Junction Capacity Assessment Results

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: Kellet Rd_Back Ln Priority Jun (2018-11-21) - Mitigation.j9
Path: J:\2018\A107175 TP-Lancaster Local Plan Viability Study\Jun. Assessment\17 Kellet Rd_Back Ln Priority Jun
Report generation date: 18/12/2018 11:22:22

»Existing Layout - 2018 Surveyed Flows, AM
»Existing Layout - 2018 Surveyed Flows, PM
»Existing Layout - 2023 DM, AM
»Existing Layout - 2023 DM, PM
»Existing Layout - 2023 DS, AM
»Existing Layout - 2023 DS, PM
»Existing Layout - 2033 DM, AM
»Existing Layout - 2033 DM, PM
»Existing Layout - 2033 DS, AM
»Existing Layout - 2033 DS, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
	Existing Layout - 2018 Surveyed Flows							
Stream B-C	0.2	7.72	0.13	3.39	0.1	7.07	0.08	1.92
Stream B-A	0.7	14.93	0.37		0.2	11.88	0.17	
Stream C-AB	0.4	5.57	0.18		0.2	5.70	0.10	
	Existing Layout - 2023 DM							
Stream B-C	0.2	8.00	0.14	3.57	0.1	7.23	0.09	1.92
Stream B-A	0.8	16.43	0.40		0.3	12.44	0.18	
Stream C-AB	0.4	5.53	0.20		0.2	5.64	0.10	
	Existing Layout - 2023 DS							
Stream B-C	0.2	8.61	0.17	4.35	0.1	7.54	0.10	2.11
Stream B-A	1.1	19.83	0.50		0.3	13.03	0.23	
Stream C-AB	0.5	5.39	0.21		0.2	5.71	0.13	
	Existing Layout - 2033 DM							
Stream B-C	0.2	8.29	0.15	3.84	0.1	7.39	0.10	1.98
Stream B-A	0.9	18.00	0.44		0.3	12.96	0.19	
Stream C-AB	0.5	5.58	0.21		0.2	5.68	0.11	
	Existing Layout - 2033 DS							
Stream B-C	5.3	130.56	0.97	32.34	0.2	9.29	0.17	3.55
Stream B-A	9.1	99.51	0.94		0.9	19.32	0.45	
Stream C-AB	0.7	5.58	0.27		0.5	6.59	0.24	

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	14/02/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG\yujing.liu
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Surveyed Flows	AM	ONE HOUR	07:45	09:15	15	✓
D2	2018 Surveyed Flows	PM	ONE HOUR	15:45	17:15	15	✓
D3	2023 DM	AM	ONE HOUR	07:45	09:15	15	✓
D4	2023 DM	PM	ONE HOUR	15:45	17:15	15	✓
D5	2023 DS	AM	ONE HOUR	07:45	09:15	15	✓
D6	2023 DS	PM	ONE HOUR	15:45	17:15	15	✓
D7	2033 DM	AM	ONE HOUR	07:45	09:15	15	✓
D8	2033 DM	PM	ONE HOUR	15:45	17:15	15	✓
D9	2033 DS	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 DS	PM	ONE HOUR	15:45	17:15	15	✓

Analysis Set Details

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

Existing Layout - 2018 Surveyed Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		3.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Kellet Rd (E)		Major
B	Back Ln		Minor
C	Kellet Rd (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Kellet Rd (W)	7.10			210.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	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 - Back Ln	One lane plus flare	10.00	9.40	6.50	5.75	5.75		4.00	35	104

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	621	0.108	0.272	0.171	0.389
1	B-C	688	0.100	0.254	-	-
1	C-B	696	0.257	0.257	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Surveyed Flows	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	380	100.000
B - Back Ln		ONE HOUR	✓	209	100.000
C - Kellet Rd (W)		ONE HOUR	✓	396	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	126	254
	B - Back Ln	145	0	64
	C - Kellet Rd (W)	320	76	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	34	1
	B - Back Ln	15	0	2
	C - Kellet Rd (W)	2	7	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)
B-C	0.13	7.72	0.2	A	59	88
B-A	0.37	14.93	0.7	B	133	200
C-AB	0.18	5.57	0.4	A	112	168
C-A					251	377
A-B					116	173
A-C					233	350

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	48	12	595	0.081	48	0.0	0.1	6.702	A
B-A	109	27	495	0.220	108	0.0	0.3	10.655	B
C-AB	83	21	780	0.106	82	0.0	0.2	5.437	A
C-A	215	54			215				
A-B	95	24			95				
A-C	191	48			191				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	58	14	575	0.100	57	0.1	0.1	7.092	A
B-A	130	33	471	0.277	130	0.3	0.4	12.134	B
C-AB	107	27	799	0.134	107	0.2	0.2	5.483	A
C-A	249	62			249				
A-B	113	28			113				
A-C	228	57			228				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	18	546	0.129	70	0.1	0.1	7.711	A
B-A	160	40	437	0.365	159	0.4	0.6	14.795	B
C-AB	146	37	826	0.177	146	0.2	0.4	5.566	A
C-A	290	72			290				
A-B	139	35			139				
A-C	280	70			280				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	18	546	0.129	70	0.1	0.2	7.723	A
B-A	160	40	437	0.365	160	0.6	0.7	14.930	B
C-AB	147	37	826	0.178	147	0.4	0.4	5.562	A
C-A	289	72			289				
A-B	139	35			139				
A-C	280	70			280				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	58	14	574	0.100	58	0.2	0.1	7.106	A
B-A	130	33	471	0.277	131	0.7	0.4	12.224	B
C-AB	107	27	799	0.134	108	0.4	0.3	5.475	A
C-A	249	62			249				
A-B	113	28			113				
A-C	228	57			228				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	48	12	594	0.081	48	0.1	0.1	6.723	A
B-A	109	27	495	0.220	110	0.4	0.3	10.753	B
C-AB	83	21	780	0.107	83	0.3	0.2	5.442	A
C-A	215	54			215				
A-B	95	24			95				
A-C	191	48			191				

Existing Layout - 2018 Surveyed Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		1.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Surveyed Flows	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	431	100.000
B - Back Ln		ONE HOUR	✓	113	100.000
C - Kellet Rd (W)		ONE HOUR	✓	218	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	133	298
	B - Back Ln	68	0	45
	C - Kellet Rd (W)	173	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	7	1
	B - Back Ln	24	0	5
	C - Kellet Rd (W)	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)
B-C	0.08	7.07	0.1	A	41	62
B-A	0.17	11.88	0.2	B	62	94
C-AB	0.10	5.70	0.2	A	54	81
C-A					146	219
A-B					122	183
A-C					273	410

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	8	625	0.054	34	0.0	0.1	6.384	A
B-A	51	13	499	0.103	51	0.0	0.1	9.948	A
C-AB	42	10	698	0.060	41	0.0	0.1	5.501	A
C-A	122	31			122				
A-B	100	25			100				
A-C	224	56			224				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	608	0.067	40	0.1	0.1	6.660	A
B-A	61	15	479	0.128	61	0.1	0.2	10.689	B
C-AB	52	13	700	0.074	52	0.1	0.1	5.578	A
C-A	144	36			144				
A-B	120	30			120				
A-C	268	67			268				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	12	584	0.085	49	0.1	0.1	7.071	A
B-A	75	19	451	0.166	75	0.2	0.2	11.864	B
C-AB	68	17	704	0.097	68	0.1	0.2	5.691	A
C-A	172	43			172				
A-B	146	37			146				
A-C	328	82			328				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	12	584	0.085	50	0.1	0.1	7.073	A
B-A	75	19	451	0.166	75	0.2	0.2	11.880	B
C-AB	68	17	704	0.097	68	0.2	0.2	5.699	A
C-A	172	43			172				
A-B	146	37			146				
A-C	328	82			328				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	40	10	608	0.067	41	0.1	0.1	6.665	A
B-A	61	15	479	0.128	61	0.2	0.2	10.704	B
C-AB	52	13	700	0.074	52	0.2	0.1	5.586	A
C-A	144	36			144				
A-B	120	30			120				
A-C	268	67			268				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	34	8	625	0.054	34	0.1	0.1	6.397	A
B-A	51	13	499	0.103	51	0.2	0.1	9.978	A
C-AB	42	10	698	0.060	42	0.1	0.1	5.508	A
C-A	122	31			122				
A-B	100	25			100				
A-C	224	56			224				

Existing Layout - 2023 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		3.57	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2023 DM	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	409	100.000
B - Back Ln		ONE HOUR	✓	221	100.000
C - Kellet Rd (W)		ONE HOUR	✓	438	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	133	276
	B - Back Ln	153	0	68
	C - Kellet Rd (W)	358	80	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	34	1
	B - Back Ln	15	0	2
	C - Kellet Rd (W)	2	7	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)
B-C	0.14	8.00	0.2	A	62	94
B-A	0.40	16.43	0.8	C	140	211
C-AB	0.20	5.53	0.4	A	125	188
C-A					277	415
A-B					122	183
A-C					253	380

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	588	0.087	51	0.0	0.1	6.827	A
B-A	115	29	484	0.238	114	0.0	0.4	11.146	B
C-AB	91	23	794	0.115	90	0.0	0.2	5.386	A
C-A	239	60			239				
A-B	100	25			100				
A-C	208	52			208				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	61	15	566	0.108	61	0.1	0.1	7.264	A
B-A	138	34	457	0.301	137	0.4	0.5	12.911	B
C-AB	119	30	816	0.146	119	0.2	0.3	5.432	A
C-A	275	69			275				
A-B	120	30			120				
A-C	248	62			248				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	534	0.140	75	0.1	0.2	7.988	A
B-A	168	42	420	0.401	167	0.5	0.7	16.299	C
C-AB	165	41	847	0.195	165	0.3	0.4	5.533	A
C-A	317	79			317				
A-B	146	37			146				
A-C	304	76			304				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	534	0.140	75	0.2	0.2	8.003	A
B-A	168	42	420	0.401	168	0.7	0.8	16.429	C
C-AB	166	41	848	0.195	166	0.4	0.4	5.532	A
C-A	317	79			317				
A-B	146	37			146				
A-C	304	76			304				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	61	15	565	0.108	61	0.2	0.1	7.287	A
B-A	138	34	457	0.301	139	0.8	0.5	13.039	B
C-AB	119	30	816	0.146	120	0.4	0.3	5.427	A
C-A	274	69			274				
A-B	120	30			120				
A-C	248	62			248				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	51	13	587	0.087	51	0.1	0.1	6.853	A
B-A	115	29	484	0.238	116	0.5	0.4	11.269	B
C-AB	92	23	794	0.115	92	0.3	0.2	5.394	A
C-A	238	60			238				
A-B	100	25			100				
A-C	208	52			208				

Existing Layout - 2023 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		1.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2023 DM	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	461	100.000
B - Back Ln		ONE HOUR	✓	118	100.000
C - Kellet Rd (W)		ONE HOUR	✓	248	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	140	321
	B - Back Ln	71	0	47
	C - Kellet Rd (W)	201	47	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	7	1
	B - Back Ln	24	0	5
	C - Kellet Rd (W)	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)
B-C	0.09	7.23	0.1	A	43	65
B-A	0.18	12.44	0.3	B	65	98
C-AB	0.10	5.64	0.2	A	59	88
C-A					169	253
A-B					128	193
A-C					295	442

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	619	0.057	35	0.0	0.1	6.467	A
B-A	53	13	490	0.109	53	0.0	0.2	10.208	B
C-AB	45	11	707	0.064	45	0.0	0.1	5.457	A
C-A	142	35			142				
A-B	105	26			105				
A-C	242	60			242				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	42	11	601	0.070	42	0.1	0.1	6.768	A
B-A	64	16	468	0.137	64	0.1	0.2	11.046	B
C-AB	57	14	711	0.080	57	0.1	0.1	5.529	A
C-A	166	42			166				
A-B	126	31			126				
A-C	289	72			289				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	13	575	0.090	52	0.1	0.1	7.223	A
B-A	78	20	437	0.179	78	0.2	0.3	12.416	B
C-AB	75	19	717	0.105	75	0.1	0.2	5.636	A
C-A	198	50			198				
A-B	154	39			154				
A-C	353	88			353				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	52	13	575	0.090	52	0.1	0.1	7.226	A
B-A	78	20	437	0.179	78	0.3	0.3	12.435	B
C-AB	75	19	717	0.105	75	0.2	0.2	5.645	A
C-A	198	49			198				
A-B	154	39			154				
A-C	353	88			353				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	42	11	600	0.070	42	0.1	0.1	6.774	A
B-A	64	16	468	0.136	64	0.3	0.2	11.069	B
C-AB	57	14	711	0.080	57	0.2	0.1	5.540	A
C-A	166	42			166				
A-B	126	31			126				
A-C	289	72			289				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	35	9	619	0.057	35	0.1	0.1	6.482	A
B-A	53	13	490	0.109	54	0.2	0.2	10.243	B
C-AB	45	11	707	0.064	45	0.1	0.1	5.468	A
C-A	142	35			142				
A-B	105	26			105				
A-C	242	60			242				

Existing Layout - 2023 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		4.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2023 DS	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	427	100.000
B - Back Ln		ONE HOUR	✓	263	100.000
C - Kellet Rd (W)		ONE HOUR	✓	495	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	142	285
	B - Back Ln	185	0	78
	C - Kellet Rd (W)	413	82	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	31	1
	B - Back Ln	12	0	1
	C - Kellet Rd (W)	2	7	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)
B-C	0.17	8.61	0.2	A	72	107
B-A	0.50	19.83	1.1	C	170	255
C-AB	0.21	5.39	0.5	A	140	209
C-A					315	472
A-B					130	195
A-C					262	392

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	575	0.102	58	0.0	0.1	7.030	A
B-A	139	35	475	0.293	137	0.0	0.5	11.873	B
C-AB	100	25	818	0.122	99	0.0	0.2	5.254	A
C-A	273	68			273				
A-B	107	27			107				
A-C	215	54			215				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	18	550	0.128	70	0.1	0.1	7.578	A
B-A	166	42	446	0.373	166	0.5	0.6	14.315	B
C-AB	132	33	845	0.156	132	0.2	0.3	5.296	A
C-A	313	78			313				
A-B	128	32			128				
A-C	256	64			256				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	509	0.169	86	0.1	0.2	8.575	A
B-A	204	51	407	0.501	202	0.6	1.1	19.522	C
C-AB	187	47	885	0.211	186	0.3	0.5	5.393	A
C-A	358	90			358				
A-B	156	39			156				
A-C	314	78			314				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	508	0.169	86	0.2	0.2	8.607	A
B-A	204	51	407	0.501	204	1.1	1.1	19.828	C
C-AB	187	47	885	0.211	187	0.5	0.5	5.392	A
C-A	358	90			358				
A-B	156	39			156				
A-C	314	78			314				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	18	548	0.128	70	0.2	0.1	7.611	A
B-A	166	42	446	0.373	168	1.1	0.7	14.567	B
C-AB	132	33	846	0.156	133	0.5	0.3	5.289	A
C-A	313	78			313				
A-B	128	32			128				
A-C	256	64			256				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	574	0.102	59	0.1	0.1	7.063	A
B-A	139	35	475	0.293	140	0.7	0.5	12.064	B
C-AB	100	25	818	0.122	100	0.3	0.2	5.265	A
C-A	273	68			273				
A-B	107	27			107				
A-C	215	54			215				

Existing Layout - 2023 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		2.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2023 DS	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	514	100.000
B - Back Ln		ONE HOUR	✓	139	100.000
C - Kellet Rd (W)		ONE HOUR	✓	285	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	172	342
	B - Back Ln	87	0	52
	C - Kellet Rd (W)	230	55	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	6	1
	B - Back Ln	18	0	4
	C - Kellet Rd (W)	1	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)
B-C	0.10	7.54	0.1	A	48	72
B-A	0.23	13.03	0.3	B	80	120
C-AB	0.13	5.71	0.2	A	73	109
C-A					189	283
A-B					158	237
A-C					314	471

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	39	10	603	0.065	39	0.0	0.1	6.628	A
B-A	65	16	481	0.136	65	0.0	0.2	10.196	B
C-AB	55	14	712	0.077	54	0.0	0.1	5.484	A
C-A	160	40			160				
A-B	129	32			129				
A-C	257	64			257				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	47	12	583	0.080	47	0.1	0.1	6.985	A
B-A	78	20	456	0.172	78	0.2	0.2	11.229	B
C-AB	70	17	718	0.097	69	0.1	0.2	5.572	A
C-A	187	47			187				
A-B	155	39			155				
A-C	307	77			307				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	57	14	554	0.103	57	0.1	0.1	7.537	A
B-A	96	24	422	0.227	95	0.2	0.3	12.994	B
C-AB	93	23	726	0.128	93	0.2	0.2	5.704	A
C-A	221	55			221				
A-B	189	47			189				
A-C	377	94			377				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	57	14	553	0.103	57	0.1	0.1	7.544	A
B-A	96	24	422	0.227	96	0.3	0.3	13.025	B
C-AB	93	23	726	0.128	93	0.2	0.2	5.711	A
C-A	220	55			220				
A-B	189	47			189				
A-C	377	94			377				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	47	12	582	0.080	47	0.1	0.1	6.996	A
B-A	78	20	456	0.172	79	0.3	0.2	11.267	B
C-AB	70	17	718	0.097	70	0.2	0.2	5.583	A
C-A	187	47			187				
A-B	155	39			155				
A-C	307	77			307				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	39	10	603	0.065	39	0.1	0.1	6.642	A
B-A	65	16	481	0.136	66	0.2	0.2	10.243	B
C-AB	55	14	712	0.077	55	0.2	0.1	5.495	A
C-A	160	40			160				
A-B	129	32			129				
A-C	257	64			257				

Existing Layout - 2033 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		3.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2033 DM	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	434	100.000
B - Back Ln		ONE HOUR	✓	233	100.000
C - Kellet Rd (W)		ONE HOUR	✓	465	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	141	293
	B - Back Ln	162	0	72
	C - Kellet Rd (W)	380	85	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	34	1
	B - Back Ln	15	0	2
	C - Kellet Rd (W)	2	7	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)
B-C	0.15	8.29	0.2	A	66	98
B-A	0.44	18.00	0.9	C	149	223
C-AB	0.21	5.58	0.5	A	138	207
C-A					289	433
A-B					129	194
A-C					269	403

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	54	13	582	0.093	53	0.0	0.1	6.953	A
B-A	122	30	476	0.256	120	0.0	0.4	11.600	B
C-AB	99	25	801	0.124	99	0.0	0.2	5.390	A
C-A	251	63			251				
A-B	106	27			106				
A-C	221	55			221				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	64	16	558	0.115	64	0.1	0.1	7.436	A
B-A	146	36	447	0.326	145	0.4	0.5	13.667	B
C-AB	131	33	824	0.159	130	0.2	0.3	5.452	A
C-A	287	72			287				
A-B	127	32			127				
A-C	263	66			263				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	20	522	0.151	79	0.1	0.2	8.271	A
B-A	178	45	408	0.437	177	0.5	0.9	17.811	C
C-AB	183	46	859	0.213	183	0.3	0.5	5.581	A
C-A	329	82			329				
A-B	155	39			155				
A-C	323	81			323				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	79	20	522	0.151	79	0.2	0.2	8.292	A
B-A	178	45	408	0.437	178	0.9	0.9	17.999	C
C-AB	183	46	859	0.214	183	0.5	0.5	5.583	A
C-A	328	82			328				
A-B	155	39			155				
A-C	323	81			323				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	64	16	557	0.115	64	0.2	0.1	7.461	A
B-A	146	36	447	0.326	147	0.9	0.6	13.840	B
C-AB	131	33	825	0.159	132	0.5	0.3	5.446	A
C-A	287	72			287				
A-B	127	32			127				
A-C	263	66			263				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	54	13	580	0.093	54	0.1	0.1	6.978	A
B-A	122	30	476	0.256	123	0.6	0.4	11.754	B
C-AB	100	25	801	0.125	100	0.3	0.2	5.399	A
C-A	250	63			250				
A-B	106	27			106				
A-C	221	55			221				

Existing Layout - 2033 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		1.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2033 DM	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	487	100.000
B - Back Ln		ONE HOUR	✓	125	100.000
C - Kellet Rd (W)		ONE HOUR	✓	264	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	147	340
	B - Back Ln	75	0	50
	C - Kellet Rd (W)	214	50	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	7	1
	B - Back Ln	24	0	5
	C - Kellet Rd (W)	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)
B-C	0.10	7.39	0.1	A	46	69
B-A	0.19	12.96	0.3	B	69	104
C-AB	0.11	5.68	0.2	A	64	96
C-A					178	267
A-B					135	202
A-C					312	468

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	614	0.061	37	0.0	0.1	6.552	A
B-A	57	14	483	0.117	56	0.0	0.2	10.442	B
C-AB	49	12	709	0.068	48	0.0	0.1	5.471	A
C-A	150	38			150				
A-B	111	28			111				
A-C	256	64			256				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	594	0.075	45	0.1	0.1	6.881	A
B-A	68	17	460	0.147	67	0.2	0.2	11.379	B
C-AB	61	15	713	0.086	61	0.1	0.1	5.549	A
C-A	176	44			176				
A-B	132	33			132				
A-C	306	76			306				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	14	567	0.097	55	0.1	0.1	7.381	A
B-A	83	21	427	0.194	83	0.2	0.3	12.934	B
C-AB	82	20	721	0.113	81	0.1	0.2	5.666	A
C-A	209	52			209				
A-B	162	40			162				
A-C	374	94			374				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	55	14	566	0.097	55	0.1	0.1	7.387	A
B-A	83	21	427	0.194	83	0.3	0.3	12.960	B
C-AB	82	20	721	0.113	82	0.2	0.2	5.676	A
C-A	209	52			209				
A-B	162	40			162				
A-C	374	94			374				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	45	11	594	0.075	45	0.1	0.1	6.888	A
B-A	68	17	460	0.147	68	0.3	0.2	11.410	B
C-AB	61	15	713	0.086	62	0.2	0.1	5.561	A
C-A	176	44			176				
A-B	132	33			132				
A-C	306	76			306				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	37	9	613	0.061	38	0.1	0.1	6.565	A
B-A	57	14	483	0.117	57	0.2	0.2	10.481	B
C-AB	49	12	709	0.069	49	0.1	0.1	5.483	A
C-A	150	37			150				
A-B	111	28			111				
A-C	256	64			256				

Existing Layout - 2033 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		32.34	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 DS	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	504	100.000
B - Back Ln		ONE HOUR	✓	446	100.000
C - Kellet Rd (W)		ONE HOUR	✓	578	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	190	314
	B - Back Ln	320	0	126
	C - Kellet Rd (W)	482	96	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	23	1
	B - Back Ln	7	0	1
	C - Kellet Rd (W)	2	6	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)
B-C	0.97	130.56	5.3	F	116	173
B-A	0.94	99.51	9.1	F	294	440
C-AB	0.27	5.58	0.7	A	184	275
C-A					347	520
A-B					174	262
A-C					288	432

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	95	24	520	0.183	94	0.0	0.2	8.522	A
B-A	241	60	454	0.530	236	0.0	1.2	17.328	C
C-AB	127	32	840	0.151	126	0.0	0.3	5.249	A
C-A	308	77			308				
A-B	143	36			143				
A-C	236	59			236				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	113	28	453	0.250	113	0.2	0.3	10.677	B
B-A	288	72	421	0.684	284	1.2	2.1	27.348	D
C-AB	172	43	874	0.197	172	0.3	0.4	5.345	A
C-A	348	87			348				
A-B	171	43			171				
A-C	282	71			282				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	139	35	201	0.691	132	0.3	1.9	49.613	E
B-A	352	88	374	0.942	332	2.1	7.2	70.385	F
C-AB	251	63	921	0.272	250	0.4	0.7	5.576	A
C-A	386	96			386				
A-B	209	52			209				
A-C	346	86			346				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	139	35	144	0.966	125	1.9	5.3	130.559	F
B-A	352	88	374	0.942	345	7.2	9.1	99.510	F
C-AB	251	63	922	0.273	251	0.7	0.7	5.584	A
C-A	385	96			385				
A-B	209	52			209				
A-C	346	86			346				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	113	28	413	0.275	133	5.3	0.4	13.906	B
B-A	288	72	419	0.687	314	9.1	2.6	43.141	E
C-AB	173	43	874	0.197	174	0.7	0.5	5.351	A
C-A	347	87			347				
A-B	171	43			171				
A-C	282	71			282				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	95	24	513	0.185	95	0.4	0.2	8.723	A
B-A	241	60	455	0.530	246	2.6	1.3	18.945	C
C-AB	128	32	841	0.152	128	0.5	0.3	5.267	A
C-A	307	77			307				
A-B	143	36			143				
A-C	236	59			236				

Existing Layout - 2033 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Kellet Rd/Back Ln Priority Jun	T-Junction	Two-way		3.55	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2033 DS	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Kellet Rd (E)		ONE HOUR	✓	696	100.000
B - Back Ln		ONE HOUR	✓	229	100.000
C - Kellet Rd (W)		ONE HOUR	✓	369	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	304	392
	B - Back Ln	153	0	76
	C - Kellet Rd (W)	280	89	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - Kellet Rd (E)	B - Back Ln	C - Kellet Rd (W)
From	A - Kellet Rd (E)	0	3	1
	B - Back Ln	10	0	3
	C - Kellet Rd (W)	1	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)
B-C	0.17	9.29	0.2	A	70	105
B-A	0.45	19.32	0.9	C	140	211
C-AB	0.24	6.59	0.5	A	131	196
C-A					208	312
A-B					279	418
A-C					360	540

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	57	14	557	0.103	57	0.0	0.1	7.399	A
B-A	115	29	450	0.256	114	0.0	0.4	11.718	B
C-AB	96	24	706	0.135	95	0.0	0.2	5.900	A
C-A	182	46			182				
A-B	229	57			229				
A-C	295	74			295				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	68	17	528	0.129	68	0.1	0.2	8.063	A
B-A	138	34	418	0.329	137	0.4	0.5	14.064	B
C-AB	124	31	712	0.174	124	0.2	0.3	6.142	A
C-A	208	52			208				
A-B	273	68			273				
A-C	352	88			352				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	84	21	484	0.173	83	0.2	0.2	9.254	A
B-A	168	42	373	0.451	167	0.5	0.9	19.074	C
C-AB	172	43	722	0.238	171	0.3	0.5	6.564	A
C-A	235	59			235				
A-B	335	84			335				
A-C	432	108			432				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	84	21	483	0.173	84	0.2	0.2	9.285	A
B-A	168	42	373	0.451	168	0.9	0.9	19.315	C
C-AB	172	43	722	0.238	172	0.5	0.5	6.585	A
C-A	234	59			234				
A-B	335	84			335				
A-C	432	108			432				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	68	17	527	0.130	69	0.2	0.2	8.098	A
B-A	138	34	418	0.329	139	0.9	0.6	14.264	B
C-AB	124	31	713	0.175	125	0.5	0.3	6.168	A
C-A	207	52			207				
A-B	273	68			273				
A-C	352	88			352				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	57	14	556	0.103	57	0.2	0.1	7.434	A
B-A	115	29	450	0.256	116	0.6	0.4	11.872	B
C-AB	96	24	707	0.136	96	0.3	0.2	5.929	A
C-A	182	45			182				
A-B	229	57			229				
A-C	295	74			295				

Appendix H – Kellet Rd/A601(M) Junction Capacity Assessment Results

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: A601(M)_Kellet Rd Priority Jun (2018-11-21) Mitigation-Priority Changing.j9
Path: J:\2018\A107175 TP-Lancaster Local Plan Viability Study\Jun. Assessment\18 A601(M)_Kellet Rd Priority Jun
Report generation date: 18/12/2018 11:23:26

»Existing Layout - 2018 Surveyed Flows, AM
»Existing Layout - 2018 Surveyed Flows, PM
»Existing Layout - 2023 DM, AM
»Existing Layout - 2023 DM, PM
»Existing Layout - 2023 DS, AM
»Existing Layout - 2023 DS, PM
»Existing Layout - 2033 DM, AM
»Existing Layout - 2033 DM, PM
»Existing Layout - 2033 DS, AM
»Existing Layout - 2033 DS, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)	Queue (PCU)	Delay (s)	RFC	Junction Delay (s)
Existing Layout - 2018 Surveyed Flows								
Stream B-C	0.2	7.56	0.15	2.75	0.2	7.06	0.14	2.31
Stream B-A	0.4	13.54	0.25		0.2	11.57	0.17	
Stream C-AB	0.3	8.40	0.21		0.2	8.34	0.18	
Existing Layout - 2023 DM								
Stream B-C	0.3	8.41	0.21	3.32	0.2	7.62	0.17	2.64
Stream B-A	0.6	16.78	0.35		0.3	13.25	0.23	
Stream C-AB	0.4	9.13	0.25		0.3	9.02	0.23	
Existing Layout - 2023 DS								
Stream B-C	0.3	8.68	0.21	3.39	0.2	7.89	0.19	2.65
Stream B-A	0.7	18.76	0.38		0.4	14.52	0.25	
Stream C-AB	0.4	9.44	0.27		0.3	9.41	0.24	
Existing Layout - 2033 DM								
Stream B-C	0.3	8.98	0.23	3.65	0.2	7.98	0.19	2.82
Stream B-A	0.7	19.31	0.40		0.4	14.51	0.26	
Stream C-AB	0.4	9.65	0.28		0.3	9.52	0.25	
Existing Layout - 2033 DS								
Stream B-C	0.4	10.08	0.27	4.15	0.4	9.47	0.26	3.04
Stream B-A	1.1	29.29	0.51		0.5	20.64	0.34	
Stream C-AB	0.6	10.89	0.35		0.5	11.15	0.31	

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	14/02/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG\yujing.liu
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Surveyed Flows	AM	ONE HOUR	07:45	09:15	15	✓
D2	2018 Surveyed Flows	PM	ONE HOUR	15:45	17:15	15	✓
D3	2023 DM	AM	ONE HOUR	07:45	09:15	15	✓
D4	2023 DM	PM	ONE HOUR	15:45	17:15	15	✓
D5	2023 DS	AM	ONE HOUR	07:45	09:15	15	✓
D6	2023 DS	PM	ONE HOUR	15:45	17:15	15	✓
D7	2033 DM	AM	ONE HOUR	07:45	09:15	15	✓
D8	2033 DM	PM	ONE HOUR	15:45	17:15	15	✓
D9	2033 DS	AM	ONE HOUR	07:45	09:15	15	✓
D10	2033 DS	PM	ONE HOUR	15:45	17:15	15	✓

Analysis Set Details

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

Existing Layout - 2018 Surveyed Flows, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		2.75	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	A601(M)		Major
B	Kellet Rd (E)		Minor
C	Kellet Rd (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Kellet Rd (W)	7.50		✓	3.00	58.0	✓	7.00

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	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 - Kellet Rd (E)	One lane plus flare	10.00	9.30	8.80	7.70	7.55	✓	3.00	55	57

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	605	0.103	0.260	0.164	0.372
1	B-C	734	0.105	0.266	-	-
1	C-B	660	0.239	0.239	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2018 Surveyed Flows	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	344	100.000
B - Kellet Rd (E)		ONE HOUR	✓	173	100.000
C - Kellet Rd (W)		ONE HOUR	✓	493	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	70	274
	B - Kellet Rd (E)	92	0	81
	C - Kellet Rd (W)	384	109	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	13	13
	B - Kellet Rd (E)	14	0	8
	C - Kellet Rd (W)	14	5	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)
B-C	0.15	7.56	0.2	A	74	111
B-A	0.25	13.54	0.4	B	84	127
C-AB	0.21	8.40	0.3	A	100	150
C-A					352	529
A-B					64	96
A-C					251	377

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	61	15	649	0.094	61	0.0	0.1	6.607	A
B-A	69	17	468	0.148	68	0.0	0.2	10.256	B
C-AB	82	21	599	0.137	81	0.0	0.2	7.301	A
C-A	289	72			289				
A-B	53	13			53				
A-C	206	52			206				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	73	18	630	0.116	73	0.1	0.1	6.972	A
B-A	83	21	441	0.187	82	0.2	0.3	11.429	B
C-AB	98	24	586	0.167	98	0.2	0.2	7.733	A
C-A	345	86			345				
A-B	63	16			63				
A-C	246	62			246				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	89	22	604	0.148	89	0.1	0.2	7.548	A
B-A	101	25	404	0.250	101	0.3	0.4	13.497	B
C-AB	120	30	570	0.211	120	0.2	0.3	8.392	A
C-A	423	106			423				
A-B	77	19			77				
A-C	302	75			302				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	89	22	604	0.148	89	0.2	0.2	7.557	A
B-A	101	25	404	0.250	101	0.4	0.4	13.535	B
C-AB	120	30	570	0.211	120	0.3	0.3	8.402	A
C-A	423	106			423				
A-B	77	19			77				
A-C	302	75			302				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	73	18	629	0.116	73	0.2	0.1	6.991	A
B-A	83	21	441	0.187	83	0.4	0.3	11.471	B
C-AB	98	24	586	0.167	98	0.3	0.2	7.746	A
C-A	345	86			345				
A-B	63	16			63				
A-C	246	62			246				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	61	15	648	0.094	61	0.1	0.1	6.631	A
B-A	69	17	468	0.148	70	0.3	0.2	10.306	B
C-AB	82	21	599	0.137	82	0.2	0.2	7.323	A
C-A	289	72			289				
A-B	53	13			53				
A-C	206	52			206				

Existing Layout - 2018 Surveyed Flows, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		2.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2018 Surveyed Flows	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	411	100.000
B - Kellet Rd (E)		ONE HOUR	✓	142	100.000
C - Kellet Rd (W)		ONE HOUR	✓	326	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	87	324
	B - Kellet Rd (E)	62	0	80
	C - Kellet Rd (W)	236	90	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	16	4
	B - Kellet Rd (E)	7	0	7
	C - Kellet Rd (W)	11	5	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)
B-C	0.14	7.06	0.2	A	73	110
B-A	0.17	11.57	0.2	B	57	85
C-AB	0.18	8.34	0.2	A	83	124
C-A					217	325
A-B					80	120
A-C					297	446

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	60	15	679	0.089	60	0.0	0.1	6.213	A
B-A	47	12	456	0.102	46	0.0	0.1	9.394	A
C-AB	68	17	586	0.116	67	0.0	0.1	7.272	A
C-A	178	44			178				
A-B	65	16			65				
A-C	244	61			244				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	18	660	0.109	72	0.1	0.1	6.546	A
B-A	56	14	433	0.129	56	0.1	0.2	10.209	B
C-AB	81	20	572	0.141	81	0.1	0.2	7.691	A
C-A	212	53			212				
A-B	78	20			78				
A-C	291	73			291				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	88	22	634	0.139	88	0.1	0.2	7.057	A
B-A	68	17	401	0.170	68	0.2	0.2	11.555	B
C-AB	99	25	552	0.179	99	0.2	0.2	8.333	A
C-A	260	65			260				
A-B	96	24			96				
A-C	357	89			357				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	88	22	633	0.139	88	0.2	0.2	7.062	A
B-A	68	17	401	0.170	68	0.2	0.2	11.571	B
C-AB	99	25	552	0.179	99	0.2	0.2	8.341	A
C-A	260	65			260				
A-B	96	24			96				
A-C	357	89			357				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	72	18	660	0.109	72	0.2	0.1	6.554	A
B-A	56	14	433	0.129	56	0.2	0.2	10.224	B
C-AB	81	20	572	0.141	81	0.2	0.2	7.702	A
C-A	212	53			212				
A-B	78	20			78				
A-C	291	73			291				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	60	15	679	0.089	60	0.1	0.1	6.228	A
B-A	47	12	456	0.102	47	0.2	0.1	9.419	A
C-AB	68	17	586	0.116	68	0.2	0.1	7.290	A
C-A	178	44			178				
A-B	65	16			65				
A-C	244	61			244				

Existing Layout - 2023 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		3.32	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2023 DM	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	420	100.000
B - Kellet Rd (E)		ONE HOUR	✓	224	100.000
C - Kellet Rd (W)		ONE HOUR	✓	567	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	92	328
	B - Kellet Rd (E)	117	0	107
	C - Kellet Rd (W)	440	127	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	10	11
	B - Kellet Rd (E)	11	0	6
	C - Kellet Rd (W)	13	4	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)
B-C	0.21	8.41	0.3	A	98	147
B-A	0.35	16.78	0.6	C	107	161
C-AB	0.25	9.13	0.4	A	117	175
C-A					404	606
A-B					84	127
A-C					301	451

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	81	20	631	0.128	80	0.0	0.2	6.911	A
B-A	88	22	441	0.200	87	0.0	0.3	11.248	B
C-AB	96	24	585	0.163	95	0.0	0.2	7.628	A
C-A	331	83			331				
A-B	69	17			69				
A-C	247	62			247				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	96	24	608	0.158	96	0.2	0.2	7.458	A
B-A	105	26	410	0.257	105	0.3	0.4	13.072	B
C-AB	114	29	570	0.200	114	0.2	0.3	8.202	A
C-A	396	99			396				
A-B	83	21			83				
A-C	295	74			295				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	118	29	572	0.206	118	0.2	0.3	8.388	A
B-A	129	32	367	0.351	128	0.4	0.6	16.672	C
C-AB	140	35	550	0.254	139	0.3	0.4	9.114	A
C-A	484	121			484				
A-B	101	25			101				
A-C	361	90			361				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	118	29	571	0.206	118	0.3	0.3	8.412	A
B-A	129	32	367	0.351	129	0.6	0.6	16.778	C
C-AB	140	35	550	0.254	140	0.4	0.4	9.130	A
C-A	484	121			484				
A-B	101	25			101				
A-C	361	90			361				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	96	24	606	0.159	96	0.3	0.2	7.489	A
B-A	105	26	410	0.256	106	0.6	0.4	13.172	B
C-AB	114	29	570	0.200	115	0.4	0.3	8.223	A
C-A	396	99			396				
A-B	83	21			83				
A-C	295	74			295				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	81	20	630	0.128	81	0.2	0.2	6.949	A
B-A	88	22	441	0.200	89	0.4	0.3	11.339	B
C-AB	96	24	585	0.163	96	0.3	0.2	7.662	A
C-A	331	83			331				
A-B	69	17			69				
A-C	247	62			247				

Existing Layout - 2023 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		2.64	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2023 DM	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	472	100.000
B - Kellet Rd (E)		ONE HOUR	✓	173	100.000
C - Kellet Rd (W)		ONE HOUR	✓	398	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	111	361
	B - Kellet Rd (E)	79	0	94
	C - Kellet Rd (W)	288	110	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	13	4
	B - Kellet Rd (E)	6	0	6
	C - Kellet Rd (W)	10	4	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)
B-C	0.17	7.62	0.2	A	86	129
B-A	0.23	13.25	0.3	B	72	109
C-AB	0.23	9.02	0.3	A	101	151
C-A					264	396
A-B					102	153
A-C					331	497

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	71	18	659	0.107	70	0.0	0.1	6.479	A
B-A	59	15	440	0.135	59	0.0	0.2	10.002	B
C-AB	83	21	575	0.144	82	0.0	0.2	7.578	A
C-A	217	54			217				
A-B	84	21			84				
A-C	272	68			272				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	85	21	636	0.133	84	0.1	0.2	6.913	A
B-A	71	18	413	0.172	71	0.2	0.2	11.160	B
C-AB	99	25	559	0.177	99	0.2	0.2	8.131	A
C-A	259	65			259				
A-B	100	25			100				
A-C	325	81			325				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	103	26	604	0.171	103	0.2	0.2	7.610	A
B-A	87	22	375	0.232	87	0.2	0.3	13.211	B
C-AB	121	30	536	0.226	121	0.2	0.3	9.008	A
C-A	317	79			317				
A-B	122	31			122				
A-C	397	99			397				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	103	26	604	0.171	103	0.2	0.2	7.620	A
B-A	87	22	375	0.232	87	0.3	0.3	13.249	B
C-AB	121	30	536	0.226	121	0.3	0.3	9.020	A
C-A	317	79			317				
A-B	122	31			122				
A-C	397	99			397				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	85	21	636	0.133	85	0.2	0.2	6.931	A
B-A	71	18	413	0.172	71	0.3	0.2	11.198	B
C-AB	99	25	559	0.177	99	0.3	0.2	8.150	A
C-A	259	65			259				
A-B	100	25			100				
A-C	325	81			325				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	71	18	658	0.108	71	0.2	0.1	6.503	A
B-A	59	15	440	0.135	60	0.2	0.2	10.048	B
C-AB	83	21	575	0.144	83	0.2	0.2	7.608	A
C-A	217	54			217				
A-B	84	21			84				
A-C	272	68			272				

Existing Layout - 2023 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		3.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2023 DS	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	438	100.000
B - Kellet Rd (E)		ONE HOUR	✓	229	100.000
C - Kellet Rd (W)		ONE HOUR	✓	654	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	94	344
	B - Kellet Rd (E)	120	0	109
	C - Kellet Rd (W)	519	135	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	10	11
	B - Kellet Rd (E)	11	0	6
	C - Kellet Rd (W)	11	4	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)
B-C	0.21	8.68	0.3	A	100	150
B-A	0.38	18.76	0.7	C	110	165
C-AB	0.27	9.44	0.4	A	124	186
C-A					476	714
A-B					86	129
A-C					316	473

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	82	21	626	0.131	81	0.0	0.2	7.006	A
B-A	90	23	426	0.212	89	0.0	0.3	11.809	B
C-AB	102	25	582	0.175	101	0.0	0.2	7.773	A
C-A	391	98			391				
A-B	71	18			71				
A-C	259	65			259				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	98	24	600	0.163	98	0.2	0.2	7.599	A
B-A	108	27	392	0.275	107	0.3	0.4	14.004	B
C-AB	121	30	566	0.214	121	0.2	0.3	8.406	A
C-A	467	117			467				
A-B	85	21			85				
A-C	309	77			309				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	120	30	561	0.214	120	0.2	0.3	8.645	A
B-A	132	33	345	0.383	131	0.4	0.7	18.601	C
C-AB	149	37	545	0.273	148	0.3	0.4	9.423	A
C-A	571	143			571				
A-B	103	26			103				
A-C	379	95			379				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	120	30	560	0.214	120	0.3	0.3	8.677	A
B-A	132	33	345	0.383	132	0.7	0.7	18.761	C
C-AB	149	37	545	0.273	149	0.4	0.4	9.441	A
C-A	571	143			571				
A-B	103	26			103				
A-C	379	95			379				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	98	24	598	0.164	98	0.3	0.2	7.636	A
B-A	108	27	392	0.275	109	0.7	0.4	14.137	B
C-AB	121	30	566	0.214	122	0.4	0.3	8.430	A
C-A	467	117			467				
A-B	85	21			85				
A-C	309	77			309				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	82	21	624	0.131	82	0.2	0.2	7.044	A
B-A	90	23	427	0.212	91	0.4	0.3	11.920	B
C-AB	102	25	582	0.175	102	0.3	0.2	7.809	A
C-A	391	98			391				
A-B	71	18			71				
A-C	259	65			259				

Existing Layout - 2023 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		2.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2023 DS	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	521	100.000
B - Kellet Rd (E)		ONE HOUR	✓	182	100.000
C - Kellet Rd (W)		ONE HOUR	✓	442	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	114	407
	B - Kellet Rd (E)	80	0	102
	C - Kellet Rd (W)	328	114	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	12	3
	B - Kellet Rd (E)	6	0	5
	C - Kellet Rd (W)	8	4	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)
B-C	0.19	7.89	0.2	A	94	140
B-A	0.25	14.52	0.4	B	73	110
C-AB	0.24	9.41	0.3	A	105	157
C-A					301	451
A-B					105	157
A-C					373	560

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	77	19	653	0.118	76	0.0	0.1	6.554	A
B-A	60	15	422	0.143	60	0.0	0.2	10.511	B
C-AB	86	21	567	0.151	85	0.0	0.2	7.763	A
C-A	247	62			247				
A-B	86	21			86				
A-C	306	77			306				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	92	23	627	0.146	92	0.1	0.2	7.052	A
B-A	72	18	392	0.183	72	0.2	0.2	11.910	B
C-AB	102	26	548	0.187	102	0.2	0.2	8.388	A
C-A	295	74			295				
A-B	102	26			102				
A-C	366	91			366				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	112	28	592	0.190	112	0.2	0.2	7.874	A
B-A	88	22	351	0.251	88	0.2	0.3	14.471	B
C-AB	126	31	523	0.240	125	0.2	0.3	9.396	A
C-A	361	90			361				
A-B	126	31			126				
A-C	448	112			448				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	112	28	591	0.190	112	0.2	0.2	7.888	A
B-A	88	22	351	0.251	88	0.3	0.4	14.516	B
C-AB	126	31	523	0.240	126	0.3	0.3	9.412	A
C-A	361	90			361				
A-B	126	31			126				
A-C	448	112			448				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	92	23	627	0.146	92	0.2	0.2	7.072	A
B-A	72	18	392	0.183	72	0.4	0.2	11.953	B
C-AB	102	26	548	0.187	103	0.3	0.2	8.408	A
C-A	295	74			295				
A-B	102	26			102				
A-C	366	91			366				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	77	19	652	0.118	77	0.2	0.1	6.578	A
B-A	60	15	422	0.143	60	0.2	0.2	10.569	B
C-AB	86	21	567	0.151	86	0.2	0.2	7.795	A
C-A	247	62			247				
A-B	86	21			86				
A-C	306	77			306				

Existing Layout - 2033 DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		3.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2033 DM	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	458	100.000
B - Kellet Rd (E)		ONE HOUR	✓	243	100.000
C - Kellet Rd (W)		ONE HOUR	✓	614	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	98	360
	B - Kellet Rd (E)	125	0	118
	C - Kellet Rd (W)	476	138	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	10	11
	B - Kellet Rd (E)	11	0	6
	C - Kellet Rd (W)	13	4	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)
B-C	0.23	8.98	0.3	A	108	162
B-A	0.40	19.31	0.7	C	115	172
C-AB	0.28	9.65	0.4	A	127	190
C-A					437	655
A-B					90	135
A-C					330	496

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	89	22	624	0.142	88	0.0	0.2	7.110	A
B-A	94	24	425	0.221	93	0.0	0.3	11.985	B
C-AB	104	26	578	0.180	103	0.0	0.2	7.867	A
C-A	358	90			358				
A-B	74	18			74				
A-C	271	68			271				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	106	27	597	0.178	106	0.2	0.2	7.763	A
B-A	112	28	391	0.287	112	0.3	0.4	14.276	B
C-AB	124	31	562	0.221	124	0.2	0.3	8.539	A
C-A	428	107			428				
A-B	88	22			88				
A-C	324	81			324				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	130	32	556	0.234	130	0.2	0.3	8.940	A
B-A	138	34	344	0.400	137	0.4	0.7	19.125	C
C-AB	152	38	540	0.281	152	0.3	0.4	9.629	A
C-A	524	131			524				
A-B	108	27			108				
A-C	396	99			396				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	130	32	555	0.234	130	0.3	0.3	8.978	A
B-A	138	34	344	0.400	138	0.7	0.7	19.309	C
C-AB	152	38	540	0.281	152	0.4	0.4	9.650	A
C-A	524	131			524				
A-B	108	27			108				
A-C	396	99			396				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	106	27	596	0.178	106	0.3	0.2	7.806	A
B-A	112	28	391	0.287	113	0.7	0.5	14.430	B
C-AB	124	31	562	0.221	124	0.4	0.3	8.565	A
C-A	428	107			428				
A-B	88	22			88				
A-C	324	81			324				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	89	22	623	0.143	89	0.2	0.2	7.156	A
B-A	94	24	425	0.221	95	0.5	0.3	12.111	B
C-AB	104	26	578	0.180	104	0.3	0.2	7.906	A
C-A	358	90			358				
A-B	74	18			74				
A-C	271	68			271				

Existing Layout - 2033 DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		2.82	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2033 DM	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	509	100.000
B - Kellet Rd (E)		ONE HOUR	✓	187	100.000
C - Kellet Rd (W)		ONE HOUR	✓	438	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	118	391
	B - Kellet Rd (E)	84	0	103
	C - Kellet Rd (W)	317	121	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	13	4
	B - Kellet Rd (E)	6	0	6
	C - Kellet Rd (W)	10	4	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)
B-C	0.19	7.98	0.2	A	95	142
B-A	0.26	14.51	0.4	B	77	116
C-AB	0.25	9.52	0.3	A	111	167
C-A					291	436
A-B					108	162
A-C					359	538

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	78	19	652	0.119	77	0.0	0.1	6.630	A
B-A	63	16	426	0.149	63	0.0	0.2	10.483	B
C-AB	91	23	569	0.160	90	0.0	0.2	7.812	A
C-A	239	60			239				
A-B	89	22			89				
A-C	294	74			294				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	93	23	627	0.148	92	0.1	0.2	7.134	A
B-A	76	19	396	0.191	75	0.2	0.2	11.878	B
C-AB	109	27	551	0.197	109	0.2	0.3	8.457	A
C-A	285	71			285				
A-B	106	27			106				
A-C	352	88			352				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	113	28	592	0.192	113	0.2	0.2	7.963	A
B-A	92	23	355	0.260	92	0.2	0.4	14.459	B
C-AB	133	33	526	0.253	133	0.3	0.3	9.501	A
C-A	349	87			349				
A-B	130	32			130				
A-C	430	108			430				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	113	28	592	0.192	113	0.2	0.2	7.978	A
B-A	92	23	355	0.260	92	0.4	0.4	14.509	B
C-AB	133	33	526	0.253	133	0.3	0.3	9.521	A
C-A	349	87			349				
A-B	130	32			130				
A-C	430	108			430				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	93	23	627	0.148	93	0.2	0.2	7.155	A
B-A	76	19	396	0.191	76	0.4	0.3	11.934	B
C-AB	109	27	551	0.197	109	0.3	0.3	8.480	A
C-A	285	71			285				
A-B	106	27			106				
A-C	352	88			352				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	78	19	651	0.119	78	0.2	0.1	6.659	A
B-A	63	16	426	0.149	64	0.3	0.2	10.544	B
C-AB	91	23	569	0.160	91	0.3	0.2	7.845	A
C-A	239	60			239				
A-B	89	22			89				
A-C	294	74			294				

Existing Layout - 2033 DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		4.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2033 DS	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	518	100.000
B - Kellet Rd (E)		ONE HOUR	✓	252	100.000
C - Kellet Rd (W)		ONE HOUR	✓	863	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	103	415
	B - Kellet Rd (E)	126	0	126
	C - Kellet Rd (W)	696	167	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	9	9
	B - Kellet Rd (E)	11	0	6
	C - Kellet Rd (W)	8	3	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)
B-C	0.27	10.08	0.4	B	116	173
B-A	0.51	29.29	1.1	D	116	173
C-AB	0.35	10.89	0.6	B	153	230
C-A					639	958
A-B					95	142
A-C					381	571

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	95	24	613	0.155	94	0.0	0.2	7.339	A
B-A	95	24	376	0.252	93	0.0	0.4	14.074	B
C-AB	126	31	567	0.222	125	0.0	0.3	8.356	A
C-A	524	131			524				
A-B	78	19			78				
A-C	312	78			312				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	113	28	580	0.195	113	0.2	0.3	8.173	A
B-A	113	28	333	0.340	113	0.4	0.6	18.023	C
C-AB	150	38	549	0.273	150	0.3	0.4	9.276	A
C-A	626	156			626				
A-B	93	23			93				
A-C	373	93			373				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	139	35	520	0.267	138	0.3	0.4	9.983	A
B-A	139	35	275	0.505	137	0.6	1.1	28.562	D
C-AB	184	46	525	0.351	183	0.4	0.5	10.845	B
C-A	766	192			766				
A-B	113	28			113				
A-C	457	114			457				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	139	35	517	0.268	139	0.4	0.4	10.082	B
B-A	139	35	275	0.505	139	1.1	1.1	29.287	D
C-AB	184	46	525	0.351	184	0.5	0.6	10.885	B
C-A	766	192			766				
A-B	113	28			113				
A-C	457	114			457				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	113	28	577	0.196	114	0.4	0.3	8.253	A
B-A	113	28	334	0.339	115	1.1	0.6	18.439	C
C-AB	150	38	549	0.273	151	0.6	0.4	9.322	A
C-A	626	156			626				
A-B	93	23			93				
A-C	373	93			373				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	95	24	611	0.155	95	0.3	0.2	7.402	A
B-A	95	24	376	0.252	96	0.6	0.4	14.293	B
C-AB	126	31	567	0.222	126	0.4	0.3	8.415	A
C-A	524	131			524				
A-B	78	19			78				
A-C	312	78			312				

Existing Layout - 2033 DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	A601(M)/Kellet Rd Priority Jun	T-Junction	Two-way		3.04	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2033 DS	PM	ONE HOUR	15:45	17:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - A601(M)		ONE HOUR	✓	685	100.000
B - Kellet Rd (E)		ONE HOUR	✓	214	100.000
C - Kellet Rd (W)		ONE HOUR	✓	572	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	121	564
	B - Kellet Rd (E)	85	0	129
	C - Kellet Rd (W)	438	134	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A601(M)	B - Kellet Rd (E)	C - Kellet Rd (W)
From	A - A601(M)	0	12	2
	B - Kellet Rd (E)	5	0	4
	C - Kellet Rd (W)	6	3	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)
B-C	0.26	9.47	0.4	A	118	178
B-A	0.34	20.64	0.5	C	78	117
C-AB	0.31	11.15	0.5	B	123	184
C-A					402	603
A-B					111	167
A-C					518	776

Main Results for each time segment

15:45 - 16:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	97	24	623	0.156	96	0.0	0.2	7.103	A
B-A	64	16	369	0.173	63	0.0	0.2	12.323	B
C-AB	101	25	537	0.188	100	0.0	0.2	8.465	A
C-A	330	82			330				
A-B	91	23			91				
A-C	425	106			425				

16:00 - 16:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	116	29	589	0.197	116	0.2	0.3	7.913	A
B-A	76	19	330	0.231	76	0.2	0.3	14.846	B
C-AB	120	30	513	0.235	120	0.2	0.3	9.427	A
C-A	394	98			394				
A-B	109	27			109				
A-C	507	127			507				

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	142	36	538	0.264	142	0.3	0.4	9.424	A
B-A	94	23	277	0.338	93	0.3	0.5	20.450	C
C-AB	148	37	480	0.307	147	0.3	0.4	11.110	B
C-A	482	121			482				
A-B	133	33			133				
A-C	621	155			621				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	142	36	538	0.264	142	0.4	0.4	9.466	A
B-A	94	23	277	0.338	94	0.5	0.5	20.637	C
C-AB	148	37	480	0.307	148	0.4	0.5	11.147	B
C-A	482	121			482				
A-B	133	33			133				
A-C	621	155			621				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	116	29	588	0.197	116	0.4	0.3	7.953	A
B-A	76	19	330	0.231	77	0.5	0.3	14.990	B
C-AB	120	30	513	0.235	121	0.5	0.3	9.467	A
C-A	394	98			394				
A-B	109	27			109				
A-C	507	127			507				

17:00 - 17:15

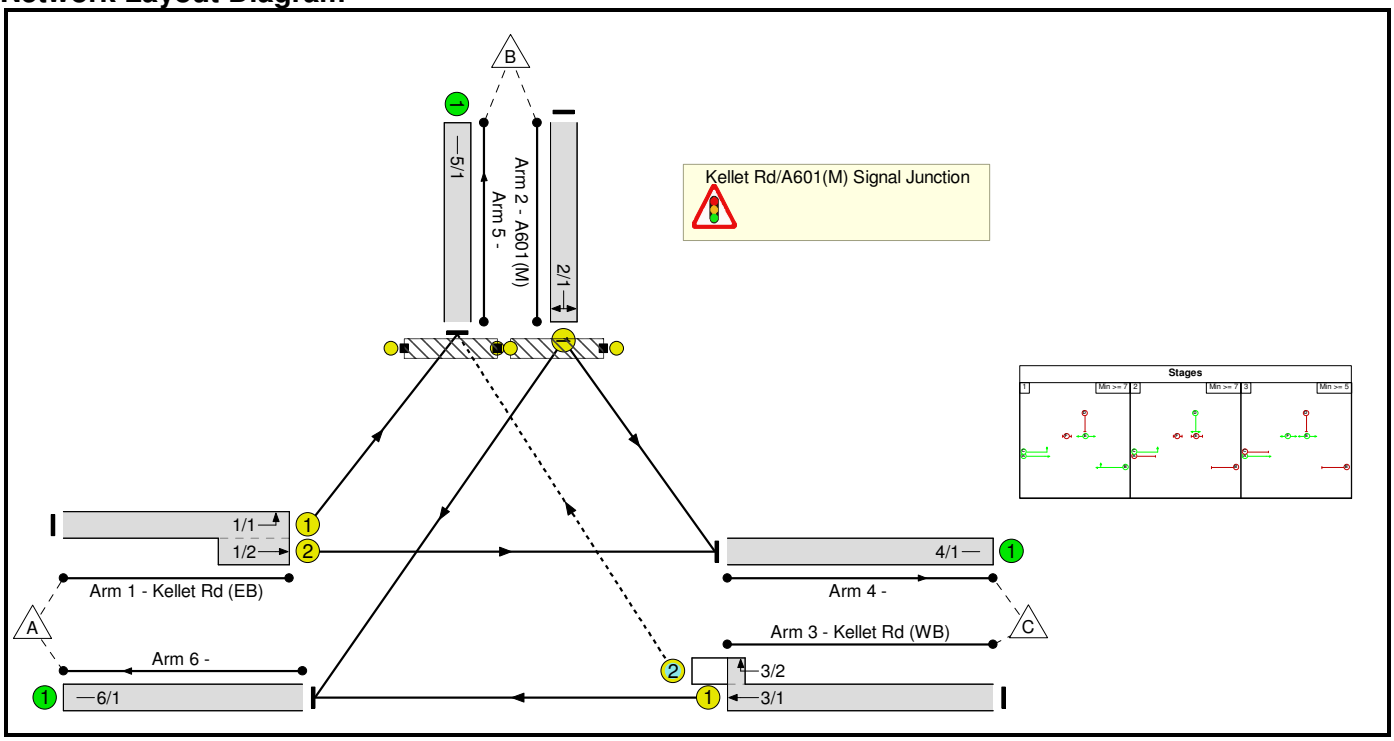
Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	97	24	622	0.156	97	0.3	0.2	7.146	A
B-A	64	16	369	0.174	64	0.3	0.2	12.434	B
C-AB	101	25	537	0.188	101	0.3	0.2	8.512	A
C-A	330	82			330				
A-B	91	23			91				
A-C	425	106			425				

Full Input Data And Results

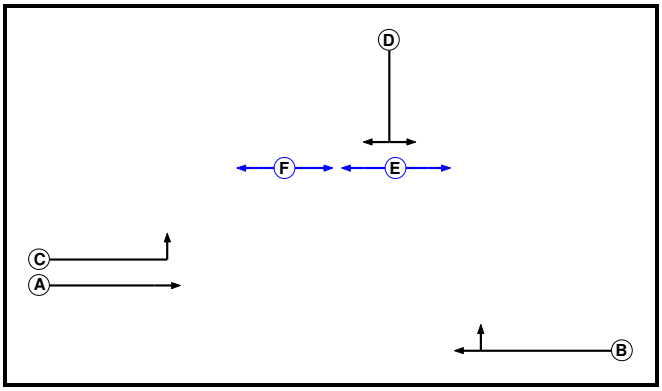
User and Project Details

Project:	
Title:	
Location:	
Additional detail:	
File name:	J18 Signal v3.lsg3x
Author:	
Company:	
Address:	

Network Layout Diagram



Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		7	7
B	Traffic		7	7
C	Traffic		7	7
D	Traffic		7	7
E	Pedestrian		5	5
F	Pedestrian		5	5

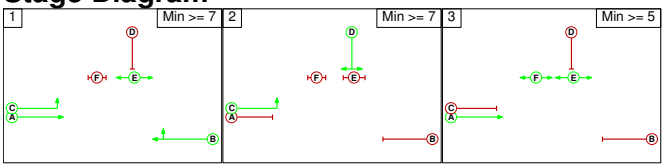
Phase Intergreens Matrix

		Starting Phase					
		A	B	C	D	E	F
Terminating Phase	A		-	-	8	-	-
	B	-		-	9	-	9
	C	-	-		-	-	8
	D	8	8	-		5	-
	E	-	-	-	6		-
	F	-	6	6	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

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

Prohibited Stage Change

		To Stage		
		1	2	3
From Stage	1		9	9
	2	8		8
	3	6	8	

Give-Way Lane Input Data

Junction: Kellet Rd/A601(M) Signal Junction

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)
3/2 (Kellet Rd (WB))	5/1 (Right)	1439	0	1/1	1.09	All	2.00	-	0.50	2	2.00
				1/2	1.09	All					

Lane Input Data

Junction: Kellet Rd/A601(M) Signal Junction

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 (Kellet Rd (EB))	U	C	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 5 Left	50.00
1/2 (Kellet Rd (EB))	U	A	2	3	4.0	Geom	-	5.00	0.00	Y	Arm 4 Ahead	Inf
2/1 (A601(M))	U	D	2	3	60.0	Geom	-	4.20	0.00	Y	Arm 4 Left	11.70
											Arm 6 Right	18.00
3/1 (Kellet Rd (WB))	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm 6 Ahead	Inf
3/2 (Kellet Rd (WB))	O	B	2	3	1.0	Geom	-	3.50	0.00	Y	Arm 5 Right	10.80
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak 2017 Surveyed Flows'	08:00	09:00	01:00	
2: 'PM Peak 2017 Surveyed Flows'	16:00	17:00	01:00	
3: 'AM Peak 2023 DM'	08:00	09:00	01:00	
4: 'PM Peak 2023 DM'	16:00	17:00	01:00	
5: 'AM Peak 2023 DS'	08:00	09:00	01:00	
6: 'PM Peak 2023 DS'	16:00	17:00	01:00	
7: 'AM Peak 2033 DM'	08:00	09:00	01:00	
8: 'PM Peak 2033 DM'	16:00	17:00	01:00	
9: 'AM Peak 2033 DS'	08:00	09:00	01:00	
10: 'PM Peak 2033 DS'	16:00	17:00	01:00	

Scenario 1: 'AM Peak 2017 Surveyed Flows' (FG1: 'AM Peak 2017 Surveyed Flows', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	384	109	493
	B	274	0	70	344
	C	81	92	0	173
	Tot.	355	476	179	1010

Traffic Lane Flows

Lane	Scenario 1: AM Peak 2017 Surveyed Flows
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	493(In) 384(Out)
1/2 (short)	109
2/1	344
3/1 (with short)	173(In) 81(Out)
3/2 (short)	92
4/1	179
5/1	476
6/1	355

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	20.3 %	1863	1863
				Arm 6 Right	18.00	79.7 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM Peak 2017 Surveyed Flows' (FG2: 'PM Peak 2017 Surveyed Flows', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

	Destination				
		A	B	C	Tot.
Origin	A	0	236	90	326
	B	324	0	87	411
	C	80	62	0	142
	Tot.	404	298	177	879

Traffic Lane Flows

Lane	Scenario 2: PM Peak 2017 Surveyed Flows
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	326(In) 236(Out)
1/2 (short)	90
2/1	411
3/1 (with short)	142(In) 80(Out)
3/2 (short)	62
4/1	177
5/1	298
6/1	404

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	21.2 %	1862	1862
				Arm 6 Right	18.00	78.8 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM Peak 2023 DM' (FG3: 'AM Peak 2023 DM', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	440	127	567
	B	328	0	92	420
	C	107	117	0	224
	Tot.	435	557	219	1211

Traffic Lane Flows

Lane	Scenario 3: AM Peak 2023 DM
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	567(In) 440(Out)
1/2 (short)	127
2/1	420
3/1 (with short)	224(In) 107(Out)
3/2 (short)	117
4/1	219
5/1	557
6/1	435

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	21.9 %	1862	1862
				Arm 6 Right	18.00	78.1 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM Peak 2023 DM' (FG4: 'PM Peak 2023 DM', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	288	110	398
	B	361	0	111	472
	C	94	79	0	173
	Tot.	455	367	221	1043

Traffic Lane Flows

Lane	Scenario 4: PM Peak 2023 DM
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	398(In) 288(Out)
1/2 (short)	110
2/1	472
3/1 (with short)	173(In) 94(Out)
3/2 (short)	79
4/1	221
5/1	367
6/1	455

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	23.5 %	1860	1860
				Arm 6 Right	18.00	76.5 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'AM Peak 2023 DS' (FG5: 'AM Peak 2023 DS', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	519	135	654
	B	344	0	94	438
	C	109	120	0	229
	Tot.	453	639	229	1321

Traffic Lane Flows

Lane	Scenario 5: AM Peak 2023 DS
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	654(In) 519(Out)
1/2 (short)	135
2/1	438
3/1 (with short)	229(In) 109(Out)
3/2 (short)	120
4/1	229
5/1	639
6/1	453

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	21.5 %	1862	1862
				Arm 6 Right	18.00	78.5 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM Peak 2023 DS' (FG6: 'PM Peak 2023 DS', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	328	114	442
	B	407	0	114	521
	C	102	80	0	182
	Tot.	509	408	228	1145

Traffic Lane Flows

Lane	Scenario 6: PM Peak 2023 DS
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	442(In) 328(Out)
1/2 (short)	114
2/1	521
3/1 (with short)	182(In) 102(Out)
3/2 (short)	80
4/1	228
5/1	408
6/1	509

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	21.9 %	1862	1862
				Arm 6 Right	18.00	78.1 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 7: 'AM Peak 2033 DM' (FG7: 'AM Peak 2033 DM', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	476	138	614
	B	360	0	98	458
	C	118	125	0	243
	Tot.	478	601	236	1315

Traffic Lane Flows

Lane	Scenario 7: AM Peak 2033 DM
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	614(In) 476(Out)
1/2 (short)	138
2/1	458
3/1 (with short)	243(In) 118(Out)
3/2 (short)	125
4/1	236
5/1	601
6/1	478

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	21.4 %	1862	1862
				Arm 6 Right	18.00	78.6 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 8: 'PM Peak 2033 DM' (FG8: 'PM Peak 2033 DM', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	317	121	438
	B	391	0	118	509
	C	103	84	0	187
	Tot.	494	401	239	1134

Traffic Lane Flows

Lane	Scenario 8: PM Peak 2033 DM
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	438(In) 317(Out)
1/2 (short)	121
2/1	509
3/1 (with short)	187(In) 103(Out)
3/2 (short)	84
4/1	239
5/1	401
6/1	494

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	23.2 %	1861	1861
				Arm 6 Right	18.00	76.8 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 9: 'AM Peak 2033 DS' (FG9: 'AM Peak 2033 DS', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	696	167	863
	B	415	0	103	518
	C	126	126	0	252
	Tot.	541	822	270	1633

Traffic Lane Flows

Lane	Scenario 9: AM Peak 2033 DS
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	863(In) 696(Out)
1/2 (short)	167
2/1	518
3/1 (with short)	252(In) 126(Out)
3/2 (short)	126
4/1	270
5/1	822
6/1	541

Lane Saturation Flows

Junction: Kellet Rd/A601(M) Signal Junction								
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 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	19.9 %	1863	1863
				Arm 6 Right	18.00	80.1 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 10: 'PM Peak 2033 DS' (FG9: 'AM Peak 2033 DS', Plan 1: 'Ped stage in each cycle')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	696	167	863
	B	415	0	103	518
	C	126	126	0	252
	Tot.	541	822	270	1633

Traffic Lane Flows

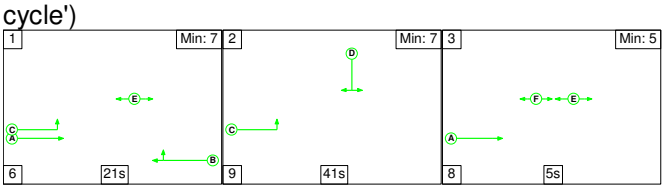
Lane	Scenario 10: PM Peak 2033 DS
Junction: Kellet Rd/A601(M) Signal Junction	
1/1 (with short)	863(In) 696(Out)
1/2 (short)	167
2/1	518
3/1 (with short)	252(In) 126(Out)
3/2 (short)	126
4/1	270
5/1	822
6/1	541

Lane Saturation Flows

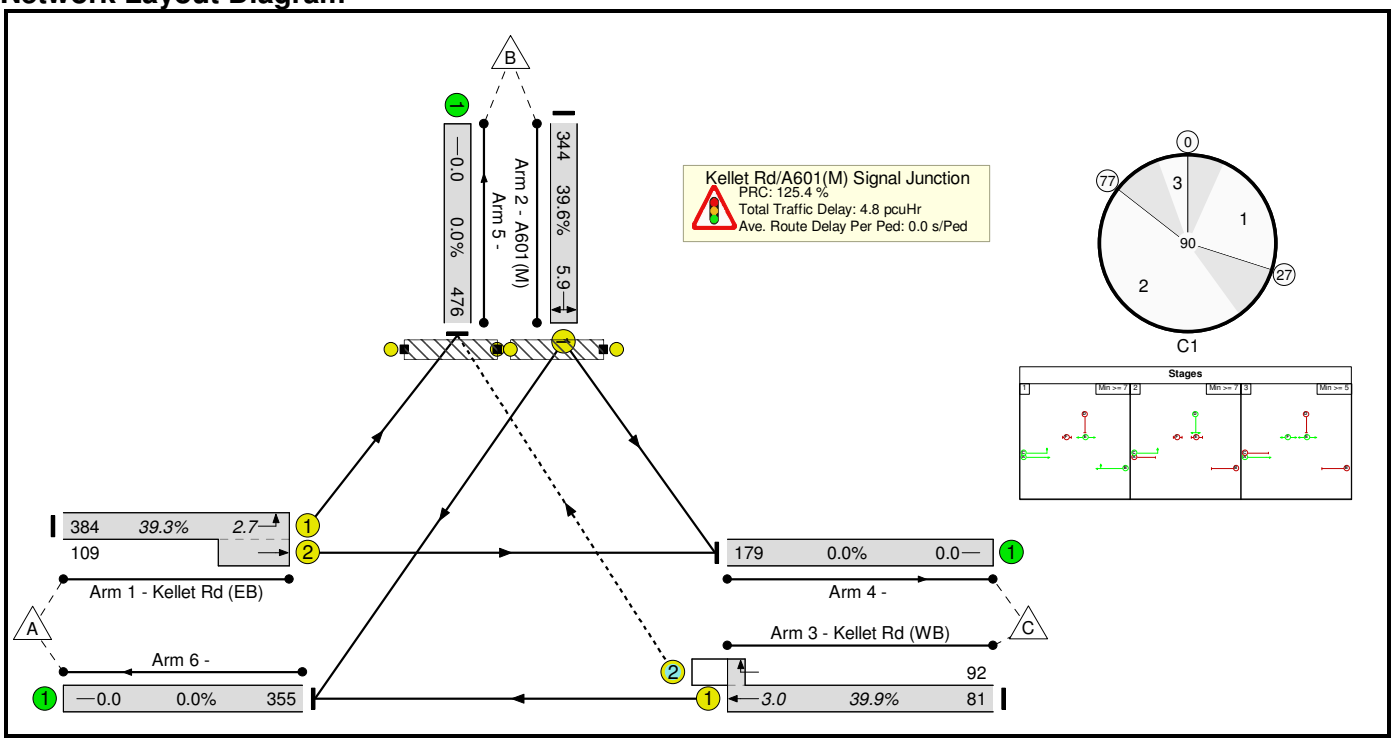
Junction: Kellet Rd/A601(M) Signal Junction								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
1/1 (Kellet Rd (EB))	3.50	0.00	Y	Arm 5 Left	50.00	100.0 %	1908	1908
1/2 (Kellet Rd (EB))	5.00	0.00	Y	Arm 4 Ahead	Inf	100.0 %	2115	2115
2/1 (A601(M))	4.20	0.00	Y	Arm 4 Left	11.70	19.9 %	1863	1863
				Arm 6 Right	18.00	80.1 %		
3/1 (Kellet Rd (WB))	3.50	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1965	1965
3/2 (Kellet Rd (WB))	3.50	0.00	Y	Arm 5 Right	10.80	100.0 %	1725	1725
4/1	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Stage Sequence Diagram

Scenario 1: 'AM Peak 2017 Surveyed Flows' (FG1: 'AM Peak 2017 Surveyed Flows', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



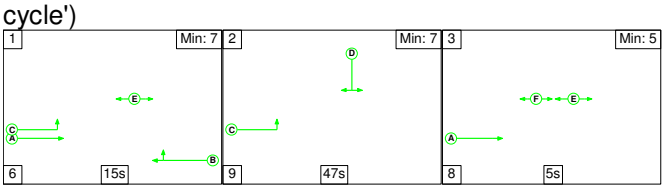
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**39.9%**	**3.6**	**1.0**	**4.8**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**39.9%**	**3.6**	**1.0**	**4.8**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	493	1908:2115	1255	39.3%	0.8	0.3	1.1	8.3	2.3	0.3	2.7
2/1	A601(M) Left Right	D	344	1863	869	39.6%	1.5	0.3	1.8	19.1	5.5	0.3	5.9
3/1+3/2	Kellet Rd (WB) Right Ahead	B	173	1965:1725	433	39.9%	1.3	0.3	1.8	37.2	2.6	0.3	3.0
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

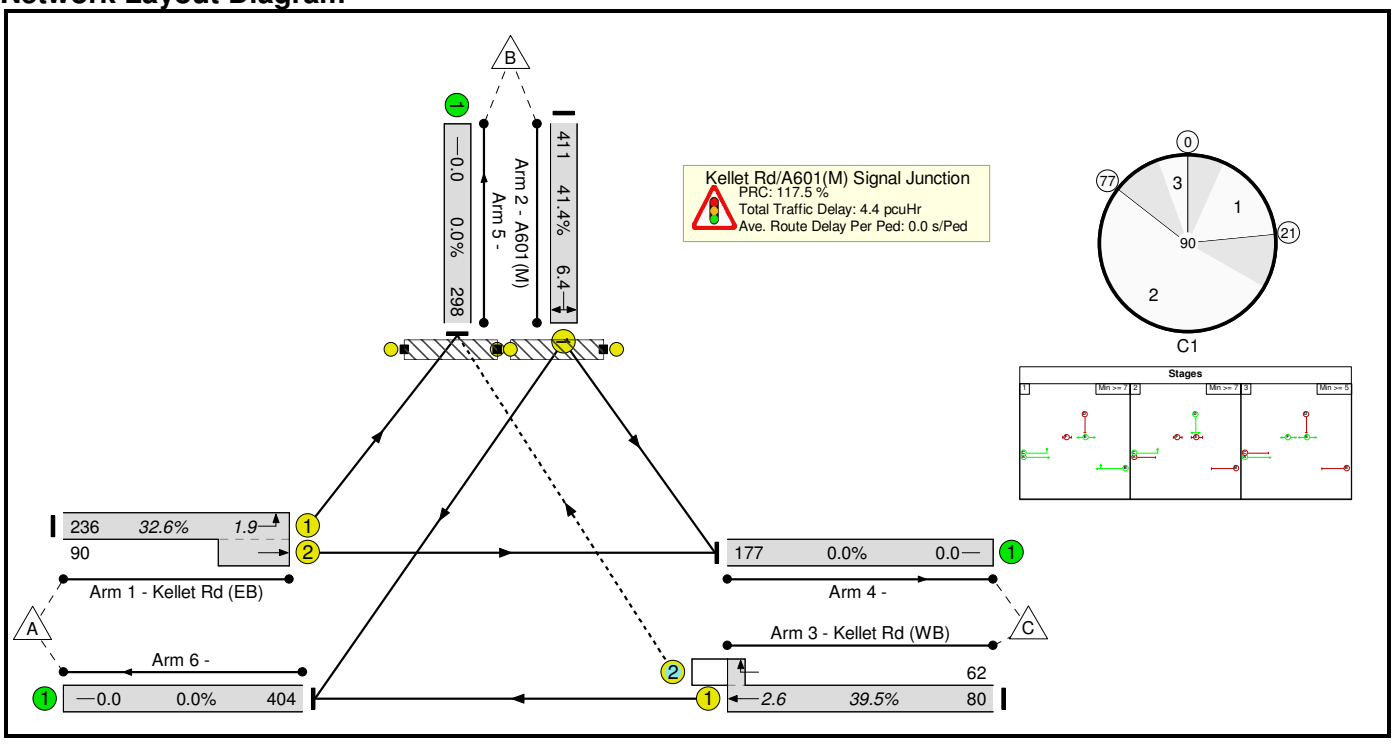
C1 PRC for Signalled Lanes (%): 125.4 Total Delay for Signalled Lanes (pcuHr): 4.76 Cycle Time (s): 90
PRC Over All Lanes (%): 125.4 Total Delay Over All Lanes(pcuHr): 4.76

Stage Sequence Diagram

Scenario 2: 'PM Peak 2017 Surveyed Flows' (FG2: 'PM Peak 2017 Surveyed Flows', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



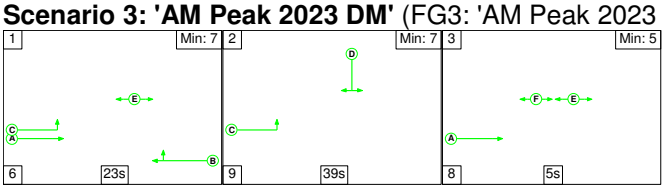
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**41.4%**	**3.4**	**0.9**	**4.4**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**41.4%**	**3.4**	**0.9**	**4.4**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	326	1908:2115	999	32.6%	0.7	0.2	1.0	10.5	1.6	0.2	1.9
2/1	A601(M) Left Right	D	411	1862	993	41.4%	1.4	0.4	1.8	15.7	6.1	0.4	6.4
3/1+3/2	Kellet Rd (WB) Right Ahead	B	142	1965:1725	359	39.5%	1.3	0.3	1.6	41.5	2.3	0.3	2.6
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

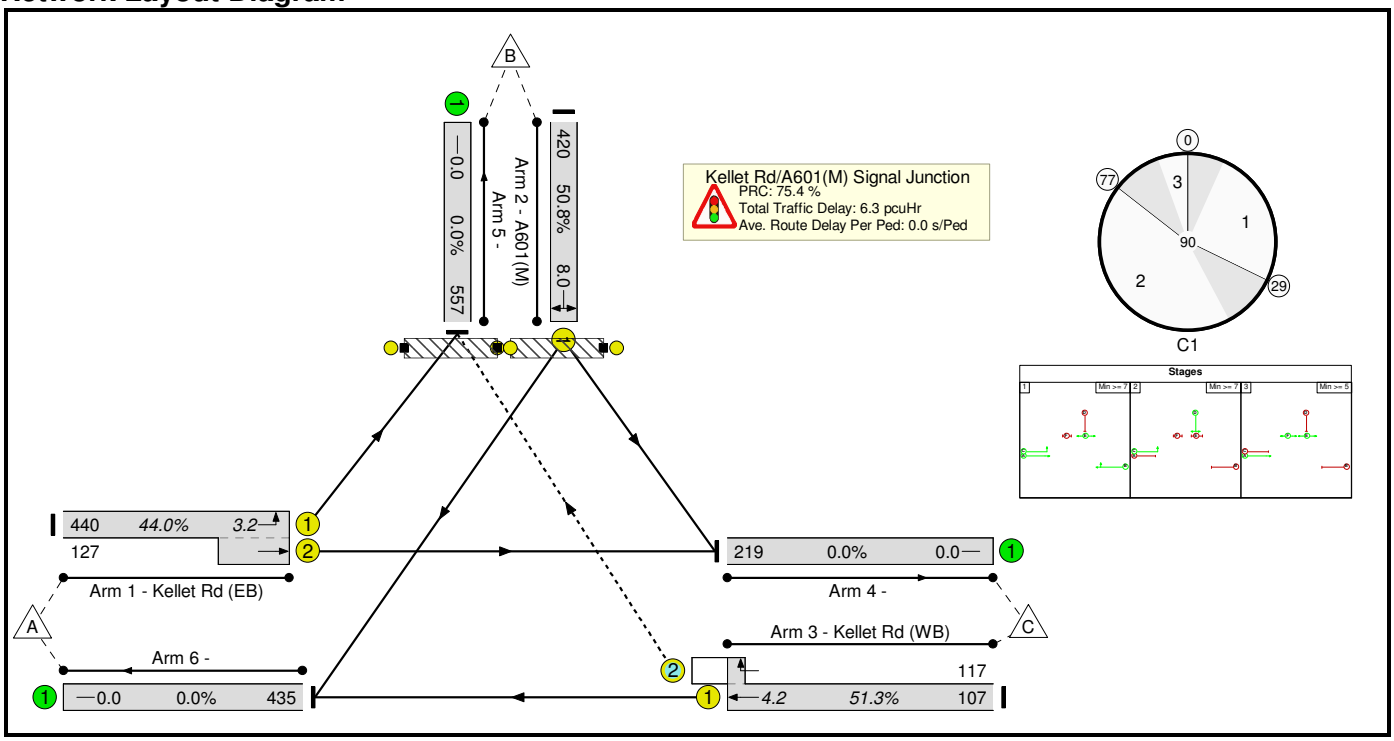
C1 PRC for Signalled Lanes (%): 117.5 Total Delay for Signalled Lanes (pcuHr): 4.38 Cycle Time (s): 90
PRC Over All Lanes (%): 117.5 Total Delay Over All Lanes(pcuHr): 4.38

Stage Sequence Diagram

Scenario 3: 'AM Peak 2023 DM' (FG3: 'AM Peak 2023 DM', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



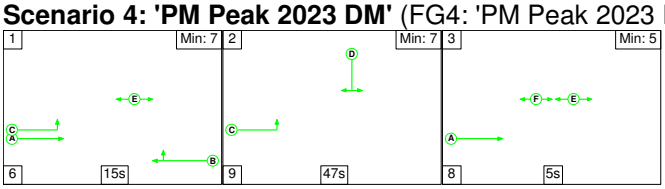
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**51.3%**	**4.7**	**1.4**	**6.3**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**51.3%**	**4.7**	**1.4**	**6.3**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	567	1908:2115	1290	44.0%	0.9	0.4	1.3	8.3	2.8	0.4	3.2
2/1	A601(M) Left Right	D	420	1862	828	50.8%	2.1	0.5	2.6	22.3	7.5	0.5	8.0
3/1+3/2	Kellet Rd (WB) Right Ahead	B	224	1965:1725	437	51.3%	1.7	0.5	2.4	38.5	3.6	0.5	4.2
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

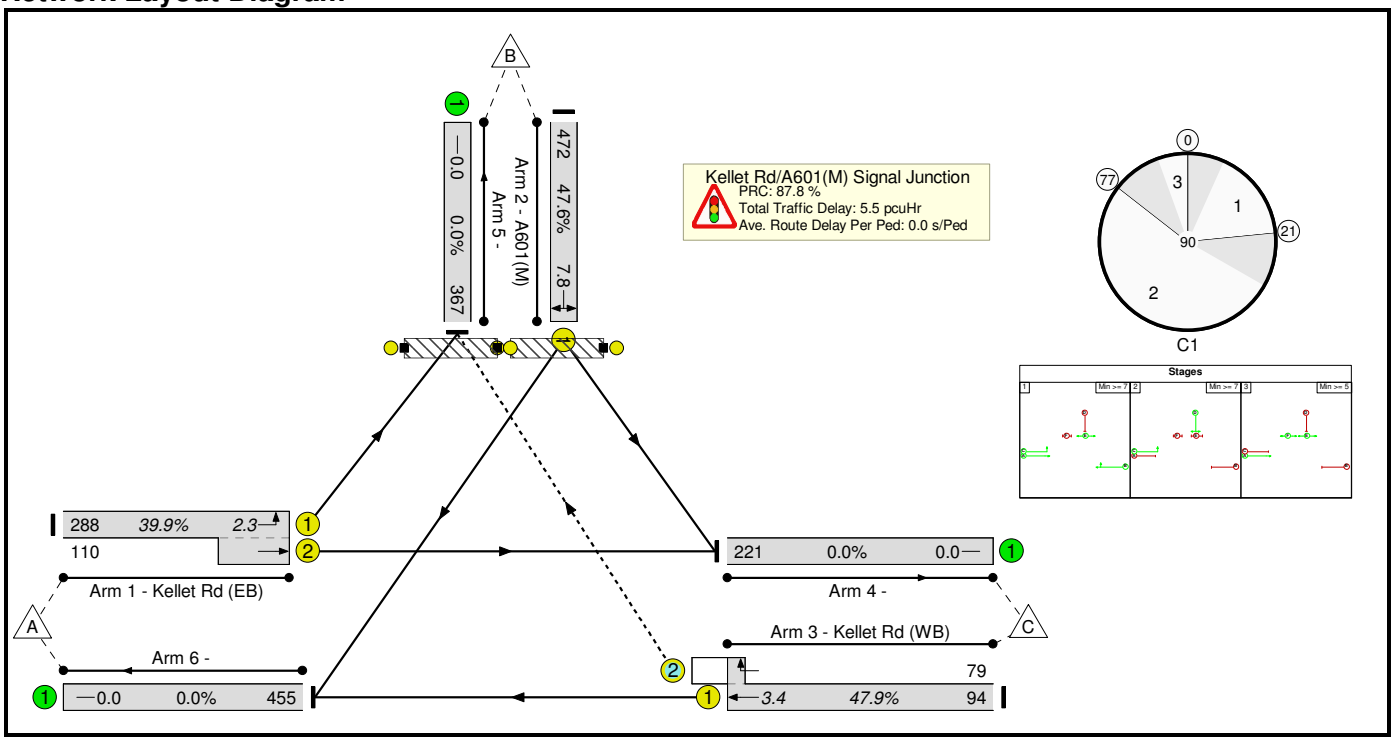
C1 PRC for Signalled Lanes (%): 75.4 Total Delay for Signalled Lanes (pcuHr): 6.31 Cycle Time (s): 90
PRC Over All Lanes (%): 75.4 Total Delay Over All Lanes(pcuHr): 6.31

Stage Sequence Diagram

Scenario 4: 'PM Peak 2023 DM' (FG4: 'PM Peak 2023 DM', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



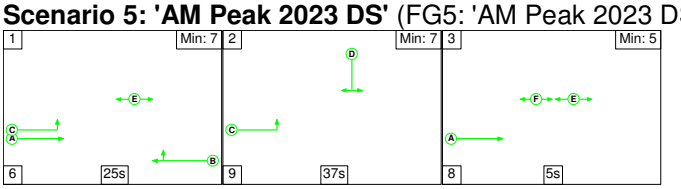
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**47.9%**	**4.2**	**1.2**	**5.5**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**47.9%**	**4.2**	**1.2**	**5.5**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	398	1908:2115	998	39.9%	0.9	0.3	1.2	11.0	2.0	0.3	2.3
2/1	A601(M) Left Right	D	472	1860	992	47.6%	1.7	0.5	2.2	16.6	7.3	0.5	7.8
3/1+3/2	Kellet Rd (WB) Right Ahead	B	173	1965:1725	361	47.9%	1.6	0.5	2.1	43.6	3.0	0.5	3.4
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

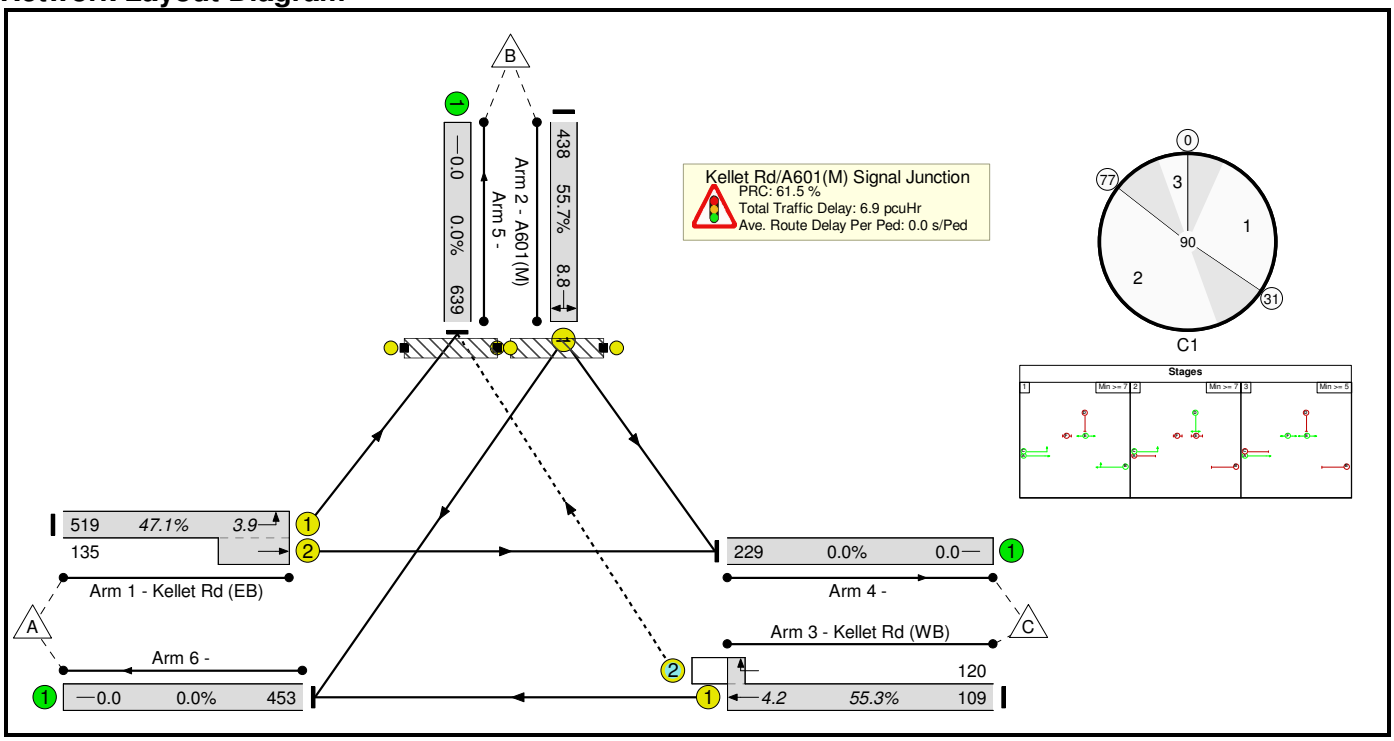
C1 PRC for Signalled Lanes (%): 87.8 Total Delay for Signalled Lanes (pcuHr): 5.48 Cycle Time (s): 90
PRC Over All Lanes (%): 87.8 Total Delay Over All Lanes(pcuHr): 5.48

Stage Sequence Diagram

Scenario 5: 'AM Peak 2023 DS' (FG5: 'AM Peak 2023 DS', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



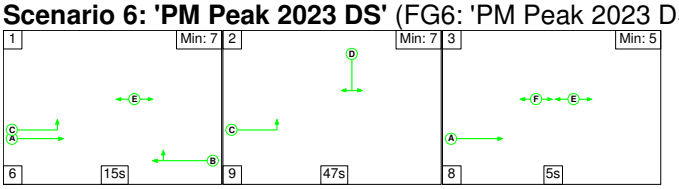
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**55.7%**	**5.0**	**1.7**	**6.9**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**55.7%**	**5.0**	**1.7**	**6.9**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	654	1908:2115	1388	47.1%	1.0	0.4	1.4	7.9	3.5	0.4	3.9
2/1	A601(M) Left Right	D	438	1862	786	55.7%	2.4	0.6	3.0	24.8	8.2	0.6	8.8
3/1+3/2	Kellet Rd (WB) Right Ahead	B	229	1965:1725	414	55.3%	1.6	0.6	2.5	39.1	3.6	0.6	4.2
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

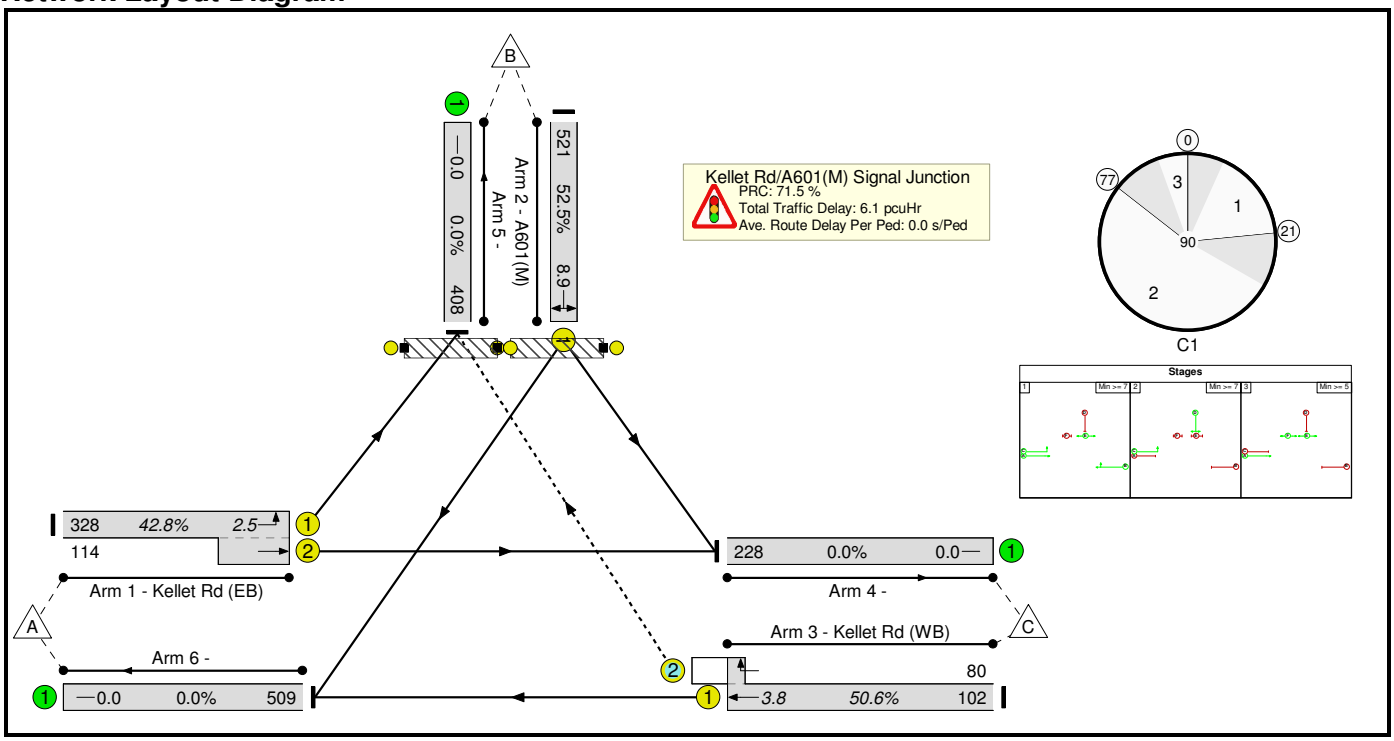
C1 PRC for Signalled Lanes (%): 61.5 Total Delay for Signalled Lanes (pcuHr): 6.93 Cycle Time (s): 90
PRC Over All Lanes (%): 61.5 Total Delay Over All Lanes(pcuHr): 6.93

Stage Sequence Diagram

Scenario 6: 'PM Peak 2023 DS' (FG6: 'PM Peak 2023 DS', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



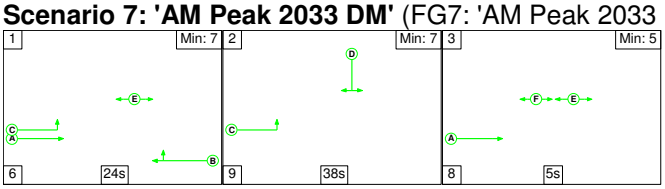
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**52.5%**	**4.6**	**1.4**	**6.1**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**52.5%**	**4.6**	**1.4**	**6.1**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	442	1908:2115	1033	42.8%	0.9	0.4	1.3	10.7	2.1	0.4	2.5
2/1	A601(M) Left Right	D	521	1862	993	52.5%	2.0	0.6	2.5	17.4	8.4	0.6	8.9
3/1+3/2	Kellet Rd (WB) Right Ahead	B	182	1965:1725	359	50.6%	1.7	0.5	2.3	44.6	3.3	0.5	3.8
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

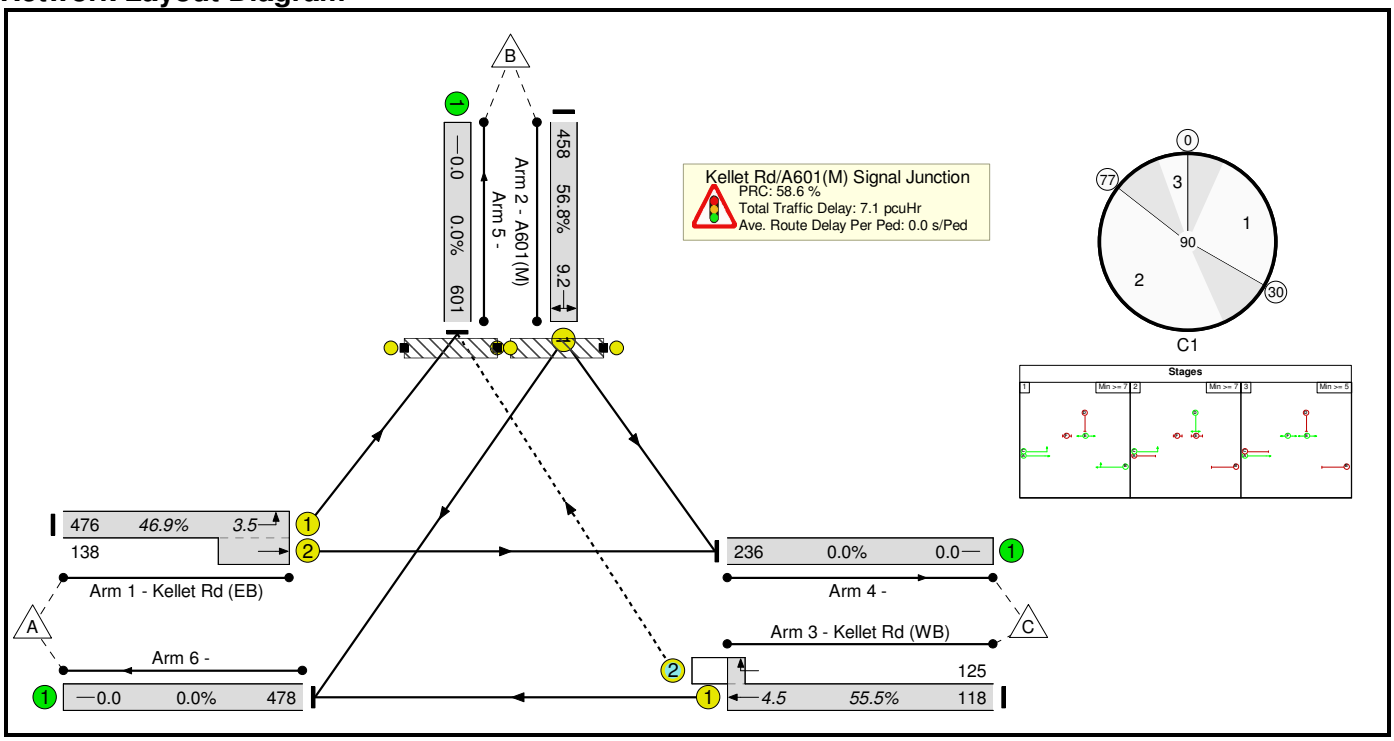
C1 PRC for Signalled Lanes (%): 71.5 Total Delay for Signalled Lanes (pcuHr): 6.09 Cycle Time (s): 90
PRC Over All Lanes (%): 71.5 Total Delay Over All Lanes(pcuHr): 6.09

Stage Sequence Diagram

Scenario 7: 'AM Peak 2033 DM' (FG7: 'AM Peak 2033 DM', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



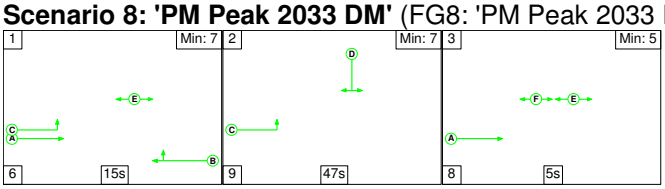
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**56.8%**	**5.2**	**1.7**	**7.1**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**56.8%**	**5.2**	**1.7**	**7.1**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	614	1908:2115	1309	46.9%	1.0	0.4	1.4	8.3	3.0	0.4	3.5
2/1	A601(M) Left Right	D	458	1862	807	56.8%	2.4	0.7	3.1	24.3	8.5	0.7	9.2
3/1+3/2	Kellet Rd (WB) Right Ahead	B	243	1965:1725	438	55.5%	1.8	0.6	2.6	38.9	3.9	0.6	4.5
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

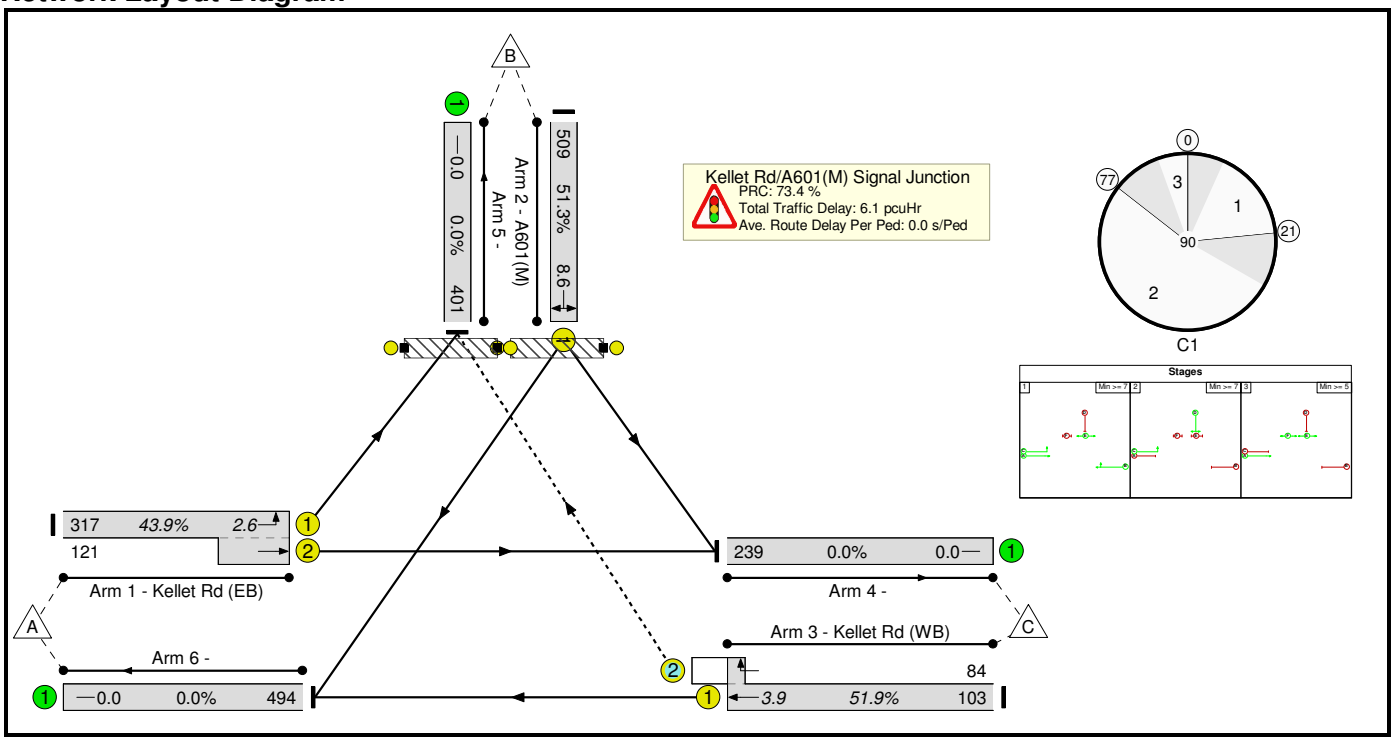
C1 PRC for Signalled Lanes (%): 58.6 Total Delay for Signalled Lanes (pcuHr): 7.14 Cycle Time (s): 90
PRC Over All Lanes (%): 58.6 Total Delay Over All Lanes(pcuHr): 7.14

Stage Sequence Diagram

Scenario 8: 'PM Peak 2033 DM' (FG8: 'PM Peak 2033 DM', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



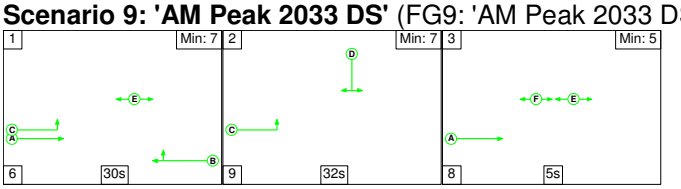
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**51.9%**	**4.6**	**1.5**	**6.1**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**51.9%**	**4.6**	**1.5**	**6.1**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	438	1908:2115	999	43.9%	1.0	0.4	1.4	11.2	2.2	0.4	2.6
2/1	A601(M) Left Right	D	509	1861	993	51.3%	1.9	0.5	2.4	17.2	8.1	0.5	8.6
3/1+3/2	Kellet Rd (WB) Right Ahead	B	187	1965:1725	360	51.9%	1.7	0.5	2.3	45.0	3.3	0.5	3.9
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

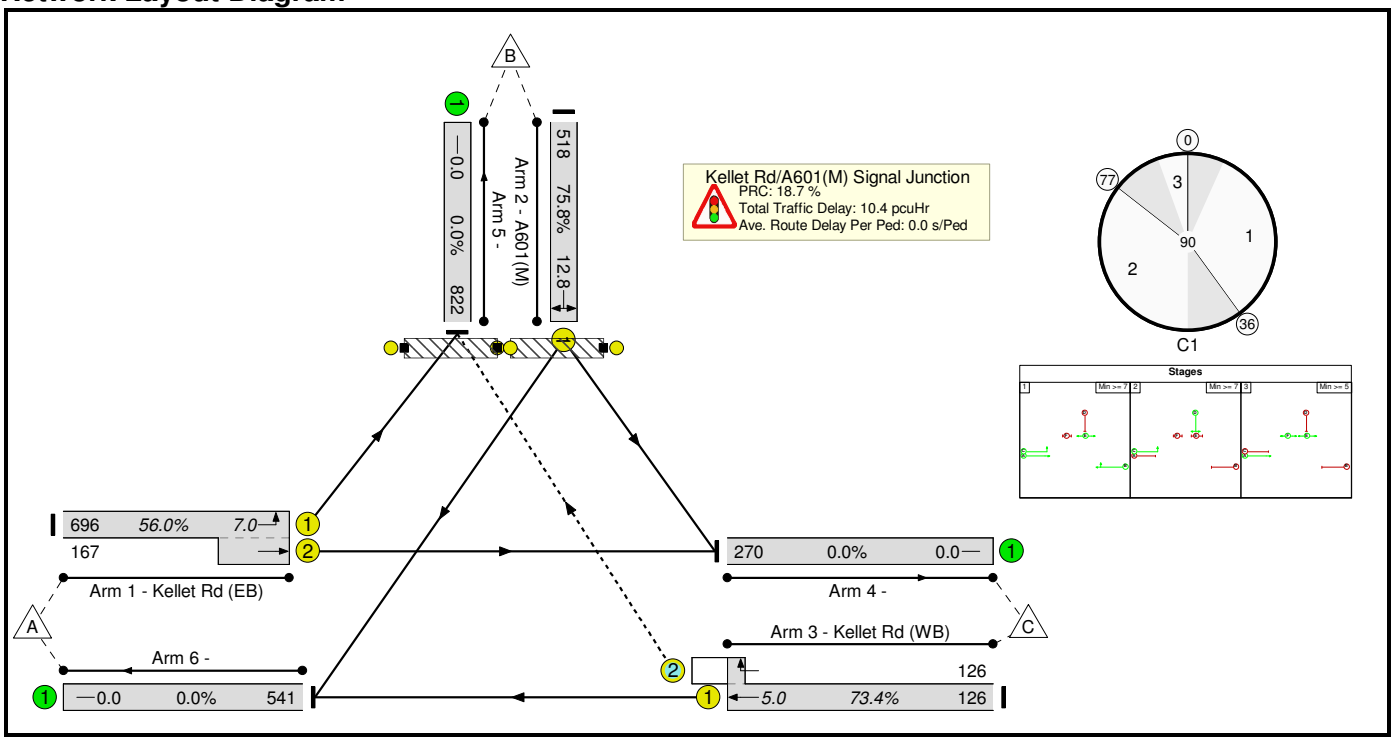
C1 PRC for Signalled Lanes (%): 73.4 Total Delay for Signalled Lanes (pcuHr): 6.14 Cycle Time (s): 90
PRC Over All Lanes (%): 73.4 Total Delay Over All Lanes(pcuHr): 6.14

Stage Sequence Diagram

Scenario 9: 'AM Peak 2033 DS' (FG9: 'AM Peak 2033 DS', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



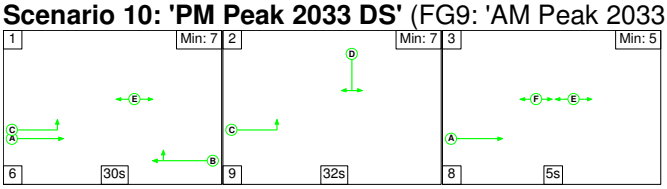
Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**75.8%**	**6.4**	**3.5**	**10.4**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**75.8%**	**6.4**	**3.5**	**10.4**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	863	1908:2115	1542	56.0%	1.2	0.6	1.9	7.7	6.4	0.6	7.0
2/1	A601(M) Left Right	D	518	1863	683	75.8%	3.6	1.5	5.1	35.7	11.2	1.5	12.8
3/1+3/2	Kellet Rd (WB) Right Ahead	B	252	1965:1725	343	73.4%	1.5	1.3	3.4	48.7	3.6	1.3	5.0
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

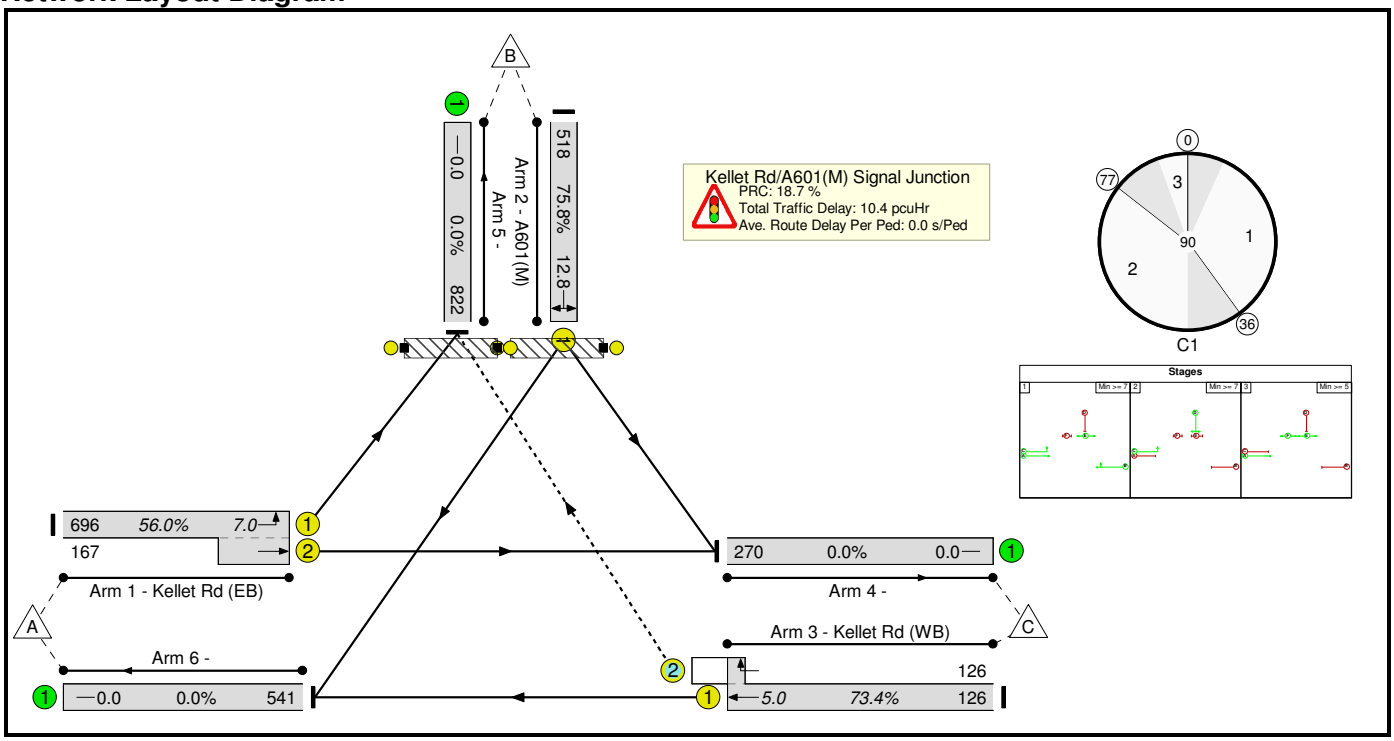
C1 PRC for Signalled Lanes (%): 18.7 Total Delay for Signalled Lanes (pcuHr): 10.40 Cycle Time (s): 90
PRC Over All Lanes (%): 18.7 Total Delay Over All Lanes(pcuHr): 10.40

Stage Sequence Diagram

Scenario 10: 'PM Peak 2033 DS' (FG9: 'AM Peak 2033 DS', Plan 1: 'Ped stage in each cycle')



Network Layout Diagram



Network Results

Item	Lane Description	Full Phase	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network	-	-	-	-	-	**75.8%**	**6.4**	**3.5**	**10.4**	-	-	-	-
Kellet Rd/A601(M) Signal Junction	-	-	-	-	-	**75.8%**	**6.4**	**3.5**	**10.4**	-	-	-	-
1/1+1/2	Kellet Rd (EB) Ahead Left	C A	863	1908:2115	1542	56.0%	1.2	0.6	1.9	7.7	6.4	0.6	7.0
2/1	A601(M) Left Right	D	518	1863	683	75.8%	3.6	1.5	5.1	35.7	11.2	1.5	12.8
3/1+3/2	Kellet Rd (WB) Right Ahead	B	252	1965:1725	343	73.4%	1.5	1.3	3.4	48.7	3.6	1.3	5.0
Ped Link: P1	Unnamed Ped Link	E	0	-	0	0.0%	-	-	-	-	-	-	-
Ped Link: P2	Unnamed Ped Link	F	0	-	0	0.0%	-	-	-	-	-	-	-

C1 PRC for Signalled Lanes (%): 18.7 Total Delay for Signalled Lanes (pcuHr): 10.40 Cycle Time (s): 90
PRC Over All Lanes (%): 18.7 Total Delay Over All Lanes(pcuHr): 10.40

Appendix I – Junction 34/A683 Caton Rd Junction Capacity Assessment Results

TRANSYT 15

Version: 15.5.2.7994
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Filename: J34 V7 (Lane Balancing) 2018-11-27 - Mitigationv4 (extra ln).t15
Path: J:\2018\A107175 TP-Lancaster Local Plan Viability Study\Transyt
Report generation date: 18/12/2018 11:30:36

»A1 - AM Peak 2018 Surveyed Flows : D1 - AM Peak 2018 Surveyed Flows* :
»A2 - PM Peak 2018 Surveyed Flows : D2 - PM Peak 2018 Surveyed Flows* :
»A3 - AM Peak 2023 DM : D3 - AM Peak 2023 DM* :
»A4 - PM Peak 2023 DM : D4 - PM Peak 2023 DM* :
»A5 - AM Peak 2023 DS : D5 - AM Peak 2023 DS* :
»A6 - PM Peak 2023 DS : D6 - PM Peak 2023 DS* :
»A7 - AM Peak 2033 DM : D7 - AM Peak 2033 DM* :
»A8 - PM Peak 2033 DM : D8 - PM Peak 2033 DM* :
»A9 - AM Peak 2033 DS : D9 - AM Peak 2033 DS* :
»A10 - PM Peak 2033 DS : D10 - PM Peak 2033 DS* :

File summary

File description

File title	(untitled)
Location	
Site number	
UTCRegion	
Driving side	Left
Date	03/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	WYG\yujing.liu
Description	

Model and Results

Enable controller offsets	Enable fuel consumption	Enable quick flares	Display journey time results	Display level of service results	Display blocking and starvation results	Display end of red and green queue results	Display excess queue results	Display separate uniform and random results	Display unweighted results	Display TRANSYT 12 style timings	Display effective greens in results	Display Red-With-Amber	Display End-Of-Green Amber

Units

Cost units	Speed units	Distance units	Fuel economy units	Fuel rate units	Mass units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
£	mph	m	mpg	l/h	kg	PCU	PCU	perHour	s	-Hour	perHour

Sorting

Show names instead of IDs	Sorting direction	Sorting type	Ignore prefixes when sorting	Analysis/demand set sorting	Link grouping	Source grouping	Colour Analysis/Demand Sets
	Ascending	Numerical		ID	Normal	Normal	✓

Network Diagrams



A1 - AM Peak 2018 Surveyed Flows
D1 - AM Peak 2018 Surveyed Flows*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	18/12/2018 11:29:32	18/12/2018 11:29:34	07:45	120	871.67	53.71	69.74	3/1	0	0	3/1	16/2	3/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM Peak 2018 Surveyed Flows		D1	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM Peak 2018 Surveyed Flows				07:45	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2087					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2083					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2018	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2160	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓		Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓		Normal	
28	1			✓	114.53	✓	Sum of lanes	2008					Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓		Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓		Normal	
31	1			✓	230.47								Normal	
32	1			✓	322.71								Normal	
	2			✓	320.24								Normal	
33	1			✓	242.45								Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800			Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	50	86.07		2087
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	79	67.54		2083
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	1	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	100	31.62	✓	2018
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	93	42.39		2160
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	496	496
	2	245	245
	3	225	225
2	1	249	249
3	1	247	247
	2	245	245
	3	108	108
4	1	117	117
5	1	16	16
6	1	818	818
7	1	662	662
	2	156	156
8	1	140	140
	2	140	140
9	1	99	99
	2	193	193
	3	230	230
10	1	292	292
	2	230	230
11	1	522	522
12	1	899	899
13	2	421	421
14	1	236	236
	2	236	236
15	1	7	7
16	1	446	446
	2	1045	1045
17	1	891	891
18	1	299	299
	2	300	300
19	1	44	44
20	1	638	638
	2	660	660
21	1	744	744
	2	544	544
22	1	486	486
	2	579	579
	3	478	478
23	1	361	361
	2	408	408
24	1	361	361
	2	362	362
25	1	46	46
26	1	282	282
27	1	462	462
	2	544	544
28	1	319	319
29	1	143	143
30	1	176	176
31	1	328	328
32	1	534	534
	2	616	616
33	1	1298	1298
34	1	449	449
	2	450	450

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	**1**	**1**	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	**1**	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	**1**	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	**1**	**1**	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	**1**	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	**1**	**1**	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	**1**	**1**	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	**2**	**1**	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	**1**	**1**	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	**1**	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	**1**	**1**	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	**1**	**1**	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	**1**	**1**	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	**1**	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	**1**	**1**	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	**1**	**1**	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	**1**	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	**1**	**1**	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	**1**	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	**1**	**1**	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	**1**	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	**1**	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	**1**	**1**	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	**1**	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	**1**	**1**	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	**1**	**1**	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	**1**	**1**	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	**1**	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	**1**	**1**	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	**1**	**1**	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	**1**	**1**	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	**1**	**1**	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	**1**	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	**1**	**1**	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	**1**	**1**	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	**1**	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	**1**	**2**	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	**1**	**2**	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	**1**	**2**	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	**1**	**2**	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	**2**	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	**1**	**2**	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	**2**	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	**2**	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	249	600	100	17	0
	2	0	0	522	82	198	16
	3	0	578	0	100	791	21
	4	0	69	106	0	143	1
	5	0	402	315	46	0	6
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	125
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	125
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	278
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	300
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	99
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	193
	9		1	3	1/3, 3/3, 22/3	Percentage	108
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	230
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	100
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	82
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	9
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	140
	22		4	5	28/1, 29/1, 32/2	Normal	72
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	9
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	58
	26		4	5	28/1, 29/1, 32/1	Normal	72
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	105
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	105
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	105
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	20
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	20
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	16
	34		3	6	16/2, 18/1, 19/1	Normal	21
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	0
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	0
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	181
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	181
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	18
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	18
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	18
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	50
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	198
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	50
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	198
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	198
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	198
	49		1	3	1/1, 3/1, 22/1	Normal	247
	50		1	3	1/2, 3/2, 22/2	Normal	245
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	1
	57		5	4	23/2, 25/1, 31/1	Normal	46
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	6
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	0
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	17
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	17
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	1
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	18
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	18
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	18
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	17
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	17

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	16, 43, 57, 83, 118
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	10	16	6	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	28	43	15	1	1
	3	✓	3	A,E,F,M,S	55	57	2	1	2
	4	✓	4	I,J,K,M,L,S	64	83	19	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	95	118	23	1	7

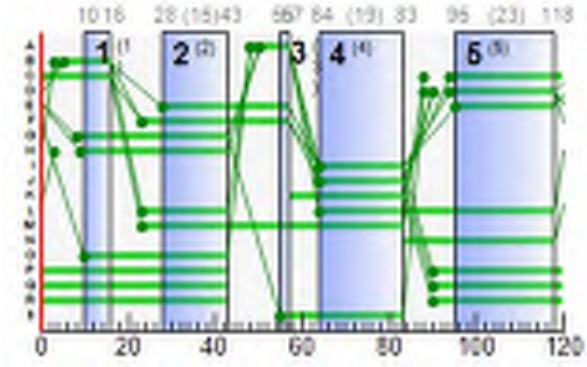
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	50	57	7
	B	1	✓	5	16	11
	C	1	✓	94	16	42
	D	1	✓	94	118	24
	E	1	✓	28	57	29
		2	✓	95	118	23
	F	1	✓	23	57	34
	G	1	✓	8	43	35
	H	1	✓	9	43	34
	I	1	✓	64	83	19
	J	1	✓	64	83	19
	K	1	✓	57	83	26
	L	1	✓	23	43	20
		2	✓	64	118	54
	M	1	✓	23	83	60
	N	1	✓	83	118	35
	O	1	✓	10	43	33
	P	1	✓	90	43	73
	Q	1	✓	90	43	73
	R	1	✓	90	43	73
	S	1	✓	55	83	28

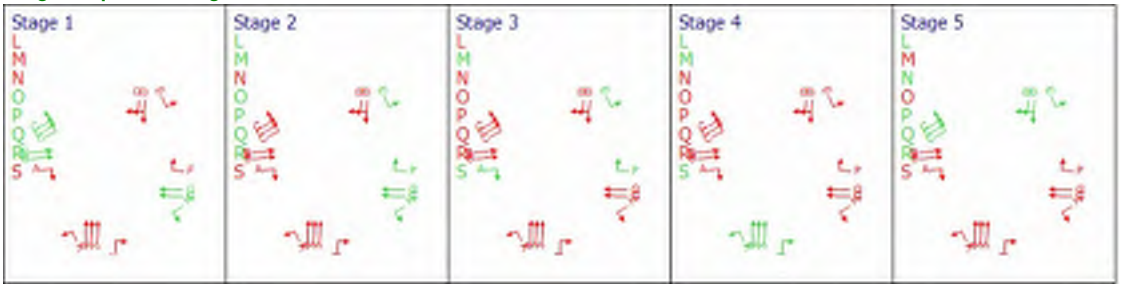
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	57	83	26			
3	1	1	1	J	64	83	19			
3	2	1	1	J	64	83	19			
3	3	1	1	J	64	83	19			
4	1	1	1	I	64	83	19			
5	1	1	1	A	50	57	7			
8	1	1	1	B	5	16	11			
8	2	1	1	B	5	16	11			
9	1	1	1	C	94	16	42			
9	2	1	1	C	94	16	42			
9	3	1	1	C	94	16	42			
13	2	1	1	F	23	57	34			
14	1	1	1	G	8	43	35			
14	2	1	1	G	8	43	35			
15	1	1	1	H	9	43	34			
17	1	1	1	E	28	57	29	95	118	23
18	1	1	1	D	94	118	24			
18	2	1	1	D	94	118	24			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	93, 116, 79
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	89	93	4	1	4
	2	✓	2	A,C,D,G,H,I	102	116	14	1	5
	3	✓	3	A,B,F,H,J	6	79	73	1	5

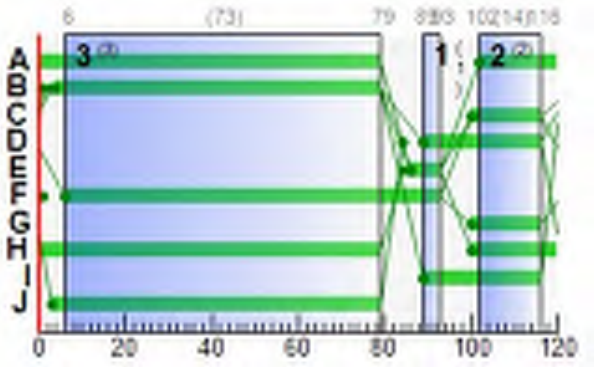
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	102	79	97
	B	1	✓	4	79	75
	C	1	✓	100	116	16
	D	1	✓	89	116	27
	E	1	✓	86	93	7
	F	1	✓	6	93	87
	G	1	✓	100	116	16
	H	1	✓	100	79	99
	I	1	✓	89	116	27
	J	1	✓	3	79	76

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	6	93	87			
24	2	2	2	F	6	93	87			
25	1	2	2	E	86	93	7			
26	1	2	2	A	102	79	97			
27	1	2	2	B	4	79	75			
27	2	2	2	B	4	79	75			
29	1	2	2	D	89	116	27			
30	1	2	2	C	100	116	16			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:45-08:45	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
1	18/12/2018 11:29:32	18/12/2018 11:29:34	07:45	120	871.67	53.71	69.74	3/1	0	0	3/1	16/2	3/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
07:45-08:45	70	29	21535	4446	8.98	762.70	108.97	871.67

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
07:45-08:45	21535	21535	-22	✓	70		29	4446

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
07:45-08:45	15.45	8.98	53.71	762.70	19.74	4251.34	108.97

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
07:45-08:45	83.17	0.00	329.19

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
07:45-08:45	0.00	0.00	✓	1.00	0.00	0.00	871.67

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	we m
1	1		1			497	2087	120	0.00	24	278	33.08	0.27	0.00	0.04	
	2		1			245	2081	120	0.00	12	664	32.92	0.12	0.00	0.01	
	3		1			226	2078	120	0.00	11	728	32.91	0.11	0.00	0.01	
2	1		1	1	K	250	2077	26	0.00	53	68	56.52	45.60	85.49	7.33	
3	1		1	1	J	247	2125	19	0.00	70	29	69.67	58.91	98.36	8.15	
	2		1	1	J	245	2115	19	0.00	70	29	75.17	59.13	99.68	8.16	
	3		1	1	J	108	2115	19	0.00	31	194	62.19	46.25	87.88	3.20	
4	1		1	1	I	118	2263	19	0.00	31	188	61.80	46.34	88.46	3.48	
5	1		1	1	A	16	2035	7	7.00	12	663	64.37	54.50	94.80	0.51	

6	**1**		1			818	2174	120	0.00	38	139	6.90	0.50	0.00	0.11
7	**1**		1			662	2083	120	0.00	32	183	8.39	0.40	0.00	0.07
	2		1			156	2120	120	0.00	7	1123	8.05	0.07	0.00	0.00
8	**1**		1	1	B	140	2120	11	0.00	66	36	77.74	68.02	104.52	4.90
	2		1	1	B	140	2120	11	0.00	66	36	77.66	68.02	104.52	4.90
9	**1**		1	1	C	99	1913	42	0.00	14	523	34.65	26.51	66.20	2.18
	2		1	1	C	193	2063	42	0.00	26	245	36.40	28.27	68.21	4.39
	3		1	1	C	230	2133	42	0.00	30	199	37.15	29.02	70.01	5.37
10	**1**		1			292	2009	120	0.00	15	519	3.11	0.15	0.00	0.01
	2		1			230	2007	120	0.00	11	685	3.05	0.12	0.00	0.01
11	**1**		1			522	2055	120	0.00	25	254	4.07	0.30	0.00	0.04
12	**1**		1			899	2096	120	21.77	49	84	12.59	1.99	8.26	2.47
13	**2**		1	1	F	423 <	4038	34	1.00	36	151	30.81	25.97	57.45	8.10 +
14	**1**		1	1	G	235	2161	35	13.00	36	148	46.35	41.32	77.38	6.06
	2		1	1	G	235	2155	35	12.00	36	148	45.05	40.13	76.88	6.02
15	**1**		1	1	H	6	2018	34	34.00	1	8729	53.04	45.38	87.93	0.18
16	**1**		1			446	2120	120	0.00	21	328	9.96	0.23	0.00	0.03
	2		1			1045	2120	120	0.00	49	83	10.57	0.82	0.00	0.24
17	**1**		1	1	E	892	3930	52	0.00	50	78	23.31	13.02	63.69	10.52
18	**1**		1	1	D	299	2160	24	0.00	66	35	60.05	52.02	91.73	9.15
	2		1	1	D	300	2165	24	0.00	67	35	60.11	52.05	91.74	9.18
19	**1**					43	Unrestricted	120	91.00	0	Unrestricted	6.95	0.00	0.00	0.00
20	**1**		1			638	Unrestricted	120	19.00	0	Unrestricted	11.82	0.00	0.00	0.00
	2		1			660	Unrestricted	120	19.00	0	Unrestricted	11.87	0.00	0.00	0.00
21	**1**		2			745	2109	120	0.00	35	155	29.74	0.47	0.00	0.10
	2		2			545	2126	120	14.15	26	251	28.99	0.29	0.25	0.55
22	**1**					487	Unrestricted	120	4.00	0	Unrestricted	25.87	0.00	0.00	0.00
	2					579	Unrestricted	120	1.00	0	Unrestricted	26.70	0.00	0.00	0.00
	3					479	Unrestricted	120	9.00	0	Unrestricted	28.91	0.00	0.00	0.00
23	**1**		2			361	2105	120	0.00	17	425	30.56	0.18	0.00	0.02
	2		2			408	2105	120	0.00	19	364	50.31	0.21	0.00	0.02
24	**1**		2	2	F	361	1924	87	0.52	26	250	20.47	5.78	28.68	3.46
	2		2	2	F	362	1932	87	0.55	26	250	29.62	5.78	30.36	3.66
25	**1**		2	2	E	46	2014	7	5.00	34	163	83.22	60.45	99.76	1.55
26	**1**		2	2	A	282	2160	97	6.00	16	463	6.31	2.25	25.63	2.52
27	**1**		2	2	B	463	2049	75	4.00	36	152	9.29	5.87	16.67	2.65
	2		2	2	B	545	2042	75	1.00	42	114	8.72	5.34	14.40	2.71
28	**1**		2			320	2008	120	0.00	16	465	8.71	0.17	0.00	0.02
29	**1**		2	2	D	144	1966	27	0.00	31	187	48.96	39.92	81.49	3.91
30	**1**		2	2	C	176	2120	16	0.00	59	54	62.24	56.66	96.06	5.64
31	**1**					328	Unrestricted	120	8.00	0	Unrestricted	18.39	0.00	0.00	0.00
32	**1**					535	Unrestricted	120	3.00	0	Unrestricted	24.06	0.00	0.00	0.00
	2					617	Unrestricted	120	3.00	0	Unrestricted	23.88	0.00	0.00	0.00
33	**1**					1298	Unrestricted	120	0.00	0	Unrestricted	18.08	0.00	0.00	0.00
34	**1**		2			449	2115	120	26.10	23	285	18.05	1.23	11.96	4.49
	2		2			450	2115	120	26.10	23	284	18.08	1.24	11.94	4.49

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	3731.21	146.14	15.86	53.71	762.70	108.97	0.00	871.67
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	3731.21	146.14	15.86	53.71	762.70	108.97	0.00	871.67

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A2 - PM Peak 2018 Surveyed Flows
D2 - PM Peak 2018 Surveyed Flows*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	18/12/2018 11:29:34	18/12/2018 11:29:36	16:30	120	964.11	60.19	80.94	3/1	0	0	3/1	12/1	3/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM Peak 2018 Surveyed Flows		D2	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM Peak 2018 Surveyed Flows				16:30	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2080					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2082					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2114	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2155	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓		Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓		Normal	
28	1			✓	114.53	✓	Sum of lanes	2008					Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓		Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓		Normal	
31	1			✓	230.47								Normal	
32	1			✓	322.71								Normal	
	2			✓	320.24								Normal	
33	1			✓	242.45								Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800			Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	68	86.07		2080
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	82	67.54		2082
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	0	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	0	31.62	✓	2114
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	100	42.39		2155
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	503	503
	2	342	342
	3	293	293
2	1	159	159
3	1	344	344
	2	342	342
	3	171	171
4	1	122	122
5	1	7	7
6	1	1101	1101
7	1	924	924
	2	177	177
8	1	170	170
	2	170	170
9	1	204	204
	2	287	287
	3	264	264
10	1	490	490
	2	264	264
11	1	754	754
12	1	997	997
13	2	576	576
14	1	211	211
	2	211	211
15	1	0	0
16	1	358	358
	2	668	668
17	1	716	716
18	1	155	155
	2	155	155
19	1	7	7
20	1	445	445
	2	445	445
21	1	706	706
	2	473	473
22	1	739	739
	2	821	821
	3	627	627
23	1	374	374
	2	442	442
24	1	374	374
	2	375	375
25	1	67	67
26	1	333	333
27	1	373	373
	2	473	473
28	1	346	346
29	1	98	98
30	1	248	248
31	1	400	400
32	1	422	422
	2	522	522
33	1	890	890
34	1	498	498
	2	499	499

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	1	1	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	1	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	1	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	1	1	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	1	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	1	1	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	1	1	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	2	1	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	1	1	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	1	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	1	1	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	1	1	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	1	1	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	1	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	1	1	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	1	1	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	1	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	1	1	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	1	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	1	1	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	1	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	1	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	1	1	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	1	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	1	1	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	1	1	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	1	1	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	1	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	1	1	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	1	1	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	1	1	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	1	1	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	1	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	1	1	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	1	1	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	1	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	1	2	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	1	2	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	1	2	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	1	2	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	2	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	1	2	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	2	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	2	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	159	857	114	8	0
	2	0	0	754	100	240	7
	3	0	310	0	119	597	0
	4	0	102	146	0	98	0
	5	0	319	430	67	0	0
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	80
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	80
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	155
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	155
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	204
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	287
	9		1	3	1/3, 3/3, 22/3	Percentage	171
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	264
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	114
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	100
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	4
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	170
	22		4	5	28/1, 29/1, 32/2	Normal	49
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	4
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	70
	26		4	5	28/1, 29/1, 32/1	Normal	49
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	125
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	125
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	125
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	0
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	0
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	7
	34		3	6	16/2, 18/1, 19/1	Normal	0
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	19
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	19
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	160
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	160
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	24
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	24
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	24
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	60
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	149
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	60
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	149
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	149
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	149
	49		1	3	1/1, 3/1, 22/1	Normal	344
	50		1	3	1/2, 3/2, 22/2	Normal	342
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	57		5	4	23/2, 25/1, 31/1	Normal	67
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	19
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	26
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	26
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	0
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	24
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	24
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	24
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	26
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	26

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	61, 95, 109, 19, 41
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	53	61	8	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	73	95	22	1	1
	3	✓	3	A,E,F,M,S	107	109	2	1	2
	4	✓	4	I,J,K,M,L,S	116	19	23	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	31	41	10	1	7

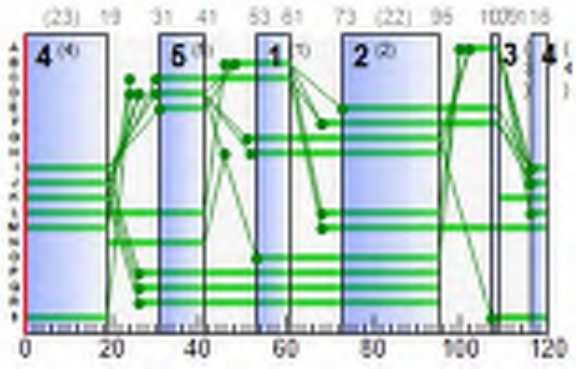
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	102	109	7
	B	1	✓	48	61	13
	C	1	✓	30	61	31
	D	1	✓	30	41	11
	E	1	✓	73	109	36
		2	✓	31	41	10
	F	1	✓	68	109	41
	G	1	✓	51	95	44
	H	1	✓	52	95	43
	I	1	✓	116	19	23
	J	1	✓	116	19	23
	K	1	✓	109	19	30
	L	1	✓	68	95	27
		2	✓	116	41	45
	M	1	✓	68	19	71
	N	1	✓	19	41	22
	O	1	✓	53	95	42
	P	1	✓	26	95	69
	Q	1	✓	26	95	69
	R	1	✓	26	95	69
	S	1	✓	107	19	32

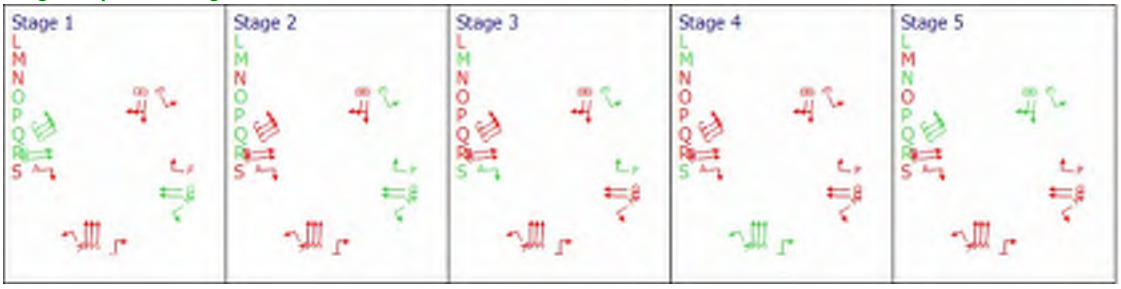
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	109	19	30			
3	1	1	1	J	116	19	23			
3	2	1	1	J	116	19	23			
3	3	1	1	J	116	19	23			
4	1	1	1	I	116	19	23			
5	1	1	1	A	102	109	7			
8	1	1	1	B	48	61	13			
8	2	1	1	B	48	61	13			
9	1	1	1	C	30	61	31			
9	2	1	1	C	30	61	31			
9	3	1	1	C	30	61	31			
13	2	1	1	F	68	109	41			
14	1	1	1	G	51	95	44			
14	2	1	1	G	51	95	44			
15	1	1	1	H	52	95	43			
17	1	1	1	E	73	109	36	31	41	10
18	1	1	1	D	30	41	11			
18	2	1	1	D	30	41	11			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	19, 48, 5
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	15	19	4	1	4
	2	✓	2	A,C,D,G,H,I	28	48	20	1	5
	3	✓	3	A,B,F,H,J	58	5	67	1	5

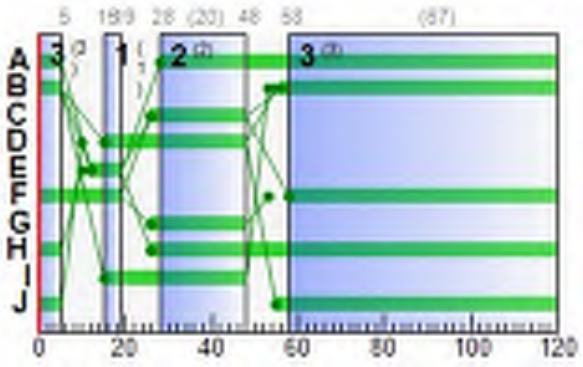
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	28	5	97
	B	1	✓	56	5	69
	C	1	✓	26	48	22
	D	1	✓	15	48	33
	E	1	✓	12	19	7
	F	1	✓	58	19	81
	G	1	✓	26	48	22
	H	1	✓	26	5	99
	I	1	✓	15	48	33
	J	1	✓	55	5	70

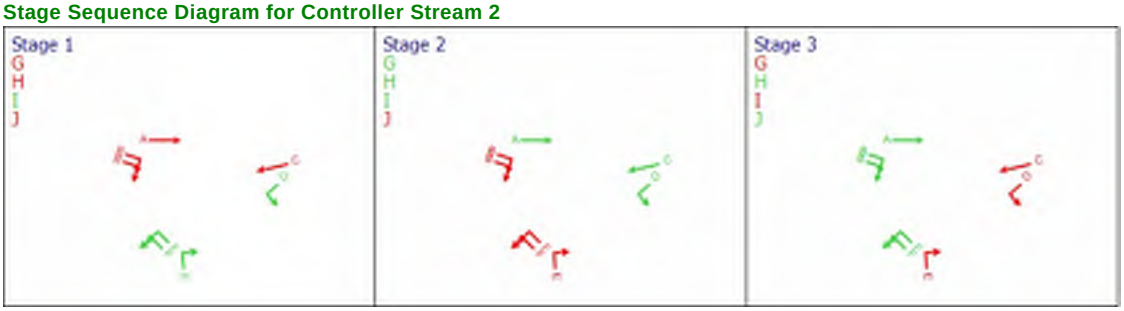
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	58	19	81			
24	2	2	2	F	58	19	81			
25	1	2	2	E	12	19	7			
26	1	2	2	A	28	5	97			
27	1	2	2	B	56	5	69			
27	2	2	2	B	56	5	69			
29	1	2	2	D	15	48	33			
30	1	2	2	C	26	48	22			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
2	18/12/2018 11:29:34	18/12/2018 11:29:36	16:30	120	964.11	60.19	80.94	3/1	0	0	3/1	12/1	3/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
16:30-17:30	81	11	22148	4427	9.78	854.63	109.48	964.11

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
16:30-17:30	22148	22148	-21		81		11	4427

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
16:30-17:30	15.50	9.78	60.19	854.63	20.77	4599.72	109.48

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
16:30-17:30	83.57	0.00	405.67

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
16:30-17:30	0.00	0.00	✓	1.00	0.00	0.00	964.11

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	we m
1	1		1			504	2080	120	0.00	24	271	33.09	0.28	0.00	0.04	
	2		1			342	2081	120	0.00	16	448	32.98	0.17	0.00	0.02	
	3		1			293	2078	120	0.00	14	538	32.95	0.14	0.00	0.01	
2	1		1	1	K	160	2077	30	0.00	30	202	48.12	37.20	77.02	4.11	
3	1		1	1	J	344	2125	23	0.00	81	11	74.34	63.57	102.63	11.85	
	2		1	1	J	342	2115	23	0.00	81	11	79.94	63.90	105.22	12.05	
	3		1	1	J	171	2115	23	0.00	40	123	60.88	44.94	87.31	4.98	
4	1		1	1	I	122	2263	23	0.00	27	234	57.72	42.25	84.55	3.44	
5	1		1	1	A	7	2035	7	7.00	5	1644	63.32	53.45	93.93	0.22	

6	**1**		1			1102	2174	120	0.00	51	78	7.25	0.85	0.00	0.26	
7	**1**		1			925	2082	120	0.00	44	103	8.68	0.69	0.00	0.18	
	2		1			177	2120	120	0.00	8	978	8.06	0.08	0.00	0.00	
8	**1**		1	1	B	170	2120	13	0.00	69	31	76.17	66.44	104.15	5.93	
	2		1	1	B	170	2120	13	0.00	69	31	76.09	66.44	104.15	5.93	
9	**1**		1	1	C	204	1913	31	0.00	40	125	46.70	38.56	80.28	5.46	
	2		1	1	C	287	2063	31	0.00	52	73	49.71	41.58	84.88	8.20	
	3		1	1	C	264	2133	31	0.00	46	94	48.28	40.15	82.74	7.28	
10	**1**		1			491	2009	120	0.00	24	268	3.25	0.29	0.00	0.04	
	2		1			264	2007	120	0.00	13	584	3.07	0.14	0.00	0.01	
11	**1**		1			755	2055	120	0.00	37	145	4.28	0.51	0.00	0.11	
12	**1**		1			1000	2096	120	23.63	56	61	15.37	4.76	21.73	7.24	
13	**2**		1	1	F	576 <	4038	41	0.00	41	121	25.83	20.98	42.39	8.14 +	
14	**1**		1	1	G	212	2161	44	17.00	26	244	36.99	31.96	63.89	4.51	
	2		1	1	G	212	2155	44	16.00	26	243	36.08	31.16	62.14	4.39	
15	**1**		1	1	H	0	2114	43	44.00	0	Unrestricted	0.00	0.00	0.00	0.00	
16	**1**		1			357	2120	120	0.00	17	434	9.90	0.17	0.00	0.02	
	2		1			667	2120	120	0.00	31	186	10.14	0.39	0.00	0.07	
17	**1**		1	1	E	714	3930	46	0.00	45	98	24.73	14.44	66.76	9.17	
18	**1**		1	1	D	155	2155	11	0.00	72	25	80.82	72.79	109.36	5.71	
	2		1	1	D	155	2165	11	0.00	72	26	80.44	72.38	109.06	5.69	
19	**1**					7	Unrestricted	120	115.00	0	Unrestricted	8.30	0.00	0.00	0.00	
20	**1**		1			447	Unrestricted	120	28.00	0	Unrestricted	11.34	0.00	0.00	0.00	
	2		1			447	Unrestricted	120	28.00	0	Unrestricted	11.34	0.00	0.00	0.00	
21	**1**		2			704	2109	120	0.00	33	170	29.05	0.47	2.19	4.88	
	2		2			472	2126	120	24.53	22	300	27.82	0.35	4.96	5.08	
22	**1**					740	Unrestricted	120	0.00	0	Unrestricted	26.23	0.00	0.00	0.00	
	2					821	Unrestricted	120	0.00	0	Unrestricted	26.75	0.00	0.00	0.00	
	3					627	Unrestricted	120	7.00	0	Unrestricted	28.46	0.00	0.00	0.00	
23	**1**		2			375	2105	120	0.00	18	405	30.56	0.19	0.00	0.02	
	2		2			444	2105	120	0.00	21	327	50.34	0.23	0.00	0.03	
24	**1**		2	2	F	375	1924	81	0.58	29	213	22.84	8.16	33.82	4.70	
	2		2	2	F	377	1932	81	0.68	29	213	32.00	8.17	37.13	4.70	
25	**1**		2	2	E	67	2014	7	0.00	50	80	89.91	67.15	105.60	2.36	
26	**1**		2	2	A	332	2160	97	6.00	19	378	5.37	1.30	12.14	2.07	
27	**1**		2	2	B	372	2049	69	3.00	31	189	10.54	7.12	17.11	2.39	
	2		2	2	B	472	2042	69	0.00	40	127	9.44	6.06	13.86	2.49	
28	**1**		2			346	2008	120	0.00	17	422	8.73	0.19	0.00	0.02	
29	**1**		2	2	D	98	1966	33	0.00	18	412	42.18	33.14	73.91	2.41	
30	**1**		2	2	C	248	2120	22	0.00	61	47	57.14	51.56	91.82	7.68	
31	**1**					399	Unrestricted	120	8.00	0	Unrestricted	18.63	0.00	0.00	0.00	
32	**1**					421	Unrestricted	120	10.00	0	Unrestricted	24.06	0.00	0.00	0.00	
	2					521	Unrestricted	120	10.00	0	Unrestricted	23.88	0.00	0.00	0.00	
33	**1**					894	Unrestricted	120	0.00	0	Unrestricted	18.08	0.00	0.00	0.00	
34	**1**		2			499	2115	120	28.62	27	238	18.50	1.68	13.52	5.91	
	2		2			501	2115	120	28.62	27	237	18.54	1.70	13.47	5.91	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	3819.36	155.54	15.26	60.19	854.63	109.48	0.00	964.11
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	3819.36	155.54	15.26	60.19	854.63	109.48	0.00	964.11

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A3 - AM Peak 2023 DM
D3 - AM Peak 2023 DM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	18/12/2018 11:29:36	18/12/2018 11:29:39	07:45	120	1081.95	66.91	79.71	18/1	0	0	18/1	12/1	18/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM Peak 2023 DM		D3	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM Peak 2023 DM				07:45	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2087					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2084					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2018	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2160	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓	Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓	Normal	
28	1			✓	114.53	✓	Sum of lanes	2008				Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓	Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓	Normal	
31	1			✓	230.47							Normal	
32	1			✓	322.71							Normal	
	2			✓	320.24							Normal	
33	1			✓	242.45							Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800		Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	50	86.07		2087
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	78	67.54		2084
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	1	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	100	31.62	✓	2018
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	93	42.39		2160
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	532	532
	2	267	267
	3	244	244
2	1	264	264
3	1	268	268
	2	267	267
	3	118	118
4	1	126	126
5	1	17	17
6	1	935	935
7	1	754	754
	2	182	182
8	1	165	165
	2	165	165
9	1	112	112
	2	218	218
	3	259	259
10	1	330	330
	2	259	259
11	1	589	589
12	1	1038	1038
13	2	496	496
14	1	268	268
	2	268	268
15	1	7	7
16	1	496	496
	2	1156	1156
17	1	991	991
18	1	330	330
	2	330	330
19	1	46	46
20	1	707	707
	2	730	730
21	1	839	839
	2	608	608
22	1	546	546
	2	650	650
	3	542	542
23	1	412	412
	2	467	467
24	1	412	412
	2	413	413
25	1	54	54
26	1	323	323
27	1	516	516
	2	608	608
28	1	369	369
29	1	156	156
30	1	213	213
31	1	377	377
32	1	594	594
	2	686	686
33	1	1437	1437
34	1	518	518
	2	520	520

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	**1**	**1**	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	**1**	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	**1**	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	**1**	**1**	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	**1**	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	**1**	**1**	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	**1**	**1**	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	**2**	**1**	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	**1**	**1**	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	**1**	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	**1**	**1**	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	**1**	**1**	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	**1**	**1**	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	**1**	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	**1**	**1**	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	**1**	**1**	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	**1**	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	**1**	**1**	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	**1**	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	**1**	**1**	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	**1**	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	**1**	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	**1**	**1**	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	**1**	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	**1**	**1**	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	**1**	**1**	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	**1**	**1**	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	**1**	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	**1**	**1**	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	**1**	**1**	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	**1**	**1**	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	**1**	**1**	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	**1**	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	**1**	**1**	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	**1**	**1**	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	**1**	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	**1**	**2**	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	**1**	**2**	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	**1**	**2**	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	**1**	**2**	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	**2**	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	**1**	**2**	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	**2**	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	**2**	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	264	653	108	18	0
	2	0	0	589	92	237	17
	3	0	638	0	123	868	22
	4	0	79	133	0	156	1
	5	0	456	363	54	0	6
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	132
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	132
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	308
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	330
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	112
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	218
	9		1	3	1/3, 3/3, 22/3	Percentage	118
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	259
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	108
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	92
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	9
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	165
	22		4	5	28/1, 29/1, 32/2	Normal	78
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	9
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	73
	26		4	5	28/1, 29/1, 32/1	Normal	78
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	121
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	121
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	121
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	21
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	21
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	17
	34		3	6	16/2, 18/1, 19/1	Normal	22
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	0
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	0
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	207
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	207
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	22
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	22
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	22
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	62
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	217
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	62
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	217
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	217
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	217
	49		1	3	1/1, 3/1, 22/1	Normal	268
	50		1	3	1/2, 3/2, 22/2	Normal	267
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	1
	57		5	4	23/2, 25/1, 31/1	Normal	54
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	6
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	0
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	20
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	20
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	1
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	22
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	22
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	22
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	20
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	20

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	15, 44, 58, 84, 117
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	9	15	6	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	27	44	17	1	1
	3	✓	3	A,E,F,M,S	56	58	2	1	2
	4	✓	4	I,J,K,M,L,S	65	84	19	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	96	117	21	1	7

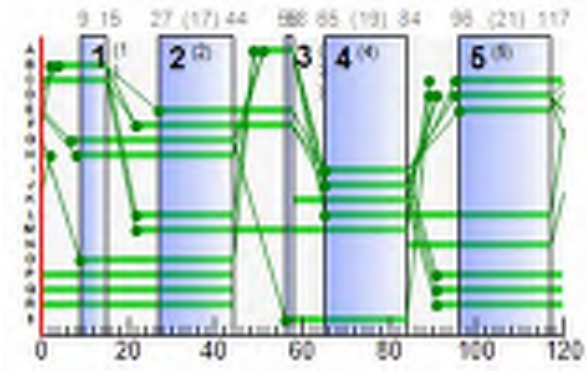
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	51	58	7
	B	1	✓	4	15	11
	C	1	✓	95	15	40
	D	1	✓	95	117	22
	E	1	✓	27	58	31
		2	✓	96	117	21
	F	1	✓	22	58	36
	G	1	✓	7	44	37
	H	1	✓	8	44	36
	I	1	✓	65	84	19
	J	1	✓	65	84	19
	K	1	✓	58	84	26
	L	1	✓	22	44	22
		2	✓	65	117	52
	M	1	✓	22	84	62
	N	1	✓	84	117	33
	O	1	✓	9	44	35
	P	1	✓	91	44	73
	Q	1	✓	91	44	73
	R	1	✓	91	44	73
	S	1	✓	56	84	28

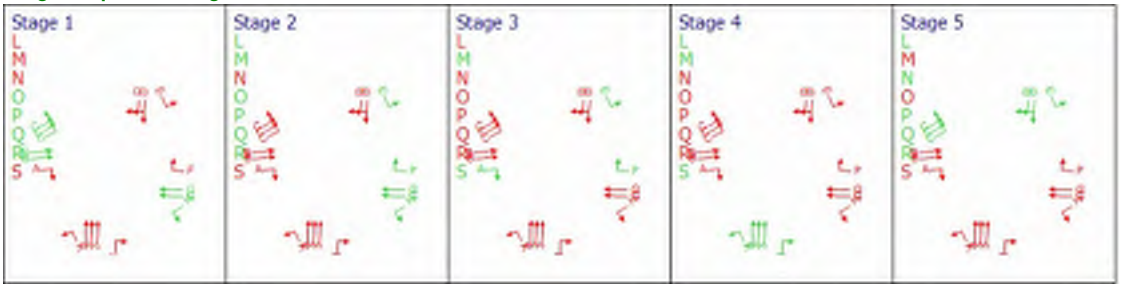
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	58	84	26			
3	1	1	1	J	65	84	19			
3	2	1	1	J	65	84	19			
3	3	1	1	J	65	84	19			
4	1	1	1	I	65	84	19			
5	1	1	1	A	51	58	7			
8	1	1	1	B	4	15	11			
8	2	1	1	B	4	15	11			
9	1	1	1	C	95	15	40			
9	2	1	1	C	95	15	40			
9	3	1	1	C	95	15	40			
13	2	1	1	F	22	58	36			
14	1	1	1	G	7	44	37			
14	2	1	1	G	7	44	37			
15	1	1	1	H	8	44	36			
17	1	1	1	E	27	58	31	96	117	21
18	1	1	1	D	95	117	22			
18	2	1	1	D	95	117	22			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	95, 118, 80
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	90	95	5	1	4
	2	✓	2	A,C,D,G,H,I	104	118	14	1	5
	3	✓	3	A,B,F,H,J	8	80	72	1	5

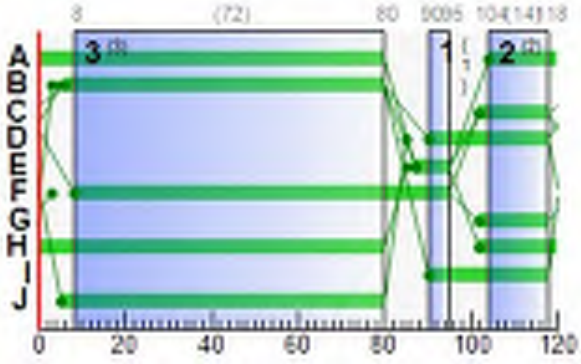
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	104	80	96
	B	1	✓	6	80	74
	C	1	✓	102	118	16
	D	1	✓	90	118	28
	E	1	✓	87	95	8
	F	1	✓	8	95	87
	G	1	✓	102	118	16
	H	1	✓	102	80	98
	I	1	✓	90	118	28
	J	1	✓	5	80	75

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	8	95	87			
24	2	2	2	F	8	95	87			
25	1	2	2	E	87	95	8			
26	1	2	2	A	104	80	96			
27	1	2	2	B	6	80	74			
27	2	2	2	B	6	80	74			
29	1	2	2	D	90	118	28			
30	1	2	2	C	102	118	16			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:45-08:45	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
3	18/12/2018 11:29:36	18/12/2018 11:29:39	07:45	120	1081.95	66.91	79.71	18/1	0	0	18/1	12/1	18/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
07:45-08:45	80	13	24177	4443	9.96	950.16	131.79	1081.95

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
07:45-08:45	24177	24177	4	✓	80		13	4443

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
07:45-08:45	15.42	9.96	66.91	950.16	22.11	5345.81	131.79

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
07:45-08:45	91.22	0.00	318.39

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
07:45-08:45	0.00	0.00		1.00	0.00	0.00	1081.95

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	we m
1	1		1			532	2087	120	0.00	25	253	33.10	0.29	0.00	0.04	
	2		1			267	2081	120	0.00	13	601	32.94	0.13	0.00	0.01	
	3		1			244	2078	120	0.00	12	666	32.92	0.12	0.00	0.01	
2	1		1	1	K	264	2077	26	0.00	56	59	57.44	46.52	87.34	7.73	
3	1		1	1	J	268	2125	19	0.00	76	19	74.05	63.28	101.64	9.12	
	2		1	1	J	267	2115	19	0.00	76	19	79.79	63.75	104.87	9.37	
	3		1	1	J	118	2115	19	0.00	33	169	62.76	46.82	88.79	3.49	
4	1		1	1	I	126	2263	19	0.00	33	169	62.22	46.75	88.65	3.72	
5	1		1	1	A	17	2035	7	7.00	13	618	64.49	54.63	94.91	0.54	

6	**1**		1			935	2174	120	0.00	43	109	7.03	0.62	0.00	0.16	
7	**1**		1			753	2084	120	0.00	36	149	8.48	0.49	0.00	0.10	
	2		1			182	2120	120	0.00	9	948	8.06	0.08	0.00	0.00	
8	**1**		1	1	B	164	2120	11	0.00	77	16	89.30	79.57	114.43	6.33	
	2		1	1	B	165	2120	11	0.00	78	16	89.89	80.25	114.93	6.39	
9	**1**		1	1	C	112	1913	40	0.00	17	425	36.34	28.20	67.97	2.54	
	2		1	1	C	218	2063	40	0.00	31	191	38.58	30.45	71.78	5.22	
	3		1	1	C	259	2133	40	0.00	36	153	39.52	31.39	73.38	6.41	
10	**1**		1			330	2009	120	0.00	16	448	3.14	0.18	0.00	0.02	
	2		1			259	2007	120	0.00	13	597	3.06	0.13	0.00	0.01	
11	**1**		1			589	2055	120	0.00	29	214	4.12	0.35	0.00	0.06	
12	**1**		1			1037	2096	120	26.01	63	42	16.25	5.64	47.69	14.02	
13	**2**		1	1	F	495 <	4038	36	0.00	40	126	29.84	25.00	49.28	8.13 +	
14	**1**		1	1	G	268	2161	37	9.00	39	130	49.37	44.34	75.62	6.76	
	2		1	1	G	268	2155	37	9.00	39	129	48.33	43.42	73.83	6.60	
15	**1**		1	1	H	6	2018	36	36.00	1	9233	55.45	47.79	91.40	0.18	
16	**1**		1			495	2120	120	0.00	23	285	9.99	0.26	0.00	0.04	
	2		1			1155	2120	120	0.00	54	65	10.76	1.01	0.00	0.33	
17	**1**		1	1	E	990	3930	52	0.00	56	61	24.00	13.71	66.23	12.57	
18	**1**		1	1	D	330	2160	22	0.00	80	13	71.32	63.29	102.51	11.38	
	2		1	1	D	330	2165	22	0.00	80	13	71.14	63.08	102.35	11.36	
19	**1**					45	Unrestricted	120	87.00	0	Unrestricted	6.95	0.00	0.00	0.00	
20	**1**		1			708	Unrestricted	120	17.00	0	Unrestricted	11.77	0.00	0.00	0.00	
	2		1			730	Unrestricted	120	17.00	0	Unrestricted	11.82	0.00	0.00	0.00	
21	**1**		2			837	2109	120	0.00	40	127	29.76	0.56	0.00	0.13	
	2		2			608	2126	120	14.07	29	212	28.90	0.37	1.35	3.13	
22	**1**					545	Unrestricted	120	2.00	0	Unrestricted	26.06	0.00	0.00	0.00	
	2					650	Unrestricted	120	0.00	0	Unrestricted	26.85	0.00	0.00	0.00	
	3					542	Unrestricted	120	7.00	0	Unrestricted	29.01	0.00	0.00	0.00	
23	**1**		2			411	2105	120	0.00	20	361	30.59	0.21	0.00	0.02	
	2		2			468	2105	120	0.00	22	305	50.35	0.24	0.00	0.03	
24	**1**		2	2	F	411	1924	87	0.58	29	207	20.75	6.07	28.77	3.94	
	2		2	2	F	414	1932	87	0.61	29	206	29.91	6.08	31.07	4.50	
25	**1**		2	2	E	54	2014	8	5.00	36	152	82.10	59.33	99.57	1.79	
26	**1**		2	2	A	322	2160	96	5.00	18	388	6.64	2.58	26.18	2.87	
27	**1**		2	2	B	515	2049	74	2.00	40	124	9.52	6.10	17.48	3.00	
	2		2	2	B	608	2042	74	0.00	48	89	9.03	5.65	15.22	3.09	
28	**1**		2			368	2008	120	0.00	18	391	8.74	0.20	0.00	0.02	
29	**1**		2	2	D	156	1966	28	0.00	33	174	48.45	39.41	80.70	4.20	
30	**1**		2	2	C	212	2120	16	0.00	71	28	68.84	63.26	100.63	7.13	
31	**1**					376	Unrestricted	120	7.00	0	Unrestricted	18.42	0.00	0.00	0.00	
32	**1**					593	Unrestricted	120	3.00	0	Unrestricted	24.06	0.00	0.00	0.00	
	2					686	Unrestricted	120	3.00	0	Unrestricted	23.88	0.00	0.00	0.00	
33	**1**					1438	Unrestricted	120	0.00	0	Unrestricted	18.08	0.00	0.00	0.00	
34	**1**		2			517	2115	120	30.55	28	220	18.56	1.75	13.41	5.87	
	2		2			520	2115	120	30.55	28	219	18.62	1.77	13.44	5.87	

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	4172.14	170.45	15.21	66.91	950.16	131.79	0.00	1081.95
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	4172.14	170.45	15.21	66.91	950.16	131.79	0.00	1081.95

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A4 - PM Peak 2023 DM
D4 - PM Peak 2023 DM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	18/12/2018 11:29:40	18/12/2018 11:29:43	16:30	120	3750.49	247.08	107.63	24/2	9	16	24/2	12/1	24/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM Peak 2023 DM		D4	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM Peak 2023 DM				16:30	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2080					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2082					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2114	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2155	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓	Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓	Normal	
28	1			✓	114.53	✓	Sum of lanes	2008				Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓	Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓	Normal	
31	1			✓	230.47							Normal	
32	1			✓	322.71							Normal	
	2			✓	320.24							Normal	
33	1			✓	242.45							Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800		Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	69	86.07		2080
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	82	67.54		2082
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	0	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	0	31.62	✓	2114
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	100	42.39		2155
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	547	547
	2	375	375
	3	321	321
2	1	170	170
3	1	377	377
	2	375	375
	3	188	188
4	1	133	133
5	1	7	7
6	1	1244	1244
7	1	1044	1044
	2	200	200
8	1	193	193
	2	193	193
9	1	230	230
	2	323	323
	3	298	298
10	1	553	553
	2	298	298
11	1	851	851
12	1	1139	1139
13	2	666	666
14	1	237	237
	2	237	237
15	1	0	0
16	1	406	406
	2	747	747
17	1	811	811
18	1	170	170
	2	171	171
19	1	7	7
20	1	492	492
	2	492	492
21	1	800	800
	2	530	530
22	1	829	829
	2	920	920
	3	708	708
23	1	423	423
	2	502	502
24	1	423	423
	2	425	425
25	1	77	77
26	1	382	382
27	1	418	418
	2	530	530
28	1	397	397
29	1	106	106
30	1	291	291
31	1	459	459
32	1	471	471
	2	583	583
33	1	984	984
34	1	569	569
	2	570	570

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	1	1	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	1	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	1	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	1	1	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	1	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	1	1	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	1	1	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	2	1	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	1	1	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	1	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	1	1	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	1	1	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	1	1	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	1	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	1	1	15/1	19/1	8.30	20.00	✓	Nearside	31.62
	2	1	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	1	1	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	1	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	1	1	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	1	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	1	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	1	1	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	1	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	1	1	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	1	1	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	1	1	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	1	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	1	1	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	1	1	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	1	1	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	1	1	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	1	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	1	1	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	1	1	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	1	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	1	2	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	1	2	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	1	2	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	1	2	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	2	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	1	2	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	2	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	2	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	170	940	125	8	0
	2	0	0	851	112	274	7
	3	0	341	0	145	666	0
	4	0	110	181	0	106	0
	5	0	363	485	77	0	0
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	85
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	85
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	170
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	171
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	230
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	323
	9		1	3	1/3, 3/3, 22/3	Percentage	188
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	298
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	125
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	112
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	4
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	193
	22		4	5	28/1, 29/1, 32/2	Normal	53
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	4
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	81
	26		4	5	28/1, 29/1, 32/1	Normal	53
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	141
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	141
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	141
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	0
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	0
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	7
	34		3	6	16/2, 18/1, 19/1	Normal	0
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	21
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	21
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	182
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	182
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	30
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	30
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	30
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	73
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	167
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	73
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	167
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	167
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	167
	49		1	3	1/1, 3/1, 22/1	Normal	377
	50		1	3	1/2, 3/2, 22/2	Normal	375
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	57		5	4	23/2, 25/1, 31/1	Normal	77
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	21
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	28
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	28
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	0
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	30
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	30
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	30
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	28
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	28

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	61, 99, 113, 23, 43
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	55	61	6	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	73	99	26	1	1
	3	✓	3	A,E,F,M,S	111	113	2	1	2
	4	✓	4	I,J,K,M,L,S	0	23	23	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	35	43	8	1	7

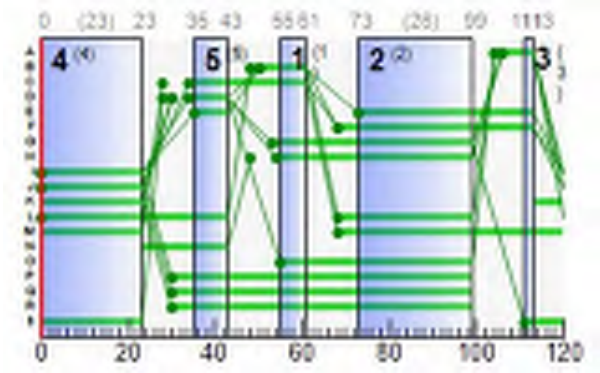
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	106	113	7
	B	1	✓	50	61	11
	C	1	✓	34	61	27
	D	1	✓	34	43	9
	E	1	✓	73	113	40
		2	✓	35	43	8
	F	1	✓	68	113	45
	G	1	✓	53	99	46
	H	1	✓	54	99	45
	I	1	✓	0	23	23
	J	1	✓	0	23	23
	K	1	✓	113	23	30
	L	1	✓	68	99	31
		2	✓	0	43	43
	M	1	✓	68	23	75
	N	1	✓	23	43	20
	O	1	✓	55	99	44
	P	1	✓	30	99	69
	Q	1	✓	30	99	69
	R	1	✓	30	99	69
	S	1	✓	111	23	32

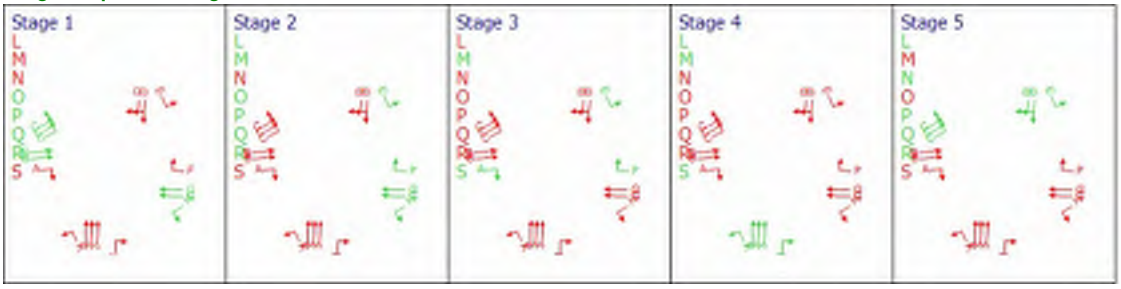
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	113	23	30			
3	1	1	1	J	0	23	23			
3	2	1	1	J	0	23	23			
3	3	1	1	J	0	23	23			
4	1	1	1	I	0	23	23			
5	1	1	1	A	106	113	7			
8	1	1	1	B	50	61	11			
8	2	1	1	B	50	61	11			
9	1	1	1	C	34	61	27			
9	2	1	1	C	34	61	27			
9	3	1	1	C	34	61	27			
13	2	1	1	F	68	113	45			
14	1	1	1	G	53	99	46			
14	2	1	1	G	53	99	46			
15	1	1	1	H	54	99	45			
17	1	1	1	E	73	113	40	35	43	8
18	1	1	1	D	34	43	9			
18	2	1	1	D	34	43	9			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	17, 64, 3
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	13	17	4	1	4
	2	✓	2	A,C,D,G,H,I	26	64	38	1	5
	3	✓	3	A,B,F,H,J	74	3	49	1	5

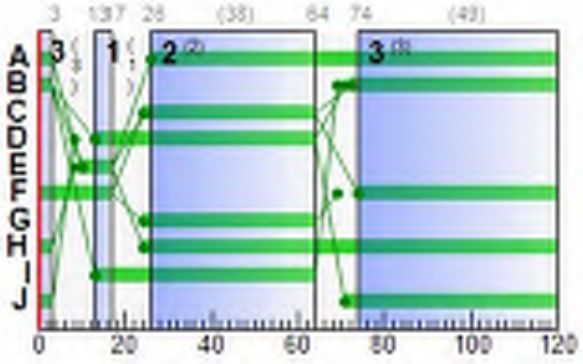
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	26	3	97
	B	1	✓	72	3	51
	C	1	✓	24	64	40
	D	1	✓	13	64	51
	E	1	✓	10	17	7
	F	1	✓	74	17	63
	G	1	✓	24	64	40
	H	1	✓	24	3	99
	I	1	✓	13	64	51
	J	1	✓	71	3	52

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	74	17	63			
24	2	2	2	F	74	17	63			
25	1	2	2	E	10	17	7			
26	1	2	2	A	26	3	97			
27	1	2	2	B	72	3	51			
27	2	2	2	B	72	3	51			
29	1	2	2	D	13	64	51			
30	1	2	2	C	24	64	40			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
4	18/12/2018 11:29:40	18/12/2018 11:29:43	16:30	120	3750.49	247.08	107.63	24/2	9	16	24/2	12/1	24/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
16:30-17:30	108	-16	24629	4383	36.12	3508.60	241.89	3750.49

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
16:30-17:30	24629	24554	261	✓	108	✓	-16	4383

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
16:30-17:30	15.48	36.12	247.08	3508.60	46.73	11259.75	241.89

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
16:30-17:30	198.06	0.00	661.32

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
16:30-17:30	0.00	0.00		1.00	0.00	0.00	3750.49

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	w m
1	1		1			547	2080	120	0.00	26	242	33.12	0.31	0.00	0.05	
	2		1			375	2081	120	0.00	18	399	33.00	0.19	0.00	0.02	
	3		1			321	2078	120	0.00	15	483	32.97	0.16	0.00	0.01	
2	1		1	1	K	170	2077	30	0.00	32	184	48.45	37.53	77.12	4.71	
3	1		1	1	J	377	2125	23	0.00	89	1	98.83	88.06	125.78	15.79	
	2		1	1	J	375	2115	23	0.00	89	2	163.20	147.16	192.44	23.56	
	3		1	1	J	188	2115	23	0.00	44	103	61.82	45.89	87.80	5.50	
4	1		1	1	I	133	2263	23	0.00	29	206	58.15	42.69	84.70	3.76	
5	1		1	1	A	7	2035	7	7.00	5	1644	63.32	53.45	93.93	0.22	

6	**1**		1			1244	2174	120	0.00	57	57	7.51	1.11	0.00	0.38
7	**1**		1			1044	2082	120	0.00	50	79	8.86	0.87	0.00	0.25
	2		1			200	2120	120	0.00	9	854	8.07	0.09	0.00	0.00
8	**1**		1	1	B	193	2120	11	0.00	91	-1	123.56	113.83	137.82	9.24
	2		1	1	B	193	2120	11	0.00	91	-1	123.48	113.83	137.82	9.24
9	**1**		1	1	C	230	1913	27	0.00	52	75	52.64	44.50	87.14	6.70
	2		1	1	C	323	2063	27	0.00	67	34	58.23	50.10	93.68	10.18
	3		1	1	C	298	2133	27	0.00	60	50	55.31	47.18	90.38	8.98
10	**1**		1			553	2009	120	0.00	28	227	3.30	0.34	0.00	0.05
	2		1			298	2007	120	0.00	15	506	3.09	0.16	0.00	0.01
11	**1**		1			851	2055	120	0.00	41	117	4.39	0.62	0.00	0.15
12	**1**		1			1082 <	2096	120	58.07	100	-10	87.06	76.45	79.90	30.45 +
13	**2**		1	1	F	633 <	4038	45	0.00	41	120	30.66	25.82	38.56	8.14 +
14	**1**		1	1	G	224	2161	46	14.00	26	240	43.19	38.16	65.84	4.92
	2		1	1	G	224	2155	46	14.00	27	239	42.35	37.44	63.57	4.75
15	**1**		1	1	H	0	2114	45	46.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	**1**		1			407	2120	120	0.00	19	369	9.93	0.20	0.00	0.02
	2		1			748	2120	120	0.00	35	155	10.21	0.46	0.00	0.10
17	**1**		1	1	E	814	3930	48	0.00	50	81	27.14	16.85	73.12	10.50
18	**1**		1	1	D	170	2155	9	0.00	95	-5	223.32	215.29	221.56	13.02
	2		1	1	D	171	2165	9	0.00	95	-5	239.16	231.11	233.50	13.98
19	**1**					7	Unrestricted	120	115.00	0	Unrestricted	8.30	0.00	0.00	0.00
20	**1**		1			476	Unrestricted	120	26.00	0	Unrestricted	11.35	0.00	0.00	0.00
	2		1			476	Unrestricted	120	25.00	0	Unrestricted	11.35	0.00	0.00	0.00
21	**1**		2			802	2109	120	3.16	39	130	29.79	1.18	16.22	8.92
	2		2			531	2126	120	33.62	28	225	30.79	3.36	37.17	8.02
22	**1**					817	Unrestricted	120	0.00	0	Unrestricted	26.28	0.00	0.00	0.00
	2					902	Unrestricted	120	0.00	0	Unrestricted	26.84	0.00	0.00	0.00
	3					697	Unrestricted	120	6.00	0	Unrestricted	28.48	0.00	0.00	0.00
23	**1**		2			423	2105	120	0.00	20	348	30.59	0.21	0.00	0.03
	2		2			502	2105	120	0.00	24	277	50.38	0.27	0.00	0.04
24	**1**		2	2	F	423 <	1924	63	39.37	107	-16	323.29	308.60	324.11	43.88 +
	2		2	2	F	425 <	1932	63	39.47	108	-16	353.21	329.37	415.55	48.05 +
25	**1**		2	2	E	77	2014	7	0.00	57	57	94.61	71.84	109.03	2.81
26	**1**		2	2	A	383	2160	97	1.00	22	315	5.42	1.36	8.57	1.99
27	**1**		2	2	B	419	2049	51	0.00	47	91	19.98	16.56	45.75	6.55
	2		2	2	B	531	2042	51	0.00	60	50	18.33	14.95	38.37	6.97
28	**1**		2			398	2008	120	0.00	20	354	8.76	0.22	0.00	0.02
29	**1**		2	2	D	106	1966	51	0.00	12	623	29.71	20.67	58.58	2.07
30	**1**		2	2	C	292	2120	40	0.00	40	123	37.66	32.09	71.87	7.20
31	**1**					460	Unrestricted	120	5.00	0	Unrestricted	18.62	0.00	0.00	0.00
32	**1**					472	Unrestricted	120	25.00	0	Unrestricted	24.06	0.00	0.00	0.00
	2					584	Unrestricted	120	25.00	0	Unrestricted	23.88	0.00	0.00	0.00
33	**1**					952	Unrestricted	120	0.00	0	Unrestricted	18.08	0.00	0.00	0.00
34	**1**		2			541 <	2115	120	89.31	100	-10	183.20	166.38	145.65	34.34 +
	2		2			541 <	2115	120	89.31	100	-10	183.23	166.38	145.65	34.34 +

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	4239.93	353.00	7.46	247.08	3508.60	241.89	0.00	3750.49
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	4239.93	353.00	7.46	247.08	3508.60	241.89	0.00	3750.49

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A5 - AM Peak 2023 DS
D5 - AM Peak 2023 DS*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	18/12/2018 11:29:44	18/12/2018 11:29:47	07:45	120	3303.63	215.02	113.09	1/2	4	7	8/1	1/2	1/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM Peak 2023 DS		D5	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM Peak 2023 DS				07:45	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2086					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2084					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2018	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2160	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓	Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓	Normal	
28	1			✓	114.53	✓	Sum of lanes	2008				Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓	Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓	Normal	
31	1			✓	230.47							Normal	
32	1			✓	322.71							Normal	
	2			✓	320.24							Normal	
33	1			✓	242.45							Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800		Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	52	86.07		2086
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	78	67.54		2084
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	1	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	100	31.62	✓	2018
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	93	42.39		2160
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	578	578
	2	297	297
	3	257	257
2	1	280	280
3	1	298	298
	2	297	297
	3	131	131
4	1	126	126
5	1	17	17
6	1	1004	1004
7	1	810	810
	2	195	195
8	1	178	178
	2	178	178
9	1	120	120
	2	234	234
	3	278	278
10	1	354	354
	2	278	278
11	1	632	632
12	1	1154	1154
13	2	588	588
14	1	280	280
	2	280	280
15	1	7	7
16	1	534	534
	2	1190	1190
17	1	1068	1068
18	1	328	328
	2	328	328
19	1	46	46
20	1	725	725
	2	748	748
21	1	900	900
	2	649	649
22	1	614	614
	2	727	727
	3	605	605
23	1	452	452
	2	509	509
24	1	452	452
	2	453	453
25	1	56	56
26	1	344	344
27	1	556	556
	2	649	649
28	1	409	409
29	1	160	160
30	1	249	249
31	1	400	400
32	1	636	636
	2	729	729
33	1	1473	1473
34	1	576	576
	2	578	578

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	1	1	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	1	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	1	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	1	1	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	1	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	1	1	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	1	1	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	2	1	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	1	1	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	1	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	1	1	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	1	1	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	1	1	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	1	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	1	1	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	1	1	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	1	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	1	1	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	1	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	1	1	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	1	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	1	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	1	1	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	1	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	1	1	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	1	1	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	1	1	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	1	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	1	1	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	1	1	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	1	1	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	1	1	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	1	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	1	1	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	1	1	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	1	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	1	2	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	1	2	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	1	2	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	1	2	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	2	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	1	2	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	2	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	2	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	280	726	108	18	0
	2	0	0	632	93	262	17
	3	0	634	0	143	925	22
	4	0	79	169	0	160	1
	5	0	480	419	56	0	6
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	140
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	140
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	306
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	328
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	120
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	234
	9		1	3	1/3, 3/3, 22/3	Percentage	131
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	278
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	108
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	93
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	9
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	178
	22		4	5	28/1, 29/1, 32/2	Normal	80
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	9
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	85
	26		4	5	28/1, 29/1, 32/1	Normal	80
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	140
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	140
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	140
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	13
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	13
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	17
	34		3	6	16/2, 18/1, 19/1	Normal	22
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	0
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	0
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	227
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	227
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	28
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	28
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	28
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	72
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	231
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	72
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	231
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	231
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	231
	49		1	3	1/1, 3/1, 22/1	Normal	298
	50		1	3	1/2, 3/2, 22/2	Normal	297
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	1
	57		5	4	23/2, 25/1, 31/1	Normal	56
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	6
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	0
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	20
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	20
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	1
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	28
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	28
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	28
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	20
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	20

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	30, 66, 80, 103, 14
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	26	30	4	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	42	66	24	1	1
	3	✓	3	A,E,F,M,S	78	80	2	1	2
	4	✓	4	I,J,K,M,L,S	87	103	16	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	115	14	19	1	7

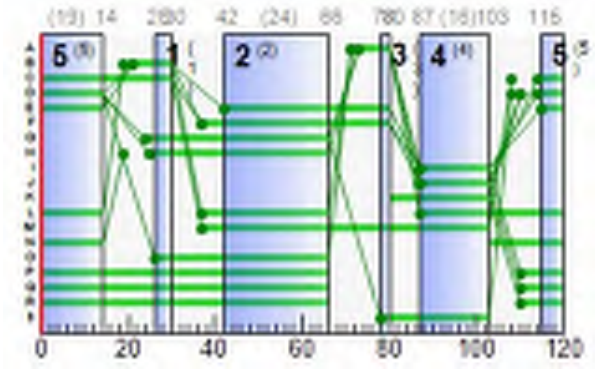
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	73	80	7
	B	1	✓	21	30	9
	C	1	✓	114	30	36
	D	1	✓	114	14	20
	E	1	✓	42	80	38
		2	✓	115	14	19
	F	1	✓	37	80	43
	G	1	✓	24	66	42
	H	1	✓	25	66	41
	I	1	✓	87	103	16
	J	1	✓	87	103	16
	K	1	✓	80	103	23
	L	1	✓	37	66	29
		2	✓	87	14	47
	M	1	✓	37	103	66
	N	1	✓	103	14	31
	O	1	✓	26	66	40
	P	1	✓	110	66	76
	Q	1	✓	110	66	76
	R	1	✓	110	66	76
	S	1	✓	78	103	25

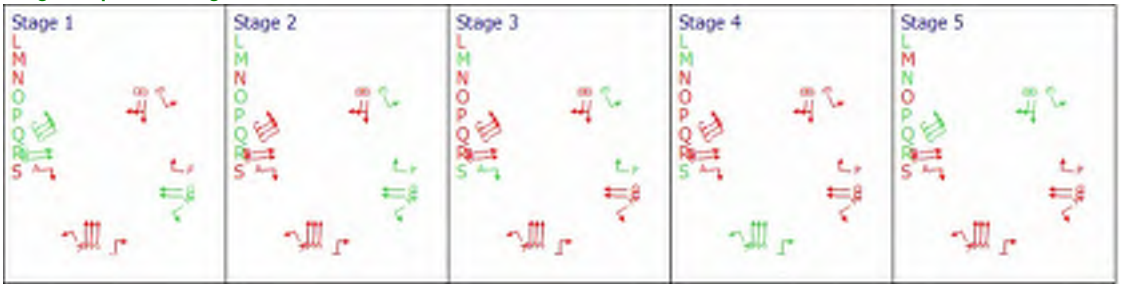
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	80	103	23			
3	1	1	1	J	87	103	16			
3	2	1	1	J	87	103	16			
3	3	1	1	J	87	103	16			
4	1	1	1	I	87	103	16			
5	1	1	1	A	73	80	7			
8	1	1	1	B	21	30	9			
8	2	1	1	B	21	30	9			
9	1	1	1	C	114	30	36			
9	2	1	1	C	114	30	36			
9	3	1	1	C	114	30	36			
13	2	1	1	F	37	80	43			
14	1	1	1	G	24	66	42			
14	2	1	1	G	24	66	42			
15	1	1	1	H	25	66	41			
17	1	1	1	E	42	80	38	115	14	19
18	1	1	1	D	114	14	20			
18	2	1	1	D	114	14	20			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	115, 18, 99
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	109	115	6	1	4
	2	✓	2	A,C,D,G,H,I	4	18	14	1	5
	3	✓	3	A,B,F,H,J	28	99	71	1	5

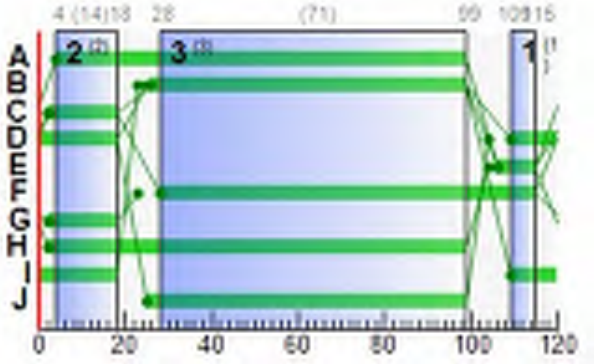
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	4	99	95
	B	1	✓	26	99	73
	C	1	✓	2	18	16
	D	1	✓	109	18	29
	E	1	✓	106	115	9
	F	1	✓	28	115	87
	G	1	✓	2	18	16
	H	1	✓	2	99	97
	I	1	✓	109	18	29
	J	1	✓	25	99	74

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	28	115	87			
24	2	2	2	F	28	115	87			
25	1	2	2	E	106	115	9			
26	1	2	2	A	4	99	95			
27	1	2	2	B	26	99	73			
27	2	2	2	B	26	99	73			
29	1	2	2	D	109	18	29			
30	1	2	2	C	2	18	16			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:45-08:45	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
5	18/12/2018 11:29:44	18/12/2018 11:29:47	07:45	120	3303.63	215.02	113.09	1/2	4	7	8/1	1/2	1/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
07:45-08:45	113	-20	25712	4434	30.10	3053.24	250.39	3303.63

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
07:45-08:45	25712	25595	273	✓	113	✓	-20	4434

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
07:45-08:45	15.47	30.10	215.02	3053.24	38.39	9580.06	250.39

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
07:45-08:45	117.57	0.00	576.33

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
07:45-08:45	0.00	0.00		1.00	0.00	0.00	3303.63

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	w m
1	1		1			578	2086	120	89.79	110	-18	255.19	222.38	217.86	47.79	
	2		1			297	2081	120	104.86	113	-20	314.92	282.11	243.31	28.88	
	3		1			257	2078	120	0.00	12	628	32.93	0.12	0.00	0.01	
2	1		1	1	K	254	2077	23	8.00	61	47	83.87	72.95	105.55	8.96	
3	1		1	1	J	271 <	2125	16	0.00	90	0	314.88	304.11	248.19	26.36 +	
	2		1	1	J	263 <	2115	16	0.00	88	3	341.75	325.71	295.69	27.35 +	
	3		1	1	J	131	2115	16	0.00	44	106	67.88	51.95	92.99	4.06	
4	1		1	1	I	126	2263	16	0.00	39	129	66.16	50.69	92.16	3.87	
5	1		1	1	A	17	2035	7	7.00	13	618	64.49	54.63	94.91	0.54	

6	**1**		1			1005	2174	120	0.00	46	95	7.11	0.71	0.00	0.20
7	**1**		1			810	2084	120	0.00	39	132	8.54	0.55	0.00	0.12
	2		1			195	2120	120	0.00	9	878	8.07	0.09	0.00	0.00
8	**1**		1	1	B	178 <	2120	9	0.00	101	-11	445.48	435.76	361.72	25.14 +
	2		1	1	B	178 <	2120	9	0.00	101	-11	445.40	435.76	361.72	25.14 +
9	**1**		1	1	C	120	1913	36	0.00	20	342	39.57	31.42	71.48	2.86
	2		1	1	C	234	2063	36	0.00	37	145	42.46	34.33	75.56	5.89
	3		1	1	C	278	2133	36	0.00	42	113	43.70	35.57	77.99	7.23
10	**1**		1			354	2009	120	0.00	18	411	3.15	0.19	0.00	0.02
	2		1			278	2007	120	0.00	14	550	3.08	0.14	0.00	0.01
11	**1**		1			632	2055	120	0.00	31	193	4.16	0.39	0.00	0.07
12	**1**		1			1154 <	2096	120	46.20	90	1	32.95	22.34	53.65	18.08 +
13	**2**		1	1	F	586 <	4038	43	0.00	40	127	31.40	26.56	41.83	8.13 +
14	**1**		1	1	G	279	2161	42	9.00	36	150	48.42	43.39	71.72	6.66
	2		1	1	G	279	2155	42	8.00	36	149	48.12	43.20	70.72	6.57
15	**1**		1	1	H	6	2018	41	41.00	1	10540	48.25	40.59	78.39	0.16
16	**1**		1			534	2120	120	0.00	25	257	10.01	0.29	0.00	0.04
	2		1			1190	2120	120	0.00	56	60	10.83	1.08	0.00	0.36
17	**1**		1	1	E	1068	3930	57	0.00	55	63	22.33	12.04	61.92	12.65
18	**1**		1	1	D	328	2160	20	0.00	87	4	84.56	76.53	112.92	12.52
	2		1	1	D	328	2165	20	0.00	87	4	84.14	76.08	112.59	12.48
19	**1**					45	Unrestricted	120	88.00	0	Unrestricted	6.95	0.00	0.00	0.00
20	**1**		1			712	Unrestricted	120	19.00	0	Unrestricted	11.71	0.00	0.00	0.00
	2		1			734	Unrestricted	120	19.00	0	Unrestricted	11.76	0.00	0.00	0.00
21	**1**		2			889	2109	120	0.00	42	114	29.95	0.62	0.67	3.10
	2		2			637	2126	120	11.23	30	197	29.09	0.42	2.83	4.18
22	**1**					586	Unrestricted	120	1.00	0	Unrestricted	26.42	0.00	0.00	0.00
	2					692	Unrestricted	120	0.00	0	Unrestricted	27.23	0.00	0.00	0.00
	3					604	Unrestricted	120	4.00	0	Unrestricted	29.06	0.00	0.00	0.00
23	**1**		2			452	2105	120	0.00	21	319	30.61	0.23	0.00	0.03
	2		2			510	2105	120	0.00	24	271	50.38	0.27	0.00	0.04
24	**1**		2	2	F	452	1924	87	0.64	32	179	21.00	6.31	29.58	4.83
	2		2	2	F	454	1932	87	0.68	32	179	30.15	6.32	32.41	4.92
25	**1**		2	2	E	56	2014	9	6.00	33	170	79.97	57.21	97.73	1.83
26	**1**		2	2	A	339	2160	95	2.00	20	359	6.43	2.37	23.98	2.81
27	**1**		2	2	B	550	2049	73	0.00	44	107	10.40	6.97	20.05	4.86
	2		2	2	B	637	2042	73	0.00	51	78	9.91	6.54	17.67	4.99
28	**1**		2			408	2008	120	0.00	20	343	8.77	0.23	0.00	0.03
29	**1**		2	2	D	160	1966	29	0.00	33	176	47.64	38.60	79.80	4.26
30	**1**		2	2	C	248	2120	16	0.00	83	9	81.87	76.29	112.19	9.38
31	**1**					395	Unrestricted	120	7.00	0	Unrestricted	18.40	0.00	0.00	0.00
32	**1**					630	Unrestricted	120	3.00	0	Unrestricted	24.06	0.00	0.00	0.00
	2					717	Unrestricted	120	3.00	0	Unrestricted	23.88	0.00	0.00	0.00
33	**1**					1446	Unrestricted	120	0.00	0	Unrestricted	18.08	0.00	0.00	0.00
34	**1**		2			576	2115	120	48.97	42	112	24.34	7.52	35.88	7.41
	2		2			578	2115	120	48.97	43	111	24.41	7.57	35.92	7.41

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	4438.06	325.52	8.47	215.02	3053.24	250.39	0.00	3303.63
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	4438.06	325.52	8.47	215.02	3053.24	250.39	0.00	3303.63

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A6 - PM Peak 2023 DS
D6 - PM Peak 2023 DS*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	18/12/2018 11:29:47	18/12/2018 11:29:53	16:30	120	5841.18	388.16	121.50	1/2	11	20	24/1	1/2	1/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM Peak 2023 DS		D6	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM Peak 2023 DS				16:30	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2081					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2082					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2114	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2155	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓		Normal
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓		Normal
28	1			✓	114.53	✓	Sum of lanes	2008					Normal
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓		Normal
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓		Normal
31	1			✓	230.47								Normal
32	1			✓	322.71								Normal
	2			✓	320.24								Normal
33	1			✓	242.45								Normal
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800			Normal
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800			Normal

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	66	86.07		2081
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	82	67.54		2082
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	0	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	0	31.62	✓	2114
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	100	42.39		2155
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	601	601
	2	392	392
	3	331	331
2	1	207	207
3	1	394	394
	2	392	392
	3	197	197
4	1	134	134
5	1	7	7
6	1	1306	1306
7	1	1098	1098
	2	209	209
8	1	202	202
	2	202	202
9	1	242	242
	2	340	340
	3	314	314
10	1	582	582
	2	314	314
11	1	896	896
12	1	1213	1213
13	2	710	710
14	1	252	252
	2	252	252
15	1	0	0
16	1	465	465
	2	808	808
17	1	929	929
18	1	171	171
	2	172	172
19	1	7	7
20	1	526	526
	2	527	527
21	1	885	885
	2	581	581
22	1	873	873
	2	969	969
	3	747	747
23	1	449	449
	2	527	527
24	1	449	449
	2	450	450
25	1	77	77
26	1	416	416
27	1	469	469
	2	581	581
28	1	420	420
29	1	106	106
30	1	314	314
31	1	493	493
32	1	522	522
	2	634	634
33	1	1053	1053
34	1	606	606
	2	607	607

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	1	1	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	1	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	1	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	1	1	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	1	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	1	1	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	1	1	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	2	1	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	1	1	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	1	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	1	1	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	1	1	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	1	1	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	1	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	1	1	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	1	1	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	1	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	1	1	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	1	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	1	1	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	1	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	1	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	1	1	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	1	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	1	1	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	1	1	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	1	1	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	1	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	1	1	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	1	1	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	1	1	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	1	1	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	1	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	1	1	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	1	1	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	1	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	1	2	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	1	2	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	1	2	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	1	2	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	2	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	1	2	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	2	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	2	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	207	983	126	8	0
	2	0	0	896	112	291	7
	3	0	343	0	178	751	0
	4	0	112	202	0	106	0
	5	0	391	508	77	0	0
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	104
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	104
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	171
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	172
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	242
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	340
	9		1	3	1/3, 3/3, 22/3	Percentage	197
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	314
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	126
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	112
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	4
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	202
	22		4	5	28/1, 29/1, 32/2	Normal	53
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	4
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	90
	26		4	5	28/1, 29/1, 32/1	Normal	53
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	150
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	150
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	150
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	0
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	0
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	7
	34		3	6	16/2, 18/1, 19/1	Normal	0
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	20
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	20
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	196
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	196
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	34
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	34
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	34
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	89
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	188
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	89
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	188
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	188
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	188
	49		1	3	1/1, 3/1, 22/1	Normal	394
	50		1	3	1/2, 3/2, 22/2	Normal	392
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	57		5	4	23/2, 25/1, 31/1	Normal	77
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	20
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	28
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	28
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	0
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	34
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	34
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	34
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	28
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	28

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	5, 46, 60, 87, 107
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	119	5	6	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	17	46	29	1	1
	3	✓	3	A,E,F,M,S	58	60	2	1	2
	4	✓	4	I,J,K,M,L,S	67	87	20	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	99	107	8	1	7

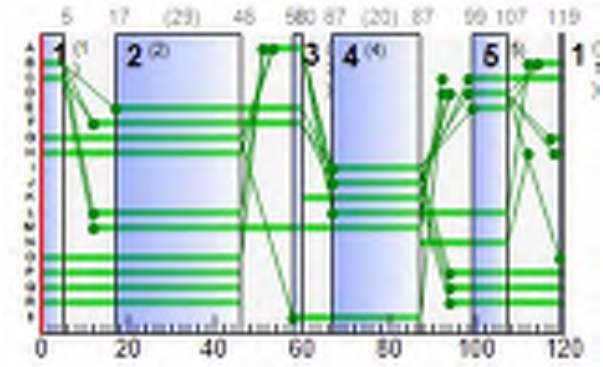
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	53	60	7
	B	1	✓	114	5	11
	C	1	✓	98	5	27
	D	1	✓	98	107	9
	E	1	✓	17	60	43
		2	✓	99	107	8
	F	1	✓	12	60	48
	G	1	✓	117	46	49
	H	1	✓	118	46	48
	I	1	✓	67	87	20
	J	1	✓	67	87	20
	K	1	✓	60	87	27
	L	1	✓	12	46	34
		2	✓	67	107	40
	M	1	✓	12	87	75
	N	1	✓	87	107	20
	O	1	✓	119	46	47
	P	1	✓	94	46	72
	Q	1	✓	94	46	72
	R	1	✓	94	46	72
	S	1	✓	58	87	29

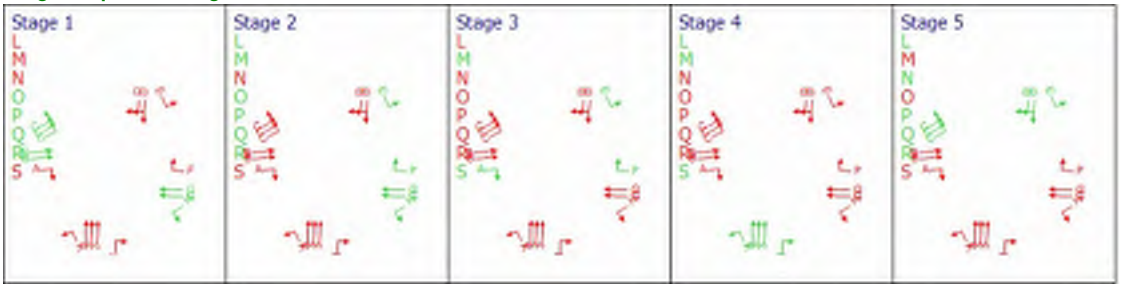
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	60	87	27			
3	1	1	1	J	67	87	20			
3	2	1	1	J	67	87	20			
3	3	1	1	J	67	87	20			
4	1	1	1	I	67	87	20			
5	1	1	1	A	53	60	7			
8	1	1	1	B	114	5	11			
8	2	1	1	B	114	5	11			
9	1	1	1	C	98	5	27			
9	2	1	1	C	98	5	27			
9	3	1	1	C	98	5	27			
13	2	1	1	F	12	60	48			
14	1	1	1	G	117	46	49			
14	2	1	1	G	117	46	49			
15	1	1	1	H	118	46	48			
17	1	1	1	E	17	60	43	99	107	8
18	1	1	1	D	98	107	9			
18	2	1	1	D	98	107	9			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	107, 27, 93
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	103	107	4	1	4
	2	✓	2	A,C,D,G,H,I	116	27	31	1	5
	3	✓	3	A,B,F,H,J	37	93	56	1	5

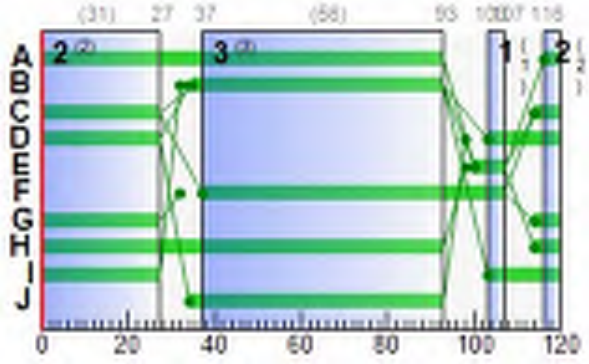
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	116	93	97
	B	1	✓	35	93	58
	C	1	✓	114	27	33
	D	1	✓	103	27	44
	E	1	✓	100	107	7
	F	1	✓	37	107	70
	G	1	✓	114	27	33
	H	1	✓	114	93	99
	I	1	✓	103	27	44
	J	1	✓	34	93	59

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	37	107	70			
24	2	2	2	F	37	107	70			
25	1	2	2	E	100	107	7			
26	1	2	2	A	116	93	97			
27	1	2	2	B	35	93	58			
27	2	2	2	B	35	93	58			
29	1	2	2	D	103	27	44			
30	1	2	2	C	114	27	33			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
6	18/12/2018 11:29:47	18/12/2018 11:29:53	16:30	120	5841.18	388.16	121.50	1/2	11	20	24/1	1/2	1/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
16:30-17:30	122	-26	25794	4397	54.17	5511.80	329.37	5841.18

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
16:30-17:30	25794	25523	822	✓	122	✓	-26	4397

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
16:30-17:30	15.47	54.17	388.16	5511.80	55.29	13729.81	329.37

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
16:30-17:30	200.88	0.00	1031.83

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
16:30-17:30	0.00	0.00		1.00	0.00	0.00	5841.18

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	w m
1	1		1			602	2081	120	90.86	119	-24	365.02	332.21	268.31	67.32	
	2		1			392	2081	120	101.40	122	-26	403.83	371.03	281.41	47.48	
	3		1			331	2078	120	0.00	16	465	32.97	0.16	0.00	0.02	
2	1		1	1	K	175	2077	27	17.00	36	150	75.22	64.30	101.73	5.92	
3	1		1	1	J	331 <	2125	20	0.00	89	1	250.08	239.32	212.83	26.20 +	
	2		1	1	J	323 <	2115	20	0.00	87	3	271.78	255.74	246.56	27.32 +	
	3		1	1	J	197	2115	20	0.00	53	69	66.88	50.94	92.02	6.05	
4	1		1	1	I	134	2263	20	0.00	34	166	61.47	46.00	87.75	3.92	
5	1		1	1	A	7	2035	7	7.00	5	1644	63.32	53.45	93.93	0.22	

6	**1**		1			1306	2174	120	0.00	60	50	7.64	1.24	0.00	0.45
7	**1**		1			1097	2082	120	0.00	53	71	8.95	0.96	0.00	0.29
	2		1			209	2120	120	0.00	10	813	8.07	0.09	0.00	0.01
8	**1**		1	1	B	201	2120	11	0.00	95	-5	235.18	225.46	233.35	16.20
	2		1	1	B	202	2120	11	0.00	95	-6	254.68	245.04	247.71	17.33
9	**1**		1	1	C	242	1913	27	0.00	54	66	53.43	45.28	87.72	7.08
	2		1	1	C	340	2063	27	0.00	71	27	60.02	51.89	95.43	10.83
	3		1	1	C	314	2133	27	0.00	63	43	56.52	48.38	91.04	9.54
10	**1**		1			582	2009	120	0.00	29	211	3.33	0.37	0.00	0.06
	2		1			314	2007	120	0.00	16	475	3.10	0.17	0.00	0.01
11	**1**		1			896	2055	120	0.00	44	106	4.45	0.68	0.00	0.17
12	**1**		1			1140 <	2096	120	54.76	100	-10	83.29	72.68	76.97	30.89 +
13	**2**		1	1	F	671 <	4038	48	0.00	41	121	28.08	23.24	36.41	8.14 +
14	**1**		1	1	G	234	2161	49	15.00	26	246	37.74	32.71	60.30	4.80
	2		1	1	G	234	2155	49	14.00	26	245	37.18	32.26	58.83	4.60
15	**1**		1	1	H	0	2114	48	49.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	**1**		1			465	2120	120	0.00	22	310	9.97	0.24	0.00	0.03
	2		1			808	2120	120	0.00	38	136	10.27	0.52	0.00	0.12
17	**1**		1	1	E	930	3930	51	0.00	54	68	27.32	17.03	74.96	12.35
18	**1**		1	1	D	171	2155	9	0.00	95	-5	245.38	237.35	238.47	14.35
	2		1	1	D	172	2165	9	0.00	95	-6	260.77	252.71	247.81	15.16
19	**1**					7	Unrestricted	120	115.00	0	Unrestricted	8.30	0.00	0.00	0.00
20	**1**		1			488	Unrestricted	120	33.00	0	Unrestricted	11.31	0.00	0.00	0.00
	2		1			488	Unrestricted	120	33.00	0	Unrestricted	11.31	0.00	0.00	0.00
21	**1**		2			880	2109	120	12.91	47	93	29.96	1.10	10.01	8.19
	2		2			576	2126	120	45.26	35	157	33.97	6.25	48.69	12.62
22	**1**					796	Unrestricted	120	0.00	0	Unrestricted	26.78	0.00	0.00	0.00
	2					886	Unrestricted	120	0.00	0	Unrestricted	27.32	0.00	0.00	0.00
	3					735	Unrestricted	120	4.00	0	Unrestricted	28.50	0.00	0.00	0.00
23	**1**		2			450	2105	120	65.19	47	92	55.40	25.02	23.56	22.46
	2		2			527	2105	120	54.39	46	97	73.11	23.01	32.80	26.25
24	**1**		2	2	F	412 <	1924	70	45.32	100	-10	314.67	299.99	203.30	42.11 +
	2		2	2	F	412 <	1932	70	45.42	100	-10	326.51	302.67	216.64	43.00 +
25	**1**		2	2	E	70	2014	7	3.00	52	71	102.40	79.63	111.34	2.62
26	**1**		2	2	A	413	2160	97	4.00	23	284	8.58	4.52	29.23	4.10
27	**1**		2	2	B	467	2049	58	0.00	46	94	16.02	12.59	45.79	7.13
	2		2	2	B	576	2042	58	0.00	57	57	15.61	12.23	38.62	7.42
28	**1**		2			422	2008	120	0.00	21	328	8.78	0.24	0.00	0.03
29	**1**		2	2	D	106	1966	44	0.00	14	526	34.24	25.20	64.51	2.28
30	**1**		2	2	C	316	2120	33	0.00	53	71	45.53	39.96	80.66	8.50
31	**1**					483	Unrestricted	120	8.00	0	Unrestricted	18.44	0.00	0.00	0.00
32	**1**					520	Unrestricted	120	18.00	0	Unrestricted	24.06	0.00	0.00	0.00
	2					629	Unrestricted	120	18.00	0	Unrestricted	23.88	0.00	0.00	0.00
33	**1**					977	Unrestricted	120	3.00	0	Unrestricted	18.08	0.00	0.00	0.00
34	**1**		2			570 <	2115	120	87.67	100	-10	187.27	170.45	131.68	34.64 +
	2		2			570 <	2115	120	87.67	100	-10	187.30	170.45	131.68	34.64 +

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	4432.41	499.01	5.52	388.16	5511.80	329.37	0.00	5841.18
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	4432.41	499.01	5.52	388.16	5511.80	329.37	0.00	5841.18

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A7 - AM Peak 2033 DM
D7 - AM Peak 2033 DM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
7	18/12/2018 11:29:54	18/12/2018 11:29:57	07:45	120	1631.98	102.99	96.74	8/2	2	4	8/2	12/1	8/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM Peak 2033 DM		D7	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM Peak 2033 DM				07:45	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2087					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2084					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2018	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2160	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓	Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓	Normal	
28	1			✓	114.53	✓	Sum of lanes	2008				Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓	Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓	Normal	
31	1			✓	230.47							Normal	
32	1			✓	322.71							Normal	
	2			✓	320.24							Normal	
33	1			✓	242.45							Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800		Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	50	86.07		2087
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	77	67.54		2084
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	1	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	100	31.62	✓	2018
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	93	42.39		2160
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	563	563
	2	282	282
	3	257	257
2	1	280	280
3	1	283	283
	2	282	282
	3	124	124
4	1	133	133
5	1	18	18
6	1	1027	1027
7	1	821	821
	2	206	206
8	1	188	188
	2	188	188
9	1	120	120
	2	234	234
	3	279	279
10	1	354	354
	2	279	279
11	1	633	633
12	1	1099	1099
13	2	524	524
14	1	284	284
	2	284	284
15	1	8	8
16	1	523	523
	2	1219	1219
17	1	1045	1045
18	1	348	348
	2	348	348
19	1	49	49
20	1	748	748
	2	772	772
21	1	899	899
	2	656	656
22	1	578	578
	2	691	691
	3	577	577
23	1	436	436
	2	495	495
24	1	436	436
	2	438	438
25	1	57	57
26	1	345	345
27	1	554	554
	2	656	656
28	1	390	390
29	1	165	165
30	1	225	225
31	1	402	402
32	1	636	636
	2	738	738
33	1	1520	1520
34	1	549	549
	2	550	550

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	**1**	**1**	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	**1**	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	**1**	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	**1**	**1**	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	**1**	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	**1**	**1**	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	**1**	**1**	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	**2**	**1**	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	**1**	**1**	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	**1**	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	**1**	**1**	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	**1**	**1**	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	**1**	**1**	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	**1**	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	**1**	**1**	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	**1**	**1**	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	**1**	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	**1**	**1**	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	**1**	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	**1**	**1**	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	**1**	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	**1**	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	**1**	**1**	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	**1**	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	**1**	**1**	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	**1**	**1**	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	**1**	**1**	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	**1**	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	**1**	**1**	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	**1**	**1**	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	**1**	**1**	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	**1**	**1**	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	**1**	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	**1**	**1**	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	**1**	**1**	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	**1**	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	**1**	**2**	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	**1**	**2**	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	**1**	**2**	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	**1**	**2**	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	**2**	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	**1**	**2**	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	**2**	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	**2**	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	280	689	114	19	0
	2	0	0	633	102	274	18
	3	0	673	0	129	916	23
	4	0	83	141	0	165	1
	5	0	484	383	57	0	7
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	140
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	140
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	325
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	348
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	120
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	234
	9		1	3	1/3, 3/3, 22/3	Percentage	124
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	279
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	114
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	102
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	10
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	188
	22		4	5	28/1, 29/1, 32/2	Normal	83
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	10
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	86
	26		4	5	28/1, 29/1, 32/1	Normal	83
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	128
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	128
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	128
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	23
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	23
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	18
	34		3	6	16/2, 18/1, 19/1	Normal	23
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	0
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	0
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	219
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	219
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	24
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	24
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	24
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	65
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	229
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	65
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	229
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	229
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	229
	49		1	3	1/1, 3/1, 22/1	Normal	283
	50		1	3	1/2, 3/2, 22/2	Normal	282
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	1
	57		5	4	23/2, 25/1, 31/1	Normal	57
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	7
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	0
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	21
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	21
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	1
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	24
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	24
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	24
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	21
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	21

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	11, 40, 57, 82, 114
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	6	11	5	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	23	40	17	1	1
	3	✓	3	A,E,F,M,S	52	57	5	1	2
	4	✓	4	I,J,K,M,L,S	64	82	18	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	94	114	20	1	7

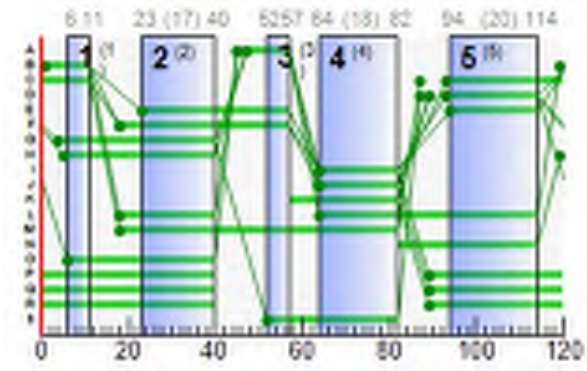
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	47	57	10
	B	1	✓	1	11	10
	C	1	✓	93	11	38
	D	1	✓	93	114	21
	E	1	✓	23	57	34
		2	✓	94	114	20
	F	1	✓	18	57	39
	G	1	✓	4	40	36
	H	1	✓	5	40	35
	I	1	✓	64	82	18
	J	1	✓	64	82	18
	K	1	✓	57	82	25
	L	1	✓	18	40	22
		2	✓	64	114	50
	M	1	✓	18	82	64
	N	1	✓	82	114	32
	O	1	✓	6	40	34
	P	1	✓	89	40	71
	Q	1	✓	89	40	71
	R	1	✓	89	40	71
	S	1	✓	52	82	30

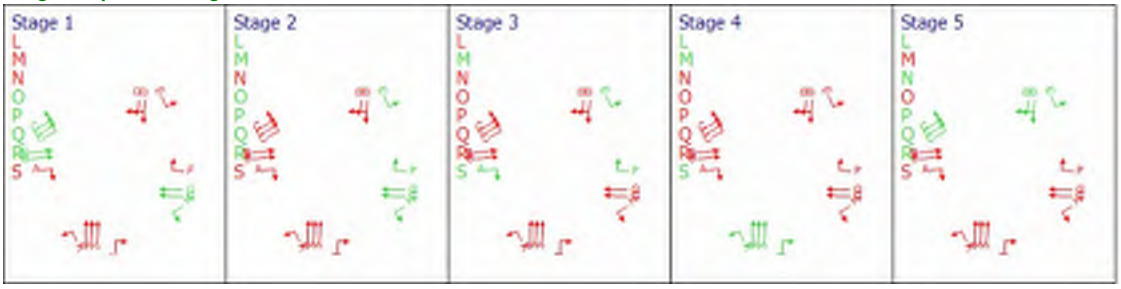
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	57	82	25			
3	1	1	1	J	64	82	18			
3	2	1	1	J	64	82	18			
3	3	1	1	J	64	82	18			
4	1	1	1	I	64	82	18			
5	1	1	1	A	47	57	10			
8	1	1	1	B	1	11	10			
8	2	1	1	B	1	11	10			
9	1	1	1	C	93	11	38			
9	2	1	1	C	93	11	38			
9	3	1	1	C	93	11	38			
13	2	1	1	F	18	57	39			
14	1	1	1	G	4	40	36			
14	2	1	1	G	4	40	36			
15	1	1	1	H	5	40	35			
17	1	1	1	E	23	57	34	94	114	20
18	1	1	1	D	93	114	21			
18	2	1	1	D	93	114	21			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	92, 118, 75
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	85	92	7	1	4
	2	✓	2	A,C,D,G,H,I	101	118	17	1	5
	3	✓	3	A,B,F,H,J	8	75	67	1	5

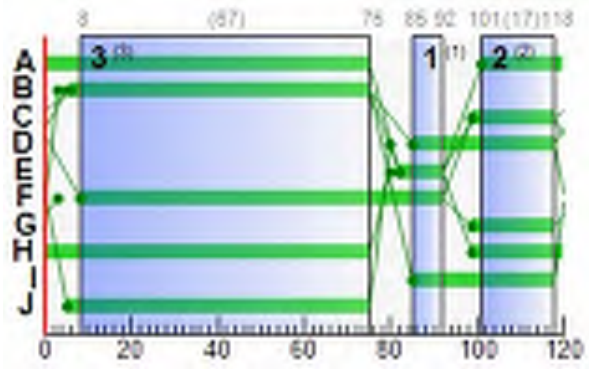
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	101	75	94
	B	1	✓	6	75	69
	C	1	✓	99	118	19
	D	1	✓	85	118	33
	E	1	✓	82	92	10
	F	1	✓	8	92	84
	G	1	✓	99	118	19
	H	1	✓	99	75	96
	I	1	✓	85	118	33
	J	1	✓	5	75	70

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	8	92	84			
24	2	2	2	F	8	92	84			
25	1	2	2	E	82	92	10			
26	1	2	2	A	101	75	94			
27	1	2	2	B	6	75	69			
27	2	2	2	B	6	75	69			
29	1	2	2	D	85	118	33			
30	1	2	2	C	99	118	19			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:45-08:45	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
7	18/12/2018 11:29:54	18/12/2018 11:29:57	07:45	120	1631.98	102.99	96.74	8/2	2	4	8/2	12/1	8/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
07:45-08:45	97	-7	25780	4425	14.38	1462.43	169.55	1631.98

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
07:45-08:45	25780	25762	5	✓	97	✓	-7	4425

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
07:45-08:45	15.38	14.38	102.99	1462.43	26.12	6689.21	169.55

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
07:45-08:45	92.60	0.00	322.11

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
07:45-08:45	0.00	0.00		1.00	0.00	0.00	1631.98

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	w m
1	1		1			563	2087	120	0.00	27	234	33.13	0.32	0.00	0.05	
	2		1			282	2081	120	0.00	14	564	32.94	0.14	0.00	0.01	
	3		1			258	2078	120	0.00	12	625	32.93	0.12	0.00	0.01	
2	1		1	1	K	280	2077	25	0.00	62	45	60.32	49.40	89.78	8.39	
3	1		1	1	J	283	2125	18	0.00	84	7	85.95	75.18	110.53	10.53	
	2		1	1	J	282	2115	18	0.00	84	7	91.85	75.81	113.88	10.81	
	3		1	1	J	124	2115	18	0.00	37	143	64.38	48.44	90.10	3.73	
4	1		1	1	I	134	2263	18	0.00	37	141	63.93	48.47	89.97	4.02	
5	1		1	1	A	18	2035	10	10.00	10	833	60.85	50.99	91.69	0.55	

6	**1**		1			1027	2174	120	0.00	47	91	7.14	0.74	0.00	0.21
7	**1**		1			821	2084	120	0.00	39	128	8.55	0.56	0.00	0.13
	2		1			206	2120	120	0.00	10	826	8.07	0.09	0.00	0.01
8	**1**		1	1	B	188	2120	10	0.00	97	-7	297.24	287.51	273.30	18.33
	2		1	1	B	188	2120	10	0.00	97	-7	297.16	287.52	273.30	18.33
9	**1**		1	1	C	120	1913	38	0.00	19	366	38.02	29.88	69.74	2.79
	2		1	1	C	234	2063	38	0.00	35	158	40.69	32.56	73.72	5.75
	3		1	1	C	279	2133	38	0.00	40	124	41.86	33.73	76.11	7.08
10	**1**		1			354	2009	120	0.00	18	411	3.15	0.19	0.00	0.02
	2		1			279	2007	120	0.00	14	547	3.08	0.14	0.00	0.01
11	**1**		1			633	2055	120	0.00	31	192	4.16	0.39	0.00	0.07
12	**1**		1			1103	2096	120	34.29	74	22	20.24	9.63	56.83	14.24
13	**2**		1	1	F	528 <	4038	39	0.00	39	129	27.67	22.82	46.17	8.13 +
14	**1**		1	1	G	284	2161	36	4.00	43	111	51.70	46.67	71.70	6.79
	2		1	1	G	284	2155	36	4.00	43	111	50.71	45.79	70.01	6.63
15	**1**		1	1	H	7	2018	35	35.00	1	7684	56.77	49.11	84.83	0.20
16	**1**		1			523	2120	120	0.00	25	265	10.01	0.28	0.00	0.04
	2		1			1219	2120	120	0.00	58	57	10.90	1.15	0.00	0.39
17	**1**		1	1	E	1046	3930	54	0.00	57	58	23.52	13.23	64.92	12.99
18	**1**		1	1	D	348	2160	21	0.00	88	2	99.28	91.25	128.89	14.99
	2		1	1	D	348	2165	21	0.00	88	3	97.61	89.55	127.19	14.83
19	**1**					48	Unrestricted	120	86.00	0	Unrestricted	6.98	0.00	0.00	0.00
20	**1**		1			748	Unrestricted	120	19.00	0	Unrestricted	11.76	0.00	0.00	0.00
	2		1			771	Unrestricted	120	19.00	0	Unrestricted	11.81	0.00	0.00	0.00
21	**1**		2			893	2109	120	0.00	42	113	29.74	0.63	0.53	1.33
	2		2			649	2126	120	12.38	31	192	28.89	0.45	3.38	4.70
22	**1**					579	Unrestricted	120	1.00	0	Unrestricted	26.09	0.00	0.00	0.00
	2					692	Unrestricted	120	0.00	0	Unrestricted	26.88	0.00	0.00	0.00
	3					579	Unrestricted	120	6.00	0	Unrestricted	29.05	0.00	0.00	0.00
23	**1**		2			437	2105	120	0.00	21	334	30.60	0.22	0.00	0.03
	2		2			495	2105	120	0.00	24	283	50.37	0.26	0.00	0.04
24	**1**		2	2	F	437	1924	84	0.71	32	178	22.06	7.38	32.78	4.98
	2		2	2	F	438	1932	84	0.75	32	179	31.21	7.38	35.00	5.11
25	**1**		2	2	E	57	2014	10	7.00	31	192	78.06	55.30	96.08	1.83
26	**1**		2	2	A	342	2160	94	3.00	20	350	6.51	2.45	24.21	2.86
27	**1**		2	2	B	551	2049	69	0.00	46	95	12.18	8.76	25.91	5.42
	2		2	2	B	649	2042	69	0.00	54	65	11.52	8.15	22.53	5.59
28	**1**		2			394	2008	120	0.00	20	359	8.76	0.22	0.00	0.02
29	**1**		2	2	D	166	1966	33	0.00	30	202	44.16	35.12	76.14	4.21
30	**1**		2	2	C	228	2120	19	0.00	65	39	61.63	56.05	94.35	7.18
31	**1**					399	Unrestricted	120	7.00	0	Unrestricted	18.41	0.00	0.00	0.00
32	**1**					634	Unrestricted	120	4.00	0	Unrestricted	24.06	0.00	0.00	0.00
	2					732	Unrestricted	120	4.00	0	Unrestricted	23.88	0.00	0.00	0.00
33	**1**					1518	Unrestricted	120	2.00	0	Unrestricted	18.08	0.00	0.00	0.00
34	**1**		2			551	2115	120	31.49	30	198	18.97	2.15	14.69	7.32
	2		2			552	2115	120	31.49	30	197	19.01	2.16	14.74	7.32

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	4439.47	213.11	12.94	102.99	1462.43	169.55	0.00	1631.98
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	4439.47	213.11	12.94	102.99	1462.43	169.55	0.00	1631.98

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A8 - PM Peak 2033 DM
D8 - PM Peak 2033 DM*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
8	18/12/2018 11:29:57	18/12/2018 11:30:00	16:30	120	5661.71	376.79	122.58	23/1	11	20	24/1	23/1	23/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM Peak 2033 DM		D8	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM Peak 2033 DM				16:30	

Network Options

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2080					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2083					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2114	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2155	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓	Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓	Normal	
28	1			✓	114.53	✓	Sum of lanes	2008				Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓	Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓	Normal	
31	1			✓	230.47							Normal	
32	1			✓	322.71							Normal	
	2			✓	320.24							Normal	
33	1			✓	242.45							Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800		Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	69	86.07		2080
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	81	67.54		2083
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	0	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	0	31.62	✓	2114
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	100	42.39		2155
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)										
	2	1	(untitled)										
	3	1	(untitled)										
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	575	575
	2	394	394
	3	337	337
2	1	179	179
3	1	396	396
	2	394	394
	3	197	197
4	1	140	140
5	1	8	8
6	1	1328	1328
7	1	1110	1110
	2	219	219
8	1	211	211
	2	211	211
9	1	243	243
	2	342	342
	3	315	315
10	1	584	584
	2	315	315
11	1	899	899
12	1	1207	1207
13	2	701	701
14	1	253	253
	2	253	253
15	1	0	0
16	1	426	426
	2	784	784
17	1	852	852
18	1	179	179
	2	179	179
19	1	8	8
20	1	521	521
	2	522	522
21	1	848	848
	2	565	565
22	1	872	872
	2	969	969
	3	746	746
23	1	450	450
	2	533	533
24	1	450	450
	2	451	451
25	1	82	82
26	1	404	404
27	1	444	444
	2	565	565
28	1	418	418
29	1	112	112
30	1	306	306
31	1	486	486
32	1	500	500
	2	621	621
33	1	1043	1043
34	1	603	603
	2	604	604

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	1	1	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	1	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	1	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	1	1	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	1	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	1	1	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	1	1	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	2	1	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	1	1	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	1	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	1	1	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	1	1	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	1	1	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	1	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	1	1	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	1	1	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	1	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	1	1	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	1	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	1	1	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	1	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	1	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	1	1	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	1	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	1	1	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	1	1	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	1	1	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	1	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	1	1	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	1	1	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	1	1	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	1	1	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	1	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	1	1	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	1	1	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	1	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	1	2	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	1	2	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	1	2	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	1	2	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	2	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	1	2	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	2	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	2	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	179	987	131	9	0
	2	0	0	899	121	300	8
	3	0	358	0	152	700	0
	4	0	116	190	0	112	0
	5	0	390	511	82	0	0
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	90
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	90
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	179
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	179
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	243
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	342
	9		1	3	1/3, 3/3, 22/3	Percentage	197
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	315
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	131
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	121
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	5
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	211
	22		4	5	28/1, 29/1, 32/2	Normal	56
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	5
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	90
	26		4	5	28/1, 29/1, 32/1	Normal	56
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	150
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	150
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	150
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	0
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	0
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	8
	34		3	6	16/2, 18/1, 19/1	Normal	0
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	20
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	20
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	195
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	195
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	32
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	32
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	32
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	76
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	175
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	76
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	175
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	175
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	175
	49		1	3	1/1, 3/1, 22/1	Normal	396
	50		1	3	1/2, 3/2, 22/2	Normal	394
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	57		5	4	23/2, 25/1, 31/1	Normal	82
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	20
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	29
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	29
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	0
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	32
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	32
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	32
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	29
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	29

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	73, 109, 3, 34, 54
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	66	73	7	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	85	109	24	1	1
	3	✓	3	A,E,F,M,S	1	3	2	1	2
	4	✓	4	I,J,K,M,L,S	10	34	24	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	46	54	8	1	7

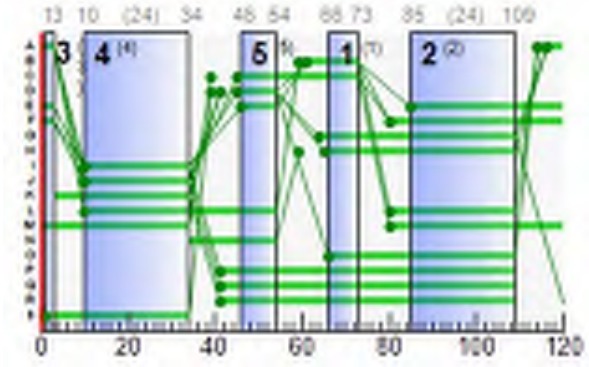
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	116	3	7
	B	1	✓	61	73	12
	C	1	✓	45	73	28
	D	1	✓	45	54	9
	E	1	✓	85	3	38
		2	✓	46	54	8
	F	1	✓	80	3	43
	G	1	✓	64	109	45
	H	1	✓	65	109	44
	I	1	✓	10	34	24
	J	1	✓	10	34	24
	K	1	✓	3	34	31
	L	1	✓	80	109	29
		2	✓	10	54	44
	M	1	✓	80	34	74
	N	1	✓	34	54	20
	O	1	✓	66	109	43
	P	1	✓	41	109	68
	Q	1	✓	41	109	68
	R	1	✓	41	109	68
	S	1	✓	1	34	33

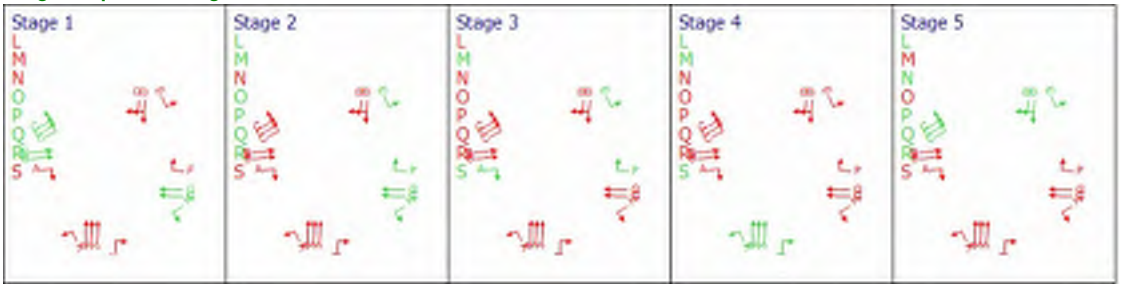
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	3	34	31			
3	1	1	1	J	10	34	24			
3	2	1	1	J	10	34	24			
3	3	1	1	J	10	34	24			
4	1	1	1	I	10	34	24			
5	1	1	1	A	116	3	7			
8	1	1	1	B	61	73	12			
8	2	1	1	B	61	73	12			
9	1	1	1	C	45	73	28			
9	2	1	1	C	45	73	28			
9	3	1	1	C	45	73	28			
13	2	1	1	F	80	3	43			
14	1	1	1	G	64	109	45			
14	2	1	1	G	64	109	45			
15	1	1	1	H	65	109	44			
17	1	1	1	E	85	3	38	46	54	8
18	1	1	1	D	45	54	9			
18	2	1	1	D	45	54	9			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	17, 60, 3
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	13	17	4	1	4
	2	✓	2	A,C,D,G,H,I	26	60	34	1	5
	3	✓	3	A,B,F,H,J	70	3	53	1	5

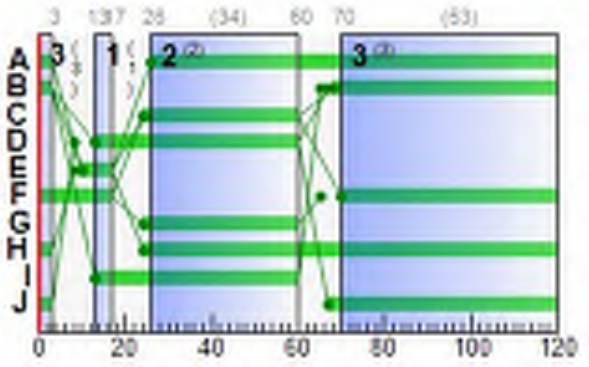
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	26	3	97
	B	1	✓	68	3	55
	C	1	✓	24	60	36
	D	1	✓	13	60	47
	E	1	✓	10	17	7
	F	1	✓	70	17	67
	G	1	✓	24	60	36
	H	1	✓	24	3	99
	I	1	✓	13	60	47
	J	1	✓	67	3	56

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	70	17	67			
24	2	2	2	F	70	17	67			
25	1	2	2	E	10	17	7			
26	1	2	2	A	26	3	97			
27	1	2	2	B	68	3	55			
27	2	2	2	B	68	3	55			
29	1	2	2	D	13	60	47			
30	1	2	2	C	24	60	36			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
8	18/12/2018 11:29:57	18/12/2018 11:30:00	16:30	120	5661.71	376.79	122.58	23/1	11	20	24/1	23/1	23/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
16:30-17:30	123	-27	25374	4394	53.46	5350.43	311.27	5661.71

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
16:30-17:30	25374	25151	977	✓	123	✓	-27	4394

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
16:30-17:30	15.45	53.46	376.79	5350.43	58.42	14187.27	311.27

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
16:30-17:30	196.08	0.00	869.75

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
16:30-17:30	0.00	0.00		1.00	0.00	0.00	5661.71

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	w m
1	1		1			576	2080	120	0.00	28	225	33.14	0.33	0.00	0.05	
	2		1			394	2081	120	19.03	23	300	34.38	1.58	15.96	2.55	
	3		1			338	2078	120	0.00	16	453	32.98	0.17	0.00	0.02	
2	1		1	1	K	180	2077	31	0.00	32	177	47.85	36.93	76.88	4.75	
3	1		1	1	J	396	2125	24	0.00	89	1	134.59	123.82	162.93	21.19	
	2		1	1	J	394 <	2115	24	0.00	89	1	195.04	179.00	222.12	27.94 +	
	3		1	1	J	197	2115	24	0.00	45	101	61.06	45.13	86.89	5.71	
4	1		1	1	I	141	2263	24	0.00	30	201	57.47	42.01	83.85	3.94	
5	1		1	1	A	8	2035	7	7.00	6	1426	63.43	53.56	94.02	0.25	

6	**1**		1			1329	2174	120	0.00	61	47	7.70	1.30	0.00	0.48
7	**1**		1			1110	2083	120	0.00	53	69	8.98	0.98	0.00	0.30
	2		1			219	2120	120	0.00	10	771	8.08	0.10	0.00	0.01
8	**1**		1	1	B	210	2120	12	0.00	91	-2	121.18	111.45	135.79	9.89
	2		1	1	B	211	2120	12	0.00	92	-2	129.00	119.36	143.49	10.59
9	**1**		1	1	C	243	1913	28	0.00	53	71	52.12	43.98	86.52	7.01
	2		1	1	C	342	2063	28	0.00	69	31	58.09	49.96	93.74	10.70
	3		1	1	C	315	2133	28	0.00	61	47	54.95	46.82	89.66	9.42
10	**1**		1			585	2009	120	0.00	29	209	3.33	0.37	0.00	0.06
	2		1			315	2007	120	0.00	16	473	3.10	0.17	0.00	0.01
11	**1**		1			900	2055	120	0.00	44	106	4.45	0.68	0.00	0.17
12	**1**		1			1042 <	2096	120	60.33	100	-10	89.86	79.25	82.07	30.15 +
13	**2**		1	1	F	608 <	4038	43	0.00	41	119	32.50	27.66	40.17	8.14 +
14	**1**		1	1	G	217	2161	45	16.00	26	243	44.99	39.96	67.31	4.87
	2		1	1	G	217	2155	45	15.00	26	242	44.09	39.17	64.99	4.70
15	**1**		1	1	H	0	2114	44	45.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	**1**		1			426	2120	120	0.00	20	348	9.94	0.21	0.00	0.03
	2		1			784	2120	120	8.73	40	126	10.64	0.89	7.14	2.96
17	**1**		1	1	E	852	3930	46	0.00	54	66	29.25	18.96	78.69	12.02
18	**1**		1	1	D	179 <	2155	9	0.00	100	-10	433.39	425.36	354.73	24.55 +
	2		1	1	D	179 <	2165	9	0.00	99	-9	424.62	416.56	351.00	24.12 +
19	**1**					8	Unrestricted	120	115.00	0	Unrestricted	8.30	0.00	0.00	0.00
20	**1**		1			474	Unrestricted	120	26.00	0	Unrestricted	11.41	0.00	0.00	0.00
	2		1			474	Unrestricted	120	25.00	0	Unrestricted	11.41	0.00	0.00	0.00
21	**1**		2			848	2109	120	0.00	40	124	29.22	0.70	6.44	7.93
	2		2			566	2126	120	24.15	27	232	27.86	0.54	10.50	7.11
22	**1**					836	Unrestricted	120	0.00	0	Unrestricted	26.17	0.00	0.00	0.00
	2					927	Unrestricted	120	0.00	0	Unrestricted	26.75	0.00	0.00	0.00
	3					715	Unrestricted	120	6.00	0	Unrestricted	28.38	0.00	0.00	0.00
23	**1**		2			450	2105	120	99.07	123	-27	394.00	363.62	284.25	55.55
	2		2			532	2105	120	95.26	123	-27	416.87	366.76	285.10	65.43
24	**1**		2	2	F	367 <	1924	67	45.10	100	-10	358.08	343.39	321.89	41.55 +
	2		2	2	F	367 <	1932	67	45.20	100	-10	373.69	349.86	413.80	42.44 +
25	**1**		2	2	E	67	2014	7	0.00	50	81	111.58	88.81	98.15	2.19
26	**1**		2	2	A	404	2160	97	1.00	23	293	6.35	2.29	14.12	2.03
27	**1**		2	2	B	444	2049	55	0.00	46	94	25.90	22.48	40.74	6.03
	2		2	2	B	566	2042	55	0.00	59	52	22.52	19.14	33.23	6.27
28	**1**		2			420	2008	120	0.00	21	330	8.78	0.24	0.00	0.03
29	**1**		2	2	D	112	1966	47	0.00	14	532	32.34	23.30	61.98	2.31
30	**1**		2	2	C	308	2120	36	0.00	47	91	41.96	36.39	77.32	7.95
31	**1**					471	Unrestricted	120	4.00	0	Unrestricted	18.41	0.00	0.00	0.00
32	**1**					500	Unrestricted	120	16.00	0	Unrestricted	24.06	0.00	0.00	0.00
	2					622	Unrestricted	120	16.00	0	Unrestricted	23.88	0.00	0.00	0.00
33	**1**					947	Unrestricted	120	0.00	0	Unrestricted	18.08	0.00	0.00	0.00
34	**1**		2			521 <	2115	120	90.43	100	-10	188.90	172.08	155.29	34.12 +
	2		2			521 <	2115	120	90.43	100	-10	188.93	172.08	155.29	34.12 +

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	4375.27	485.71	5.60	376.79	5350.43	311.27	0.00	5661.71
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	4375.27	485.71	5.60	376.79	5350.43	311.27	0.00	5661.71

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A9 - AM Peak 2033 DS
D9 - AM Peak 2033 DS*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
9	18/12/2018 11:30:01	18/12/2018 11:30:05	07:45	120	7781.61	518.56	142.23	23/2	11	20	24/2	23/2	23/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
AM Peak 2033 DS		D9	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
AM Peak 2033 DS				07:45	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2086					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2084					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2018	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2160	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2105					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓		Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓		Normal	
28	1			✓	114.53	✓	Sum of lanes	2008					Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓		Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓		Normal	
31	1			✓	230.47								Normal	
32	1			✓	322.71								Normal	
	2			✓	320.24								Normal	
33	1			✓	242.45								Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800			Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800			Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	51	86.07		2086
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	77	67.54		2084
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	1	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	100	31.62	✓	2018
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	93	42.39		2160
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	650	650
	2	328	328
	3	277	277
2	1	320	320
3	1	330	330
	2	328	328
	3	144	144
4	1	133	133
5	1	18	18
6	1	1270	1270
7	1	1020	1020
	2	251	251
8	1	233	233
	2	233	233
9	1	150	150
	2	291	291
	3	346	346
10	1	441	441
	2	346	346
11	1	787	787
12	1	1342	1342
13	2	679	679
14	1	328	328
	2	328	328
15	1	8	8
16	1	615	615
	2	1311	1311
17	1	1229	1229
18	1	348	348
	2	348	348
19	1	49	49
20	1	812	812
	2	836	836
21	1	1062	1062
	2	766	766
22	1	705	705
	2	846	846
	3	717	717
23	1	528	528
	2	595	595
24	1	528	528
	2	531	531
25	1	64	64
26	1	405	405
27	1	657	657
	2	766	766
28	1	452	452
29	1	169	169
30	1	283	283
31	1	469	469
32	1	741	741
	2	850	850
33	1	1648	1648
34	1	670	670
	2	672	672

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	1	1	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	1	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	1	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	1	1	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	1	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	1	1	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	1	1	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	2	1	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	1	1	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	1	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	1	1	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	1	1	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	1	1	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	1	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	1	1	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	1	1	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	1	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	1	1	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	1	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	1	1	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	1	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	1	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	1	1	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	1	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	1	1	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	1	1	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	1	1	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	1	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	1	1	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	1	1	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	1	1	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	1	1	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	1	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	1	1	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	1	1	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	1	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	1	2	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	1	2	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	1	2	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	1	2	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	2	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	1	2	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	2	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	2	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	320	802	114	19	0
	2	0	0	787	109	356	18
	3	0	673	0	182	1047	23
	4	0	86	196	0	169	1
	5	0	569	483	64	0	7
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	160
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	160
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	325
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	348
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Percentage	150
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Percentage	291
	9		1	3	1/3, 3/3, 22/3	Percentage	144
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Percentage	346
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	114
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	109
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	10
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	233
	22		4	5	28/1, 29/1, 32/2	Normal	85
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	10
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	124
	26		4	5	28/1, 29/1, 32/1	Normal	85
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	161
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	161
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	161
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	19
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	19
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	18
	34		3	6	16/2, 18/1, 19/1	Normal	23
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	0
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	0
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	265
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	265
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	33
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	33
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	33
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	91
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	262
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	91
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	262
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	262
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	262
	49		1	3	1/1, 3/1, 22/1	Normal	330
	50		1	3	1/2, 3/2, 22/2	Normal	328
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	1
	57		5	4	23/2, 25/1, 31/1	Normal	64
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	7
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	0
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	22
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	22
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	1
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	33
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	33
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	33
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	22
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	22

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	11, 40, 54, 79, 111
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	3	11	8	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	23	40	17	1	1
	3	✓	3	A,E,F,M,S	52	54	2	1	2
	4	✓	4	I,J,K,M,L,S	61	79	18	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	91	111	20	1	7

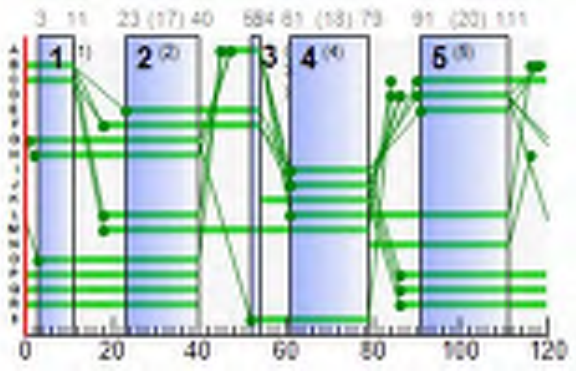
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	47	54	7
	B	1	✓	118	11	13
	C	1	✓	90	11	41
	D	1	✓	90	111	21
	E	1	✓	23	54	31
		2	✓	91	111	20
	F	1	✓	18	54	36
	G	1	✓	1	40	39
	H	1	✓	2	40	38
	I	1	✓	61	79	18
	J	1	✓	61	79	18
	K	1	✓	54	79	25
	L	1	✓	18	40	22
		2	✓	61	111	50
	M	1	✓	18	79	61
	N	1	✓	79	111	32
	O	1	✓	3	40	37
	P	1	✓	86	40	74
	Q	1	✓	86	40	74
	R	1	✓	86	40	74
	S	1	✓	52	79	27

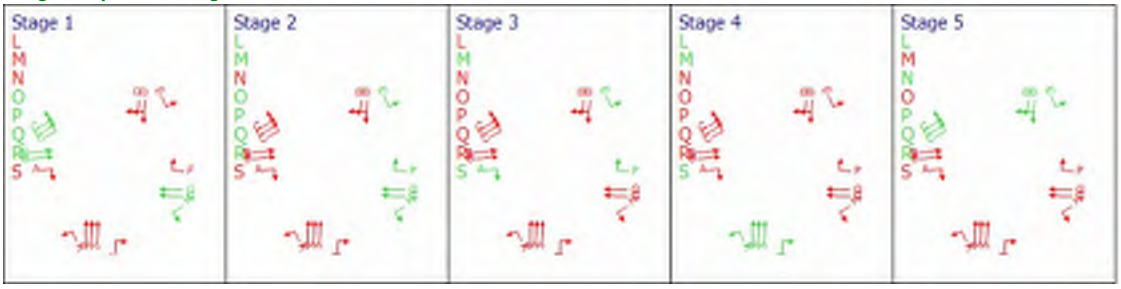
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	54	79	25			
3	1	1	1	J	61	79	18			
3	2	1	1	J	61	79	18			
3	3	1	1	J	61	79	18			
4	1	1	1	I	61	79	18			
5	1	1	1	A	47	54	7			
8	1	1	1	B	118	11	13			
8	2	1	1	B	118	11	13			
9	1	1	1	C	90	11	41			
9	2	1	1	C	90	11	41			
9	3	1	1	C	90	11	41			
13	2	1	1	F	18	54	36			
14	1	1	1	G	1	40	39			
14	2	1	1	G	1	40	39			
15	1	1	1	H	2	40	38			
17	1	1	1	E	23	54	31	91	111	20
18	1	1	1	D	90	111	21			
18	2	1	1	D	90	111	21			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	88, 2, 74
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	84	88	4	1	4
	2	✓	2	A,C,D,G,H,I	97	2	25	1	5
	3	✓	3	A,B,F,H,J	12	74	62	1	5

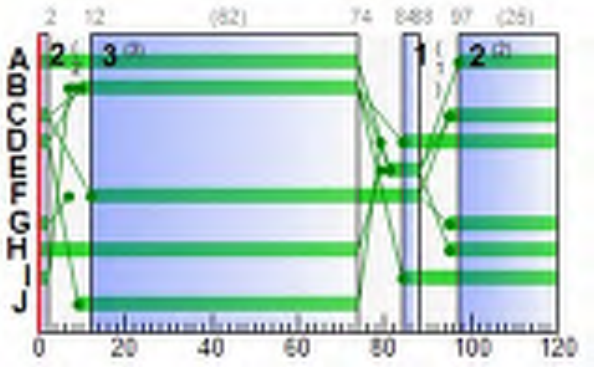
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	97	74	97
	B	1	✓	10	74	64
	C	1	✓	95	2	27
	D	1	✓	84	2	38
	E	1	✓	81	88	7
	F	1	✓	12	88	76
	G	1	✓	95	2	27
	H	1	✓	95	74	99
	I	1	✓	84	2	38
	J	1	✓	9	74	65

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	12	88	76			
24	2	2	2	F	12	88	76			
25	1	2	2	E	81	88	7			
26	1	2	2	A	97	74	97			
27	1	2	2	B	10	74	64			
27	2	2	2	B	10	74	64			
29	1	2	2	D	84	2	38			
30	1	2	2	C	95	2	27			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
07:45-08:45	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
9	18/12/2018 11:30:01	18/12/2018 11:30:05	07:45	120	7781.61	518.56	142.23	23/2	11	20	24/2	23/2	23/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
07:45-08:45	142	-37	28267	4427	66.04	7363.48	418.12	7781.61

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
07:45-08:45	28267	27827	1974	✓	142	✓	-37	4427

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
07:45-08:45	15.40	66.04	518.56	7363.48	67.58	17696.42	418.12

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
07:45-08:45	195.53	0.00	992.42

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
07:45-08:45	0.00	0.00		1.00	0.00	0.00	7781.61

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	w m
1	1		1			650	2086	120	85.92	110	-18	248.33	215.52	214.78	52.55	
	2		1			328	2081	120	103.13	112	-20	299.60	266.79	236.41	30.69	
	3		1			278	2078	120	0.00	13	573	32.94	0.13	0.00	0.01	
2	1		1	1	K	292	2077	25	7.00	65	39	84.03	73.11	105.95	10.31	
3	1		1	1	J	301 <	2125	18	0.00	89	1	278.27	267.50	233.11	26.27 +	
	2		1	1	J	293 <	2115	18	0.00	87	3	303.07	287.03	269.63	27.33 +	
	3		1	1	J	144	2115	18	0.00	43	109	65.80	49.86	90.83	4.36	
4	1		1	1	I	134	2263	18	0.00	37	141	63.93	48.47	89.97	4.02	
5	1		1	1	A	18	2035	7	7.00	13	578	64.62	54.76	95.01	0.57	

6	**1**		1			1269	2174	120	0.00	58	54	7.56	1.16	0.00	0.41
7	**1**		1			1019	2084	120	0.00	49	84	8.82	0.83	0.00	0.23
	2		1			250	2120	120	0.00	12	663	8.10	0.11	0.00	0.01
8	**1**		1	1	B	232	2120	13	0.00	94	-4	223.67	213.94	227.11	18.18
	2		1	1	B	232	2120	13	0.00	94	-4	223.59	213.95	227.11	18.18
9	**1**		1	1	C	150	1913	41	0.00	22	302	36.45	28.31	68.97	3.45
	2		1	1	C	291	2063	41	0.00	40	123	39.74	31.61	73.58	7.14
	3		1	1	C	346	2133	41	0.00	46	94	41.21	33.08	76.12	8.78
10	**1**		1			441	2009	120	0.00	22	310	3.21	0.25	0.00	0.03
	2		1			346	2007	120	0.00	17	422	3.12	0.19	0.00	0.02
11	**1**		1			787	2055	120	0.00	38	135	4.31	0.54	0.00	0.12
12	**1**		1			1031 <	2096	120	60.96	100	-10	90.67	80.06	82.70	30.06 +
13	**2**		1	1	F	539 <	4038	36	0.00	43	108	37.99	33.15	45.45	8.16 +
14	**1**		1	1	G	244	2161	39	13.00	34	166	54.11	49.08	79.97	6.50
	2		1	1	G	244	2155	39	13.00	34	165	53.76	48.84	77.83	6.32
15	**1**		1	1	H	5	2018	38	38.00	1	11848	49.46	41.80	80.81	0.13
16	**1**		1			615	2120	120	0.00	29	210	10.08	0.35	0.00	0.06
	2		1			1311	2120	120	0.00	62	46	11.12	1.37	0.00	0.50
17	**1**		1	1	E	1230	3930	51	0.00	71	27	26.73	16.44	73.78	16.84
18	**1**		1	1	D	348	2160	21	0.00	88	2	99.29	91.26	129.13	14.99
	2		1	1	D	348	2165	21	0.00	88	3	97.62	89.56	127.51	14.83
19	**1**					46	Unrestricted	120	87.00	0	Unrestricted	6.92	0.00	0.00	0.00
20	**1**		1			713	Unrestricted	120	22.00	0	Unrestricted	11.94	0.00	0.00	0.00
	2		1			750	Unrestricted	120	19.00	0	Unrestricted	12.01	0.00	0.00	0.00
21	**1**		2			1056	2109	120	8.26	54	67	32.91	3.88	38.67	15.11
	2		2			760	2126	120	24.10	40	122	32.82	4.60	47.41	13.12
22	**1**					630	Unrestricted	120	0.00	0	Unrestricted	26.17	0.00	0.00	0.00
	2					763	Unrestricted	120	0.00	0	Unrestricted	27.09	0.00	0.00	0.00
	3					670	Unrestricted	120	5.00	0	Unrestricted	28.96	0.00	0.00	0.00
23	**1**		2			528 <	2105	120	98.76	142	-36	573.67	543.29	350.35	91.07 +
	2		2			594 <	2105	120	96.19	142	-37	600.98	550.87	352.71	103.03 +
24	**1**		2	2	F	373 <	1924	76	53.76	100	-10	353.12	338.43	323.89	41.58 +
	2		2	2	F	373 <	1932	76	53.86	100	-10	368.42	344.59	421.84	42.51 +
25	**1**		2	2	E	45	2014	7	0.00	34	169	72.86	50.09	86.34	1.53
26	**1**		2	2	A	402	2160	97	3.00	23	295	6.37	2.31	21.61	3.95
27	**1**		2	2	B	654	2049	64	0.00	59	53	15.14	11.72	32.25	7.07
	2		2	2	B	760	2042	64	0.00	69	31	15.08	11.71	29.23	7.46
28	**1**		2			456	2008	120	0.00	23	296	8.80	0.26	0.00	0.03
29	**1**		2	2	D	170	1966	38	0.00	27	238	40.06	31.02	71.68	4.06
30	**1**		2	2	C	286	2120	27	0.00	58	56	51.69	46.12	86.84	8.29
31	**1**					447	Unrestricted	120	4.00	0	Unrestricted	18.05	0.00	0.00	0.00
32	**1**					739	Unrestricted	120	4.00	0	Unrestricted	24.06	0.00	0.00	0.00
	2					845	Unrestricted	120	4.00	0	Unrestricted	23.88	0.00	0.00	0.00
33	**1**					1464	Unrestricted	120	0.00	0	Unrestricted	18.08	0.00	0.00	0.00
34	**1**		2			516 <	2115	120	90.74	100	-10	198.61	181.79	147.48	34.06 +
	2		2			516 <	2115	120	90.74	100	-10	198.64	181.79	147.48	34.06 +

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	4885.54	639.47	4.75	518.56	7363.48	418.12	0.00	7781.61
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	4885.54	639.47	4.75	518.56	7363.48	418.12	0.00	7781.61

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

A10 - PM Peak 2033 DS
D10 - PM Peak 2033 DS*

Summary

Data Errors and Warnings

No errors or warnings

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
10	18/12/2018 11:30:06	18/12/2018 11:30:09	16:30	120	9058.39	606.84	154.19	23/2	13	24	24/2	23/2	23/

Analysis Set Details

Name	Description	Demand set	Include in report	Locked
PM Peak 2033 DS		D10	✓	

Demand Set Details

Name	Description	Composite	Demand sets	Start time (HH:mm)	Locked
PM Peak 2033 DS				16:30	

Network Options

Network timings

Network cycle time (s)	Restrict to SCOOT cycle times	Time segment length (min)	Number of time segments	Modelled time period (min)
120		60	1	60

Signals options

Start displacement (s)	End displacement (s)
2	3

Advanced

Phase minimum broken penalty (£)	Phase maximum broken penalty (£)	Intergreen broken penalty (£)	Starting Red-with-Amber (s)
10000.00	10000.00	10000.00	2

Traffic options

Traffic model	Vehicle flow scaling factor (%)	Pedestrian flow scaling factor (%)	Cruise times or speeds
Platoon Dispersion (PDM)	100	100	Cruise Speeds

Advanced

Resolution	DOS Threshold (%)	Cruise scaling factor (%)	Use link stop weightings	Use link delay weightings	Exclude pedestrians from results calculation	Random delay mode	Type of Vehicle-in-Service	Type of random parameter	PCU Length (m)	Calculate results for Path Segments	Generate PDM Profile Data
1	90	100	✓	✓		Complex	Uniform (TRANSYT)	Uniform (TRANSYT)	5.75		✓

Normal Traffic parameters

Dispersion type	Dispersion coefficient	Travel time coefficient
Default	35	80

Normal Traffic Types

Name	PCU Factor
Normal	1.00

Bus parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Bus	1.00	Default	0.94	30	85

Tram parameters

Name	PCU Factor	Dispersion type	Acceleration (ms^[-2])	Stationary time coefficient	Cruise time coefficient
Tram	1.00	Default	0.94	100	100

Pedestrian parameters

Dispersion type
Default

Optimisation options

Enable optimisation	Auto redistribute	Optimisation level	Enable OUT Profile accuracy
✓		Offsets Only	

Advanced

Optimisation type	Hill climb increments	OUTProfile accuracy	Use enhanced optimisation	Auto optimisation order	Optimisation order	Master controller	Offsets relative to master controller	Master controller offset after each run
Hill Climb (Fast)	15, 40, 15, 40, 15, 1, 1	50, 50, 5, 5, 0.5, 0.05, 0.05		✓	1, 2			Do nothing

Economics

Vehicle Monetary Value Of Delay (£ per PCU-hr)	Vehicle Monetary Value Of Stops (£ per 100 stops)	Pedestrian monetary value of delay (£ per Ped-hr)
14.20	2.60	14.20

Traffic Nodes

Traffic Nodes

Traffic node	Name	Description
(ALL)	(untitled)	

Arms and Traffic Streams

Arms

Arm	Name	Description	Traffic node
1			1
2			1
3			1
4			1
5			1
6			1
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
15			1
16			1
17			1
18			1
19			
20			1
21			2
22			
23			2
24			2
25			2
26			2
27			2
28			2
29			2
30			2
31			
32			
33			
34			2

Traffic Streams

Arm	Traffic Stream	Name	Description	Auto length	Length (m)	Has Saturation Flow	Saturation flow source	Saturation flow (PCU/hr)	Auto-calculate cell saturation flow	Cell saturation flow (PCU/hr)	Is signal controlled	Is give way	Traffic type	Allow Nearside Turn On Red
1	1				440.00	✓	Sum of lanes	2083					Normal	
	2				440.00	✓	Sum of lanes	2081					Normal	
	3				440.00	✓	Sum of lanes	2078					Normal	
2	1			✓	146.44	✓	Sum of lanes	2077	✓	1800	✓		Normal	
3	1			✓	144.40	✓	Sum of lanes	2125	✓	1800	✓		Normal	
	2			✓	143.44	✓	Sum of lanes	2115	✓	1800	✓		Normal	
	3			✓	142.47	✓	Sum of lanes	2115	✓	1800	✓		Normal	
4	1			✓	138.28	✓	Sum of lanes	2263	✓	1800	✓		Normal	

5	**1**			✓	132.27	✓	Sum of lanes	2035	✓	1800	✓		Normal	
6	**1**			✓	85.84	✓	Sum of lanes	2174					Normal	
7	**1**			✓	107.19	✓	Sum of lanes	2082					Normal	
	2			✓	107.04	✓	Sum of lanes	2120					Normal	
8	**1**			✓	130.44	✓	Sum of lanes	2120	✓	1800	✓		Normal	
	2			✓	129.38	✓	Sum of lanes	2120	✓	1800	✓		Normal	
9	**1**			✓	72.83	✓	Sum of lanes	1913	✓	1800	✓		Normal	
	2			✓	72.69	✓	Sum of lanes	2063	✓	1800	✓		Normal	
	3			✓	72.71	✓	Sum of lanes	2133	✓	1800	✓		Normal	
10	**1**			✓	39.70	✓	Sum of lanes	2009					Normal	
	2			✓	39.31	✓	Sum of lanes	2007					Normal	
11	**1**			✓	33.71	✓	Sum of lanes	2055					Normal	
12	**1**			✓	88.41	✓	Sum of lanes	2096		2096			Normal	
13	**2**			✓	64.94	✓	Sum of lanes	4038	✓	3600	✓		Normal	
14	**1**			✓	67.45	✓	Sum of lanes	2161	✓	1800	✓		Normal	
	2			✓	65.95	✓	Sum of lanes	2155	✓	1800	✓		Normal	
15	**1**			✓	68.50	✓	Sum of lanes	2114	✓	1800	✓		Normal	
16	**1**			✓	130.48	✓	Sum of lanes	2120					Normal	
	2			✓	130.74	✓	Sum of lanes	2120					Normal	
17	**1**			✓	105.78	✓	Sum of lanes	3930	✓	3600	✓		Normal	
18	**1**			✓	107.69	✓	Sum of lanes	2155	✓	1800	✓		Normal	
	2			✓	108.07	✓	Sum of lanes	2165	✓	1800	✓		Normal	
19	**1**			✓	74.22								Normal	
20	**1**			✓	120.43								Normal	
	2			✓	120.41								Normal	
21	**1**			✓	265.50	✓	Sum of lanes	2109					Normal	
	2			✓	265.26	✓	Sum of lanes	2126					Normal	
22	**1**			✓	271.49								Normal	
	2			✓	272.30								Normal	
	3			✓	273.16								Normal	
23	**1**			✓	407.42	✓	Sum of lanes	2074					Normal	
	2			✓	417.56	✓	Sum of lanes	2105					Normal	
24	**1**			✓	196.96	✓	Sum of lanes	1924	✓	1800	✓		Normal	
	2			✓	198.61	✓	Sum of lanes	1932	✓	1800	✓		Normal	
25	**1**			✓	189.73	✓	Sum of lanes	2014	✓	1800	✓		Normal	
26	**1**			✓	54.46	✓	Sum of lanes	2160	✓	1800	✓		Normal	

27	1			✓	45.89	✓	Sum of lanes	2049	✓	1800	✓	Normal	
	2			✓	45.29	✓	Sum of lanes	2042	✓	1800	✓	Normal	
28	1			✓	114.53	✓	Sum of lanes	2008				Normal	
29	1			✓	80.83	✓	Sum of lanes	1966	✓	1800	✓	Normal	
30	1			✓	74.75	✓	Sum of lanes	2120	✓	1800	✓	Normal	
31	1			✓	230.47							Normal	
32	1			✓	322.71							Normal	
	2			✓	320.24							Normal	
33	1			✓	242.45							Normal	
34	1			✓	140.14	✓	Sum of lanes	2115	✓	1800		Normal	
	2			✓	140.38	✓	Sum of lanes	2115	✓	1800		Normal	

Lanes

Arm	Traffic Stream	Lane	Name	Description	Use RR67	Surface condition	Site quality factor	Gradient (%)	Width (m)	Use connector turning radius	Proportion that turn (%)	Turning radius (m)	Nearside lane	Saturation flow (PCU/hr)
1	1	1	(untitled)		✓	N/A	N/A	0	3.50	✓	61	86.07		2083
	2	1	(untitled)		✓	N/A	N/A	0	3.64	✓	100	82.99		2081
	3	1	(untitled)		✓	N/A	N/A	0	3.72	✓	100	64.06		2078
2	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	22.57	✓	2077
3	1	1	(untitled)		✓	N/A	N/A	0	3.70	✓	0	99999.00		2125
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	3	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
4	1	1	(untitled)		✓	N/A	N/A	0	6.00	✓	100	36.72		2263
5	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	35.75		2035
6	1	1	(untitled)		✓	N/A	N/A	0	4.19	✓	0	99999.00		2174
7	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	82	67.54		2082
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
8	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
9	1	1	(untitled)		✓	N/A	N/A	0	3.63	✓	100	44.06	✓	1913
	2	1	(untitled)		✓	N/A	N/A	0	3.74	✓	100	47.13		2063
	3	1	(untitled)		✓	N/A	N/A	0	4.42	✓	100	50.20		2133
10	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	65.29		2009
	2	1	(untitled)		✓	N/A	N/A	0	3.00	✓	100	62.22		2007
11	1	1	(untitled)		✓	N/A	N/A	0	3.00	✓	0	99999.00		2055
12	1	1	(untitled)		✓	N/A	N/A	0	3.41	✓	0	80.06		2096
13	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	31.22		2023
		2	(untitled)		✓	N/A	N/A	0	3.57	✓	100	31.22		2015
14	1	1	(untitled)		✓	N/A	N/A	0	4.06	✓	0	99999.00		2161
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	0	99999.00		2155
15	1	1	(untitled)		✓	N/A	N/A	0	4.99	✓	0	31.62	✓	2114
16	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
	2	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
17	1	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	24.31	✓	1868
		2	(untitled)		✓	N/A	N/A	0	4.34	✓	100	24.31		2062
18	1	1	(untitled)		✓	N/A	N/A	0	4.76	✓	100	42.39		2155
	2	1	(untitled)		✓	N/A	N/A	0	4.93	✓	100	39.32		2165
19	1	1	(untitled)											
20	1	1	(untitled)											
	2	1	(untitled)											
21	1	1	(untitled)		✓	N/A	N/A	0	3.54	✓	0	99999.00		2109
	2	1	(untitled)		✓	N/A	N/A	0	3.71	✓	0	99999.00		2126

22	1	1	(untitled)											
	2	1	(untitled)											
	3	1	(untitled)											
23	1	1	(untitled)		✓	N/A	N/A	0	3.50		100	100.00		2074
	2	1	(untitled)		✓	N/A	N/A	0	3.50		0	100.00		2105
24	1	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	31.72	✓	1924
	2	1	(untitled)		✓	N/A	N/A	0	4.00	✓	100	34.80	✓	1932
25	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	100	28.63		2014
26	1	1	(untitled)		✓	N/A	N/A	0	5.45	✓	0	99999.00	✓	2160
27	1	1	(untitled)		✓	N/A	N/A	0	3.69	✓	100	40.88		2049
	2	1	(untitled)		✓	N/A	N/A	0	3.68	✓	100	37.81		2042
28	1	1	(untitled)		✓	N/A	N/A	0	3.59	✓	100	28.37		2008
29	1	1	(untitled)		✓	N/A	N/A	0	4.36	✓	100	34.63	✓	1966
30	1	1	(untitled)		✓	N/A	N/A	0	3.65	✓	0	99999.00		2120
31	1	1	(untitled)											
32	1	1	(untitled)											
	2	1	(untitled)											
33	1	1	(untitled)											
34	1	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115
	2	1	(untitled)		✓	N/A	N/A	0	3.60	✓	0	99999.00		2115

Modelling

Arm	Traffic Stream	Traffic model	Stop weighting multiplier (%)	Delay weighting multiplier (%)	Assignment Cost Weighting (%)	Exclude from results calculation	Max queue storage (PCU)	Has queue limit	Has degree of saturation limit
1	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
2	1	Flare	100	100	100		0.00		
3	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
4	1	Flare	100	100	100		0.00		
5	1	Flare	100	100	100		0.00		
6	1	NetworkDefault	100	100	100		0.00		
7	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
8	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
9	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
	3	Flare	100	100	100		0.00		
10	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
11	1	NetworkDefault	100	100	100		0.00		
12	1	CTM	100	100	100		0.00		
13	2	Flare	100	100	100		8.00		
14	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
15	1	Flare	100	100	100		8.00		
16	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
17	1	Flare	100	100	100		0.00		
18	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
19	1	NetworkDefault	100	100	100		0.00		
20	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
21	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
22	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
	3	NetworkDefault	100	100	100		0.00		
23	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
24	1	Flare	100	100	100		0.00		
	2	Flare	100	100	100		0.00		
25	1	Flare	100	100	100		0.00		
26	1	Flare	100	100	100		8.00		
27	1	Flare	100	100	100		8.00		
	2	Flare	100	100	100		8.00		
28	1	NetworkDefault	100	100	100		0.00		
29	1	Flare	100	100	100		0.00		
30	1	Flare	100	100	100		0.00		
31	1	NetworkDefault	100	100	100		0.00		
32	1	NetworkDefault	100	100	100		0.00		
	2	NetworkDefault	100	100	100		0.00		
33	1	NetworkDefault	100	100	100		0.00		
34	1	CTM	100	100	100		0.00		
	2	CTM	100	100	100		0.00		

Modelling - Advanced

Arm	Traffic Stream	Initial queue (PCU)	Type of Vehicle-in-Service	Vehicle-in-Service	Type of random parameter	Random parameter	Auto cycle time	Cycle time
(ALL)	(ALL)	0.00	NetworkDefault	Not-Included	NetworkDefault	0.50	✓	120

Normal traffic - Modelling

Arm	Traffic Stream	Stop weighting (%)	Delay weighting (%)
(ALL)	(ALL)	100	100

Normal traffic - Advanced

Arm	Traffic Stream	Dispersion type for Normal Traffic
(ALL)	(ALL)	NetworkDefault

Flows

Arm	Traffic Stream	Total Flow (PCU/hr)	Normal Flow (PCU/hr)
1	1	716	716
	2	433	433
	3	359	359
2	1	281	281
3	1	435	435
	2	433	433
	3	217	217
4	1	142	142
5	1	8	8
6	1	1531	1531
7	1	1291	1291
	2	241	241
8	1	233	233
	2	233	233
9	1	331	331
	2	357	357
	3	369	369
10	1	689	689
	2	369	369
11	1	1058	1058
12	1	1418	1418
13	2	813	813
14	1	303	303
	2	303	303
15	1	0	0
16	1	521	521
	2	902	902
17	1	1042	1042
18	1	190	190
	2	191	191
19	1	8	8
20	1	633	633
	2	634	634
21	1	993	993
	2	656	656
22	1	1038	1038
	2	1062	1062
	3	858	858
23	1	525	525
	2	612	612
24	1	525	525
	2	527	527
25	1	85	85
26	1	459	459
27	1	534	534
	2	656	656
28	1	477	477
29	1	111	111
30	1	366	366
31	1	544	544
32	1	590	590
	2	712	712
33	1	1267	1267
34	1	708	708
	2	710	710

Signals

Arm	Traffic Stream	Controller stream	Phase	Second phase enabled
2	1	1	K	
3	1	1	J	
	2	1	J	
	3	1	J	
4	1	1	I	
5	1	1	A	
8	1	1	B	
	2	1	B	
9	1	1	C	
	2	1	C	
	3	1	C	
13	2	1	F	
14	1	1	G	
	2	1	G	
15	1	1	H	
17	1	1	E	
18	1	1	D	
	2	1	D	
24	1	2	F	
	2	2	F	
25	1	2	E	
26	1	2	A	
27	1	2	B	
	2	2	B	
29	1	2	D	
30	1	2	C	

Entry Sources

Arm	Traffic Stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)
1	1	32.81	30.00
	2	32.81	30.00
	3	32.81	30.00
6	1	6.40	30.00
16	1	9.73	30.00
	2	9.75	30.00
23	1	30.38	30.00
	2	50.11	18.64
28	1	8.54	30.00

Sources

Arm	Traffic Stream	Source	Source traffic stream	Destination traffic stream	Cruise time for Normal Traffic (s)	Cruise speed for Normal Traffic (mph)	Auto turning radius	Traffic turn style	Turning radius (m)
2	1	1	1/1	2/1	10.92	30.00	✓	Straight	Straight Movement
3	1	1	1/1	3/1	10.77	30.00	✓	Offside	86.07
	2	1	1/2	3/2	16.04	20.00	✓	Offside	82.99
	3	1	1/3	3/3	15.93	20.00	✓	Offside	79.92
4	1	1	1/3	4/1	15.47	20.00	✓	Offside	64.06
5	1	1	7/2	5/1	9.86	30.00	✓	Straight	Straight Movement
7	1	1	6/1	7/1	7.99	30.00	✓	Straight	Straight Movement
	2	1	6/1	7/2	7.98	30.00	✓	Straight	Straight Movement
8	1	1	7/1	8/1	9.73	30.00	✓	Straight	Straight Movement
	2	1	7/2	8/2	9.65	30.00	✓	Straight	Straight Movement

9	1	1	10/1	9/1	8.15	20.00	✓	Offside	66.43
	2	1	10/1	9/2	8.13	20.00	✓	Offside	65.29
	3	1	10/2	9/3	8.13	20.00	✓	Offside	62.22
10	1	1	11/1	10/1	2.96	30.00	✓	Straight	Straight Movement
	2	1	11/1	10/2	2.93	30.00	✓	Straight	Straight Movement
11	1	1	7/1	11/1	3.77	20.00	✓	Nearside	67.54
12	1	1	34/1	12/1	10.61	18.64	✓	Straight	Straight Movement
13	2	1	12/1	13/2	4.84	30.00	✓	Straight	Straight Movement
14	1	1	12/1	14/1	5.03	30.00	✓	Straight	Straight Movement
	2	1	12/1	14/2	4.92	30.00	✓	Straight	Straight Movement
15	1	1	12/1	15/1	7.66	20.00	✓	Nearside	80.06
17	1	1	16/1	17/1	7.89	30.00	✓	Straight	Straight Movement
18	1	1	16/2	18/1	8.03	30.00	✓	Straight	Straight Movement
	2	1	16/2	18/2	8.06	30.00	✓	Straight	Straight Movement
19	1	1	15/1	19/1	8.30	20.00	✓	Nearside	31.62
20	1	1	2/1	20/1	13.47	20.00	✓	Nearside	22.57
	2	1	2/1	20/2	13.47	20.00	✓	Nearside	22.57
21	1	1	8/1	21/1	19.80	30.00	✓	Straight	Straight Movement
	2	1	8/2	21/2	19.78	30.00	✓	Straight	Straight Movement
22	1	1	9/1	22/1	30.37	20.00	✓	Nearside	44.06
	2	1	9/2	22/2	30.46	20.00	✓	Nearside	47.13
	3	1	9/3	22/3	30.55	20.00	✓	Nearside	50.20
24	1	1	23/1	24/1	14.69	30.00	✓	Offside	47.74
	2	1	23/2	24/2	23.83	18.64	✓	Offside	44.66
25	1	1	23/2	25/1	22.77	18.64	✓	Offside	36.93
26	1	1	21/1	26/1	4.06	30.00	✓	Straight	Straight Movement
27	1	1	21/1	27/1	3.42	30.00	✓	Straight	Straight Movement
	2	1	21/2	27/2	3.38	30.00	✓	Straight	Straight Movement
29	1	1	28/1	29/1	9.04	20.00	✓	Nearside	28.37
30	1	1	28/1	30/1	5.57	30.00	✓	Nearside	74.98
31	1	1	26/1	31/1	17.18	30.00	✓	Straight	Straight Movement
32	1	1	29/1	32/1	24.06	30.00	✓	Nearside	34.63
	2	1	29/1	32/2	23.88	30.00	✓	Nearside	34.63
33	1	1	20/2	33/1	18.08	30.00	✓	Nearside	46.10
34	1	1	24/1	34/1	16.82	18.64	✓	Nearside	31.72
	2	1	24/2	34/2	16.85	18.64	✓	Nearside	34.80
12	1	2	34/2	12/1	10.61	18.64	✓	Straight	Straight Movement
17	1	2	16/2	17/1	12.69	18.64	✓	Straight	Straight Movement
19	1	2	5/1	19/1	8.30	20.00	✓	Offside	35.75
20	1	2	14/1	20/1	8.98	30.00	✓	Straight	Straight Movement
	2	2	14/2	20/2	8.98	30.00	✓	Straight	Straight Movement
21	1	2	4/1	21/1	29.70	20.00	✓	Offside	36.72
	2	2	4/1	21/2	29.67	20.00	✓	Offside	36.72
	1	2	3/1	22/1	20.24	30.00	✓	Straight	Straight Movement

22	2	2	3/2	22/2	20.30	30.00	✓	Straight	Straight Movement
	3	2	3/3	22/3	20.37	30.00	✓	Straight	Straight Movement
31	1	2	25/1	31/1	25.78	20.00	✓	Offside	28.63
32	1	2	27/1	32/1	24.06	30.00	✓	Offside	40.88
	2	2	27/2	32/2	23.88	30.00	✓	Offside	37.81
33	1	2	20/1	33/1	18.08	30.00	✓	Nearside	44.70
34	1	2	30/1	34/1	16.82	18.64	✓	Straight	Straight Movement
	2	2	30/1	34/2	16.85	18.64	✓	Straight	Straight Movement
19	1	3	18/1	19/1	5.53	30.00	✓	Straight	Straight Movement
20	1	3	18/1	20/1	13.47	20.00	✓	Offside	42.39
	2	3	18/2	20/2	13.47	20.00	✓	Offside	39.32
21	1	3	17/1	21/1	31.86	18.64	✓	Nearside	24.31
	2	3	17/1	21/2	31.83	18.64	✓	Nearside	24.31
22	1	3	13/2	22/1	32.58	18.64	✓	Offside	37.37
	2	3	13/2	22/2	32.68	18.64	✓	Offside	34.29
	3	3	13/2	22/3	32.78	18.64	✓	Offside	31.22

Local OD Matrix - Local Matrix: 1

Local Matrix Options

OD Matrix	Name	Use for point to point table	Auto calculate	Allocation mode	Allow paths past exit locations	Allow looped paths on arms	Allow looped paths on traffic nodes	Copy flows	Matrix to copy flows from	Limit paths by length	Path length limit multiplier	Limit paths by number	Path number limit
1	(untitled)	✓	✓	Lane Balancing			✓			✓	1.25		

Normal Input Flows (PCU/hr)

		To					
		1	2	3	4	5	6
From	1	0	281	1086	133	9	0
	2	0	0	1058	122	343	8
	3	0	381	0	204	838	0
	4	0	123	243	0	111	0
	5	0	482	570	85	0	0
	6	0	0	0	0	0	0

Bus Input Flows not shown as they are blank.

Tram Input Flows not shown as they are blank.

Pedestrian Input Flows not shown as they are blank.

Locations

OD Matrix	Location	Name	Entries	Exits	Colour
1	1	(untitled)	1/1, 1/2, 1/3		#0000FF
	2	(untitled)	6/1	33/1	#FF0000
	3	(untitled)	16/2, 16/1	22/1, 22/2, 22/3	#00FF00
	4	(untitled)	28/1	31/1	#FFFF00
	5	(untitled)	23/1, 23/2	32/2, 32/1	#00FFFF
	6	(untitled)		19/1	#FF00FF

Normal Paths and Flows

OD Matrix	Path	Description	From location	To location	Path items	Allocation type	Normal Calculated Flow (PCU/hr)
1	1		1	2	1/1, 2/1, 20/1, 33/1	Normal	141
	2		1	2	1/1, 2/1, 20/2, 33/1	Normal	141
	3		3	2	16/2, 18/1, 20/1, 33/1	Normal	190
	4		3	2	16/2, 18/2, 20/2, 33/1	Normal	191
	6		2	3	6/1, 7/1, 11/1, 10/1, 9/1, 22/1	Normal	331
	8		2	3	6/1, 7/1, 11/1, 10/1, 9/2, 22/2	Normal	357
	9		1	3	1/3, 3/3, 22/3	Percentage	217
	10		2	3	6/1, 7/1, 11/1, 10/2, 9/3, 22/3	Normal	369
	11		1	4	1/3, 4/1, 21/1, 26/1, 31/1	Normal	133
	12		2	4	6/1, 7/1, 8/1, 21/1, 26/1, 31/1	Normal	122
	19		1	5	1/3, 4/1, 21/2, 27/2, 32/2	Normal	5
	20		2	5	6/1, 7/2, 8/2, 21/2, 27/2, 32/2	Normal	233
	22		4	5	28/1, 29/1, 32/2	Normal	56
	23		1	5	1/3, 4/1, 21/1, 27/1, 32/1	Normal	5
	24		2	5	6/1, 7/1, 8/1, 21/1, 27/1, 32/1	Normal	111
	26		4	5	28/1, 29/1, 32/1	Normal	56
	28		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/1	Normal	175
	29		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/2	Normal	175
	30		5	3	23/1, 24/1, 34/1, 12/1, 13/2, 22/3	Normal	175
	31		5	2	23/1, 24/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	0
	32		5	2	23/1, 24/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	0
	33		2	6	6/1, 7/2, 5/1, 19/1	Normal	8
	34		3	6	16/2, 18/1, 19/1	Normal	0
	35		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/2	Normal	15
	36		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/3	Normal	15
	37		5	2	23/2, 24/2, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	241
	38		5	2	23/2, 24/2, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	241
	39		5	6	23/2, 24/2, 34/2, 12/1, 15/1, 19/1	Normal	0
	40		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/1	Normal	41
	41		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/2	Normal	41
	42		4	3	28/1, 30/1, 34/2, 12/1, 13/2, 22/3	Normal	41
	43		3	4	16/2, 17/1, 21/1, 26/1, 31/1	Normal	102
	44		3	5	16/2, 17/1, 21/1, 27/1, 32/1	Normal	210
	45		3	4	16/1, 17/1, 21/1, 26/1, 31/1	Normal	102
	46		3	5	16/1, 17/1, 21/1, 27/1, 32/1	Normal	210
	47		3	5	16/2, 17/1, 21/2, 27/2, 32/2	Normal	210
	48		3	5	16/1, 17/1, 21/2, 27/2, 32/2	Normal	210
	49		1	3	1/1, 3/1, 22/1	Normal	435
	50		1	3	1/2, 3/2, 22/2	Normal	433
	51		4	6	28/1, 30/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	57		5	4	23/2, 25/1, 31/1	Normal	85
	58		5	6	23/1, 24/1, 34/1, 12/1, 15/1, 19/1	Normal	0
	59		5	3	23/2, 24/2, 34/2, 12/1, 13/2, 22/1	Normal	15
	60		4	2	28/1, 30/1, 34/2, 12/1, 14/1, 20/1, 33/1	Normal	31
	61		4	2	28/1, 30/1, 34/2, 12/1, 14/2, 20/2, 33/1	Normal	31
	62		4	6	28/1, 30/1, 34/2, 12/1, 15/1, 19/1	Normal	0
	63		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/1	Normal	41
	64		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/2	Normal	41
	65		4	3	28/1, 30/1, 34/1, 12/1, 13/2, 22/3	Normal	41
	66		4	2	28/1, 30/1, 34/1, 12/1, 14/1, 20/1, 33/1	Normal	31
	67		4	2	28/1, 30/1, 34/1, 12/1, 14/2, 20/2, 33/1	Normal	31

Signal Timings

Network Default: 120s cycle time; 120 steps

Controller Stream 1

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
1	(untitled)		7	NetworkDefault	120

Controller Stream 1 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
1	Unspecified						Absolute

Controller Stream 1 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
1	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
1	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Traffic	
	H	(untitled)	7	300	0	0	Traffic	
	I	(untitled)	7	300	0	0	Traffic	
	J	(untitled)	7	300	0	0	Traffic	
	K	(untitled)	7	300	0	0	Traffic	
	L	(untitled)	5	300	0	0	Pedestrian	0
	M	(untitled)	5	300	0	0	Pedestrian	0
	N	(untitled)	5	300	0	0	Pedestrian	0
	O	(untitled)	5	300	0	0	Pedestrian	0
	P	(untitled)	5	300	0	0	Pedestrian	0
	Q	(untitled)	5	300	0	0	Pedestrian	0
	R	(untitled)	5	300	0	0	Pedestrian	0
	S	(untitled)	5	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
1	1	B, C, G, H, O, P, Q, R	1
	2	E, F, G, H, O, P, Q, R, M, L	1
	3	A, E, F, M, S	1
	4	I, J, K, M, L, S	1
	5	C, D, E, N, P, Q, R, L	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
1	1	(untitled)	Single	1, 3, 4, 5	20, 51, 77, 108
	2	(untitled)	Single	1, 3, 5, 4	19, 49, 78, 109
	3	(untitled)	Single	1, 4, 3, 5	19, 49, 79, 108
	4	(untitled)	Single	1, 4, 5, 3	18, 48, 78, 108
	5	(untitled)	Single	1, 5, 3, 4	20, 51, 83, 109
	6	(untitled)	Single	1, 5, 4, 3	18, 48, 79, 108
	7	(untitled)	Single	1, 2, 3, 4, 5	19, 54, 68, 98, 119
	8	(untitled)	Single	1, 2, 3, 5, 4	13, 36, 61, 84, 109
	9	(untitled)	Single	1, 2, 4, 3, 5	13, 37, 61, 85, 108
	10	(untitled)	Single	1, 2, 4, 5, 3	12, 36, 60, 84, 108

Intergreen Matrix for Controller Stream 1

		To																	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
From	A				7			10	12	7	7		7			12				
	B				11	12	7			7	7		7							
	C						7				7			7						
	D	7	7				8	10	11	7	10	13				12				13
	E		7							7										
	F		9	11	7					7	7									
	G	7			7					7	9	11								12
	H	7			7										7					
	I	7	7		11	12	9	7									7			
	J	8	9	11	7		8	7										7		
	K				7			7											7	
	L	5	5																	
	M			5																
	N								5											
	O	5			5															
	P									5										
	Q										5									
	R											5								
	S				5			5												

Banned Stage transitions for Controller Stream 1

		To				
		1	2	3	4	5
From	1					
	2					
	3					
	4					
	5					

Interstage Matrix for Controller Stream 1

		To				
		1	2	3	4	5
From	1	0	12	12	12	12
	2	11	0	12	12	11
	3	12	12	0	7	11
	4	11	12	12	0	12
	5	12	12	13	13	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
1	1	✓	1	B,C,G,H,O,P,Q,R	11	19	8	1	2
	2	✓	2	E,F,G,H,O,P,Q,R,M,L	31	54	23	1	1
	3	✓	3	A,E,F,M,S	66	68	2	1	2
	4	✓	4	I,J,K,M,L,S	75	98	23	1	7
	5	✓	5	C,D,E,N,P,Q,R,L	110	119	9	1	7

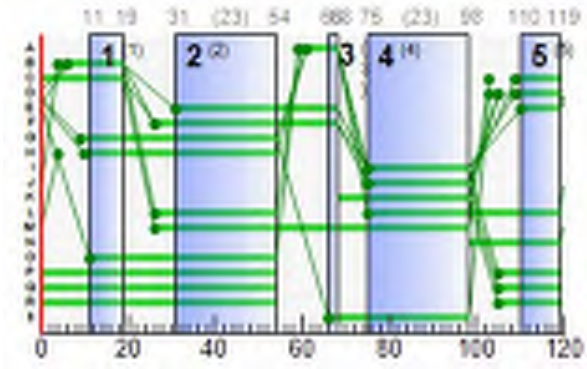
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
1	A	1	✓	61	68	7
	B	1	✓	6	19	13
	C	1	✓	109	19	30
	D	1	✓	109	119	10
	E	1	✓	31	68	37
		2	✓	110	119	9
	F	1	✓	26	68	42
	G	1	✓	9	54	45
	H	1	✓	10	54	44
	I	1	✓	75	98	23
	J	1	✓	75	98	23
	K	1	✓	68	98	30
	L	1	✓	26	54	28
		2	✓	75	119	44
	M	1	✓	26	98	72
	N	1	✓	98	119	21
	O	1	✓	11	54	43
	P	1	✓	105	54	69
	Q	1	✓	105	54	69
	R	1	✓	105	54	69
	S	1	✓	66	98	32

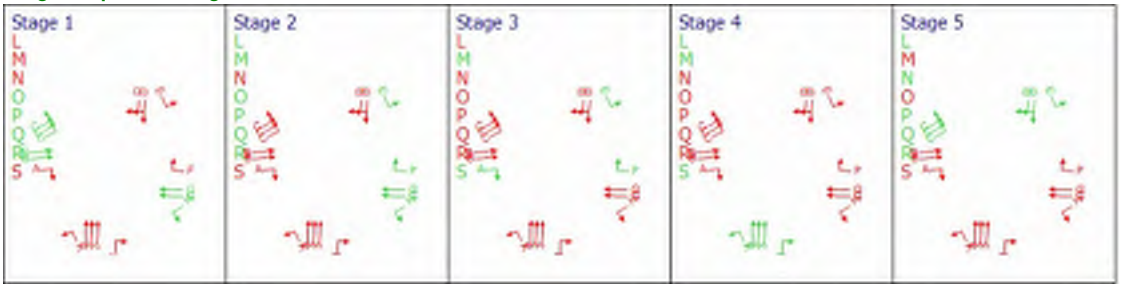
Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
2	1	1	1	K	68	98	30			
3	1	1	1	J	75	98	23			
3	2	1	1	J	75	98	23			
3	3	1	1	J	75	98	23			
4	1	1	1	I	75	98	23			
5	1	1	1	A	61	68	7			
8	1	1	1	B	6	19	13			
8	2	1	1	B	6	19	13			
9	1	1	1	C	109	19	30			
9	2	1	1	C	109	19	30			
9	3	1	1	C	109	19	30			
13	2	1	1	F	26	68	42			
14	1	1	1	G	9	54	45			
14	2	1	1	G	9	54	45			
15	1	1	1	H	10	54	44			
17	1	1	1	E	31	68	37	110	119	9
18	1	1	1	D	109	119	10			
18	2	1	1	D	109	119	10			

Phase Timings Diagram for Controller Stream 1



Stage Sequence Diagram for Controller Stream 1



Controller Stream 2

Controller Stream	Name	Description	Use sequence	Cycle time source	Cycle time (s)
2	(untitled)		1	NetworkDefault	120

Controller Stream 2 - Properties

Controller Stream	Manufacturer name	Type	Model number	(Telephone) Line Number	Site number	Grid reference	Gaining delay type
2	Unspecified						Absolute

Controller Stream 2 - Optimisation

Controller Stream	Allow offset optimisation	Allow green split optimisation	Optimisation level	Auto redistribute	Enable stage constraint
2	✓	✓	Offsets Only		

Phases

Controller Stream	Phase	Name	Minimum green (s)	Maximum green (s)	Relative start displacement (s)	Relative end displacement (s)	Type	Blackout Time (s)
2	A	(untitled)	7	300	0	0	Traffic	
	B	(untitled)	7	300	0	0	Traffic	
	C	(untitled)	7	300	0	0	Traffic	
	D	(untitled)	7	300	0	0	Traffic	
	E	(untitled)	7	300	0	0	Traffic	
	F	(untitled)	7	300	0	0	Traffic	
	G	(untitled)	7	300	0	0	Pedestrian	0
	H	(untitled)	7	300	0	0	Pedestrian	0
	I	(untitled)	7	300	0	0	Pedestrian	0
	J	(untitled)	7	300	0	0	Pedestrian	0

Library Stages

Controller Stream	Library Stage	Phases in stage	User stage minimum (s)
2	1	D, E, F, I	1
	2	A, C, D, G, H, I	1
	3	A, B, F, H, J	1

Stage Sequences

Controller Stream	Sequence	Name	Multiple cycling	Stage IDs	Stage ends
2	1	(untitled)	Single	1, 2, 3	93, 14, 79
	2	(untitled)	Single	1, 3, 2	31, 70, 110

Intergreen Matrix for Controller Stream 2

		To									
		A	B	C	D	E	F	G	H	I	J
From	A					7					
	B			7	10	7				10	
	C		8			8	10				
	D		7								7
	E	9	7	7					7		
	F			7				7			
	G						5				
	H					5					
	I		5								
	J				5						

Banned Stage transitions for Controller Stream 2

		To		
		1	2	3
From	1			
	2			
	3			

Interstage Matrix for Controller Stream 2

		To		
		1	2	3
From	1	0	9	9
	2	10	0	10
	3	10	10	0

Resultant Stages

Controller Stream	Resultant Stage	Is base stage	Library Stage ID	Phases in this stage	Stage start (s)	Stage end (s)	Stage duration (s)	User stage minimum (s)	Stage minimum (s)
2	1	✓	1	D,E,F,I	89	93	4	1	4
	2	✓	2	A,C,D,G,H,I	102	14	32	1	5
	3	✓	3	A,B,F,H,J	24	79	55	1	5

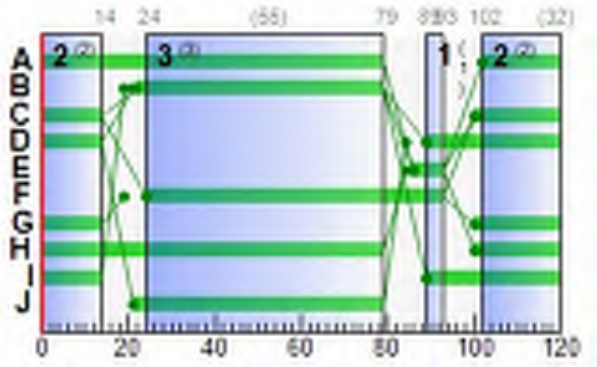
Resultant Phase Green Periods

Controller Stream	Phase	Green period	Is base green period	Start time (s)	End time (s)	Duration (s)
2	A	1	✓	102	79	97
	B	1	✓	22	79	57
	C	1	✓	100	14	34
	D	1	✓	89	14	45
	E	1	✓	86	93	7
	F	1	✓	24	93	69
	G	1	✓	100	14	34
	H	1	✓	100	79	99
	I	1	✓	89	14	45
	J	1	✓	21	79	58

Traffic Stream Green Times

Arm	Traffic Stream	Traffic Node	Controller Stream	Phase	Green Period 1			Green Period 2		
					Start	End	Duration	Start	End	Duration
24	1	2	2	F	24	93	69			
24	2	2	2	F	24	93	69			
25	1	2	2	E	86	93	7			
26	1	2	2	A	102	79	97			
27	1	2	2	B	22	79	57			
27	2	2	2	B	22	79	57			
29	1	2	2	D	89	14	45			
30	1	2	2	C	100	14	34			

Phase Timings Diagram for Controller Stream 2



Stage Sequence Diagram for Controller Stream 2



Resultant penalties

Time Segment	Controller stream	Phase min max penalty (£ per hr)	Intergreen broken penalty (£ per hr)	Stage constraint broken penalty (£ per hr)	Cost of controller stream penalties (£ per hr)
16:30-17:30	(ALL)	0.00	0.00	0.00	0.00

Network Results

Run Summary

Analysis set used	Run start time	Run finish time	Modelling start time (HH:mm)	Network Cycle Time (s)	Performance Index (£ per hr)	Total network delay (PCU-hr/hr)	Highest DOS (%)	Item with highest DOS	Number of oversaturated items	Percentage of oversaturated items (%)	Item with worst signalised PRC	Item with worst unsignalised PRC	Ite wit wor over PR
10	18/12/2018 11:30:06	18/12/2018 11:30:09	16:30	120	9058.39	606.84	154.19	23/2	13	24	24/2	23/2	23/

Network Results: Vehicle summary

Time Segment	Degree of saturation (%)	Practical reserve capacity (%)	Calculated flow entering (PCU/hr)	Actual green (s (per cycle))	Mean Delay per Veh (s)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Performance Index (£ per hr)
16:30-17:30	154	-42	28226	4402	77.40	8617.12	441.27	9058.39

Network Results: Flows and signals

Time Segment	Calculated flow entering (PCU/hr)	Calculated flow out (PCU/hr)	Flow discrepancy (PCU/hr)	Adjusted flow warning	Degree of saturation (%)	DOS Threshold exceeded	Practical reserve capacity (%)	Actual green (s (per cycle))
16:30-17:30	28226	27632	2471	✓	154	✓	-42	4402

Network Results: Stops and delays

Time Segment	Mean Cruise Time per Veh (s)	Mean Delay per Veh (s)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Mean stops per Veh (%)	Total stops (Stops per hr)	Weighted cost of stops (£ per hr)
16:30-17:30	15.43	77.40	606.84	8617.12	72.90	18542.95	441.27

Network Results: Queues and blocking

Time Segment	Utilised storage (%)	Excess queue penalty (£ per hr)	Wasted time total (s (per cycle))
16:30-17:30	196.65	0.00	1063.91

Network Results: Advanced

Time Segment	Degree of saturation penalty (£ per hr)	Ped gap accepting penalty (£ per hr)	Warmed up	PCU Factor	Cost of traffic penalties (£ per hr)	Controller stream penalties (£ per hr)	Performance Index (£ per hr)
16:30-17:30	0.00	0.00		1.00	0.00	0.00	9058.39

Final Prediction Table

Traffic Stream Results

				SIGNALS		FLOWS		PERFORMANCE				PER PCU			QUEUES	
Arm	Traffic Stream	Name	Traffic node	Controller stream	Phase	Calculated flow entering (PCU/hr)	Calculated sat flow (PCU/hr)	Actual green (s (per cycle))	Wasted time total (s (per cycle))	Degree of saturation (%)	Practical reserve capacity (%)	JourneyTime (s)	Mean Delay per Veh (s)	Mean stops per Veh (%)	Mean max queue (PCU)	w m
1	1		1			717	2083	120	84.32	116	-22	322.00	289.19	250.10	72.23	
	2		1			433	2081	120	98.80	118	-24	358.76	325.95	264.14	47.27	
	3		1			360	2078	120	0.00	17	420	32.99	0.18	0.00	0.02	
2	1		1	1	K	244	2077	30	15.00	45	98	75.94	65.02	102.30	8.31	
3	1		1	1	J	376 <	2125	23	0.00	88	2	214.41	203.64	195.78	26.11 +	
	2		1	1	J	368 <	2115	23	0.00	87	4	234.24	218.20	218.58	27.30 +	
	3		1	1	J	217	2115	23	0.00	51	75	63.65	47.72	90.16	6.57	
4	1		1	1	I	143	2263	23	0.00	32	185	58.59	43.12	84.85	4.05	
5	1		1	1	A	8	2035	7	7.00	6	1426	63.43	53.56	94.02	0.25	

6	**1**		1			1531	2174	120	0.00	70	28	8.36	1.96	0.00	0.83
7	**1**		1			1290	2082	120	0.00	62	45	9.40	1.40	0.00	0.50
	2		1			241	2120	120	0.00	11	692	8.09	0.11	0.00	0.01
8	**1**		1	1	B	233	2120	13	0.00	94	-4	243.63	233.90	246.72	19.48
	2		1	1	B	233	2120	13	0.00	94	-4	243.55	233.90	246.72	19.48
9	**1**		1	1	C	331	1913	30	0.00	67	34	55.64	47.50	90.89	10.14
	2		1	1	C	357	2063	30	0.00	67	34	55.67	47.54	91.34	10.88
	3		1	1	C	369	2133	30	0.00	67	34	55.73	47.59	91.40	11.52
10	**1**		1			688	2009	120	0.00	34	163	3.43	0.47	0.00	0.09
	2		1			369	2007	120	0.00	18	390	3.13	0.20	0.00	0.02
11	**1**		1			1057	2055	120	0.00	51	75	4.70	0.93	0.00	0.27
12	**1**		1			1054 <	2096	120	59.68	100	-10	89.04	78.43	81.43	30.24 +
13	**2**		1	1	F	617 <	4038	42	0.00	43	111	32.34	27.50	39.67	8.16 +
14	**1**		1	1	G	218	2161	45	16.00	26	242	47.59	42.56	72.61	5.28
	2		1	1	G	218	2155	45	15.00	26	241	47.07	42.15	71.41	5.20
15	**1**		1	1	H	0	2114	44	45.00	0	Unrestricted	0.00	0.00	0.00	0.00
16	**1**		1			522	2120	120	0.00	25	266	10.01	0.28	0.00	0.04
	2		1			903	2120	120	0.00	43	111	10.38	0.63	0.00	0.16
17	**1**		1	1	E	1044	3930	46	0.00	66	36	33.01	22.72	88.04	16.96
18	**1**		1	1	D	190 <	2155	10	0.00	96	-6	309.74	301.71	285.27	19.58 +
	2		1	1	D	191 <	2165	10	0.00	96	-6	322.96	314.90	292.42	20.38 +
19	**1**					8	Unrestricted	120	115.00	0	Unrestricted	8.30	0.00	0.00	0.00
20	**1**		1			522	Unrestricted	120	33.00	0	Unrestricted	11.59	0.00	0.00	0.00
	2		1			522	Unrestricted	120	32.00	0	Unrestricted	11.59	0.00	0.00	0.00
21	**1**		2			988	2109	120	3.65	48	86	30.81	2.00	25.05	11.13
	2		2			651	2126	120	28.18	33	169	30.95	3.31	39.84	10.07
22	**1**					912	Unrestricted	120	0.00	0	Unrestricted	26.70	0.00	0.00	0.00
	2					930	Unrestricted	120	0.00	0	Unrestricted	26.94	0.00	0.00	0.00
	3					792	Unrestricted	120	5.00	0	Unrestricted	28.34	0.00	0.00	0.00
23	**1**		2			525 <	2074	120	100.22	154	-41	671.37	640.99	382.56	103.72 +
	2		2			612 <	2105	120	97.37	154	-42	697.79	647.68	385.02	121.46 +
24	**1**		2	2	F	342 <	1924	69	48.68	100	-10	385.33	370.65	335.96	41.21 +
	2		2	2	F	342 <	1932	69	48.77	100	-10	401.30	377.47	447.13	42.10 +
25	**1**		2	2	E	55	2014	7	0.00	41	119	90.67	67.90	92.18	1.70
26	**1**		2	2	A	455	2160	97	2.00	26	249	6.28	2.22	13.75	2.14
27	**1**		2	2	B	532	2049	57	0.00	54	67	20.54	17.12	37.26	6.62
	2		2	2	B	651	2042	57	0.00	66	37	19.27	15.90	32.25	7.00
28	**1**		2			482	2008	120	0.00	24	275	8.82	0.28	0.00	0.04
29	**1**		2	2	D	112	1966	45	0.00	15	506	33.67	24.63	63.68	2.38
30	**1**		2	2	C	370	2120	34	0.00	60	50	46.99	41.42	83.09	10.33
31	**1**					510	Unrestricted	120	2.00	0	Unrestricted	18.11	0.00	0.00	0.00
32	**1**					588	Unrestricted	120	13.00	0	Unrestricted	24.06	0.00	0.00	0.00
	2					707	Unrestricted	120	13.00	0	Unrestricted	23.88	0.00	0.00	0.00
33	**1**					1043	Unrestricted	120	1.00	0	Unrestricted	18.08	0.00	0.00	0.00
34	**1**		2			527 <	2115	120	90.11	100	-10	193.30	176.48	145.02	34.19 +
	2		2			527 <	2115	120	90.11	100	-10	193.33	176.48	145.02	34.19 +

Network Results

	Distance travelled (PCU-km/hr)	Time spent (PCU-hr/hr)	Mean journey speed (mph)	Total delay (PCU-hr/hr)	Weighted cost of delay (£ per hr)	Weighted cost of stops (£ per hr)	Excess queue penalty (£ per hr)	Performance Index (£ per hr)
Normal traffic	4867.80	727.83	4.16	606.84	8617.12	441.27	0.00	9058.39
Bus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tram	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pedestrians								
TOTAL	4867.80	727.83	4.16	606.84	8617.12	441.27	0.00	9058.39

- *< = adjusted flow warning (upstream links/traffic streams are over-saturated)*
- ** = Traffic Stream - Normal, Bus or Tram Stop or Delay weighting has been set to a value other than 100%*
- *^ = Traffic Stream - Normal, Bus or Tram Stop or Delay Path weighting has been set to a value other than 100%*
- *+ = average link/traffic stream excess queue is greater than 0*
- ***P.I. = PERFORMANCE INDEX***

Appendix J – Preliminary Construction Cost Estimates

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 2 OPTION A		Prov. Items	Capital Works
Method Related Charges/TM		0.00	5000.00
Site Clearance		0.00	5000.00
Fencing		0.00	0.00
Drainage		0.00	0.00
Earthworks		0.00	0.00
Road/pavement/kerbs		0.00	10000.00
Road markings and traffic signs		0.00	10000.00
Street lighting		0.00	0.00
Traffic Signals		0.00	50000.00
Summary - Measured Works Cost		0.00	**80000.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**115200.00** Capital
	TOTAL	**£**	**115,200.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J02-100-01 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 2 OPTION B		Prov. Items	Capital Works
Method Related Charges/TM		0.00	5000.00
Site Clearance		0.00	5000.00
Fencing		0.00	0.00
Drainage		0.00	0.00
Earthworks		0.00	0.00
Road/pavement/kerbs		0.00	10000.00
Road markings and traffic signs		0.00	5000.00
Street lighting		0.00	0.00
Traffic Signals		0.00	50000.00
Summary - Measured Works Cost		0.00	**75000.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**108000.00** Capital
	TOTAL	**£**	**108,000.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J02-100-02 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 3		Prov. Items	Capital Works
Method Related Charges/TM		0.00	7000.00
Site Clearance		0.00	5000.00
Fencing		0.00	0.00
Drainage		0.00	15000.00
Earthworks		0.00	20000.00
Road/pavement/kerbs		0.00	50000.00
Road markings and traffic signs		0.00	10000.00
Street lighting		0.00	7500.00
Traffic Signals		0.00	65000.00
Summary - Measured Works Cost		0.00	**179500.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**258480.00** Capital
	TOTAL	**£**	**258,480.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J03-100-01 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 4		Prov. Items	Capital Works
Method Related Charges/TM		0.00	5000.00
Site Clearance		0.00	5000.00
Fencing		0.00	0.00
Drainage		0.00	1500.00
Earthworks		0.00	0.00
Road/pavement/kerbs		0.00	10000.00
Road markings and traffic signs		0.00	2500.00
Street lighting		0.00	0.00
Traffic Signals		0.00	50000.00
Summary - Measured Works Cost		0.00	**74000.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**106560.00** Capital
	TOTAL	**£**	**106,560.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J04-100-01 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 5		Prov. Items	Capital Works
Method Related Charges		0.00	150000.00
Site Clearance		0.00	100000.00
Fencing		0.00	40000.00
Drainage		0.00	100000.00
Earthworks		0.00	200000.00
Road/pavement/kerbs		0.00	750000.00
Road markings and traffic signs		0.00	50000.00
Street lighting		0.00	100000.00
Traffic Signals		0.00	150000.00
Summary - Measured Works Cost		0.00	**1640000.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**2361600.00** Capital
	TOTAL	**£**	**2,361,600.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J05-100-02 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 16		Prov. Items	Capital Works
Method Related Charges		0.00	5000.00
Site Clearance		0.00	5000.00
Fencing		0.00	0.00
Drainage		0.00	0.00
Earthworks		0.00	0.00
Road/pavement/kerbs		0.00	5000.00
Road markings and traffic signs		0.00	2500.00
Street lighting		0.00	0.00
Traffc Signal (relocation of equipmnet)		0.00	20000.00
Summary - Measured Works Cost		0.00	**37500.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**54000.00** Capital
	TOTAL	**£**	**54,000.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J016-100-01 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 17		Prov. Items	Capital Works
Method Related Charges		0.00	2500.00
Site Clearance		0.00	2500.00
Fencing		0.00	0.00
Drainage		0.00	5000.00
Earthworks		0.00	5000.00
Road/pavement/kerbs		0.00	30000.00
Road markings and traffic signs		0.00	2500.00
Street lighting		0.00	0.00
Traffc Signals		0.00	0.00
Summary - Measured Works Cost		0.00	**47500.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**68400.00** Capital
	TOTAL	**£**	**68,400.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J017-100-01 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 18 OPTION A		Prov. Items	Capital Works
Method Related Charges		0.00	25000.00
Site Clearance		0.00	5000.00
Fencing		0.00	2000.00
Drainage		0.00	2500.00
Earthworks		0.00	0.00
Road/pavement/kerbs		0.00	15000.00
Road markings and traffic signs		0.00	10000.00
Street lighting		0.00	0.00
Traffic Signals		0.00	0.00
Summary - Measured Works Cost		0.00	**59500.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**85680.00** Capital
	TOTAL	**£**	**85,680.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J018-100-01 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 18 OPTION A		Prov. Items	Capital Works
Method Related Charges		0.00	25000.00
Site Clearance		0.00	5000.00
Fencing		0.00	2500.00
Drainage		0.00	2500.00
Earthworks		0.00	0.00
Road/pavement/kerbs		0.00	15000.00
Road markings and traffic signs		0.00	10000.00
Street lighting		0.00	50000.00
Traffic Signals		0.00	80000.00
Summary - Measured Works Cost		0.00	**190000.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**273600.00** Capital
	TOTAL	**£**	**273,600.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J018-100-02 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 29 OPTION A		Prov. Items	Capital Works
Method Related Charges		0.00	25000.00
Site Clearance		0.00	10000.00
Fencing		0.00	0.00
Drainage		0.00	30000.00
Earthworks		0.00	10000.00
Road/pavement/kerbs		0.00	50000.00
Road markings and traffic signs		0.00	10000.00
Street lighting		0.00	5000.00
Traffic Signals (relocation of equipment)		0.00	10000.00
Summary - Measured Works Cost		0.00	**150000.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**216000.00** Capital
	TOTAL	**£**	**216,000.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J010/29-100-01 Rev.P01

LANCASTER TRANSPORT VIABILITY PLAN - JUNCTION 29 OPTION B		Prov. Items	Capital Works
Method Related Charges		0.00	20000.00
Site Clearance		0.00	10000.00
Fencing		0.00	0.00
Drainage		0.00	35000.00
Earthworks		0.00	15000.00
Road/pavement/kerbs		0.00	50000.00
Road markings and traffic signs		0.00	10000.00
Street lighting		0.00	15000.00
Traffic Signals (relocation of equipment)		0.00	10000.00
Summary - Measured Works Cost		0.00	**165000.00**
Prelims			
Overhead & Profit			
Developer's Contingency andf risk			
Overall Mark-up 44%	1.44		
Overall construction contract costs		**0** Prov	**237600.00** Capital
	TOTAL	**£**	**237,600.00**

Excludes-

1) Detailed design fees
2) Statutory Undertaker's diversions
3) Local Authority technical approvals fees/site inspections/management costs
4) Procurement Costs, inc tendering, supervision, project management, etc

Notes-

1) Preliminary construction cost estimates based on indicative works layout as shown on WYG dwg. ref.A107175-J010/29-100-02 Rev.P01