WYG Transport Planning

Homes and Communities Agency

Gedling Access Road (GAR)

Transport Assessment Report

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1 Introduction

1.1 PREAMBLE

1.1.1 WYG has been appointed by the Homes and Communities Agency (HCA) to provide transport planning support in relation to proposals for a new link road, known as the Gedling Access Road (GAR), in Gedling, Nottingham.

1.1.2 The proposed 3.8km long GAR is located in the Gedling Borough of Nottinghamshire, to the east of Nottingham City Centre and will link the B684 Mapperley Plains Road north of Gedling with the A612 Nottingham Road south of Gedling.

1.1.3 Gedling Borough Council (GBC) is the local planning authority and Nottinghamshire County Council (NCC) is the local highway authority. The location of the GAR is remote from the nearest Trunk Road or Motorway and as such there is no requirement to consult with the Highways Agency (HA).

1.1.4 The GAR is planned to facilitate redevelopment of the Gedling Colliery/Chase Farm site for mixed-uses as well as providing a 'bypass' around Gedling to help ease traffic congestion on local roads.

1.1.5 Plans showing the proposed alignment of the GAR and the location of the Gedling Colliery/Chase Farm site can be found in **Appendix A**.

1.1.6 Full planning permission was sought for the GAR in 2008 however; the application was not determined because, at the time the applicant couldn't demonstrate that funding for the full scheme was achievable. Recent work by the HCA with Gedling Borough Council (GBC) and Nottinghamshire County Council (NCC) has given greater clarity to the financial viability of GAR and updated transport modelling has been undertaken establishing the implications for a possible phased programme of delivery for both the colliery redevelopment development and the GAR.

1.1.7 The HCA therefore proposes to submit a full (detailed) planning application for the GAR in early 2014 and a new, updated Transport Assessment (TA) is required in support of the planning application.

1.1.8 This TA report has therefore been prepared to update the 2008 TA for submission in support of the latest planning application. The scope and methodology for this assessment was identified in

a TA Scoping Report dated February 2014 (see copy in **Appendix B**) which was agreed with the local highway authority, Nottinghamshire County Council (NCC). This TA has therefore been prepared on an agreed basis.

1.2 TRANSPORT WORKING GROUP

1.2.1 A project inception meeting was held on Friday 17th January 2014. The meeting was attended by officers from the HCA, GBC, NCC and WYG. In the meeting it was agreed that a 'Transport Working Group' be established and that this should consist of officers from NCC and WYG and other stakeholder representatives, as appropriate.

1.2.2 WYG met with NCC on Thursday 13th February 2014 to discuss and agree the content of the TA Scoping Study Report. The proposed scope and methodology for the study was agreed and a copy of the TA Scoping Study Report can be found in **Appendix B** together with a covering note detailing a few minor updates which were agreed in the meeting.

1.2.3 A further meeting was held between NCC and WYG on Thursday 3rd April 2014 to discuss and agree the junction modelling methodology.

1.2.4 Monthly Steering Group Meetings have also been held between the HCA, GBC, NCC and WYG to discuss progress on the preparation of the planning application and supporting studies. Regular telephone and email contact has also been maintained with NCC throughout the preparation of this assessment.

1.3 FORMAT OF REPORT

1.3.1 The layout of this report is as follows:

- Chapter 2 describes existing transport conditions
- Chapter 3 presents a review of relevant planning policy documents
- Chapter 4 describes the proposed GAR scheme
- Chapter 5 defines the assessment years and design flows
- Chapter 6 reviews sustainable travel
- Chapter 7 presents the highway impacts
- Chapter 8 summarises the findings of the report

2 Existing Conditions

2.1 LOCATION

2.1.1 The proposed GAR is located approximately 6 km north east of Nottingham City Centre and its route is contained wholly within the Borough of Gedling. The planned road is situated directly to the north of the settlements of Gedling, Carlton and Colwick, to the east of Mapperley and to the south-west of the settlement of Burton Joyce.

2.2 ROUTE OF THE GAR

2.2.1 The proposed GAR will follow a route south from a new junction with the B684 Mapperley Plains Road, parallel with the A6211 Arnold Lane through Chase Farm before following a route through the centre of the Gedling Colliery site. From here, the GAR will continue southeast to terminate at a new junction with the A612 Nottingham Road. See plans in **Appendix C**.

2.3 EXISTING CHARACTERISTICS

2.3.1 Key characteristics of the land that will be crossed by the route of the GAR are summarised as follows:

- Agricultural fields (arable and pastoral)
- Part of a former, dismantled railway and associated railway tunnel (part filled)
- The former Gedling Colliery site (former spoil tipping land which has been restored to scrub and pasture land).
- The vacant Glebe Farm House and outbuildings
- A small area of woodland (Gedling Wood)
- A section of the Walled Garden at the Grade II Listed Gedling House
- A small section of the grounds of Carlton le Willows Academy

2.3.2 The majority of the development which lies to the south and west of the proposed GAR route is predominantly residential in nature with the densely populated residential areas of Gedling and Carlton to the south and Woodthorpe and Arnold to the west.

2.3.3 To the north and east of the proposed GAR route lie the less populated areas of Mapperley Plains and Lambley. Beyond the residential areas to the north and east are large areas of pastoral and arable farm land interspersed by the settlement of Burton Joyce and the River Trent to the east.

DETAILED STUDY AREA

2.3.4 The agreed study area for detailed assessment is indicated in **Appendix C**. The study area covers the route of the GAR including its terminal junctions with the B684 Mapperley Plains Road, the A612 Nottingham Road and all intermediate junctions, plus the route of the A6211 Arnold Lane between its junctions with the B684 Mapperley Plains Road, the A612 Nottingham Road and intermediate junctions. This is the existing route that the GAR will provide traffic relief to once it is complete.

2.3.5 The B684 Mapperley Plains Road passes through the northern end of the detailed study area on an approximate southwest to northeast alignment. The B684 is subject to a 30mph speed limit, is street lit with footways and verges on both sides of the carriageway and has a carriageway width of approximately 7.3m. The B684 is urban in character with continuous residential development on both sides of the road. Through its signal controlled junction with the A6211 Arnold Lane/Gedling Road the carriageway widens to provide two through lanes and right turn lanes from the B684 in both directions.

2.3.6 The A6211 Arnold Lane runs approximately parallel to the line of the proposed Gedling Access Road on an approximate north west to south east alignment. At its north western end the A6211 Arnold Lane is a single carriageway road subject to the national speed limit (60mph), the section past the Gedling Colliery site has a rural character with limited frontage development, a single footway on the south western side and street lighting present.

2.3.7 In the vicinity of its junction with Linsdale Gardens the speed limit on the A6211 reduces to 40mph and continuous residential frontage development with direct vehicular access and numerous side road junctions are present on the south western side of the road from this point southeastwards. A short distance to the south (just south of its junction with Besecar Avenue) the A6211 has footways on both sides of the carriageway.

2.3.8 At a point approximately 300m northwest of its junction with Lambley Lane the speed limit on the A6211 reduces to 30mph and from Lambley Lane southeast the road has continuous residential

development on both sides with direct vehicular accesses and numerous side road junctions, with a carriageway width in the order of 6.5m.

2.3.9 The existing junction of the A6211 with Lambley Lane is a simple priority T-Junction and there is a signal controlled pedestrian crossing located a short distance to the southeast of the junction. Further to the southeast the footway on the north eastern side of the A6211 narrows and adjacent to the All Hallows Church the footway terminates for a distance of approximately 80m with an off-carriageway route provided through the church grounds over this section. A short distance to the south east of the church there is a mini-roundabout junction with Main Road, at which point the A6211 becomes Main Road travelling south before its name changes again to Shearing Hill.

2.3.10 The junction of the A6211 Shearing Hill with Burton Road is a signal controlled T-Junction located immediately to the west of a railway bridge over the eastern Burton Road arm of the junction. A short distance to the west of this junction is the signal controlled T-Junction of the B686 with the A6211 Colwick Loop Road/Burton Road. The signal control at both of these junctions is linked to manage traffic travelling between the junctions.

2.3.11 From the A6211 Shearing Hill/Burton Road junction Burton Road continues northeast to its junction with the A612 Trent Valley Way. The character of this section of the road is still predominantly urban/residential, although there is less frontage development to the northern side as the road passes the playing fields associated with the Carlton le Willows Academy. Over this section Burton Road is street lit and is subject to a 30mph speed limit. On its southern side there is a continuous footway, whilst on its northern side is a continuous shared footway/cycleway from its junction with Coronation Walk (approx' 150m northeast of the A6211 Shearing Hill/Burton Road junction) to its junction with the A612 Trent Valley Way approximately 1km to the northeast.

2.3.12 There is a signal controlled pedestrian crossing on Burton Road just to the east of its junction with Coronation Walk and a couple of physical refuges in the carriageway opposite the Carlton le Willows Academy to assist pedestrian crossing movements. There are also several bus stops with associated laybys over this section and at a point approximately 200m southwest of its junction with the A612 Trent Valley Way there is a signal controlled Bus Gate with associated carriageway narrowing and vehicle turning facilities provided on either side of the Bus Gate.

2.3.13 The A612 Trent Valley Way is at the southern end of the detailed study area and is a wide single carriageway road (9.3m kerbed) subject to a 40mph speed limit and is street lit. In the vicinity of its junction with Burton Road the A612 carriageway widens out to provide an additional lane in both directions through the signal junction and a right turn lane from the A612 into Burton Road. This section of the Trent Valley Way is rural in character with only limited development on the northwestern side of the junction, served from Whitworth Drive. There is a shared footway/cycleway running along the western side of Trent Valley Way linking Burton Joyce to the north with Netherfield and Colwick to the south. There is no footway provision on the eastern side in the vicinity of the junction.

2.4 ACCIDENT HISTORY

2.4.1 NCC has provided Personal Injury Accident (PIA) information for the existing highway network for the detailed study area shown in **Appendix C**. The data covers the most recently available 5 year time period up to 30th September 2013. A copy of the accident data, including a plan showing the search area, is presented in **Appendix D**.

2.4.2 A total of 73 accidents have occurred during this period within the detailed study area (*note*: the data presented in **Appendix D** details a total of 85 accidents however 12 of these occurred at locations where it is considered that the provision of Gedling Access Road will have no impact; i.e. within residential areas where the Gedling Access Road will not affect future traffic conditions. These accidents have therefore been ignored for the purposes of this review).

2.4.3 Included in the total of 73 accidents there was 1 fatal accident, 11 'serious' and 61 'slight' accidents resulting in a total of 105 casualties which were classified as 2 fatal, 13 serious and 90 slight in severity. **Table 1** on the following page provides a summary of the recorded accidents by year and severity.

Table 1 – Existing Accident Record

Year	Slight	Serious	Fatal	Totals Accidents (Casualties)
2008	12 (17)	1 (2)	1 (2)	14 (21)
2009	13 (21)	3 (4)	0 (0)	16 (25)
2010	11 (18)	2 (2)	0 (0)	13 (20)
2011	8 (11)	3 (3)	0 (0)	11 (14)
2012	6 (9)	1 (1)	0 (0)	7 (10)
2013	11 (14)	1 (1)	0 (0)	12 (15)
Totals	61(90)	11(13)	1 (2)	73 (105)

2.4.4 The fatal accident occurred on the B684 Mapperley Plains Road and involved a motorcycle colliding with the rear of a car and then an oncoming car. This resulted in the motorcycle rider and passenger receiving fatal injuries and an occupant of the oncoming car suffering a slight injury. The accident occurred within the existing 30mph speed limit during daylight hours in fine weather and on a dry road surface.

2.4.5 Within the detailed study area there have been a total of 10 accidents that involved a pedestrian of which 3 resulted in a serious injury to the pedestrian. Further analysis of the pedestrian accidents shows that five of them occurred between 15:00hrs and 16:00hrs and involved pedestrians between the age of 11 and 13. Four of these occurred at various locations on the A6211 and one occurred on Lambley Lane.

2.4.6 Seven of the recorded accidents occurred on Lambley Lane and these were classified as two serious injury accidents and five slight injury accidents. One serious accident involved a young pedestrian being in collision with a car and the other serious accident involved a vehicle colliding with the rear of a stationary vehicle. Four of the slight injury accidents occurred outside of the 30mph speed limit. Two of these accidents involved a single vehicle, one involved opposing vehicles and one involved a rear end shunt type collision. The other slight injury accident involved a collision between a vehicle turning right into a side road across the path of an oncoming vehicle.

2.4.7 There have been 42 recorded accidents at various locations along the A6211 Arnold Lane/Main Road/Shearing Hill/Colwick Loop Road corridor. The recorded accidents were classified as 7 serious injury and 35 slight injury. The following text provides a summary of these accidents taken geographically from north to south.

2.4.8 A cluster of 10 slight injury accidents have occurred at the traffic signal controlled crossroads junction of the A6211 Gedling Road/A6211 Arnold Road/B684 Mapperley Plains Road. Four of the recorded accidents involved rear end shunts, three involved a vehicle turning right across the path of an oncoming vehicle and three involved a collision between vehicles where it appears that one of the vehicles entered the junction injudiciously. Six of these accidents occurred during daylight hours of which two occurred on a wet road surface. The area has street lighting and this is recorded as being lit at the time of each of the four remaining accidents. Two of these accidents were on a wet road surface and one on a snow covered surface. Five of the accidents occurred in 2009, two in 2012, and one in each of 2008, 2011 and 2013.

2.4.9 Six of the recorded accidents occurred on the section of the A6211 between Lambley Lane and Mapperley Plains. One was classified as a serious accident and involved a collision between opposing vehicles during the hours of darkness in fine weather but on a wet road surface. The street lighting was confirmed as being in operation. Of the other five slight injury accidents, one involved a vehicle waiting to turn right into a side road being hit from behind, one involved a vehicle on the main carriageway turning right across the path of an oncoming vehicle, one involved a vehicle entering the main carriageway into the path of an oncoming vehicle, one involved a powered two-wheeler losing control and one involved a slowing vehicle being hit from behind.

2.4.10 A serious accident occurred on the A6211 Arnold Lane and involved a single vehicle being driven by a young driver in the early hours of the morning. The weather conditions were fine and dry and street lighting was in operation. The accident also resulted in two slight injury casualties.

2.4.11 Two slight injury accidents were recorded at the junction of the A6211 Arnold Lane at its junction with Lambley Lane. Both occurred during daylight hours with one involving a vehicle turning right out of the side road across the path of an oncoming powered two-wheeler and the other involved a vehicle turning right out of the side road across the path of an oncoming vehicle.

2.4.12 Three slight injury accidents occurred on the A6211 Shearing Hill at its crossroads junction with Brooklands Drive and Shearing Close. One involved a vehicle turning right onto the main carriageway across the path of an oncoming vehicle, one involved a vehicle entering the main carriageway across the path of an oncoming pedal cycle and one involved a young pedestrian crossing the A6211 from behind a parked vehicle and being in collision with an oncoming vehicle.

2.4.13 There is a cluster of seven accidents that occurred at the junction of A6211 Shearing Hill/A6211 Burton Road/Burton Road traffic signal junction. One of these accidents involved a pedestrian being in collision with a right turning vehicle resulting in a serious injury. The other six accidents were all classed as slight injury accidents, of which two involved a pedal cycle, one involved a powered two wheeler, one involved a pedestrian and two involved vehicles approaching down Shearing Hill. One of these involved a single vehicle on an icy road.

2.4.14 Five of the recorded accidents occurred on the A6211 Colwick Loop Road at its traffic signal controlled junction with Burton Road of which one was classified as a serious injury accident and the remaining four were classified as slight injury accidents. The serious accident involved a pedal cycle turning right into the side road across the path of an oncoming vehicle. One slight injury accident involved a young pedestrian crossing the road during the hours of darkness being in collision with a moving vehicle and another involved a powered two wheeler being side swiped as it was overtaken on the main carriageway. The fourth recorded accident involved a vehicle turning right out of the side road being in collision with a bus waiting on the main carriageway to turn right into the side road. The final accident involved two queuing vehicles waiting to turn left from the side road being hit by a third vehicle approaching the junction along the side road.

2.4.15 Two of the recorded serious injury accidents within the study area involved a single vehicle and occurred within the 40mph speed limit on the A6211 Colwick Loop Road. Both occurred during the hours of darkness under street lighting that was confirmed to be operational. One involved a young driver in fine, dry conditions and the other an elderly driver during rain and on a wet road surface.

2.4.16 Five of the recorded accidents occurred on Burton Road and all were classified as slight injury. Three of the accidents involved pedestrians of which two involved reversing vehicles and one involved a young pedestrian using a pedestrian crossing being in collision with a passing vehicle. The other two involved a vehicle turning right across the path of an oncoming vehicle.

2.4.17 Four of the accidents occurred on the A612 Trent Valley Way and two were classified as serious and two as slight injury accidents. Both of the serious accidents involved a single vehicle resulting in two serious injury casualties in each case. One vehicle was driven by an elderly person and the other vehicle by a young person. One of the slight injury accidents involved a car overtaking a motorcycle and the other involved a car turning left into a side road across the path of a pedal cycle travelling in the same direction.

2.4.18 Analysis has shown that there are no particular trends for the accidents recorded within the study area. There are a number of locations where small clusters of accidents have occurred but no common contributory factors have been identified. The main area of concern surrounds the number of young school age children that have been involved in accidents soon after the end of the school day.

2.5 FORECAST FLOW CHANGES

2.5.1 **Table 2** below summarises the change in traffic flows forecast on the A6211 corridor between the B684 Mapperley Plains Road and the A612 Nottingham Road as a result of the provision of the Gedling Access Road and full redevelopment of the Gedling Colliery/Chase Farm site (flow changes on the wider network are summarised in **Section 7.3**). As can be seen from the summary below traffic flows are forecast to reduce on all sections of the route with the exception of Burton Road where a modest flow increase is forecast in the 2034 PM peak.

Table 2 – Forecast Change in 2-Way Flows on the A6211 Corridor

Location	2-Way Flow Changes Due to the Provision of Gedling Access Road and Redevelopment of Gedling Colliery (VPH)			
	2019		2034	
	AM	PM	AM	PM
A6211 Arnold Lane (B684 to Shelford Road)	-346	-456	-495	-406
A6211 Arnold Lane (Shelford Road to Lambley Lane)	-304	-386	-431	-309
A6211 Arnold Lane (Lambley Lane to Shearing Hill)	-345	-556	-484	-511
A6211 Shearing Hill	-298	-454	-408	-490
Burton Road (Shearing Hill NE to A612)	-181	-200	-83	127
Averages across all sections	-295	-410	-380	-318

2.5.2 As can be seen from **Table 2** the average peak hour flow changes across all sections of the A6211 corridor are between approximately 300 to 400 vehicles per hour (2-way). This equates to a reduction of between approximately 5 and 7 vehicles per minute on the A6211 corridor as through traffic movements make use of the new road.

2.5.3 Given the overall reduction in traffic flows that are forecast on the A6211 corridor it is considered that the construction of the Gedling Access Road should therefore have a beneficial effect on road safety on this area of the highway network. The type of safety benefits that could be expected may include:

- Pedestrians finding it easier to cross the road, with fewer potential conflicts.
- Cyclists benefiting from reduced traffic flows, making shared use of the carriageway generally safer.
- Reduced conflicts for right turn movements to/from the A6211.
- Improved junction performance, with reduced potential for queues and delays, which could help minimise incidents of drivers taking unnecessary risks due to frustration.

2.5.4 In addition, comparison of the performance of the existing A6211 Shearing Hill/Burton Road and the B686 Burton Road/Colwick Loop Road junctions demonstrate that the forecast reduction in traffic flows will assist with the operation of both of these signal controlled junctions. Details of the capacity assessment results can be found in **Section 7.2**.

2.5.5 At the A6211 Shearing Hill/Burton Road junction practical reserve capacity increases from 0% in the 2028 AM peak Reference Case (i.e. without the Gedling Access Road) to 81% in the 2028 Design Year (i.e. with the new road and completion of the Gedling Colliery/Chase Farm redevelopment). With similar benefits forecast in all other scenarios. At the B686 Burton Road/Colwick Loop Road junction practical reserve capacity increases from 25% in the 2028 AM Reference Case to 68% in the 2028 Design Year with slightly smaller benefits in all other scenarios.

2.5.6 These types of improvement in existing junction performance have the potential to assist road safety at these locations if drivers are generally less frustrated by delays.

2.5.7 Any reduction in traffic flow does however have the potential to increase traffic speeds, particularly on the initial section of the A6211 Arnold Lane between its junctions with Mapperley Plains Road and Linsdale Gardens where the road is currently rural in nature and subject to the national speed limit (60mph). However, it is anticipated that the introduction of the new roundabout junction onto the A6211 Arnold Lane will act as a 'gateway' into Gedling, helping to manage vehicle speeds. In addition, the new residential development on the Gedling Colliery/Chase Farm site will introduce new frontage development and frontage activity onto this section of the A6211 which will help to further manage vehicle speeds. Possible further complementary measures are discussed in section 2.6 below.

2.6 COMPLEMENTARY MEASURES

2.6.1 A package of complementary measures will be developed to effectively integrate the road scheme and redevelopment proposals into the existing transport network and to encourage use of the Gedling Access Road for through movements, thereby helping to relieve local roads.

2.6.2 In addition, the operation of the existing highway network will be monitored before and after the Gedling Access Road and Colliery/Chase Farm redevelopment is introduced to determine whether any off-site complementary measures are required to address any adverse changes due to the scheme.

2.6.3 Some of the complementary measures will need to be implemented in parallel with the scheme, to be effective as soon as the Gedling Access Road and redevelopment is open, whereas others will be considered after a period of monitoring.

2.6.4 It is anticipated that complementary measures will be funded and delivered through a combination of scheme funding (i.e. delivered as part of the scheme) and as part of the redevelopment proposals, delivered either as part of the development, or via developer financial contributions.

2.6.5 The exact nature of the complementary measures has yet to be determined but potential measures are set out below, with the sub-headings providing an indication of when they will be required:

Measures Required in Parallel with the Scheme Opening

- Classification of the Gedling Access Road as an 'A' road and downgrading of the classification of Arnold Lane.
- Appropriate signage at the terminal junctions of the Gedling Access Road to encourage use of the new road for through vehicle movements and to access the new development served off the access road.
- Introduction of appropriate mandatory speed limits on Arnold Lane between its junctions with the B684 Mapperley Plains Road and the new roundabout junction with the Gedling Access Road, and between the new roundabout and the start of the existing 30mph speed limit at a point approximately 100m north west of its junction with Besecar Avenue.

- Potential traffic calming features on Arnold Lane adjacent to the proposed residential development on the Gedling Colliery/Chase Farm site. This could take the form of 'speed tables' at access junctions, chicanes with priority movements, 'speed cushions' etc. The final form will need to be designed to complement the proposed residential development and cater for appropriate vehicle movements (e.g. buses).
- Potential pedestrian crossing facilities on Arnold Lane adjacent to the proposed residential development on the Gedling Colliery/Chase Farm site to help integrate the development with the existing residential development to the southwest of Arnold Lane.

Potential Longer-Term Measures (Details subject to monitoring results)

- Traffic signing (including Vehicle Activated Signs)
- Road markings
- Speed control features (e.g. speed limits, rumble strips, speed tables, speed cushions, chicanes etc)
- Anti-skid surfacing
- Refuge/traffic islands
- Crossings (e.g. zebra, Pelican, Toucan crossings)
- Parking (e.g. restrictions in inappropriate locations, bollards, sheltered parking etc).

3 Planning Policy

3.1 PREAMBLE

3.1.1 The objectives for the Gedling Access Road have been defined taking into account national and local policies that seek to safeguard the environment and resources and to put into practice the principles of sustainable development.

National

- National Planning Policy Framework
- Transport White Paper: 'Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen'

Local

- Nottinghamshire Local Transport Plan 3
- Emerging Local Plan for Gedling
- Adopted Gedling Replacement Local Plan 2005

3.2 NATIONAL

National Planning Policy Framework

3.2.1 The National Planning Policy Framework (NPPF) was published on 27 March 2012 and constitutes guidance for local planning authorities and decision-takers both in drawing up development plans and as a material consideration in determining applications. The NPPF replaces previous planning policy statements and planning policy guidance, including PPG13. However, the principles of good transport planning contained within PPG13, whilst no longer material planning considerations, remain useful as a guide when preparing supporting transport planning documents.

3.2.2 At the heart of the NPPF is a presumption in favour of sustainable development. Paragraph 7 of the NPPF states that:

> *"There are three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:*

- *an economic role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;"*

3.2.3 Provision of the Gedling Access Road is required to facilitate regeneration of the Gedling Colliery/Chase Farm site and is therefore considered to contribute towards the economic role of sustainable development within the Gedling Borough.

3.2.4 The NPPF makes further mention of infrastructure provision as summarised in the following extracts:

Paragraph 20 – *"In drawing up Local Plans, local planning authorities should:*

- *identify priority areas for economic regeneration, infrastructure provision and environmental enhancement…"*

Paragraph 157 – *"Crucially, Local Plans should:*

- *plan positively for the development and infrastructure required in the area to meet the objectives, principles and policies of this Framework…"*

Paragraph 162 – "*Local planning authorities should work with other authorities and providers to:*

- *assess the quality and capacity of infrastructure for transport, water supply,*
- *wastewater and its treatment, energy (including heat), telecommunications,*
- *utilities, waste, health, social care, education, flood risk and coastal change*
- *management, and its ability to meet forecast demands…"*

3.2.5 The Gedling Access Road has been identified as essential infrastructure to facilitate regeneration of the Gedling Colliery/Chase Farm site (see following text relating to the adopted and emerging Local Plan) and is therefore considered to accord with the aims and policies of the NPPF.

3.3 LOCAL

Nottinghamshire – Local Transport Plan 3 (2011 – 2026)

3.3.1 The Nottinghamshire Local Transport Plan 2011 to 2026 (LTP3) is the third Local Transport Plan (LTP3) for the County of Nottinghamshire and came into effect on 1 April 2011. The document details the transport strategy for the whole of the county of Nottinghamshire for the fifteen year period 2011-2026. The county of Nottinghamshire comprises the seven districts of Ashfield, Bassetlaw, Broxtowe, Gedling, Mansfield, Newark & Sherwood, and Rushcliffe.

3.3.2 The document comprises:

- The **Local Transport Plan Strategy** which sets out how the County Council aims to make transport improvements in Nottinghamshire during the plan period. Including a review at least every five years to make sure that it considers any changes in transport conditions and priorities; and to make sure that it is effective.

- The **Implementation Plan** that runs for the same period as Central Government's capital funding allocations to ensure it takes account of realistic funding levels. The first implementation plan covers the four year period 1 April 2011 to 31 March 2015.

3.3.3 The Implementation Plan seeks to deliver proposals and measures that will help to achieve the five overarching strategic objectives for transport which are to;

- Provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel

- Improve access to key services, particularly enabling employment and training opportunities, and

- Minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions.

3.3.4 Whilst the LTP3 doesn't specifically mention the Gedling Access Road the proposal is considered to accord well with its strategic objectives in terms of; supporting growth through the regeneration of the former colliery site, delivering traffic relief to adjacent roads within Gedling which will help to support a thriving local economy and minimise the impacts of transport on people's lives as well as improving access to new employment opportunities.

Emerging Gedling Local Plan - Greater Nottingham Aligned Core Strategies

3.3.5 Gedling Borough Council is currently consulting on the latest stage of its Aligned Core Strategy which has been jointly prepared with the Aligned Core Strategies for Broxtowe Borough Council and Nottingham City Council.

3.3.6 The Aligned Core Strategies were submitted to the Planning Inspectorate in June 2013, a public examination followed in October 2013 and additional hearing sessions were held in November 2013 and February 2014 to examine proposed changes.

3.3.7 The District Council is currently undertaking a consultation on the main modifications to the submitted Gedling Borough Aligned Core Strategy and this consultation is open until Wednesday 30th April 2014.

3.3.8 Subject to the Planning Inspector agreeing that the Gedling Borough Aligned Core Strategy is sound it will be adopted as planning policy for the Borough. Once adopted, the Aligned Core Strategy will set out the strategic policy direction for future development in Gedling Borough. It will be used to help decide planning applications and guide the location and design of development in Gedling Borough.

3.3.9 The Core Strategy will provide a broad guide to development and growth in the Borough, setting out possible locations for major sites (over 500 houses). Detailed policies to control future development and set out sites for smaller development (less than 500 houses) will be set out in the Local Planning Document. Within the Core Strategy the Gedling Access Road is identified as follows:

- Policy 2; The Spatial Strategy – 3a v) *Gedling Colliery/Chase Farm in Gedling subject to funding of the Gedling Access Road (at least 600 homes)*
- Policy 7: Regeneration – e) "*Gedling Colliery/Chase Farm offers the opportunity for the redevelopment and reuse of brownfield land to create a new sustainable neighbourhood. It will be designed to engender a safe and strong community and to create a place of distinction, and will require the construction of the Gedling Access Road.*"

- Policy 15: Transport Infrastructure Priorities – "*Other schemes with no committed funding but which remain important to the delivery of the Core Strategy include: Highway Improvements: b) Gedling Access Road.*"

- Appendix B – Critical Infrastructure Requirements Critical Site Specific transport infrastructure – "*Gedling Access Road to facilitate development of Gedling Colliery/Chase Farm.*"

Emerging Local Plan - Local Planning Document

3.3.10 The Local Planning Document will work with the Aligned Core Strategy to shape future development in Gedling Borough by planning for new homes, jobs and infrastructure. The Local Planning Document is being prepared by Gedling Borough Council and will cover the whole borough. The document will include; site-specific policies, allocations (of non-strategic sites) and designations for new housing, employment, retail, community facilities, recreation and open space, nature conservation and other land uses. It will also set out detailed policies to help deliver specific allocations and help in the day to day assessment of planning applications.

3.3.11 Once adopted, both the Aligned Core Strategy and the Local Planning Document will be used to help decide planning applications and guide the location and design of development in Gedling Borough.

3.3.12 The Issues and Options stage of the Local Planning Document was published for consultation in October 2013. The consultation closed in December 2013 and publication of the submission document is anticipated towards the end of 2014. The Issues and Options publication sought feedback on the Gedling Colliery/Chase Farm regeneration as follows:

> *"Regeneration - REG 1a - 1 - Gedling Colliery/Chase Farm - is a major part brownfield site adjacent to the urban area. Redevelopment of the site is a priority for the Borough Council. However, due to the cost of necessary infrastructure, specifically the Gedling Access Road, the site is not currently financially viable and cannot be counted on to deliver housing during the plan period. The Aligned Core Strategy identifies Gedling Colliery/Chase Farm as a regeneration site and allows for its redevelopment, should economic conditions improve and public funding may become available. The Replacement Local Plan identifies the Gedling Colliery/Chase Farm site as suitable for 1,100 homes, 6ha of employment land, a new*

community hub and a new district centre. This scheme will need to be updated to reflect the current situation.

Gedling Replacement Local Plan 2005

3.3.13 Gedling's Replacement Local Plan was adopted in 2005 and provides the main planning framework for the Borough until replaced by the planning documents being prepared under the Local Development Framework (i.e. the Aligned Core Strategy and Local Planning Document mentioned above). In July 2008 the adopted Local Plan policies were reviewed and either saved or deleted.

3.3.14 The following extract from policy (H3) is saved and relates to redevelopment of land at the former Gedling Colliery and Chase Farm, setting out the requirement to provide a new access road from Burton Road to Arnold Lane:

POLICY H3 LAND AT FORMER GEDLING COLLIERY AND CHASE FARM

"Planning permission will be granted for the mixed development of land at, and adjoining, the former Gedling Colliery site, as identified on the Proposals Map.

The development will provide for up to 1120 dwellings, with 700 to be completed by 2011, and 6 hectares of employment land subject to:

a. a phased programme of implementation to be agreed with the Borough Council and County Council through joint Legal Agreements to ensure a comprehensive development solution and that the following are provided:

(i) construction of an access road, (as identified on the proposals map, from Burton Road to Arnold Lane) and necessary junction improvements; the construction of the access road shall be completed before any of the dwellings are occupied….."

3.3.15 Paragraph 2.35 of the adopted Local Plan expands further on the requirement for the access road to facilitate redevelopment of the site:

"Providing adequate facilities and infrastructure to accommodate the transportation needs resulting from the development of the site is an important component in the successful integration of the site with the existing urban area. An independent study commissioned

jointly by the Borough Council and the County Council concluded that the access road, as identified on the proposals map, and junction improvements will be required to serve the development. The access road will have the added benefit of reducing the level of traffic on the A6211, and providing environmental improvement for residents along this route. The Gedling By-Pass is identified as a long term proposal by the County Council in the 1996 Structure Plan Review which predates the Government's White Paper on Transport in 1998. Since then it has been made clear it will not receive public funding within the plan period. The access road will therefore require to be funded entirely by the development of the site. The construction of the access road shall be completed before any of the dwellings are occupied or any of the employment development is brought into use. The access road is to incorporate a satisfactory junction at Mapperley Plains (including any traffic management measures on the approach roads to that junction)."

3.4 SUMMARY

3.4.1 Provision of the Gedling Access Road is identified as an essential requirement for regeneration of the Gedling Colliery/Chase Farm site in both the adopted and emerging planning policy for Gedling Borough and is therefore considered to accord with the aims and policies of the NPPF.

3.4.2 Provision of the access road is also considered to accord with the strategic objectives of the third Nottinghamshire Local Transport Plan in terms of; supporting growth through the regeneration of the former colliery site, delivering traffic relief to adjacent roads within Gedling which will help to support a thriving local economy and minimise the impacts of transport on people's lives as well as improving access to new employment opportunities.

4 Proposed Scheme

4.1 PROPOSED ROAD ALIGNMENT

4.1.1 A plan depicting the alignment of the proposed road and the red-line boundary for the planning application can be found in **Appendix A**. The current scheme is very similar to the 2008 scheme design but has been amended following recent public consultation events to minimise the impacts on local residents, this has involved minor adjustments to the planning application red-line boundary and consists of the following elements and characteristics:

- A new 7.3m wide single-carriageway road, 3.8km in length with a maximum speed limit of 40mph (70kph design speed).

- Street lighting and a shared footway/cycleway along the whole length of the new road which between its junctions with the B684 Mapperley Plains Road and the new 5-arm roundabout junction will run along the northern side of the Gedling Access Road. To the south east of the 5-arm roundabout the footway/cycleway way will run along the southern side to its junction with the A612 Trent Valley Way/Burton Road/Whitworth Drive.

- At the north western end a new signal-controlled T-Junction onto the B684 Mapperley Plains Road located approximately 170m to the east of the existing B684 Mapperley Plains Road/A6211 Arnold Lane/Gedling Road signal controlled cross roads junction. The new junction includes a signal controlled pedestrian crossings on the eastern Mapperley Plains Road and Gedling Access Road arms and a central refuge to assist pedestrian movements across the other Mapperley Plains Road arm. The operation of the signal control at this new junction will be linked to the operation of the existing B684 Mapperley Plains/A6211 Arnold Lane/Gedling Road junction, with both junctions effectively operating together as one large junction. The right turn from Mapperley Plains Road into Arnold Lane will be banned and the lanes on this approach to the existing signal junction will be reallocated to provide one left-turn lane into Gedling Road and two ahead lanes on Mapperley Plains Road eastbound. The banned right turn will be catered for at the new Gedling Access Road junction onto Mapperley Plains Road approximately 170m to the east.

- At its south eastern end a new signal-controlled junction onto the A612 Trent Valley Way at the location of the existing junction between Burton Road and the A612 Trent Valley Way. The new junction ties into Burton Road and Whitworth Drive and incorporates signal-controlled pedestrian crossing facilities on the Gedling Access Road and Burton Road arms of the junction.

- A new 5-arm roundabout connecting the Gedling Access Road with the A6211 Arnold Lane and future development on the Gedling Colliery/Chase Farm site.

- A new 4-arm roundabout connecting the Gedling Access Road with future residential and employment development on the Gedling Colliery/Chase Farm site.

- Two new priority 'Ghost-Island' T-junctions providing links with the northern and southern sections of Lambley Lane.

- A new 3-arm mini-roundabout connecting on Lambley Lane connecting the southern section of Lambley Lane to the Gedling Access Road, with the option of a fourth arm to serve potential development land immediately to the east of Lambley Lane.

- A new private access road with a simple priority junction onto the Gedling Access Road to allow future maintenance access to balancing ponds to the north of the Gedling Access Road (located approximately 350m to the southeast of the proposed new junction between the Gedling Access Road and the northern section of Lambley Lane).

- A new simple priority private access junction onto the Gedling Access Road to serve Gedling Wood Farm (located approximately 500m to the southeast of the proposed new junction between the Gedling Access Road and the northern section of Lambley Lane).

- Diversion of an existing footpath at the point where it crosses Gedling Access Road (located approximately 350m to the southeast of the proposed new junction between the Gedling Access Road and the northern section of Lambley Lane). The diverted footpath will cross the Gedling Access Road at an uncontrolled crossing point with a pedestrian refuge provided in the carriageway.

- Embankments along much of the northern section of the road (north of the 5-arm roundabout), up to a maximum of around 14m in height above existing ground levels.

- Cuttings on the southern section of the road, up to around 15m in depth below existing ground levels south of Lambley Lane, but shallow (up to 4m depth) further south.

- Provision of a climbing lane on the southern section of the Gedling Access Road over a distance of approximately 900m from its junction with the A612 Trent Valley Way. This is to allow northwest bound drivers to safely overtake slow moving vehicles on the uphill gradient over this section.

- Pedestrian crossing facilities will be provided at the Gedling Access Road/B684 Mapperley Plains Road and Gedling Access Road/A612 Trent Valley Way junctions as part of the signal control arrangements at these locations. A "TOUCAN" signal-controlled crossing will be provided across the Gedling Access Road on the south eastern arm of the new 4-arm roundabout provided to serve future development on the Gedling Colliery/Chase Farm site. Safe uncontrolled pedestrian crossing points will also be provided as follows:

    - On the northern arm of the new 4-arm roundabout provided to serve future development on the Gedling Colliery/Chase Farm site.

    - On the eastern Gedling Access Road arm of the new 5-arm roundabout with the A6211 Arnold Lane (at the point where the footway/cycleway switches from the northern to southern sides of GAR).

    - On the Lambley Lane arm of the 'Ghost-Island' junction with Lambley Lane south.

    - On the Gedling Access Road at the point where the diverted footpath crosses it (approximately 350m to the southeast of the proposed new junction between the Gedling Access Road and the northern section of Lambley Lane), as mentioned above.

4.1.2 The following text briefly describes the route of the Gedling Access Road from its southern junction with the A612 Trent Valley Way to its northern junction with the B684 Mapperley Plains Road by reference to land, topography, ecology and other known engineering constraints. The design of the Gedling Access Road has evolved having regard to these constraints and the preferred alignment now proposed is considered to be the best solution to fit within these constraints, whilst meeting the objectives of the access road.

4.1.3 From its southern junction with the A612 Trent Valley Way the Gedling Access Road will climb on a shallow embankment, heading north-westwards, roughly parallel to Whitworth Drive and passing through land which is currently part of the grounds and playing fields of Carlton-le-Willows Academy; and land which forms part of the grounds of Gedling House, including a walled garden. The gradient of the road will be up to 8%, and has been designed to include measures to permit overtaking on the incline.

4.1.4 The proposed route will cut through the south eastern tip of the Gedling House Wood Nature Reserve through a cutting of approximately 2.0m depth and running immediately to the south of Gedling Wood Farm before continuing northwest across open farm land. Just to the south of Lambley Lane the alignment of the road bends to the west through Glebe Farm, which would be demolished, before bending back to the north west, and passing through the former Gedling Colliery site and continuing on to join the B684 Mapperley Plains Road at its northern end.

4.1.5 The new road will be constructed in several cuttings along its length which will vary in depth from approximately 2.0m to 15.0m. It is proposed that a slope stabilisation technique called "Soil Nailing" will be used to strengthen cutting slopes and reduce the area of land take required. In addition to the cuttings along the course of the road there will also be an embankment at the northern end measuring up to 14m in height.

4.1.6 The scheme has been designed to achieve an earthwork 'cut/fill' balance across the whole of the road construction with the earth removal required to create the cuttings on the southern section being reused to create the embankments required for the northern section. This will minimise the need to import/export large quantities of material thereby achieving cost effective construction and helping to minimise construction traffic impacts.

4.2 PROPOSED REDEVELOPMENT

4.2.1 The primary purpose of the Gedling Access Road is to facilitate redevelopment of the Gedling Colliery/Chase Farm site with mixed residential and employment uses. A masterplan of the proposed redevelopment can be found in **Appendix E** and the redevelopment comprises the following:

- Up to 1,120 residential dwellings
- 4,500 sqm of B1 (office) use-class employment
- 18,000 sqm of B2 (light industrial) use-class employment
- A new Country Park (which is currently under construction and will benefit from the Gedling Access Road but is not dependent upon its delivery)
- The safeguarding of land for a future rail station, car park and associated features.

4.2.2 Access to the proposed new residential development will principally be provided from the south eastern arm of the new 5-arm roundabout connecting the Gedling Access Road with the A6211 Arnold Lane, from the southern arm of the new 4-arm roundabout on GAR and from Arnold Lane. The proposed highway layout within the residential site has yet to be designed however, it will provide for an internal highway link between the two roundabout junctions suitable for buses to pass through the site as well as providing a link to Arnold Lane. The internal highway layout will be designed to discourage inappropriate vehicular movements through the development (i.e. by making the routes indirect and through the use of speed control features).

4.2.3 The employment development will be situated to the north of the Gedling Access Road (see masterplan in **Appendix E**) and will be accessed via the northern arm of the proposed new 4-arm roundabout junction.

4.2.4 To the north of the employment area is Gedling Country Park which is currently being formed and is expected to be open in the autumn of 2014. Two options are currently being considered for providing a small car park (circa 50 spaces) for use by visitors to the Country Park. These are; on the employment land to the north of the Gedling Access Road with vehicular access shared from the northern arm of the proposed new 4-arm roundabout; or on the residential land to the south of the Gedling Access Road with vehicular access shared from the southern arm of the

proposed new 4-arm roundabout. The latter option would also include an appropriate pedestrian route between the car park and the Country Park across the Gedling Access Road. At the time of writing the final details are subject to ongoing negotiation with the respective landowners and will be confirmed in due course.

4.3 TIMESCALES

4.3.1 Construction of Gedling Access Road is planned in two phases which are summarised as follows:

- **Phase 1** – Construction of the new 5-arm roundabout onto the A6211 Arnold Lane is expected to commence in early 2015. This will facilitate development of an initial stage of residential development on the Gedling Colliery/Chase Farm site.
- **Phase 2** – completion of the Gedling Access Road between the B684 Mapperley Plains Road to the northwest and the A612 Burton Road to the southeast enabling the complete redevelopment of the Gedling Colliery/Chase Farm site.

4.3.2 The exact timescale for Phase 2 has yet to be confirmed and will be partly dependent upon developer interest in the Gedling Colliery/Chase Farm redevelopment. However, for the purposes of this TA it has been assumed that Gedling Access Road will be constructed in its entirety by 2019.

4.4 COMPLEMENTARY MEASURES

4.4.1 As mentioned in Section 2.6 it is expected that the scheme will include complementary measures to effectively integrate the road scheme and redevelopment proposals into the existing transport network and to encourage use of the Gedling Access Road for through movements, thereby helping to relieve local roads.

5 Design Flows & Assessment Years

5.1 2013 TRANSPORT MODELLING WORK

5.1.1 In 2013 transport consultants (formerly MVA now called Systra) were appointed by HCA to undertake a strategic transport assessment of the proposed development of the Gedling Colliery/Chase Farm site and the provision of the Gedling Access Road. This work used the Greater Nottingham Transport Model (GNTM) which is a multi-modal transport model consisting of a (SATURN) highway model, (Cube Voyager) public transport model and a (Cube) Variable Demand Model (VDM).

5.1.2 The modelling work applied an assessment year of 2028, which is consistent with the end of plan period for the Greater Nottingham Aligned Core Strategy, and examined the following time periods:

- AM Peak (08:00 – 09:00)
- Interpeak hour (11:00 – 14:00 average hour)
- PM Peak (17:00 – 18:00)

5.1.3 The modelling work examined 2028 'Reference Case' and 2028 'With Development' scenarios. The 2028 'Reference Case' includes the 2028 'Base' situation plus all committed transport infrastructure schemes and planning land-use developments that are expected to be complete by 2028. The 'With Development' scenario examined the 2028 'Reference Case' plus development of the Gedling Colliery/Chase Farm site and provision of the Gedling Access Road.

5.1.4 The 'With Development' scenarios examined a potential phased delivery of the Gedling Access Road and associated phased delivery of development on the Gedling Colliery/Chase Farm site. Development of the Gedling Colliery/Chase Farm site was assumed to comprise:

- 1,120 Residential Dwellings
- 4,500 sqm of B1 Employment
- 18,000 sqm of B2 Employment

5.1.5 The development modelled by Systra is consistent with the development for which planning permission is now being sought. The only exception is the omission of the Country Park. However

as this will generate minimal trips during the morning and evening peak hours it was ignored for the purposes of the Systra modelling and has been ignored for the purposes of this TA.

5.1.6 The methodology and findings from the 2013 GNTM assessment are presented in the Systra report titled "Gedling Colliery Development Assessment" dated 24 July 2013. This report was approved by NCC. Further sensitivity testing of the operation of the Gedling Access Road terminal junctions onto the B684 Mapperley Plains Road has subsequently been completed by Systra and this data has been made available by NCC to assist with preparation of this TA.

5.1.7 A summary of the estimated total vehicular trip generation from the completed Gedling Colliery/Chase Farm redevelopment is presented below. This information is taken from Table 2 on page 14 of the "Gedling Colliery Development Assessment" report produced by Systra. The effects of these traffic flows have been modelled in the 'with development' scenarios.

Table 3 - Summary of Gedling Colliery Development Trip Generation (PCU)

Use	AM Peak (08:00-09:00 hrs)		PM Peak (17:00-18:00 hrs)	
	In	Out	In	Out
Total Development	337	664	526	415

5.2 ASSESSMENT FLOWS

5.2.1 Outputs from the latest Systra modeling work have therefore been used to form the basis for the junction capacity assessments presented in **Section 7** of this report.

5.2.2 Modelled turning flows have been provided for the following scenarios:

- **2028 Reference Case Flows** – Includes the 2028 'Base' situation plus all committed transport infrastructure schemes and planning land-use developments that are expected to be complete by 2028.
- **2028 Design Flows with Gedling Access Road and Development** - 2028 'Reference Case' plus provision of the full Gedling Access Road and complete redevelopment of the Gedling Colliery/Chase Farm site.

5.2.3 As the planning application is for the whole GAR it has been agreed with NCC that the TA needs to examine the implications of the new road in its completed form. The 'With Development'

scenario therefore assumes that the Gedling Access Road is completed in its entirety and the Gedling Colliery/Chase Farm site has been fully redeveloped.

5.2.4 The Greater Nottingham Transport Model (GNTM) works to a 2028 forecast year (see above) however NCC require the operation of junctions on the Gedling Access Road to be assessed at a 15 year design horizon post completion of the whole Gedling Access Road. Therefore, assuming a 2019 completion year gives a 15 year design year of 2034.

5.2.5 To estimate 2034 design year flows NCC has provided the following local traffic growth factors, derived from TEMPRO data (TEMPRO stands for the **T**rip **E**nd **M**odel **Pr**esentation **Pro**gram and this is the industry standard tool for estimating traffic growth based on outputs from the National Trip End Model), to apply to the 2028 'With Development' flows:

- 2028 to 2034 AM Peak = 1.035
- 2028 to 2034 PM Peak = 1.040

5.2.6 A summary of the 2028 'Reference Case' and 2028 and 2034 'Design Flows' is presented in **Appendix F.**

5.2.7 In addition to the turning flow information mentioned above, modelled link flows have also been provided for the detailed study area and surrounding network, for the following scenarios:

- 2019 Completion Year (DM) – Annual Average Daily Traffic Flows (AADT) and AM/PM peaks
- 2019 Completion Year (DS) – Annual Average Daily Traffic Flows (AADT) and AM/PM peaks
- 2034 Design Year (DM) – Annual Average Daily Traffic Flows (AADT) and AM/PM peaks
- 2034 Design Year (DS) – Annual Average Daily Traffic Flows (AADT) and AM/PM peaks

Note: DM stands for 'Do Minimum' i.e. without the Gedling Access Road and Colliery Redevelopment. DS stands for 'Do Something' i.e. with the Gedling Access Road and Colliery Redevelopment.

5.2.8 These flows are presented in **Figures 1** to **12** for information. The 2019 Completion Year and 2034 Design Year data is consistent with the assessment years applied in the Business Case for the Gedling Access Road. All junction capacity assessments have been undertaken at the 2028 and 2034 Design Years mentioned earlier in this chapter.

6 Sustainable Transport

6.1 EXISTING CONDITIONS

6.1.1 Existing sustainable transport provision within the detailed study area has been reviewed and summarised. This includes a review of walking/cycling infrastructure and existing bus services passing through the study area that may be affected by the Gedling Access Road.

6.2 WALKING AND CYCLING

6.2.1 The proposed Gedling Access Road will intersect with existing walking/cycling infrastructure at the following locations:

1. It's northern terminal junction onto the B684 Mapperley Plains Road.
2. At its junction with the A6211 Arnold Lane at the proposed new 5-arm roundabout.
3. At the location of the proposed new mini-roundabout onto Lambley Lane (south).
4. The location of the proposed tie-in point to Lambley Lane (north).
5. Approximately 400m southeast of the northern junction of the Gedling Access Road with Lambley Lane where the line of the new road is crossed by an existing public footpath.
6. At its southern terminal junction with the A612 Trent Valley Way/Burton Road/Whitworth Drive.

6.2.2 The proposed Gedling Access Road will provide a new 3.0m wide shared footway/cycleway with a 0.5m wide safety buffer strip along its entire length between the B684 Mapperley Plains Road and the A612 Trent Valley Way/Burton Road/Whitworth Drive junctions. A plan showing the route of the shared footway/cycleway can be found in **Appendix A**.

6.2.3 Between its junctions with the B684 Mapperley Plains Road and the new 5-arm roundabout junction with the A6211 Arnold Lane the footway/cycleway will run along the northern side of the Gedling Access Road. At the new 5-arm roundabout an uncontrolled crossing point will be provided on the Gedling Access Road (south eastern) arm of the roundabout, with a physical central splitter island provided to assist pedestrian and cycle crossing movements.

6.2.4 To the southeast of the 5-arm roundabout the footway/cycleway will run along the southern side of the Gedling Access Road to its junction with the new 4-arm roundabout to link the proposed employment and residential development areas. At this junction the footway/cycleway will be extended into the residential and employment sites (by developers) as these are developed out. A signal controlled TOUCAN crossing is proposed across the Gedling Access Road on the south eastern arm of the 4-arm roundabout and an uncontrolled crossing point will be provided on the southern arm of the roundabout with a physical central splitter island provided to assist pedestrian and cycle crossing movements

6.2.5 To the southeast of the new 4-arm roundabout to the A612 Trent Valley Way/Burton Road/Whitworth Drive junction the new footway/cycleway will run along the northern side of the Gedling Access Road.

6.2.6 At the location where the realigned northern section of Lambley Lane ties back into the existing road (approx' 300 north of its junction with the Gedling Access Road) there is no existing footpath provision on either side of Lambley Lane and footway provision does not commence for some distance (approximately 250m further to the north). The scheme therefore provides footway to the back of the splitter island at the Gedling Access Road/Lambley Lane (north) junction, on both sides of the minor road to allow pedestrians to safely cross the mouth of the junction.

6.2.7 Approximately 400m to the east of the northern junction of the Gedling Access Road with Lambley Lane the line of the new road is crossed by an existing public footpath. This will be relocated approximately 75m to the northwest and an uncontrolled crossing point provided.

6.2.8 At the A612 Trent Valley Way/Burton Road/Whitworth Drive junction there is an existing 3.0m wide shared footway/cycleway on the northern side of Burton Road which links to an existing 3.0m wide shared footway/cycleway on the western side of the A612 Trent Valley Way. Whitworth Drive is served by a single footway (approximately 2.0m wide) on its northern side. The proposed shared footway/cycleway on the northern side of the Gedling Access Road will therefore tie into this existing infrastructure with controlled crossing points provided across the Gedling Access Road and across the mouth of Burton Road at its junction with Gedling Access Road.

6.3 BUS

INTRODUCTION

6.3.1 As mentioned in paragraph 4.2.2 the highway layout within the proposed residential development on the Gedling Colliery/Chase Farm site will provide a route through the site between the two proposed roundabout junctions onto the Gedling Access road to enable buses to pass through the site and serve the development.

6.3.2 It is anticipated that planning permissions for future residential development on the site will be conditioned to require developers to secure either; an extension to an existing bus service, or provision of a new bus service to serve the site in this manner, thereby ensuring that all new dwellings are located within the recommended 400m walking distance of bus stops served by regular bus services.

6.3.3 Nottinghamshire County Council has confirmed that developers will be expected to liaise directly with Nottinghamshire County Council's Transport and Travel Services to determine details of what contributions towards bus service support are expected. The County Council would expect residential developers to make free travel passes available to all new residents on occupation as part of a package of travel plan measures.

6.3.4 In terms of new infrastructure the County Council would expect all new residential properties to be located within 400m walking distance of a bus stop and developers will be expected to provide new/additional stops to ensure this is achieved. The estimated cost per new stop is £10,700 excluding VAT and fees, which includes for a; shelter (£2,500), hard standing (£1,500), Bus Stop Clearway Order (£700) and real-time displays and associated electrical connections (£6,000). Any new stops provided within the development will be expected to meet this same standard.

6.3.5 In addition, the County Council will expect a contingency fund to be made available to mitigate impacts on existing bus services, should construction works interfere with these.

6.3.6 The following paragraphs summarise the existing bus services operating within the TA study area and examines their potential for diversion/extension to serve the proposed redevelopment of the Gedling Colliery/Chase Farm site.

EXISTING SERVICE SUMMARY

6.3.7 The main bus services within the study area are operated by Nottingham City Transport and copies of relevant service route maps and timetables can be found in **Appendix G**. The main services are summarised in **Table 4** as follows:

Table 4 – Existing Bus Services Within the Study Area

Service Number	Operator	Route	Approximate Frequency		
			(Mon to Sat) Daytimes	(Mon to Sat) Evenings	Sundays
44	Nott'm City Transport	City Centre – Sneinton Hermitage – Colwick Village – Netherfield - Gedling	10 min's	30 min's	20 min's
46/47/47B	Nott'm City Transport	City Centre – Mapperley – Mapperley Plains – Arnold (46) or Lambley – Woodborough – Claverton - Gunthorpe	30 min's	40 min's	Every 2 Hours
100/N100/ 26/26C	Nott'm City Transport	City Centre – Gedling – Burton Joyce – Lowdham – NTU Brackenhurst - Southwell	20 min's	Hourly	Hourly

6.3.1 Service 100/26/26C runs between the City Centre and Southwell along the A612 Trent Valley Way/Nottingham Road corridor and would therefore pass through the southern terminal junction of the Gedling Access Road with the A612 Trent Valley Way. Service 100//N100/26/26C is operated commercially. Some timetable revisions to Service 100 are to be introduced from 4th August 2014.

6.3.2 Whilst serving stops within the TA study area Service 100/26/26C is considered to offer little opportunity for diversion/extension to serve the proposed redevelopment of the Gedling Colliery/Chase Farm site due to the distance of its route from the site and the length of diversion that would be required.

6.3.3 Service 44/Night Bus 100 (N100) runs between the City Centre and Gedling. At the Gedling end of its route it passes along the A6211 Arnold Lane between its junctions with Main Road and Shelford Road. This service therefore passes immediately adjacent to the proposed residential

development site and offers a good opportunity to be extended to pass through the completed residential development, thereby linking it to the city centre with a high frequency bus service. This potential should therefore be explored further at the planning application stage for the redevelopment of the Gedling Colliery/Chase Farm site. This service is operated commercially.

6.3.4 Service 46 runs between the City Centre and Arnold and Services 47/47B continue on to serve Lambley, Woodborough, Calverton, Lowdham and Gunthorpe. All of these services pass through the study area on the B684 Mapperley Plains Road and will therefore pass through the improved B684 Mapperley Plains Road/A6211 Arnold Lane junction and the new B684 Mapperley Plains Road/Gedling Access Road junction. These services are operated with financial support from Nottinghamshire County Council. A route revision to Service 46/47/47B is to be introduced from 4th August 2014.

6.3.5 Whilst serving stops within the TA study area Service 46/47/47B is considered to offer little opportunity for diversion/extension to serve the proposed redevelopment of the Gedling Colliery/Chase Farm site due to the distance of its route from the site and the length of diversion that would be required.

RAIL

6.3.6 The Gedling Colliery site is connected to the South Nottinghamshire Rail Network (SNRN) via a disused freight line which links the colliery to the Nottingham to Grantham line at Netherfield. Various studies have previously been undertaken to examine the feasibility of opening the freight line for passenger use and Nottinghamshire County Council is currently safeguarding a scheme for possible construction during the third Local Transport Plan for Nottinghamshire, 2011-2026. This scheme does not however feature in the LTP3 implementation programme for 2014/15 and is unlikely to be included in any 2015/16 programme for construction.

SUMMARY

6.3.7 The study area is well served by frequent bus services which link the area with Nottingham City Centre and local villages to the north and northeast.

6.3.8 Service 44 currently passes along the A6211 Arnold Lane immediately adjacent to the proposed development site and is therefore considered to offer a good opportunity to be extended into the

completed residential development, thereby linking it to the city centre with a high frequency bus service.

6.3.9 It is therefore recommended that this potential be explored further at the planning application stage for the redevelopment of the Gedling Colliery/Chase Farm site.

7 Highway Impact Assessment

7.1 INTRODUCTION

7.1.1 The operation of all the proposed junctions on the Gedling Access Road have been assessed for the 2028 and 2034 'With Development' design flows which assume completion of the Gedling Access Road and all development at the Gedling Colliery/Chase Farm site.

7.1.2 In addition to the proposed new junctions the operation of 5 existing junctions has also been assessed with the 2028 'Reference Case' flows (see **Section 5** for further details) and the 2028 and 2034 'Design Flows' (see **Section 5** and **Appendix F** for further details) so the effect of providing the Gedling Access Road can be determined at these locations.

7.1.3 All junctions have been assessed for the AM and PM peak hours and a summary of the junction capacity assessments undertaken is presented in **Table 5** below.

Table 5 – Junction Capacity Assessments Undertaken

Junction	Junction Type	Junction Capacity Assessments Undertaken					
		2028 Reference Case		2028 With GAR and Development		2034 With GAR and Development	
		AM	PM	AM	PM	AM	PM
A6211 Arnold Lane/ B684 Mapperley Plains Road	Signal Controlled	X	X	X	X	X	X
A6211 Arnold Lane/Lambley Lane	Simple Priority	X	X	X	X	X	X
A6211 Shearing Hill/A6211 Burton Road	Signal Controlled	X	X	X	X	X	X
Burton Road/A612 Nottingham Road	Signal Controlled	X	X	X	X	X	X
GAR/B684 Mapperley Plains Road	Signal Controlled	N/A	N/A	X	X	X	X
GAR/A6211 Arnold Lane	Priority Roundabout	N/A	N/A	X	X	X	X
GAR/Gedling Colliery Site Access	Priority Roundabout	N/A	N/A	X	X	X	X
GAR/Lambley Lane (S)	Ghost Island Priority	N/A	N/A	X	X	X	X
GAR/Lambley Lane (S)	Mini-Roundabout	N/A	N/A	X	X	X	X
GAR/Lambley Lane (N)	Ghost Island Priority	N/A	N/A	X	X	X	X
GAR/A612 Nottingham Road	Signal Controlled	X	X	X	X	X	X

Note: Junctions marked as N/A do not exist until the Gedling Access Road is constructed

7.2 JUNCTION CAPACITY ASSESSMENTS

7.2.1 The assessment of the junctions has been undertaken using the ARCADY 7, PICADY 5 and LINSIG 3 computer programmes which are the 'industry standard' traffic modelling computer software packages used for assessing the traffic capacity of roundabouts, simple priority junctions and signalised junctions respectively.

7.2.2 Junction geometry has been taken from the layout drawings presented in **Appendix H** and **Table 6** below summarises which software has been used to assess each junction.

Table 6 – Junction Modelling Software Used

Junction	Junction Type	Junction Modelling Software
A6211 Arnold Lane/ B684 Mapperley Plains Rd	Signal Controlled	LINSIG 3
A6211 Arnold Lane/Lambley Lane	Simple Priority	PICADY 5
A6211 Shearing Hill/A6211 Burton Road	Signal Controlled	LINSIG 3
Burton Road/A612 Nottingham Road	Signal Controlled	LINSIG 3
GAR/B684 Mapperley Plains Road	Signal Controlled	LINSIG 3
GAR/A6211 Arnold Lane	Priority Roundabout	ARCADY 7
GAR/Gedling Colliery Site Access	Priority Roundabout	ARCADY 7
GAR/Lambley Lane (S)	Ghost Island Priority	PICADY 5
GAR/Lambley Lane (S)	Mini-Roundabout	ARCADY 7
GAR/Lambley Lane (N)	Ghost Island Priority	PICADY 5
GAR/A612 Nottingham Road	Signal Controlled	LINSIG 3

7.2.3 For priority junction and roundabout assessments a Ratio of Flow to Capacity (RFC) value below 0.85 indicates that a junction operates 'within' its theoretical capacity. Typically junctions can satisfactorily operate with RFC values between 0.85 and 1.00. An RFC value greater than 1.00 indicates that a junction operates 'above' its capacity.

7.2.4 For traffic signal junction assessments, a Reserve Capacity (RC) or degree of overload is used to indicate whether or not a junction operates 'within' its theoretical capacity. When there is no RC, a degree of overload is the percentage by which the traffic flows exceed the capacity of the junction. Experience with RC calculations at existing junctions indicates that queuing does not become particularly noticeable until the degree of overload reaches 10% (i.e. -10% RC) and this is approximately comparable to an RFC of 1.0 at a priority junction.

7.2.5 Full details of the traffic flows used in the capacity assessments can be found in **Appendix F**. The results of the junction capacity assessments are contained in full in **Appendix H** and summarised on the following page in **Table 7**.

7.2.6 For the sake of simplicity the results presented in **Table 7** overleaf are the 'worst case' RFC / RC values forecast at each junction.

Table 7 – Junction Capacity Assessment Results

Junction	AM Peak (08:00 – 09:00)		PM Peak (17:00 – 18:00)	
	Max. RFC/RC	Max. Queue (PCU)/Total Delay (PCU/Hour)	Max. RFC/RC	Max. Queue (PCU)/Total Delay (PCU/Hour)
2028 Reference Case Flows				
Mapperley Plains/Gedling Road/Arnold Lane	-21.9%	181.9	-29.6%	234.4
A612/GAR (Existing Junction)	9.1%	16.9	-10.7%	37.0
A6211 Shearing Hill/A6211 Burton Road	-0.3%	18.8	36.9%	10.7
B686 Burton Road/A6211 Colwick Loop Road	25.2%	11.4	27.0%	12.1
Arnold Lane/Lambley Lane	1.073	25.39	***	243.06
2028 With GAR and Development Design Flows				
Mapperley Plains/Gedling Road/Arnold Lane	-8.4%	57.4	-7.7%	49.7
Mapperley Plains Road/GAR	-0.6%	21.5	36.2%	8.3
Arnold Lane/GAR/Site	0.555	1.24	0.518	1.07
GAR/Site Access	0.480	0.92	0.211	0.27
GAR/Lambley Lane (S)	0.403	0.67	0.860	5.23
GAR/Lambley Lane (S) – Mini Roundabout	0.455	0.83	0.494	0.97
GAR/Lambley Lane (N)	0.909	6.62	0.916	7.22
A612/GAR/Burton Road/Whitworth Drive	23.6%	28.0	1.7%	42.4
A6211 Shearing Hill/A6211 Burton Road	80.8%	5.2	75.1%	5.0
B686 Burton Road/A6211 Colwick Loop Road	68.2%	7.2	33.1%	10.4
Arnold Lane/Lambley Lane	0.663	1.9	0.743	5.96
2034 With GAR and Development Design Flows				
Mapperley Plains/Gedling Road/Arnold Lane	-11.0%	75.7	-12.4%	62.8
Mapperley Plains Road/GAR	-4.2%	25.2	17.1%	8.8
Arnold Lane/GAR/Site	0.579	1.36	0.541	1.17
GAR/Site Access	0.497	0.96	0.219	0.28
GAR/Lambley Lane (S)	0.423	0.72	0.905	7.1
GAR/Lambley Lane (S) – Mini Roundabout	0.472	0.88	0.514	1.05
GAR/Lambley Lane (N)	0.983	10.76	0.997	12.71
A612/GAR/Burton Road/Whitworth Drive	19.6%	29.6	-2.3%	48
A6211 Shearing Hill/A6211 Burton Road	74.7%	5.4	68.3%	5.3
B686 Burton Road/A6211 Colwick Loop Road	62.4%	7.5	27.9%	11.1
Arnold Lane/Lambley Lane	0.696	2.19	0.777	7.45

7.2.7 As can be seen from **Table 7** all of the existing and proposed junctions are forecast to operate satisfactorily at the 2028 and 2034 Design Years with the completion of the Gedling Colliery/Chase Farm development and the completion of the Gedling Access Road.

7.2.8 The Mapperley Plains/Gedling Road/Arnold Lane junction is forecast to be operating at a level where queuing will start to be noticeable at the 2034 Design Year (PRC values of -11.0% in the AM and -12.4% in the PM). However, this level of performance is deemed to be acceptable considering it is a 20 year forecast and the junction operation is significantly improved in comparison to the existing junction in the 2028 Reference Case scenario.

7.2.9 The 'Ghost-Island' priority junctions between the Gedling Access Road and Lambley Lane (North and South) are forecast to be operating close to their theoretical capacity at the 2034 Design Year, with RFC values of between 0.85 and 1.00 in both peaks. However, the forecast maximum queue lengths are small (maximum of 13 PCU) so this level of performance is considered acceptable, particularly given that it is a 20 year forecast (maximum forecast queue length is 7 PCU at 2028).

7.2.10 Comparing the operation of the existing A6211 Shearing Hill/Burton Road and the B686 Burton Road/Colwick Loop Road junction layouts in the 'Reference Case' scenario with their operation in the 2028 and 2034 'With Development and Gedling Access Road' scenarios it can be seen that provision of the new road will assist with the operation of both of these signal controlled junctions, with significant performance increases.

7.2.11 On the basis of the junction capacity results all of the existing and proposed junction layouts depicted in **Appendix H** are therefore considered to be appropriate to accommodate the forecast design flows.

7.3 LINK FLOW SUMMARY

7.3.1 Diagrams presenting link flow summaries for the Detailed Study Area and surrounding network are presented as **Figures 1** to **12** at the end of this report. A summary of key link flows in the AM/PM peak hours is presented in **Table 8** as follows.

Table 8 – Peak Hour Link Flow Summary

Location	2019 2-Way Traffic Flows VPH						2034 2-Way Traffic Flows VPH					
	Reference Case		Design flows		Difference		Reference Case		Design flows		Difference	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
B684 Mapperley Plains Road NE of Arnold Lane	1,952	1,754	1,830	1,627	-122	-127	2,283	1,941	2,147	1,939	-136	-2
B684 Mapperley Plains Road SW of Arnold Lane	1,904	1,826	1,735	1,589	-169	-237	2,270	1,991	2,194	1,721	-76	-270
A6211 Gedling Road NW of Mapperley Plains Rd	1,448	1,590	1,496	1,477	48	-113	1,568	1,787	1,619	1,679	51	-108
A6211 Arnold Lane (B684 to Shelford Road)	1,237	1,212	891	756	-346	-456	1,442	1,481	947	1,075	-495	-406
A6211 Arnold Lane (Shelford Rd to Lambley Ln)	1,318	1,253	1,014	867	-304	-386	1,475	1,407	1,044	1,098	-431	-309
A6211 Arnold Lane (Lambley Ln to Shearing Hill)	1,631	1,710	1,286	1,154	-345	-556	1,853	1,940	1,369	1,429	-484	-511
A6211 Shearing Hill	1,227	1,355	929	901	-298	-454	1,410	1,516	1,002	1,026	-408	-490
Burton Road (Shearing Hill NE to A612)	703	870	522	670	-181	-200	1,027	723	944	850	-83	127
A612 Nottingham Road (NE of Burton Road)	1,544	1,702	1,569	1,733	25	31	1,986	1,990	1,973	2,069	-13	79
A612 Trent Valley Way (SW of Burton Road)	971	1,069	1,110	1,508	139	439	1,287	1,516	1,491	1,699	204	183
Spring Lane (west of Lambley Lane)	691	809	639	939	-52	130	710	960	788	954	78	-6
Lambley Lane (GAR to Spring Lane)	463	538	556	669	93	131	497	540	780	621	283	81
Lambley Lane (GAR to A6211)	412	506	303	263	-109	-243	452	536	398	322	-54	-214
Westdale Lane West (west of Moore Road)	1,590	1,731	1,614	1,746	24	15	1,807	1,793	1,867	1,764	60	-29
Westdale Lane East (east of Besecar Ave)	874	833	848	793	-26	-40	889	881	890	827	1	-54
GAR (B684 to A6211 Roundabout)	0	0	507	542	507	542	0	0	515	735	515	735
GAR (A6211 Roundabout to Colliery Access)	0	0	295	369	295	369	0	0	513	563	513	563
GAR (Colliery Access to Lambley Lane South)	0	0	348	458	348	458	0	0	562	647	562	647
GAR (Lambley Ln South to Lambley Ln north)	0	0	496	565	496	565	0	0	786	827	786	827
GAR (Lambley Lane north to A612)	0	0	603	822	603	822	0	0	1,075	963	1,075	963

Notes: New Gedling Access Road links highlighted in grey.

7.3.2 Overall, across the whole existing highway network summarised in **Table 8,** there is a forecast reduction in traffic flows when comparing the Reference Case flows to the Design Flows in both peaks at 2019 and at 2034. The links with the most significant flow increase is the A612 Trent Valley Way towards Nottingham, with smaller increases forecast on Burton Road in the PM peak, Spring Lane in the AM peak and on Lambley Lane. These increases are due to traffic re-routing to use the new Gedling Access Road and corresponding flow reductions are observed on the A6211 Arnold Lane corridor.

Table 9 – Annual Average Daily Traffic (AADT) Link Flow Summary

Location	2019 2-Way Traffic Flows AADT			2034 2-Way Traffic Flows AADT		
	Reference Case	Design flows	Difference	Reference Case	Design flows	Difference
B684 Mapperley Plains Road NE of Arnold Lane	20,337	19,723	-614	24,392	23,247	-1,145
B684 Mapperley Plains Road SW of Arnold Lane	19,672	17,746	-1,926	23,892	21,458	-2,434
A6211 Gedling Road NW of Mapperley Plains Rd	15,144	14,188	-956	17,896	17,531	-365
A6211 Arnold Lane (B684 to Shelford Road)	13,681	9,472	-4,209	16,581	11,125	-5,456
A6211 Arnold Lane (Shelford Rd to Lambley Ln)	15,021	11,137	-3,884	17,172	12,711	-4,461
A6211 Arnold Lane (Lambley Ln to Shearing Hill)	20,975	16,308	-4,667	24,218	18,331	-5,887
A6211 Shearing Hill	14,340	10,566	-3,774	17,231	12,178	-5,053
Burton Road (Shearing Hill NE to A612)	7,898	6,108	-1,790	10,083	8,775	-1,308
A612 Nottingham Road (NE of Burton Road)	16,499	16,690	191	21,185	21,884	699
A612 Trent Valley Way (SW of Burton Road)	10,270	13,474	3,204	14,325	18,312	3,987
Spring Lane (west of Lambley Lane)	11,071	10,468	-603	12,223	11,548	-675
Lambley Lane (GAR to Spring Lane)	6,898	7,261	363	7,157	8,428	1,271
Lambley Lane (GAR to A6211)	5,930	3,941	-1,989	6,418	4,608	-1,810
Westdale Lane West (west of Moore Road)	17,204	17,799	595	19,218	19,575	357
Westdale Lane East (east of Besecar Ave)	9,282	10,361	1,079	9,771	11,222	1,451
GAR (B684 to A6211 Roundabout)	0	6,887	6,887	0	7,132	7,132
GAR (A6211 Roundabout to Colliery Access)	0	3,646	3,646	0	5,900	5,900
GAR (Colliery Access to Lambley Lane South)	0	4,410	4,410	0	6,673	6,673
GAR (Lambley Ln South to Lambley Ln north)	0	5,849	5,849	0	8,965	8,965
GAR (Lambley Lane north to A612)	0	7,058	7,058	0	10,660	10,660

Notes: New Gedling Access Road links highlighted in grey.

7.3.1 Overall, across the whole existing highway network summarised in **Table 9** there is a forecast reduction in traffic flows when comparing the daily Reference Case flows to the Design Flows at the 2019 opening and 2034 design years. The links with significant flow increases are the A612 Trent Valley Way (SW of Burton Road, towards Nottingham) which is forecast to experience a daily traffic flow increase of 3,204 vehicles per day (VPD) at the 2019 Opening Year and 3,987 VPD at the 2034 Design Year. Lambley Lane (GAR to Spring Lane section) is forecast to experience a daily traffic flow increase of 363 VPD at the 2019 Opening Year and 1,271 VPD at the 2034 Design Year. The A612 Nottingham Road (NE of Burton Road) is forecast to experience a small daily traffic flow increases of 191 VPD at the 2019 opening year and 699 VPD at the 2034 design year. Daily flow increases are also forecast on Westdale Lane at both the 2019 opening and 2034 design years.

7.3.2 Forecast flows on the wider highway network are summarised in **Table 10** and **Table 11** below.

Table 10 – Peak Hour Link Flow Summary – Wider Network

Location	2019 2-Way Traffic Flows VPH						2034 2-Way Traffic Flows VPH					
	Reference Case		Design flows		Difference		Reference Case		Design flows		Difference	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
A612 Through Burton Joyce (NE of Meadow Ln)	1,261	1,372	1,265	1,373	3	1	1,683	1,631	1,650	1,643	-33	12
A612 Colwick Loop Road (W of Victoria Pk Way)	1,993	1,979	2,036	2,126	43	147	2,483	2,548	2,486	2,665	3	117
B684 Mapperley Plains Road (N of Catfoot Ln)	1,250	1,445	1,210	1,467	-40	22	1,554	1,642	1,548	1,626	-6	-16
B684 Mapperley Plains Road (S of Westdale Ln)	2,370	1,502	2,282	1,367	-88	-135	2,602	1,682	2,633	1,458	31	-224
A6211 Gedling Road (NW of Rollestone Dr)	543	624	534	621	-10	-3	603	717	579	739	-24	21
Main Street Lambley	801	945	808	944	8	-1	892	973	973	1,003	81	30
A612 Through Burton Joyce (NE of Meadow Ln)	1,261	1,372	1,265	1,373	3	1	1,683	1,631	1,650	1,643	-33	12

Table 11 – Annual Average Daily Traffic (AADT) Link Flow Summary – Wider Network

Location	2019 2-Way Traffic Flows AADT			2034 2-Way Traffic Flows AADT		
	Reference Case	Design flows	Difference	Reference Case	Design flows	Difference
A612 Through Burton Joyce (NE of Meadow Ln)	14,089	14,057	-31	18,524	18,885	361
A612 Colwick Loop Road (W of Victoria Pk Way)	21,687	22,517	830	28,344	29,432	1,088
B684 Mapperley Plains Road (N of Catfoot Ln)	14,451	14,231	-220	18,371	18,169	-202
B684 Mapperley Plains Road (S of Westdale Ln)	22,834	22,080	-755	25,529	24,530	-999
A6211 Gedling Road (NW of Rollestone Dr)	6,503	6,375	-127	7,270	7,211	-60
Main Street Lambley	9,248	9,453	205	10,501	10,521	20
A612 Through Burton Joyce (NE of Meadow Ln)	14,089	14,057	-31	18,524	18,885	361

7.3.3 As can be seen from **Table 10** and **Table 11** the provision of GAR and the full redevelopment of the Gedling Colliery/Chase Farm site results in relatively small peak hour flow changes on the wider highway network at both the 2019 opening and 2034 design years when compared to the reference case. Flows on the A612 through Burton Joyce, on the B684 Mapperley Plains Road north of GAR and on the A6211 Gedling Road towards Arnold remain essentially unchanged, whereas flows on the B684 Mapperley Plains Road towards Nottingham (south of Westdale Lane) are forecast to be reduced. Flows on Main Street in Lambley increase by a very small amount, although the forecast differences are small and therefore unlikely to be noticeable in practice. Flows on the A612 Colwick Loop Road towards Nottingham (west of Victoria Park Way) are forecast to increase by approximately 5% to 7% in the PM peak hour and by approximately 4% on a daily basis in both the opening and 2034 design years when compared to the reference case.

8 Summary

8.1.1 WYG has been appointed by the Homes and Communities Agency (HCA) to provide transport planning support in relation to proposals for a new link road, known as the Gedling Access Road (GAR), in Gedling, Nottingham.

8.1.2 The proposed 3.8 km long GAR is located in the Gedling Borough of Nottinghamshire, to the east of Nottingham city centre and will link the B684 Mapperley Plains Road north of Gedling with the A612 Nottingham Road south of Gedling.

8.1.3 Gedling Access Road is planned to facilitate development of the Gedling Colliery/Chase Farm site for mixed-uses as well as providing a 'bypass' around Gedling to help ease traffic congestion on local roads. Its provision is identified as an essential requirement for regeneration of the Gedling Colliery/Chase Farm site in both the adopted and emerging planning policy for Gedling Borough.

8.1.4 A full (detailed) planning application is to be submitted for Gedling Access Road in 2014 and this Transport Assessment has been prepared to support the planning application for the new road. Future redevelopment of the Gedling Colliery/Chase Farm will be subject to separate planning applications.

8.1.5 The scope and methodology for this Transport Assessment have been agreed with Nottinghamshire County Council and regular contact has been maintained with the County Council throughout the preparation of the assessment. This TA has therefore been prepared on an agreed basis.

8.1.6 Provision of the Gedling Access Road is forecast to reduce traffic flows on the adjacent A6211 corridor in all scenarios tested as traffic reassigns to make use of the new route. The forecast flow reductions are expected to have an overall beneficial effect on road safety on the A6211 corridor. In addition, the operation of existing junctions on the A6211 corridor will also benefit from the general reduction in traffic with fewer delays and queues experienced in the peak hours.

8.1.7 A range of complementary traffic management measures will be developed to effectively integrate the road scheme and redevelopment proposals into the exiting transport network. A list of potential measures has been identified in this report however; the final package will be subject to agreement with Nottinghamshire County Council. It is anticipated that some complementary

measures will be delivered in parallel with the road scheme, whereas others will be considered following a period of monitoring.

8.1.8 The operation of the proposed junctions on the Gedling Access Road have been tested and demonstrated to operate within acceptable parameters at the 2034 Design Year assuming full redevelopment of the Gedling Colliery/Chase Farm site. The proposed junction layouts are therefore considered appropriate to accommodate forecast traffic flows.

8.1.9 Overall, provision of the Gedling Access Road is considered to be beneficial in terms of impacts on the local highway network and the scheme is therefore considered acceptable on transport grounds.

Figures

Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

Legend

DM 2019 - AADT (HGV%)

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REV	DESCRIPTION	BY	CHK	APP	DATE

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Project:
Gedling Access Road (GAR)

Drawing Title:
Figure 1
2019 DM - AADT (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
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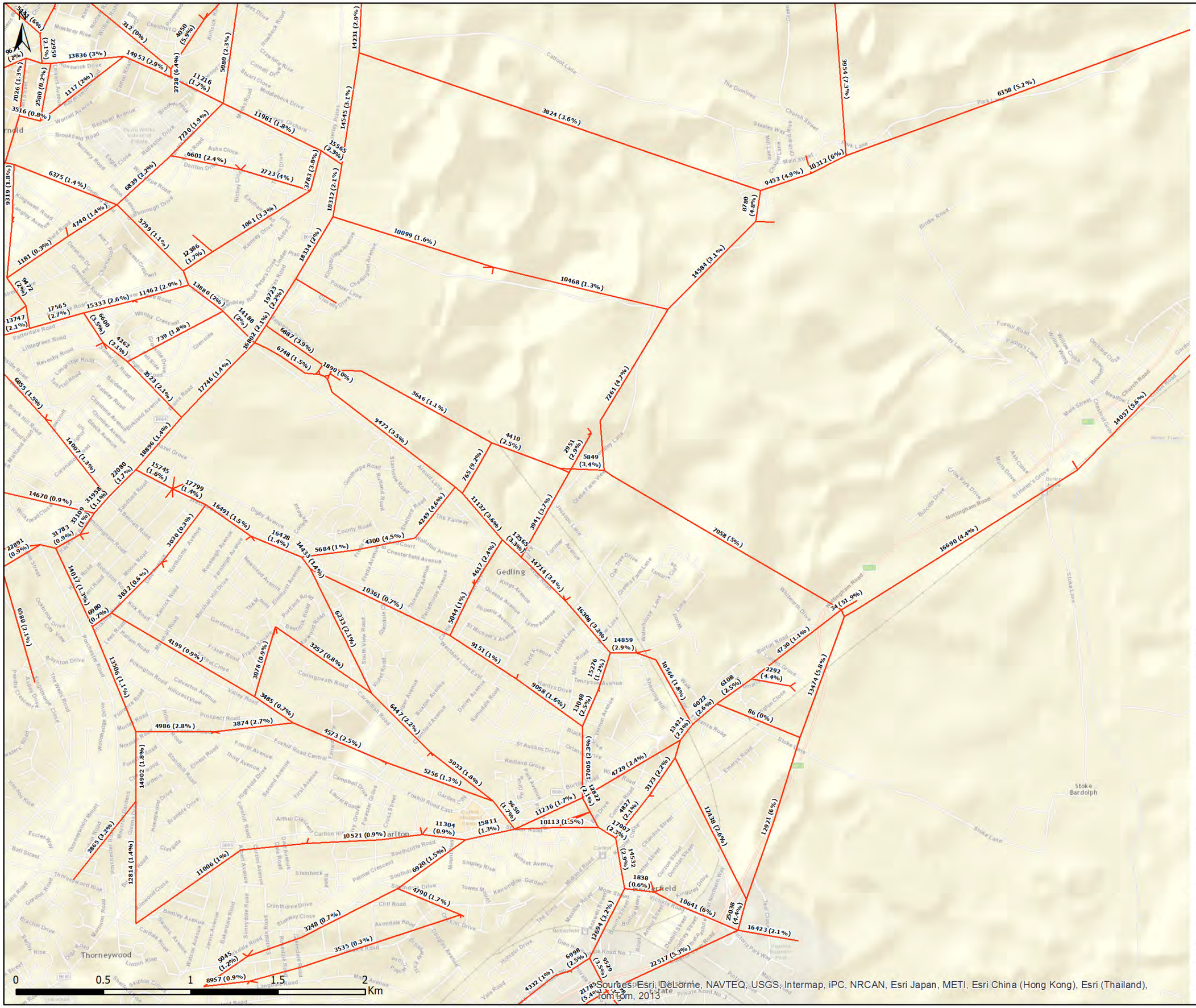

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Drawing Title:
Figure 2
2019 DS - AADT (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	003	-

REV	DESCRIPTION	BY	CHK	APP	DATE
A	REVISED FLOWS	JJC	ASG	ASG	16/07/14

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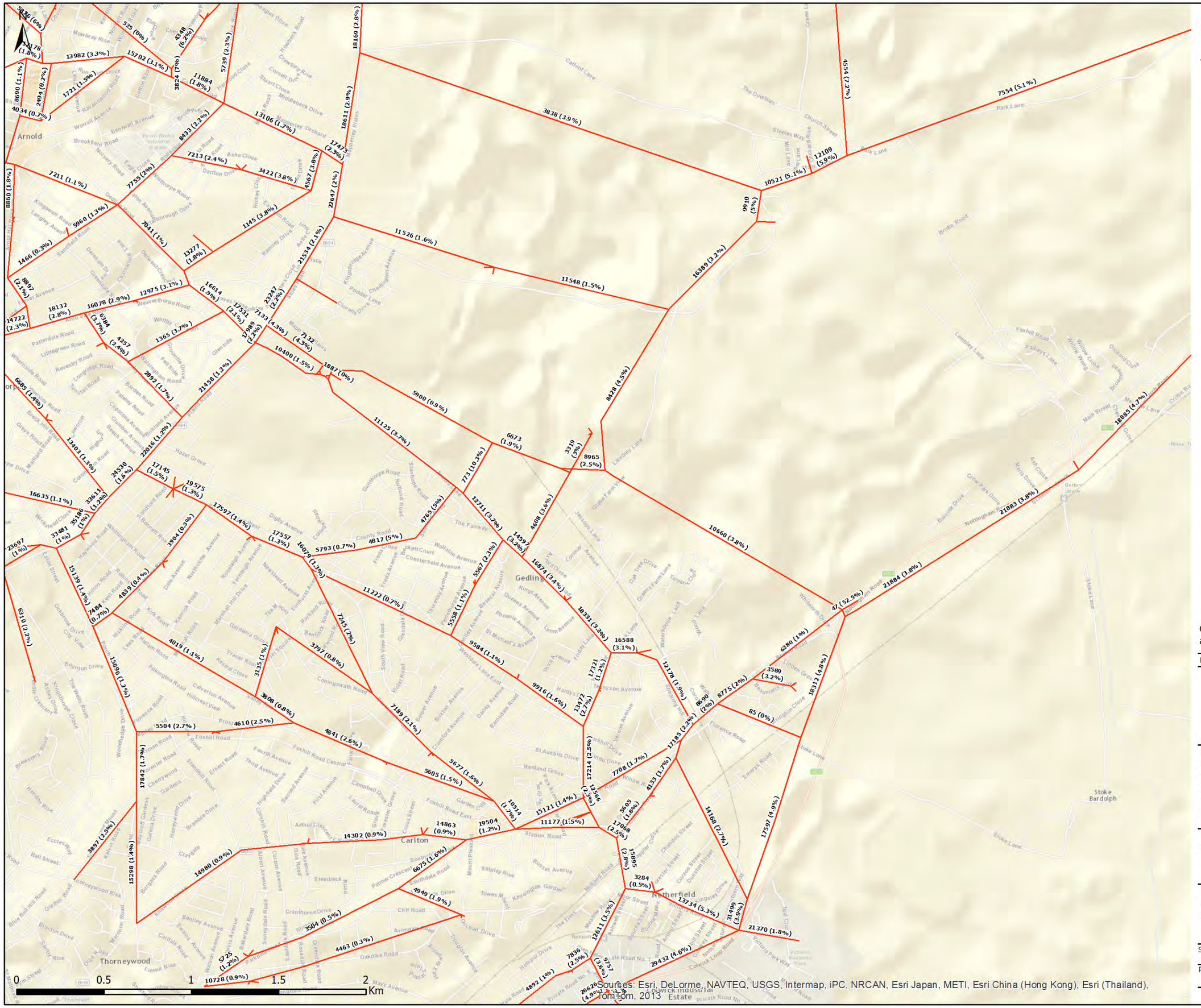
Gedling Access Road (GAR)

Drawing Title:
Figure 3
2034 DM - AADT (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	004	A



Legend

DS 2034 - AADT (HGV%)

Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

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Drawing Title:
Figure 4
2034 DS - AADT (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	005	-

REV	DESCRIPTION	BY	CHK	APP	DATE

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Project:
Gedling Access Road (GAR)

Drawing Title:
Figure 5
2019 DM - AM PEAK FLOW (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	006	-

Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

Legend

DS 2019 - AM PEAK (HGV%)

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REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

Homes & Communities Agency

EXECUTIVE PARK
AVALON WAY
ANSTEY
LEICESTER
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wyg

Project:

Gedling Access Road (GAR)

Drawing Title:

Figure 6
2019 DS - AM PEAK FLOW (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	007	-

REV	DESCRIPTION	BY	CHK	APP	DATE
A	REVISED FLOWS	JJC	ASG	ASG	16/07/14

Client:

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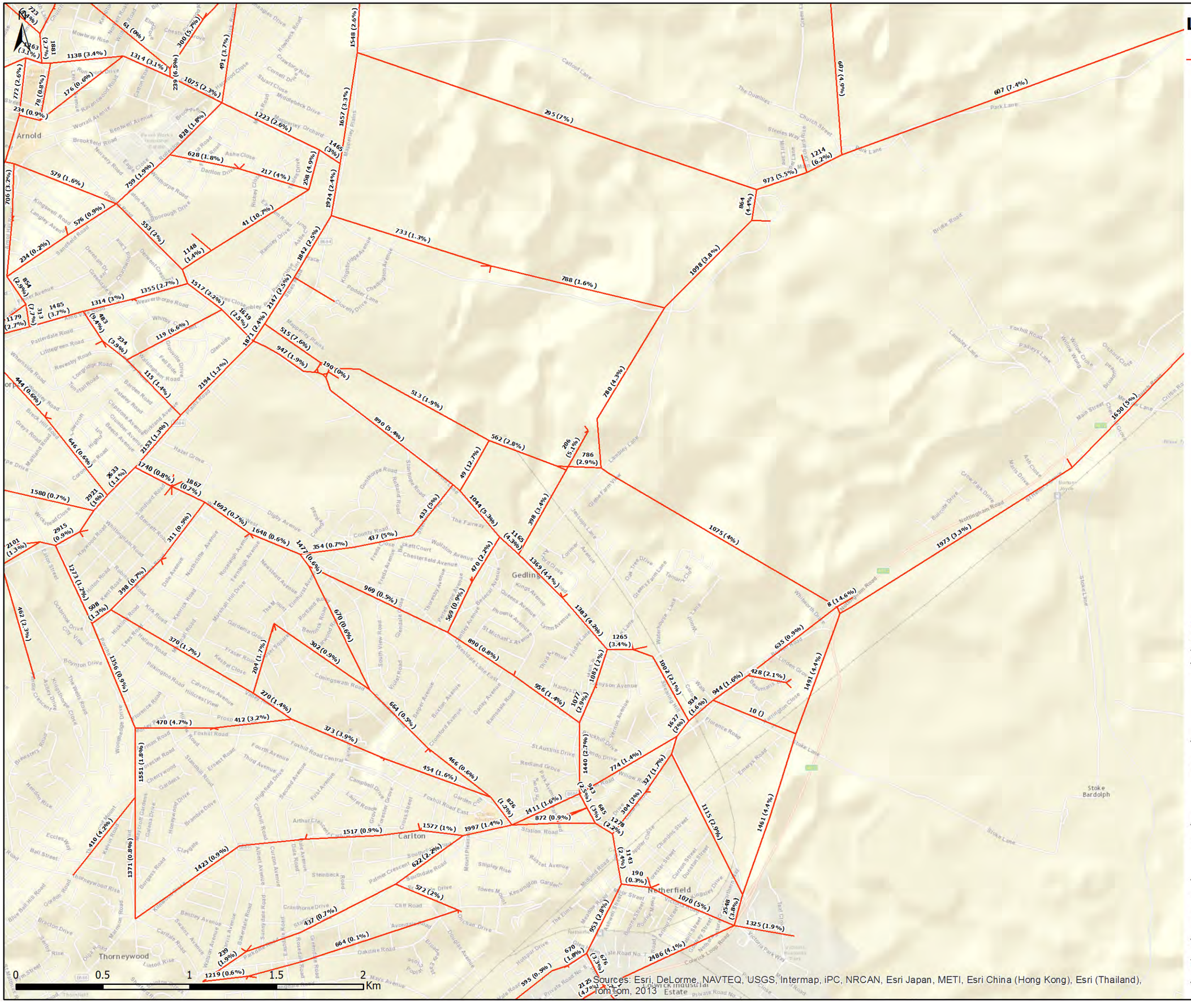
Project:
Gedling Access Road (GAR)

Drawing Title:
Figure 7
2034 DM - AM PEAK FLOW (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	008	A



Legend

DS 2034 - AM PEAK (HGV%)

REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

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EXECUTIVE PARK
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Project:
Gedling Access Road (GAR)

Drawing Title:
Figure 8
2034 DS - AM PEAK FLOW (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	009	-

REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

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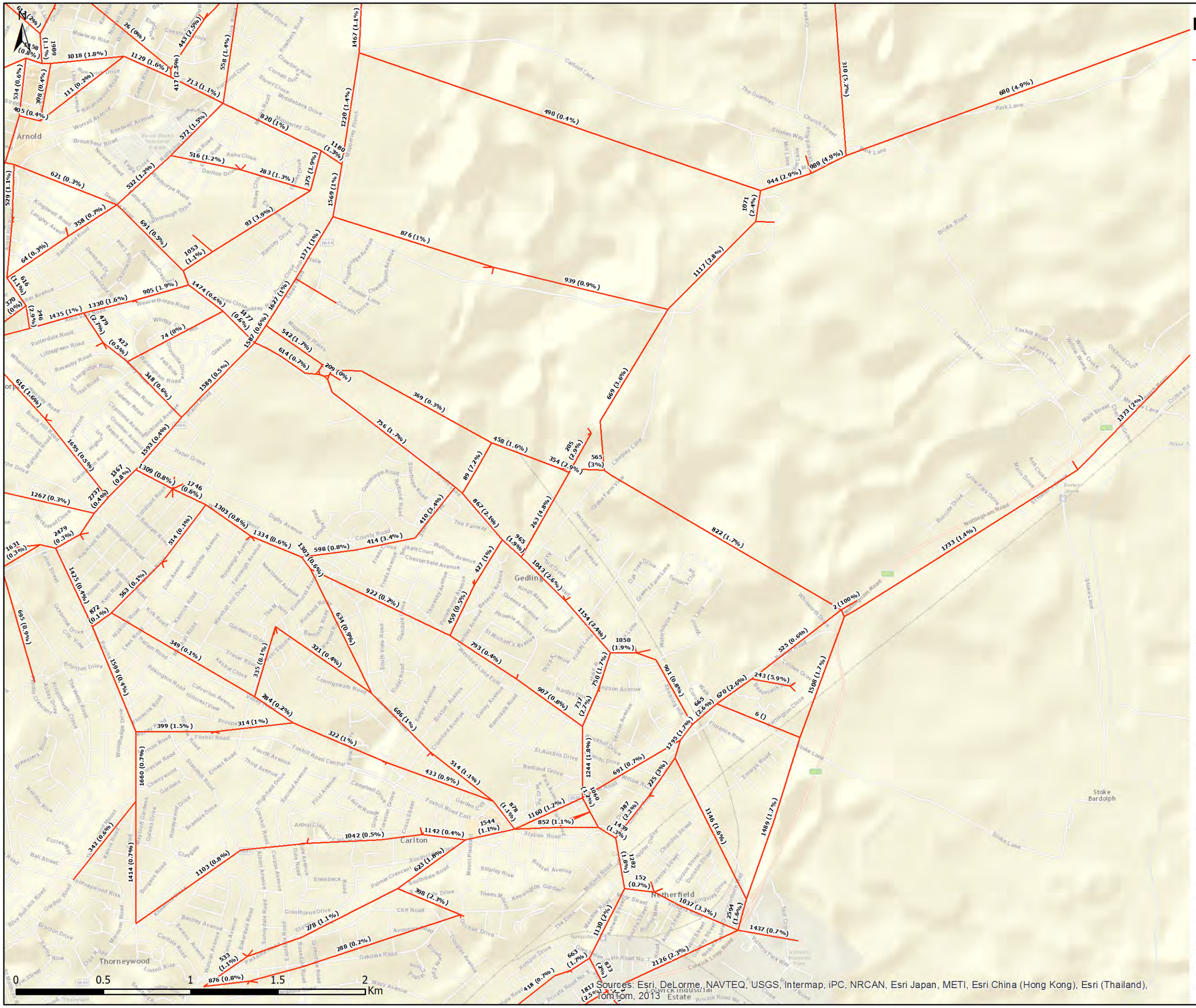
Project:
Gedling Access Road (GAR)

Drawing Title:
Figure 9
2019 DM - PM PEAK FLOW (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	010	-



Legend

DS 2019 - PM PEAK (HGV%)

REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

Homes & Communities Agency

EXECUTIVE PARK
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Project:
Gedling Access Road (GAR)

Drawing Title:
Figure 10
2019 DS - PM PEAK FLOW (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	011	-

REV	DESCRIPTION	BY	CHK	APP	DATE
A	REVISED FLOWS	JJC	ASG	ASG	16/07/14

Client:

Homes & Communities Agency

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Project:
Gedling Access Road (GAR)

Drawing Title:
Figure 11
2034 DM - PM PEAK FLOW (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	012	A

Legend

DS 2034 - PM PEAK (HGV%)

REV	DESCRIPTION	BY	CHK	APP	DATE

Client:

Homes & Communities Agency

EXECUTIVE PARK
AVALON WAY
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Project:
Gedling Access Road (GAR)

Drawing Title:
Figure 12
2034 DS - PM PEAK FLOW (HGV %)

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
NTS	JJC	29/05/14	ASG	29/05/14	ASG	29/05/14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	013	-

Appendix A – Proposed Road Alignment

Proposed Road Alignment

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

B684 MAPPERLEY PLAINS

PROPOSED CULVERT TO MAINTAIN NATURAL CATCHMENT FLOW

PROPOSED CULVERT TO MAINTAIN NATURAL CATCHMENT FLOW

FOR CONTINUATION REFER TO DRAWING BELOW

NEW PIPE 400.000 TO BE CONNECTED INTO EXISTING DITCH

ARNOLD LANE

FOR CONTINUATION REFER TO DRAWING ABOVE

PROPOSED CULVERT TO MAINTAIN NATURAL CATCHMENT FLOW

CONNECT CUT-OFF DITCHES INTO PROPOSED CULVERT

NETWORK 1 ATTENUATION POND

OUTLET

NETWORK 2a ATTENUATION POND CASCADE

FOR CONTINUATION REFER TO DRG. NO. 50730/MBH/035

LOW POINT

LOW POINT

KEY :

- CARRIER DRAIN AND PIPE REFERENCE
- FILTER DRAIN AND PIPE REFERENCE
- NARROW FILTER / FIN DRAIN
- DITCH
- SW40 MANHOLE
- CP40 CATCHPIT
- CULVERT
- HEADWALL
- GULLY

NOTES :
1. ALL GULLY CONNECTIONS TO BE 150 DIA UNLESS STATED OTHERWISE.
2. GULLY CONNECTIONS HAVE BEEN OMITTED FOR CLARITY.

Homes & Communities Agency

Project:

GEDLING ACCESS ROAD

Drawing Title:

INDICATIVE PROPOSED DRAINAGE LAYOUT
SHEET 1 OF 3

Scale	Date	Drawing No.
1:1250 @ A1	July 2014	GAR10

DO NOT SCALE: CONTRACTOR TO CHECK ALL DIMENSIONS AND

N

2a01.000
2a01.001
2a02.004
2a02.005
2a01.002
2a01.003
FOR CONTINUATION REFER TO DRG. NO. 50730/MBH/034
2a06.002
LOW POINT
NETWORK 2a
ATTENUATION POND
CASCADE
LOW POINT
PROPOSED CULVERT
FOR OUSE DYKE
CONNECT CUT-OFF
DITCH INTO OUSE DYKE
2a06.001
OUSE DYKE
NETWORK 2b
ATTENUATION POND
2a06.000
2b01.009
2b01.008
2b01.007
2b01.006
2b01.005
2b01.004
2b01.003
2b01.002
2b01.001
2b01.000
2b04.002
2b04.001
2b04.000
HIGH POINT
HIGH POINT
2b03.000
2b02.000
2b03.001
2b02.001
2b03.002
2b02.002
2b03.003
2b02.003
LAMBLEY LANE
Drain
Pond
Glebe Farm
2c00.000
2c01.000
2c00.001
2c01.001
2c00.002
2c01.002
FOR CONTINUATION REFER TO DRG. NO. 50730/MBH/035
500.000
500.001
500.002
500.003
500.004
NEW DRAINAGE SYSTEM TO
BE CONNECTED INTO
EXISTING DRAINAGE SYSTEM
GLEBE FARM VIEW
Kennels
Pavilion
PROP
CULVE

KEY :

- 109.000 CARRIER DRAIN AND PIPE REFERENCE
- 107.000 FILTER DRAIN AND PIPE REFERENCE
- NARROW FILTER / FIN DRAIN
- DITCH
- SW40 MANHOLE
- CP40 CATCHPIT
- CULVERT
- HEADWALL
- GULLY

NOTES :
1. ALL GULLY CONNECTIONS TO BE 150 DIA UNLESS STATED OTHERWISE.
2. GULLY CONNECTIONS HAVE BEEN OMITTED FOR CLARITY.

Homes & Communities Agency

Project:

GEDLING ACCESS ROAD

Drawing Title:

INDICATIVE PROPOSED DRAINAGE LAYOUT
SHEET 2 OF 3

Scale	Date	Drawing No.
1:1250 @ A1	July 2014	GAR11

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

GEDLING FARM

NETWORK 2c ATTENUATION POND

EXISTING WATERCOURSE

PROPOSED CULVERT

FOR CONTINUATION REFER TO DRG. NO. 50730/MBH/036

FOR CONTINUATION REFER TO DRAWING BELOW

FOR CONTINUATION REFER TO DRAWING ABOVE

HIGH POINT

GEDLING WOOD

OUTFALL INTO EXISTING DITCH

HYDROBRAKE CONTROL STRUCTURE

NETWORK 3 ATTENUATION POND

KEY :

- CARRIER DRAIN AND PIPE REFERENCE
- FILTER DRAIN AND PIPE REFERENCE
- NARROW FILTER / FIN DRAIN
- DITCH
- SW40 MANHOLE
- CP40 CATCHPIT
- CULVERT
- HEADWALL
- GULLY

NOTES :
1. ALL GULLY CONNECTIONS TO BE 150 DIA UNLESS STATED OTHERWISE.
2. GULLY CONNECTIONS HAVE BEEN OMITTED FOR CLARITY.

Homes & Communities Agency

Project: GEDLING ACCESS ROAD

Drawing Title: INDICATIVE PROPOSED DRAINAGE LAYOUT SHEET 3 OF 3

Scale	Date	Drawing No.
1:1250 @ A1	July 2014	GAR12

Proposed Footway/Cycleway

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

UNCONTROLLED CROSSING POINT

UNCONTROLLED CROSSING POINT

ROUNDABOUT 1

UNCONTROLLED CROSSING POINT

ROUNDABOUT2

TOUCAN CONTROLLED CROSSING POINT

UNCONTROLLED CROSSING POINT

CUT LINE FOR CONTINUATION SEE BELOW

CUT LINE

UNCONTROLLED CROSSING POINT

PROPOSED ACCESS TO GEDLING FARM

GEDLING FARM

UNCONTROLLED CROSSING POINT

CUT LINE FOR CONTINUATION SEE ABOVE

CUT LINE

SOIL NAILED WALL

GEDLING WOOD

WALLED GARDEN

CONTROLLED CROSSING AT JUNCTION

A612 NOTTINGHAM ROAD

A612 NOTTINGHAM ROAD

KEY

2.5m WIDE SHARED FOOTWAY/CYCLEWAY WITH 0.5m WIDE SAFETY BUFFER STRIP.

NOTES:
1. DROPPED KERBS INSTALLED AT ALL CROSSING POINTS.
2.BUFF COLOURED TACTILE PAVING INSTALLED AT UNCONTROLLED CROSSINGS.
3.RED COLOURED TACTILE PAVING INSTALLED AT CONTROLLED CROSSINGS.

Homes & Communities Agency

Project:

GEDLING ACCESS ROAD

Drawing Title:

PROPOSED FOOTWAY / CYCLEWAY WITH CONTROLLED / UNCONTROLLED CROSSING POINTS

Scale	Date	Drawing No.
1:5000 @ A1	July 2014	GAR13

Appendix B – TA Scoping Report

WYG Transport Planning

Homes and Communities Agency

Gedling Access Road (GAR)

Transport Assessment Scoping Report – Rev 3

WYG
Executive Park
Avalon Way
Anstey
Leicester
LE7 7GR

Report No. RT85361-01

14th February 2014

REPORT CONTROL

Project:	Gedling Access Road (GAR)
Client:	Homes and Communities Agency
Job Number:	A085361
File Origin:	N:\Projects\A085361 - Gedling Colliery Access Road\reports\TA Scoping Report\Text\A085361 - Gedling Access Road TA Scoping Report - Final - Rev 1.doc

Document Checking:

Primary Author	Alistair Gregory	Initialled:	ASG

Contributor	-	Initialled:	-

Review By	Robert Holland	Initialled:	RJH

Issue	Date	Status	Checked for Issue
1	28/01/2014	Draft	ASG
2	06/02/2014	Revised Draft (Rev 1)	ASG
3	10/02/2014	Final (Rev 2)	ASG
4	14/02/2014	Revised Final (Rev 3)	ASG

Contents

Tables

Appendices

1 Introduction

1.1 PREAMBLE

1.1.1 WYG has been appointed by the Homes and Communities Agency (HCA) to provide transport planning support in relation to proposals for a new link road, known as the Gedling Access Road (GAR), in Gedling, Nottingham.

1.1.2 The proposed 5km long GAR is located in the Gedling Borough of Nottinghamshire, to the east of Nottingham city centre and will link the B684 Mapperley Plains Road north of Gedling with the A612 Burton Road south of Gedling.

1.1.3 The GAR is planned to facilitate development of the Gedling Colliery/Chase Farm site for mixed-uses as well as providing a 'bypass' around Gedling to ease traffic congestion on local roads.

1.1.4 Plans showing the proposed alignment of the GAR and the location of the Gedling Colliery/Chase Farm site can be found in **Appendix A**.

1.1.5 Full planning permission was sought for the GAR in 2008 however; the application was not determined as there was a requirement for the GAR as a whole to be funded. Recent work by the HCA with Gedling Borough Council (GBC) and Nottinghamshire County Council (NCC) has led to a phased approach to delivery of the GAR. Updated transport modelling has been undertaken establishing the basis for a phased programme of both development and the GAR.

1.1.6 The HCA therefore proposes to submit a full (detailed) planning application for the GAR in early 2014 and a new, updated Transport Assessment (TA) is required in support of the planning application.

1.1.7 This note has been prepared to outline the methodology for the TA, for discussion and agreement with the local highway authority, Nottinghamshire County Council (NCC).

1.1.8 The location of the GAR is remote from the nearest Trunk Road or Motorway and as such there is no requirement to consult with the Highways Agency (HA).

1.2 TRANSPORT WORKING GROUP

1.2.1 A project inception meeting was held on Friday 17th January 2014. The meeting was attended by officers from the HCA, GBC, NCC and WYG. In the meeting it was agreed that a 'Transport Working Group' be established and that this should consist of officers from NCC and WYG and other stakeholder representatives, as appropriate.

1.2.2 This scoping report will form the basis for discussions at the first meeting of the Transport Working Group.

1.3 FORMAT OF REPORT

1.3.1 The layout of this report is as follows:

- Chapter 2 describes existing conditions
- Chapter 3 identifies planning policy documents that will be reviewed in the TA
- Chapter 4 identifies the sources of information that the TA will refer to
- Chapter 5 outlines assessment years and design flows
- Chapter 6 describes how road safety will be reviewed
- Chapter 7 describes how sustainable travel will be reviewed
- Chapter 8 describes the proposed junction modelling approach
- Chapter 9 summarises the report

2 Existing Conditions

2.1 LOCATION

2.1.1 The proposed GAR is located approximately 6 km northeast of Nottingham City Centre and its route is contained wholly within the Borough of Gedling. The planned road is situated directly to the north of the settlements of Gedling, Carlton and Colwick, to the east of Mapperley Plains and to the west of the settlement of Burton Joyce.

2.2 ROUTE OF THE GAR

2.2.1 The proposed GAR will follow a route south from a new junction with the B684 Mapperley Plains Road, parallel with the A6211 Arnold Lane before following a route through the centre of the former Gedling Colliery site. From here, the GAR will continue south-east to terminate at a new junction with the A612 Burton Road. See plans in **Appendix A**.

2.3 EXISTING CHARACTERISTICS

2.3.1 Key characteristics of the land that will be crossed by the route of the GAR are summarised as follows:

- Agricultural fields (arable and pastoral)
- Part of a former, dismantled railway and associated railway tunnel (part filled)
- The former Gedling Colliery site (former spoil tipping land which has been restored to scrub and pasture land).
- The vacant Glebe Farm House and outbuildings
- A small area of woodland (Gedling Wood)
- A section of the Walled Garden at the Grade II Listed Gedling House
- A small section of the grounds of Carlton le Willows school.

2.3.2 The majority of the development which lies to the south and west of the proposed GAR route is predominantly residential in nature with the densely populated residential areas of Gedling and Carlton to the south and Woodthorpe and Arnold to the west.

2.3.3 To the north and east of the proposed GAR route lie the less populated areas of Mapperley Plains and Lambley. Beyond the residential areas to the north and east are large areas of pastoral and arable farm land interspersed by the settlement of Burton Joyce and the River Trent to the east.

PROPOSED TA STUDY AREA

2.3.4 The proposed TA study area is indicated in **Appendix B**. The study area covers the route of the GAR including its terminal junctions with the B684 Mapperley Plains Road, the A612 Burton Road and all intermediate junctions, plus the route of the A6211 Arnold Lane between its junctions with the B684 Mapperley Plains Road, the A612 Burton Road and intermediate junctions. This is the existing route that the GAR will provide traffic relief to once it is complete.

REFERENCE CASE TRAFFIC FLOWS

2.3.5 Traffic flows (2028 Reference Case – see **Section 5** for further details) for the existing highway network within the study area will be obtained from NCC and summarised in tabular and graphical formats.

EXISTING JUNCTION OPERATION

2.3.6 The operation of the following existing junctions will be tested using the appropriate junction modelling software for the 2028 Reference Case (see **Section 5** for further details):

- A6211 Arnold Lane/ B684 Mapperley Plains Road
- A6211 Arnold Lane/Lambley Lane
- A6211 Shearing Hill/A6211 Burton Road
- Burton Road/A612 Nottingham Road

ROAD SAFETY

2.3.7 The most recently available 5 year period of personal injury accident (PIA) data will be obtained from NCC for the study area. The data will be analysed and summarised to determine any trends in accident causational factors that may be affected by the proposed GAR. Road safety is discussed further in **Section 6**.

2.4 SUSTAINABLE TRANSPORT

2.4.1 Existing sustainable transport provision within the study area will be reviewed and summarised. This will include a review of existing bus services passing through the study area that may be affected by the provision of the GAR. Sustainable travel modes are discussed further in **Section 7**.

3 Planning Policy

3.1.1 The following planning policy documents will be reviewed and transport policy relevant to the GAR summarised as part of the TA:

National

- Transport White Paper: Creating Growth, Cutting Carbon Making Sustainable Local Transport Happen (January 2011)
- National Planning Policy Framework (NPPF)

Local

- Nottinghamshire County Council – Local Transport Plan 3
- Aligned Core Strategy for Gedling Borough
- Gedling Borough Council Replacement Local Plan 2005 (saved policies)

3.1.2 The preparation of the TA will also have regard to the following design standards and guidance:

- Design Manual for Roads and Bridges (DMRB)
- Manual for Streets (1 and 2)
- 6C's Design Guide

4 Proposed Scheme

4.1 PROPOSED DESIGN

4.1.1 The TA will be based on a review of the 2008 GAR scheme design produced by Faber Maunsell consultants. See relevant extracts in **Appendix C**.

4.1.2 It has been assumed that NCC will be able to provide the electronic (AutoCAD) files of the 2008 Faber Maunsell scheme design to facilitate the review.

4.1.3 Other documents that will be referred to as part of the preparation of the TA are:

- MVA report titled "Gedling Colliery Development Assessment" dated 24 July 2013
- Scott Wilson report titled "Gedling Colliery and Adjacent Lands Transport Assessment" dated May 2008

4.1.4 For ease of reference a list of information required from NCC to facilitate the preparation of the TA is included in **Appendix D**.

5 Design Flows & Assessment Years

5.1 2013 MODELLING WORK

5.1.1 In 2013 MVA consultants were appointed to undertake a strategic transport assessment of the proposed development of the Gedling Colliery/Chase Farm site and the provision of the GAR. This work used the Greater Nottingham Transport Model (GNTM) which is a multi-modal model consisting of a SATURN highway model, Cube Voyager public transport model and a Cube Variable Demand Model (VDM).

5.1.2 The modelling work applied an assessment year of 2028 and examined the following time periods:

- AM Peak (08:00 – 09:00)
- PM Peak (17:00 – 18:00)

5.1.3 The modelling work examined 2028 'Reference Case' and 2028 'With Development' scenarios. The 2028 'Reference Case' includes the 2028 'Base' situation plus all committed transport infrastructure schemes and planning land-use developments that are expected to be complete by 2028. The 'With Development' scenario examined the 2028 'Reference Case' plus development of the Gedling Colliery/Chase Farm site and provision of the GAR.

5.1.4 The 'With Development' scenarios examined a potential phased delivery of the GAR and associated phased delivery of development on the Gedling Colliery/Chase Farm site. Development of the Gedling Colliery/Chase Farm site was assumed to comprise:

- Up to 1,120 Residential Dwellings
- 4,500 sqm of B1 Employment
- 18,000 sqm of B2 Employment

5.1.5 The methodology and findings from the 2013 GNTM assessment are presented in the MVA report titled "Gedling Colliery Development Assessment" dated 24 July 2013. The report has been approved by NCC. Further sensitivity testing of the operation of the GAR terminal junctions onto the B684 Mapperley Plains Road has subsequently been completed by MVA and it is understood that NCC will also make this data available to assist with preparation of the TA.

5.1.6 Outputs from the MVA modeling work will therefore be used to form the basis for the TA required in support of the forthcoming planning application for the GAR.

5.1.7 NCC require the operation of GAR junctions to be tested at the 2028 assessment year, assuming completion of GAR and the redevelopment of the Gedling Colliery/Chase Farm site. In addition, NCC requires all junctions to be assessed at a design year 15 years post completion of GAR. Assuming a 2019 completion year this gives a 15 year design year of 2034. NCC will provide local traffic growth factors to estimate 2034 flows from the 2028 model outputs.

5.2 PROPOSED JUNCTION CAPACITY ASSESSMENTS

5.2.1 The operation of all junctions on the proposed GAR and the existing junctions identified at paragraph 2.3.6 will be assessed for the AM and PM peak hours at the 2028 and 2034 design years. The table below summarises the assessments that will be undertaken for the TA.

Table 1 – Junction Assessments to be Undertaken

Junction	Junction Type	Junction Assessments to be Undertaken					
		2028 Reference Case		2028 With GAR & Development		2034 With GAR & Development	
		AM	PM	AM	PM	AM	PM
A6211 Arnold Lane/ B684 Mapperley Plains Road	Signal Controlled	X	X	X	X	X	X
A6211 Arnold Lane/Lambley Lane	Simple Priority	X	X	X	X	X	X
A6211 Shearing Hill/A6211 Burton Road	Signal Controlled	X	X	X	X	X	X
Burton Road/A612 Nottingham Road	Signal Controlled	X	X	X	X	X	X
GAR/B684 Mapperley Plains Road	Signal Controlled			X	X	X	X
GAR/A6211 Arnold Lane	Priority Roundabout			X	X	X	X
GAR/Gedling Colliery Site Access	Priority Roundabout			X	X	X	X
GAR/Lambley Lane (S)	Ghost Island Priority			X	X	X	X
GAR/Lambley Lane (S)	Mini-Roundabout			X	X	X	X
GAR/Lambley Lane (N)	Ghost Island Priority			X	X	X	X
GAR/A612 Nottingham Road	Signal Controlled	X	X	X	X	X	X

5.2.2 As the planning application is for the whole GAR it has been agreed with NCC that the TA needs to examine the implications of the new road in its completed form and there is no requirement to assess a phased GAR delivery.

5.2.3 As agreed with NCC, capacity assessments for the 'With Development' scenario will therefore assume full completion of the GAR and all development on the Gedling Colliery/Chase Farm site.

5.3 REQUIRED DATA

For the purposes of this TA it is understood that NCC will provide junction turning counts from the MVA modelling work for the assessment scenarios summarised in **Table 1**.

6 Road Safety

6.1 ACCIDENT ANALYSIS

6.1.1 As mentioned earlier the most recently available 5 year period of personal injury accident (PIA) data will be obtained from NCC for the study area shown in **Appendix B**. The data will be analysed and summarised to determine any trends in accident causational factors that may be affected by the proposed GAR.

6.1.2 The analysis will identify any accident cluster sites within the study area for further investigation to determine the likely effects of forecast changes in traffic patterns due to provision of the GAR.

6.1.3 Forecast traffic flows will be obtained from the 2013 MVA modelling work discussed in Section 5 for the 2028 'Reference Case' and 2028 'With Development' scenarios. Comparing these flows will enable the change in traffic due to the GAR to be estimated and the likely impacts of any change related to existing road safety. The operation of the existing junctions discussed in Section 8 will also be related to road safety.

6.1.4 If necessary, the TA will make recommendations for remedial works to address any adverse road safety impacts identified due to the GAR on the existing highway network within the study area.

7 Sustainable Transport

7.1 EXISTING CONDITIONS

7.1.1 As mentioned earlier, existing sustainable travel conditions will be reviewed and summarised within the study area shown in **Appendix B**. This will involve the following tasks.

7.2 WALKING AND CYCLING

7.2.1 Existing cycle and walking routes that will be affected by the proposed alignment of the GAR will be identified and reviewed with regards to any potential severance issues.

7.2.2 The proposed tie-in points to existing walking and cycling routes shown in the 2008 Faber Maunsell scheme design will be reviewed. If necessary, design modifications will be identified to ensure the proposed road integrates effectively with existing infrastructure and any adverse impacts are minimised.

7.3 BUS

7.3.1 Existing bus service routes and frequencies within the study area will be identified and summarised.

7.3.2 Accessibility of the proposed Gedling Colliery/Chase Farm development site for existing/potential bus services will be examined having regard to the recommended highway design criteria to allow for safe bus access to/from the GAR

7.3.3 The potential benefits that the GAR offers in terms of traffic relief to existing bus service routes using the A6211 Arnold Lane will be examined and discussed.

8 Junction Capacity Assessments

8.1 INTRODUCTION

8.1.1 Traffic capacity assessments will be undertaken at the junctions identified in **Table 1** using the appropriate 'industry standard' junction modelling software which is summarised as follows:

Table 2 – Junction Modelling Software

Junction	Junction Type	Junction Modelling Software
A6211 Arnold Lane/ B684 Mapperley Plains Road	Signal Controlled	LINSIG 3 (+)
A6211 Arnold Lane/Lambley Lane	Simple Priority	PICADY 5
A6211 Shearing Hill/A6211 Burton Road	Signal Controlled	LINSIG 3*
Burton Road/A612 Nottingham Road	Signal Controlled	LINSIG 3*
GAR/B684 Mapperley Plains Road	Signal Controlled	LINSIG 3 (+)
GAR/A6211 Arnold Lane	Priority Roundabout	ARCADY 7
GAR/Gedling Colliery Site Access	Priority Roundabout	ARCADY 7
GAR/Lambley Lane (S)	Ghost Island Priority	PICADY 5
GAR/Lambley Lane (S)	Mini-Roundabout	ARCADY 7
GAR/Lambley Lane (N)	Ghost Island Priority	PICADY 5
GAR/A612 Nottingham Road	Signal Controlled	LINSIG 3

Note: the junctions marked with (*) and (+) above are/will be linked in their operation.

8.1.2 The assessments will seek to demonstrate that existing junctions within the study area will benefit from the provision of the GAR, through a general reduction in traffic flows.

8.1.3 The assessments will also seek to demonstrate that the GAR junction designs produced in 2008 by Faber Maunsell consultants (**Appendix C**) are still appropriate in terms of their ability to satisfactorily accommodate the latest design flows. If necessary the Faber Maunsell junction layouts will be amended, as appropriate.

9 Summary

9.1.1 WYG has been appointed by the Homes and Communities Agency (HCA) to provide transport planning support in relation to proposals for a new link road, known as the Gedling Access Road (GAR), in Gedling, Nottingham.

9.1.2 The proposed 5km long GAR is located in the Gedling Borough of Nottinghamshire, to the east of Nottingham city centre and will link the B684 Mapperley Plains Road north of Gedling with the A612 Burton Road south of Gedling.

9.1.3 The GAR is planned to facilitate development of the Gedling Colliery/Chase Farm site for mixed-uses as well as providing a 'bypass' around Gedling to ease traffic congestion on local roads.

9.1.4 A full (detailed) planning application is to be submitted for the GAR in early 2014. This note has been prepared to outline the methodology for the TA required in support of the planning application for discussion and agreement with the local highway authority, Nottinghamshire County Council (NCC).

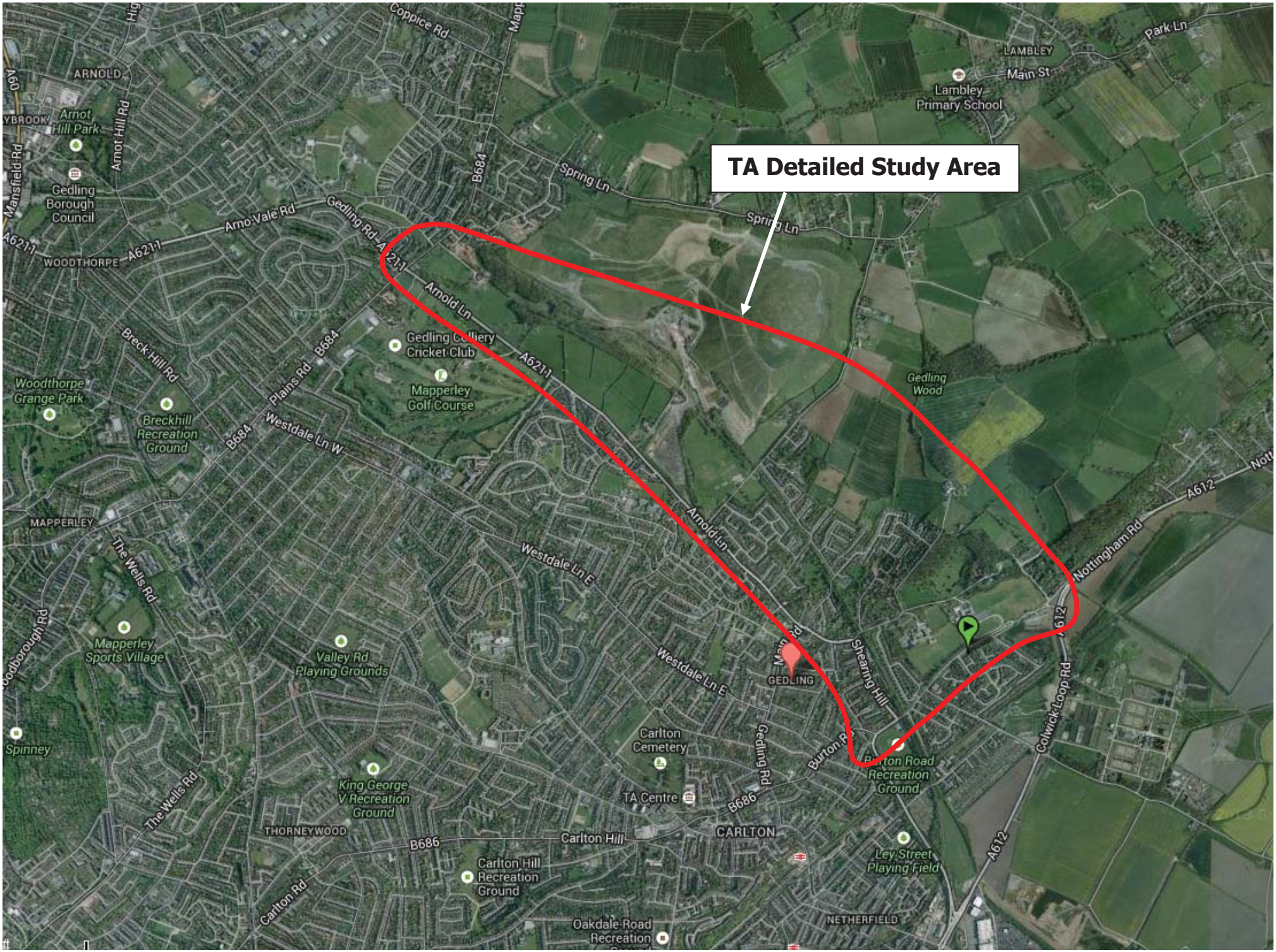
9.1.5 The location of the GAR is remote from the nearest Trunk Road or Motorway and as such there is no requirement to consult with the Highways Agency (HA).

9.1.6 This scoping report will form the basis for discussions at the first meeting of the Transport Working Group. The 'Transport Working Group' consists of officers from NCC and WYG and other stakeholder representatives, as appropriate.

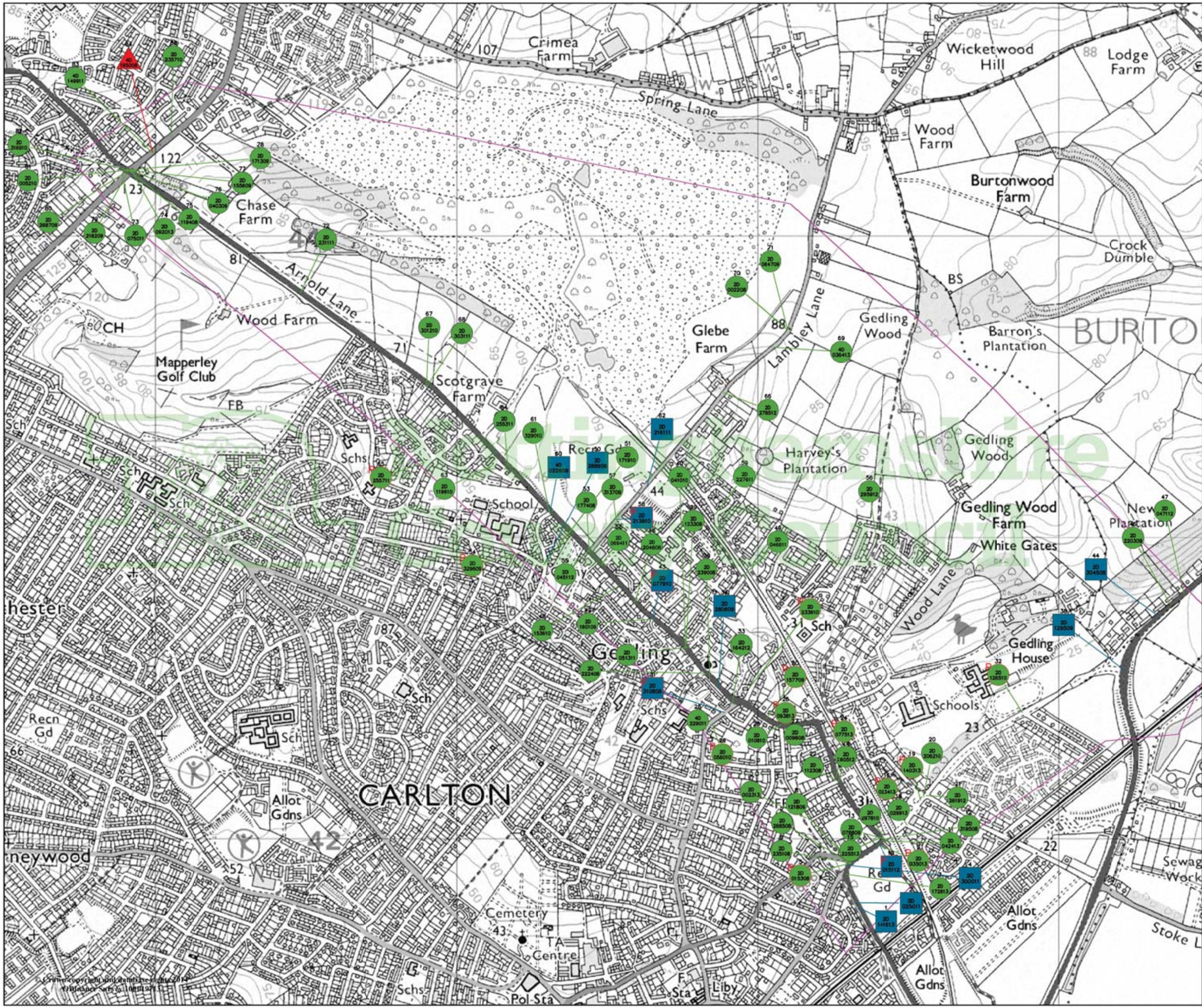
9.1.7 The scope of the proposed study area for the TA has been identified, together with key data inputs and methodology for assessing impacts on road safety, sustainable travel and traffic capacity.

9.1.8 For ease of reference a list of information required from NCC to enable the TA to be prepared is included in **Appendix D**.

Appendix C – TA Detailed Study Area


TA Detailed Study Area
ARNOLD
Arnot Hill Park
Arnot Hill Rd
Gedling Borough Council
Mansfield Rd
Coppice Rd
B684
Spring Ln
LAMBLEY
Main St
Lambley Primary School
Park Ln
Arno Vale Rd
Gedling Rd
A6211
WOODTHORPE
Arnold Ln
Gedling Colliery Cricket Club
Mapperley Golf Course
Gedling Wood
Breck Hill Rd
Woodthorpe Grange Park
Breckhill Recreation Ground
Plains Rd
Westdale Ln W
MAPPERLEY
The Wells Rd
Mapperley Sports Village
Valley Rd Playing Grounds
Westdale Ln E
GEDLING
Shearing Hill
Nottingham Rd
A612
Colwick Loop Rd
Burton Road Recreation Ground
Carlton Cemetery
Gedling Rd
B686
TA Centre
King George V Recreation Ground
THORNEYWOOD
Carlton Hill
CARLTON
Ley Street Playing Field
Carlton Hill Recreation Ground
Carlton Rd
Oakdale Road Recreation
NETHERFIELD
Spinney

Appendix D – Accident Data



Crimea Farm
Wicketwood Hill
Lodge Farm
Spring Lane
Wood Farm
Burtonwood Farm
Chase Farm
Crock Dumble
Arnold Lane
Glebe Farm
Lambley Lane
Gedling Wood
Barron's Plantation
BURTON
Wood Farm
Mapperley Golf Club
Scotgrave Farm
Harvey's Plantation
Gedling Wood
Gedling Wood Farm
New Plantation
White Gates
Wood Lane
Gedling House
Gedling
Schools
CARLTON
Recn Gd
Allot Gdns
Cemetery
TA Centre
Pol Sta
Allot Gdns
Stoke L

Key

Slight

Slight involving pedestrian

Serious

Fatal

Rev Status	Description	Drawn	Ch'kd	Auth	Date

Project: GAR Study

Property No. | Project No.

Title: Severity Plot 1/1/2008 to 30/9/2013

Scale	Drawn	Date
N.T.S.	S J Taylor	Feb '14
	Ch'kd	Date
	Auth	Traced

Drawing No.: DR1672 | Rev

Nottinghamshire County Council
Trent Bridge House, Fox Road,
West Bridgford, Nottingham NG2 6BJ
Tel: 08449 808080

Reference Number	Accident Severity	Accident Date	Accident Month	Accident Year	Day of Week	Number of Vehicles	Number of Casualties	Time (24hr)	Road Surface	Lighting Conditions	Weather Conditions	Grid Ref: Easting	Grid Ref: Northing	Location
2D141613	2	07/08/2013	7	2013	1	1	1	2324	1	4	1	462334	341773	A6211 COLWICK LOOP ROAD APPROX 100M SE /CONWAY RD, NETHERFIELD
2D025011	2	02/10/2011	2	2011	4	1	1	2131	2	4	2	462329	341788	A6211 COLWICK LOOP RD , 100 metres southeast of CONWAY RD, GEDLING
2D172813	3	27/08/2013	8	2013	2	4	1	1053	1	1	1	462291	341884	A6211 COLWICK LOOP ROAD, at its Junction with Unclassified Road CONWAY ROAD, CARLTON
2D300011	2	24/12/2011	12	2011	6	2	1	1158	2	1	1	462297	341913	A6211 COLWICK LOOP ROAD, at its Junction with B686 BURTON ROAD, GEDLING
2D015308	3	30/01/2008	1	2008	3	1	1	1845	1	4	1	462310	341920	A6211 Colwick Loop Rd/Burton Rd Gedling
2D235108	3	09/10/2008	9	2008	3	2	1	1440	1	1	1	462310	341920	A6211 Colwick Loop Rd /Burton Rd Carlton
2D268508	3	18/10/2008	10	2008	6	2	1	1220	1	1	1	462310	341920	A6211 Colwick Loop Rd/Burton Rd
2D121809	3	29/05/2009	5	2009	5	3	2	1800	1	1	1	462310	341920	A6211 Colwick Loop Rd/ Burton Rd Gedling
2D035013	3	26/02/2013	2	2013	2	1	1	1530	1	1	1	462400	341980	A6211 BURTON RD, at its Junction with Unclassified Road BURTON RD /SHEARING HILL GEDLING
2D015112	2	15/01/2012	1	2012	0	1	1	1538	2	1	8	462404	341981	A6211 BURTON RD, at its Junction with Unclassified Road SHEARING HILL CARLTON
2D042413	3	27/02/2013	2	2013	3	2	1	0730	4	1	1	462412	341994	B686 BURTON ROAD, at its Junction with A6211 SHEARING HILL, GEDLING
2D319508	3	21/11/2008	11	2008	5	1	1	1425	2	1	1	462420	342000	A6211 Burton Rd /A6211 Shearing Hill Carlton
2D078809	3	31/03/2009	3	2009	2	2	2	2014	1	4	1	462420	342000	Burton Rd/Shearing Hill Gedling
2D297810	3	12/05/2010	12	2010	0	1	1	0125	4	4	8	462420	342000	A6211 Shearing Hill /Burton Road
2D225513	3	11/05/2013	11	2013	2	2	1	1101	2	1	2	462410	342005	A6211 SHEARING HILL, at its Junction with Unclassified Road BURTON ROAD, GEDLING
2D023413	3	01/09/2013	1	2013	3	1	1	1400	1	1	1	462497	342045	Unclassified Road FLORENCE ROAD, at its Junction with Unclassified Road BURTON ROAD, GEDLING
2D002313	3	01/04/2013	1	2013	5	1	1	2002	1	4	1	462161	342070	Unclassified Road BROOKLANDS DRIVE, (O/S NO.s 44/42) at its Junction with Unclassified Road BROOKLANDS CRESCENT, GEDLING
2D029913	3	26/02/2013	2	2013	2	2	2	1336	2	1	1	462343	342075	A6211 SHEARING HILL at House Number 49, at its Junction with Unclassified Road PTE DRIVE ENT, GEDLING
2D140313	3	19/07/2013	7	2013	5	1	1	0920	1	1	1	462540	342129	Unclassified Road BURTON ROAD PXING ADJ Junction with Unclassified Road STOKE LANE, GEDLING
2D206210	3	09/07/2010	9	2010	2	2	3	0945	1	1	1	462550	342140	Burton Rd /Stoke Ln Gedling
2D261912	3	30/11/2012	11	2012	5	2	2	2310	2	4	1	462559	342144	Unclassified Road BURTON ROAD, at its Junction with Unclassified Road STOKE LANE, GEDLING
2D112308	3	20/03/2008	3	2008	4	2	2	1835	2	4	2	462270	342190	Shearing Hill/Brooklands Dr Gedling
2D260512	3	11/05/2012	11	2012	1	2	1	0824	2	1	8	462268	342191	A6211 SHEARING HILL, at its xrds with Unclassified Road BROOKLANDS DRIVE/SHEARING CLOSE, GEDLING
2D077513	3	15/05/2013	5	2013	3	1	2	1505	1	1	1	462261	342206	A6211 SHEARING HILL, at its Junction with Unclassified Road SHEARING CLOSE, GEDLING
4D229011	3	10/02/2011	10	2011	0	1	1	0021	1	4	1	461823	342369	C167 MAIN ROAD BEND, 74 metres southwest of CARNARVON GROVE, GEDLING
2D093813	3	06/05/2013	6	2013	3	1	1	1515	1	1	1	462090	342378	A6211 MAIN ROAD, PXING ADJ Junction with Unclassified Road WAVERLEY AVENUE, GEDLING
2D009608	3	13/01/2008	1	2008	0	2	2	1950	2	4	1	462120	342380	A6211 Main Rd O/S 104 Gedling
2D010810	3	15/01/2010	1	2010	5	2	1	0915	2	1	1	462080	342380	A6211 Main Rd/ Waverley Ave Gedling
2D056010	3	20/03/2010	3	2010	6	1	1	1005	2	1	2	461850	342380	Main Rd O/S No. 62 Flowers for All Occasions Gedling
2D157709	3	07/06/2009	7	2009	1	1	1	1619	5	1	2	462030	342400	A6211 Main Rd O/S no 63 Gedling
2D310808	2	18/11/2008	11	2008	2	1	1	1535	1	1	1	461890	342420	Main Rd O/S Bus Stop Approx 15M Sw Jn Carnarvon Gr Gedling
2D126510	3	14/06/2010	6	2010	1	1	1	0820	1	1	1	462880	342420	Linden Gr/Layby 14M Se /A612 Burton Rd Gedling
2D164212	3	08/10/2012	8	2012	5	2	1	1836	1	1	1	461917	342451	A6211 MAIN ROAD/ARNOLD LANE, at its Junction with C167 MAIN ROAD, GEDLING
2D280609	2	11/06/2009	11	2009	5	1	3	0112	1	4	1	461870	342500	A6211 Arnold Ln Gedling O/S No2 & Church Wall
2D233610	3	14/09/2010	9	2010	2	1	1	1805	1	1	1	461970	342500	Willow Ln O/S no 2 Aprx 56M Ne /A6211 Main Rd Gedling
2D239008	3	08/10/2008	8	2008	0	2	1	0930	1	1	1	461840	342530	A6211 Arnold Ln Refuge 30M Nw M-Rbt /Main Rd Gedling
2D222408	3	13/08/2008	8	2008	3	2	1	1605	2	1	1	461820	342550	A6211 Arnold Ln/Friday Ln Gedling
2D129509	2	24/05/2009	5	2009	0	1	2	1839	1	1	1	463220	342560	A612 N'ham Rd Bend /A612 Trent Valley Rd /Burton Rd Carlton
2D123309	3	27/05/2009	5	2009	3	2	1	1630	1	1	1	461760	342630	A6211 Arnold Ln/Jessops Ln Gedling
2D041010	3	19/02/2010	2	2010	5	2	1	2305	2	4	1	461760	342630	A6211 Arnold Ln /Jessops Ln Gedling
2D051311	3	22/03/2011	3	2011	2	2	1	2008	1	4	1	461769	342637	Unclassified Road JESSOP's LN at House Number 2 , 10 metres northeast of A6211 ARNOLD LN, GEDLING
2D160109	3	15/06/2009	6	2009	1	3	2	1715	1	1	1	461650	342730	A6211 Arnold Ln/ Cotgrave Ave Gedling
2D077910	2	04/04/2010	4	2010	0	1	1	2230	1	4	1	461650	342730	A6211 Arnold Ln/Cotgrave Ave Nottm
2D304508	2	16/11/2008	11	2008	0	1	2	1645	1	4	1	463330	342740	A612 Nottingham Rd O/S No216 Burton Joyce
2D204808	3	13/08/2008	8	2008	3	2	2	1500	2	1	1	461590	342780	A6211 Arnold Lane/D-Wy 41 Gedling
2D220309	3	09/05/2009	9	2009	6	2	1	0920	1	1	1	463370	342780	A612 Nottingham Rd O/S no 208 Burton Joyce
2D047112	3	20/02/2012	2	2012	1	2	1	1820	1	4	1	463416	342815	A612 NOTTINGHAM ROAD, at its Junction with Unclassified Road PTE DRIVEWAY OF NO: 200, BURTON JOYCE
2D153610	3	06/06/2010	6	2010	0	2	1	2247	1	4	1	461540	342840	A6211 Arnold Ln (Exact Loc U/K) Gedling
2D046611	3	03/06/2011	3	2011	0	1	1	0909	2	1	1	461952	342873	Unclassified Road JESSOPS LANE AT RAILWAY BR SW /WILLOW LN, GEDLING
2D288908	2	17/10/2008	10	2008	5	1	1	2305	1	4	1	461290	342910	Besecar Ave /Wollaton Ave Gedling
2D171910	3	27/07/2010	7	2010	2	2	1	1335	1	1	1	461290	342910	Besecar Ave / Wollaton Ave Gedling
2D069411	3	01/09/2011	1	2011	0	2	1	0000	1	4	1	461481	342910	A6211 ARNOLD LN , at its Junction with Unclassified Road AVON RD (NW JN), GEDLING
2D177408	3	06/04/2008	6	2008	3	3	2	1800	1	1	1	461440	342950	Arnold Ln/Lambley Ln Gedling
2D329609	3	12/01/2009	12	2009	2	1	1	0800	4	1	1	461210	342950	Wollaton Ave Aprx 15M Nw /Hucknall Cres Gedling
2D045112	3	13/03/2012	3	2012	2	2	1	1144	1	1	1	461438	342958	A6211 ARNOLD LANE, at its Junction with Unclassified Road LAMBLEY LANE, GEDLING
2D295912	3	22/09/2012	9	2012	6	3	2	1640	1	1	1	462395	342984	Unclassified Road YEW TREE LANE at House Number 10-12, at its Junction with Unclassified Road YEW TREE LANE GEDLING
2D313709	3	15/11/2009	11	2009	0	2	1	1016	1	1	1	461530	343060	Lambley Ln / Lorimer Ave Gedling
2D213810	2	24/08/2010	8	2010	2	1	1	1536	1	1	1	461530	343060	Lambley Ln /Lorimer Ave Gedling
2D227611	3	15/10/2011	10	2011	6	2	1	2142	1	4	1	461859	343077	Unclassified Road JESSOPS LANE, at its Junction with Unclassified Road EARL CRESCENT, GEDLING
4D022609	2	02/10/2009	2	2009	2	2	1	2158	2	4	1	461310	343080	A6211 Arnold Ln 18M Nw /Besecar Ave Gedling
2D329010	3	27/09/2010	9	2010	1	2	2	1752	2	1	2	461310	343080	A6211 Arnold Ln /Besecar Ave Gedling
2D216111	2	07/11/2011	7	2011	1	2	3	1520	1	1	1	461633	343173	Unclassified Road LAMBLEY LN , 103 metres southwest of JESSOPS LN, GEDLING
2D119610	3	27/05/2010	5	2010	4	2	1	0835	1	1	1	461120	343240	High Hazles Cl Opp No.24 Gedling
2D255311	3	11/07/2011	11	2011	1	1	1	2024	2	4	2	461170	343240	A6211 ARNOLD LANE, at its Junction with Unclassified Road HIGH HAZLES CLOSE, GEDLING
2D255711	3	15/11/2011	11	2011	2	1	1	1608	1	1	1	460894	343250	Unclassified Road SHELFORD ROAD, at its Junction with Unclassified Road TURPIN AVENUE, GEDLING, NOTTINGHAMSHIRE
2D278512	3	15/12/2012	12	2012	6	2	3	1120	2	1	1	461887	343481	Unclassified Road LAMBLEY LANE at House Number 68, 85 metres northeast of GLEBE FARM VIEW, GEDLING
2D301210	3	10/03/2010	10	2010	0	2	1	1435	2	1	2	460900	343500	A6211 Arnold Ln /Featherstone Cl Nottm
2D303111	3	29/12/2011	12	2011	4	3	2	1640	2	4	5	460903	343506	A6211 ARNOLD LANE, at its Junction with Unclassified Road FEATHERSTONE CLOSE, GEDLING, NOTTINGHAMSHIRE
4D036413	3	21/02/2013	2	2013	4	1	1	0925	1	1	1	462054	343632	Unclassified Road LAMBLEY LANE APRX 490M NE /JESSOPS LANE, GEDLING
2D002208	3	01/03/2008	1	2008	4	2	2	1555	4	1	8	462100	343690	Lambley Ln Bend Aprx 3/4M (980M) Ne /Arnold Ln Carlton
2D064709	3	16/02/2009	2	2009	1	1	1	2303	2	6	1	462100	343690	Lambley Ln Bnd Aprox.470M Ne/Jessops Ln Gedling
2D231111	3	10/12/2011	10	2011	3	4	2	1924	2	4	2	460480	343812	A6211 ARNOLD LANE, at its Junction with Unclassified Road HIGH HAZLES CLOSE, GEDLING
2D075011	3	24/02/2011	2	2011	4	2	1	1537	9	1	1	459890	344201	B684 Plains Road , at its Junction with A6211 Gedling Road, Mapperley
2D092013	3	06/06/2013	6	2013	4	2	2	2251	1	4	1	459922	344214	B684 MAPPERLEY PLAINS-PLAINS RD, at its Junction with A6211 ARNOLD LN-GEDLING ROAD, MAPPERLEY
2D119408	3	27/04/2008	4	2008	0	2	1	0946	1	1	1	459910	344220	A6211 Arnold Ln/Plains Rd Gedling
2D040309	3	02/10/2009	2	2009	2	2	1	1515	2	1	1	459910	344220	Mapperley Pins /A6211 Gedling
2D155609	3	17/06/2009	6	2009	3	4	2	1300	2	1	2	459910	344220	Plains Rd/Arnold Ln/Gedling Rd Mapperley
2D171309	3	18/07/2009	7	2009	6	2	2	0944	1	1	1	459910	344220	A6211 Gedling Rd/Plains Rd Mapperley Plains
2D218209	3	08/01/2009	8	2009	6	2	1	0415	2	4	1	459910	344220	Mapperley Plains/ A6211 Arnold Ln/ Gedling Rd Mapperley
2D268709	3	22/09/2009	9	2009	2	2	2	0607	1	1	1	459910	344220	A6211 Arnold Lane/Mapperley Plains/Plains Rd Xrds Mapperley
2D005210	3	01/08/2010	1	2010	5	2	2	1811	3	4	6	459910	344220	Plains Rd/Arnold Ln/Gedling Rd Arnold
2D316910	3	29/12/2010	12	2010	3	2	2	1700	2	4	7	459910	344220	A6211 Gedling Rd/ Arnold Ln/ Mapperley Plains/ Gedling
4D149911	3	07/12/2011	7	2011	2	2	1	1015	1	1	1	459988	344278	B684 MAPPERLEY PLAINS , at its Junction with Unclassified Road PRIVATE DRIVE (235A), ARNOLD
4D195008	1	08/04/2008	8	2008	1	3	3	1845	1	1	1	459990	344280	Mapperley Plains O/S 235A Mapperley
2D235710	3	14/09/2010	9	2010	2	2	2	1655	1	1	1	460050	344330	Mapperley Plains Aprx 100M Sw /Chartwell Grove Gedling

Appendix E – Proposed Redevelopment

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

KEY

Gedling Borough Replacement Local Plan Adopted July 2005

	Policy H3 Allocation Boundary	circa 42 ha
	Policy E1(c) Allocation Boundary	circa 5 ha
	Net Residential Area (Housing, Streets, Public Open Space) 40 dph Density required to reach 1120 dwellings	27.53 ha 1101 Dwellings = 41
	Additional Land Needed Beyond Local Plan Boundary to Achieve 1120 Dwellings	2.22 ha
	Public Open Space/ Childrens Play Within NRA (Includes 2 LEAPS)	0.60 ha
	Employment Area	5.30 ha
E	B1 Employment	1.77 ha
BD	Land for NCC Bus Depot	2.14 ha
HWC	Relocated Household Waste Centre	0.75 ha
SS	Relocated Substation	0.64 ha
LC	Local Centre (Includes Convenience Store 500m2 Health Centre 346m2, Other Small Retail Units, Parking, & Public Square	0.60 ha
S	Primary School	1.21 ha
	Potential Future Tram/ Train Stop	
P+R	Land for Potential Park and Ride	0.80 ha
	Existing Vegetation	
	Structural Landscape	8.34 ha
	Formal Sports Provision	8.0 ha
	Indicative Main Street	

Homes & Communities Agency

Project:

GEDLING ACCESS ROAD

Drawing Title:

PROPOSED DEVELOPMENT FRAMEWORK

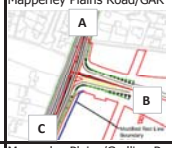
Scale @ A0	Date	Drawing No.
1:1250	July 2014	GAR08

Appendix F – Design Flows

Gedling Access Road - Transport Assessment

Design Flow Summary - 2028 Reference Case (Updated to reflect 'Test C' model revisions)

Ref 1 — Junction: Mapperley Plains Road/GAR



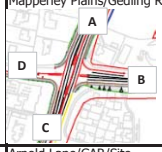
AM Peak Hour Flows (PCU)

AM	A	B	C		
A					
B					
C					

PM Peak Hour Flows (PCU)

PM	A	B	C		
A					
B					
C					

Ref 2 — Junction: Mapperley Plains/Gedling Road/Arnold Lane



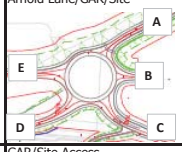
AM Peak Hour Flows (PCU)

AM	A	B	C	D	
A	0	302	569	110	
B	397	0	32	467	
C	779	4	0	157	
D	48	421	62	0	

PM Peak Hour Flows (PCU)

PM	A	B	C	D	
A	0	292	315	58	
B	277	0	16	327	
C	919	40	0	606	
D	42	416	101	0	

Ref 3 — Junction: Arnold Lane/GAR/Site



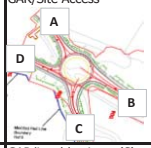
AM Peak Hour Flows (PCU)

AM	A	B	C	D	E
A					
B					
C					
D					
E					

PM Peak Hour Flows (PCU)

PM	A	B	C	D	E
A					
B					
C					
D					
E					

Ref 4 — Junction: GAR/Site Access



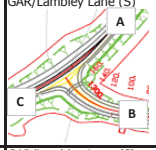
AM Peak Hour Flows (PCU)

AM	A	B	C	D	
A					
B					
C					
D					

PM Peak Hour Flows (PCU)

PM	A	B	C	D	
A					
B					
C					
D					

Ref 5 — Junction: GAR/Lambley Lane (S)



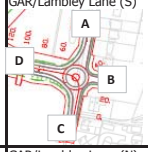
AM Peak Hour Flows (PCU)

AM	A	B	C		
A					
B					
C					

PM Peak Hour Flows (PCU)

PM	A	B	C		
A					
B					
C					

Ref 6 — Junction: GAR/Lambley Lane (S)



AM Peak Hour Flows (PCU)

AM	A	B	C	D	
A					
B					
C					
D					

PM Peak Hour Flows (PCU)

PM	A	B	C	D	
A					
B					
C					
D					

Ref 7 — Junction: GAR/Lambley Lane (N)

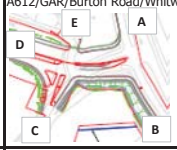
AM Peak Hour Flows (PCU)

AM	A	B	C		
A					
B					
C					

PM Peak Hour Flows (PCU)

PM	A	B	C		
A					
B					
C					

Ref 8 — Junction: A612/GAR/Burton Road/Whitworth Drive



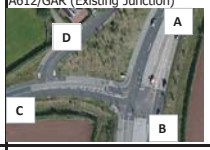
AM Peak Hour Flows (PCU)

AM	A	B	C	D	E
A					
B					
C					
D					
E					

PM Peak Hour Flows (PCU)

PM	A	B	C	D	E
A					
B					
C					
D					
E					

Ref 9 — Junction: A612/GAR (Existing Junction)



AM Peak Hour Flows (PCU)

AM	A	B	C	D	
A	0	959	527	10	
B	637	0	13	10	
C	115	0	0	10	
D	10	10	10	0	

= Estimated flows

PM Peak Hour Flows (PCU)

PM	A	B	C	D	
A	0	884	432	10	
B	977	0	9	10	
C	142	0	0	10	
D	10	10	10	0	

Ref 10 — Junction: A6211 Shearing Hill/A6211 Burton Road

AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	497	119		
B	534	0	63		
C	494	156	0		

PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	524	169		
B	359	0	71		
C	393	114	0		

Ref 11 — Junction: B686 Burton Road/A6211 Colwick Loop Road

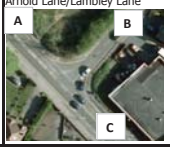
AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	160	591		
B	61	0	25		
C	664	364	0		

PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	144	638		
B	240	0	55		
C	450	302	0		

Ref 12 — Junction: Arnold Lane/Lambley Lane



AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	100	686		
B	22	0	251		
C	774	327	0		

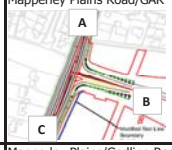
PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	103	642		
B	61	0	155		
C	439	536	0		

Gedling Access Road - Transport Assessment

Design Flow Summary - 2028 'Test C' Flows

Ref 1 — Junction: Mapperley Plains Road/GAR



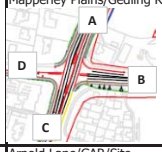
AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	389	535		
B	566	0	265		
C	636	92	0		

PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	202	230		
B	382	0	313		
C	706	56	0		

Ref 2 — Junction: Mapperley Plains/Gedling Road/Arnold Lane



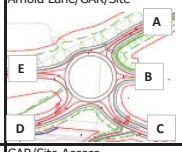
AM Peak Hour Flows (PCU)

AM	A	B	C	D	
A	0	0	565	234	
B	0	0	38	339	
C	707	0	0	240	
D	20	484	192	0	

PM Peak Hour Flows (PCU)

PM	A	B	C	D	
A	0	0	337	206	
B	0	0	13	361	
C	730	0	0	321	
D	32	489	105	0	

Ref 3 — Junction: Arnold Lane/GAR/Site



AM Peak Hour Flows (PCU)

AM	A	B	C	D	E
A	0	31	0	80	40
B	130	0	19	146	116
C	0	5	0	158	524
D	269	34	179	0	0
E	265	26	180	0	0

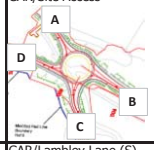
= Reassigned flows

PM Peak Hour Flows (PCU)

PM	A	B	C	D	E
A	0	126	0	86	123
B	58	0	14	42	56
C	0	17	0	227	432
D	194	125	172	0	0
E	16	51	161	0	0

= Reassigned flows

Ref 4 — Junction: GAR/Site Access



AM Peak Hour Flows (PCU)

AM	A	B	C	D	
A	0	14	1	21	
B	66	0	31	99	
C	12	130	0	116	
D	94	430	26	0	

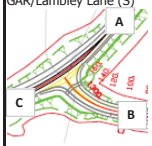
= Reassigned flows

PM Peak Hour Flows (PCU)

PM	A	B	C	D	
A	0	69	15	80	
B	6	0	126	118	
C	1	58	0	56	
D	7	198	51	0	

= Reassigned flows

Ref 5 — Junction: GAR/Lambley Lane (S)



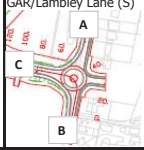
AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	175	185		
B	115	0	41		
C	607	96	0		

PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	125	250		
B	259	0	125		
C	351	31	0		

Ref 6 — Junction: GAR/Lambley Lane (S)



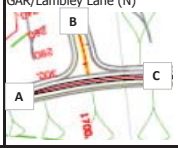
AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	34	19		
B	23	0	137		
C	21	250	0		

PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	16	42		
B	37	0	342		
C	12	143	0		

Ref 7 — Junction: GAR/Lambley Lane (N)



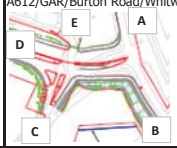
AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	192	531		
B	164	0	105		
C	196	309	0		

PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	293	317		
B	120	0	212		
C	256	423	0		

Ref 8 — Junction: A612/GAR/Burton Road/Whitworth Drive



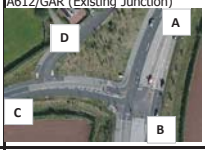
AM Peak Hour Flows (PCU)

AM	A	B	C	D	E
A	0	930	412	155	1
B	350	0	1	366	0
C	174	1	0	0	0
D	114	529	0	0	9
E	1	0	0	0	0

PM Peak Hour Flows (PCU)

PM	A	B	C	D	E
A	0	854	346	236	0
B	553	0	0	420	0
C	418	0	0	1	0
D	139	338	0	0	25
E	7	0	0	0	0

Ref 9 — Junction: A612/GAR (Existing Junction)



AM Peak Hour Flows (PCU)

AM	A	B	C	D	
A					
B					
C					
D					

PM Peak Hour Flows (PCU)

PM	A	B	C	D	
A					
B					
C					
D					

Ref 10 — Junction: A6211 Shearing Hill/A6211 Burton Road

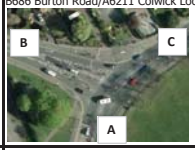
AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	367	162		
B	154	0	30		
C	420	92	0		

PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	588	395		
B	87	0	26		
C	364	41	0		

Ref 11 — Junction: B686 Burton Road/A6211 Colwick Loop Road



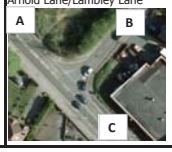
AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	167	426		
B	20	0	103		
C	286	289	0		

PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	165	626		
B	85	0	358		
C	172	278	0		

Ref 12 — Junction: Arnold Lane/Lambley Lane



AM Peak Hour Flows (PCU)

AM	A	B	C		
A	0	52	416		
B	29	0	255		
C	664	108	0		

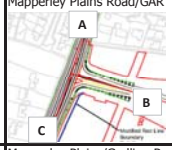
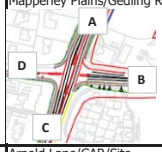
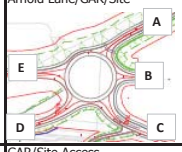
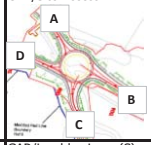
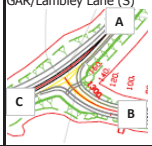
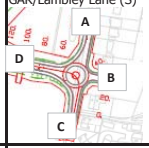
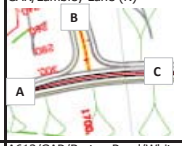
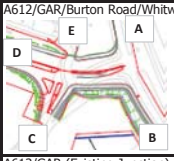
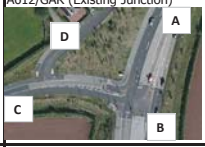
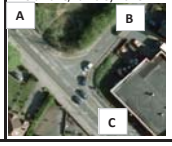
PM Peak Hour Flows (PCU)

PM	A	B	C		
A	0	47	297		
B	48	0	111		
C	725	331	0		

Gedling Access Road - Transport Assessment

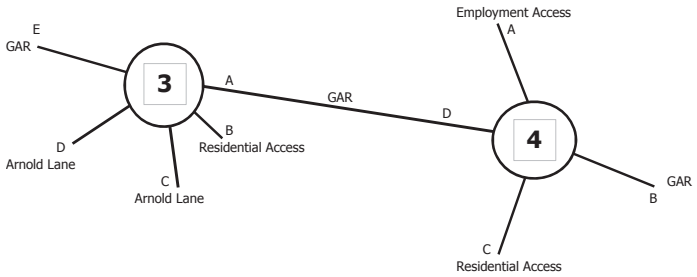
Design Flow Summary - 2034 'Test C' Flows

Conversion factor 2028 to 2034 = | **AM** 1.035 | **PM** 1.040

Ref	Junction	AM Peak Hour Flows (PCU)	PM Peak Hour Flows (PCU)
1	Mapperley Plains Road/GAR 	AM: A 0 403 554; B 586 0 274; C 658 95 0	PM: A 0 210 239; B 397 0 326; C 734 58 0
2	Mapperley Plains/Gedling Road/Arnold Lane 	AM: A 0 0 585 242; B 0 0 39 351; C 732 0 0 248; D 21 501 199 0	PM: A 0 0 350 214; B 0 0 14 375; C 759 0 0 334; D 33 509 109 0
3	Arnold Lane/GAR/Site 	AM: A 0 32 0 83 41; B 134 0 20 151 120; C 0 5 0 164 542; D 278 35 185 0 0; E 274 26 186 0 0	PM: A 0 131 0 89 128; B 60 0 15 44 58; C 0 18 0 236 449; D 202 130 179 0 0; E 17 53 167 0 0
4	GAR/Site Access 	AM: A 0 14 1 22; B 68 0 32 102; C 12 134 0 120; D 97 445 26 0	PM: A 0 72 16 83; B 6 0 131 123; C 1 60 0 58; D 7 206 53 0
5	GAR/Lambley Lane (S) 	AM: A 0 181 191; B 119 0 42; C 628 99 0	PM: A 0 130 260; B 269 0 130; C 365 32 0
6	GAR/Lambley Lane (S) 	AM: A 0 35 20; B 24 0 142; C 22 259 0	PM: A 0 17 44; B 38 0 356; C 12 149 0
7	GAR/Lambley Lane (N) 	AM: A 0 199 550; B 170 0 109; C 203 320 0	PM: A 0 305 330; B 125 0 220; C 266 440 0
8	A612/GAR/Burton Road/Whitworth Drive 	AM: A 0 963 426 160 1; B 362 0 1 379 0; C 180 1 0 0 0; D 118 548 0 0 9; E 1 0 0 0 0	PM: A 0 888 360 245 0; B 575 0 0 437 0; C 435 0 0 1 0; D 145 352 0 0 26; E 7 0 0 0 0
9	A612/GAR (Existing Junction) 	AM: A; B; C; D	PM: A; B; C; D
10	A6211 Shearing Hill/A6211 Burton Road 	AM: A 0 380 168; B 159 0 31; C 435 95 0	PM: A 0 612 411; B 90 0 27; C 379 43 0
11	B686 Burton Road/A6211 Colwick Loop Road 	AM: A 0 173 441; B 21 0 107; C 296 299 0	PM: A 0 172 651; B 88 0 372; C 179 289 0
12	Arnold Lane/Lambley Lane 	AM: A 0 54 431; B 30 0 264; C 687 112 0	PM: A 0 49 309; B 50 0 115; C 754 344 0

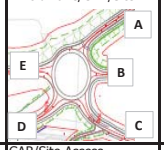
Reassignment of Development Trips

The SATURN model assigns all westbound residential development traffic via the western roundabout and eastbound traffic via the eastern roundabout.
This is unlikley to occur in practice so the residential development flows have been manually reassigned, split 50/50 between each junction as follows.



Turning Flows Taken from SATURN Model Outputs:

3 — Arnold Lane/GAR/Site



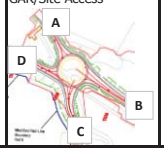
AM	A	B	C	D	E
A	0	0	0	80	40
B	0	0	19	146	232
C	0	5	0	158	524
D	269	34	179	0	0
E	265	51	180	0	0

= Residential flows

PM	A	B	C	D	E
A	0	0	0	86	123
B	0	0	14	42	111
C	0	17	0	227	432
D	194	125	172	0	0
E	16	101	161	0	0

= Residential flows

4 — GAR/Site Access



AM	A	B	C	D	
A	0	14	1	21	
B	66	0	61	99	
C	12	259	0	0	
D	94	430	0	0	

= Residential flows
= Employment flows

PM	A	B	C	D	
A	0	69	15	80	
B	6	0	251	118	
C	1	115	0	0	
D	7	198	0	0	

= Residential flows
= Employment flows

Development Flows Taken from SATURN Model Outputs:

Total Residential Flows:

	Inbound	Outbound	2-Way
AM	152	668	820
PM	509	283	792

Eastbound Residential Flows:

	Inbound	Outbound	2-Way
AM	61	259	320
PM	251	115	366

Westbound Residential Flows:

	Inbound	Outbound	2-Way
AM	51	232	283
PM	101	111	212

Total Employment Flows:

	Inbound	Outbound	2-Way
AM	172	36	208
PM	14	164	178

East/Westbound Residential Flows:

	Inbound	Outbound	2-Way
AM	112	491	603
PM	352	226	578

Total Development Flows:

	Inbound	Outbound	2-Way
AM	324	704	1,028
PM	523	447	970

Check

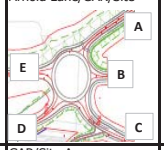
	Inbound	Outbound	2-Way
AM	40	177	217
PM	157	57	214

Check

	Inbound	Outbound	2-Way
AM	40	177	217
PM	157	57	214

Reassigned Development Flows Based on a 50/50 East/West Directional Split:

3 — Arnold Lane/GAR/Site



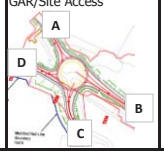
AM	A	B	C	D	E
A		31			
B	130				116
C					
D					
E		26			

= Reassigned residential flows — Sum 302

PM	A	B	C	D	E
A		126			
B	58				56
C					
D					
E		51			

= Reassigned residential flows — Sum 289

4 — GAR/Site Access



AM	A	B	C	D	
A					
B			31		
C		130		116	
D			26		

= Reassigned residential flows — Sum 302

PM	A	B	C	D	
A					
B			126		
C		58		56	
D			51		

= Reassigned residential flows — Sum 289

Check	603

Check	578

Appendix G – Existing Bus Services

Pathfinder 100 (also including N100 and lilac line 26 and 26C)

Pathfinder 100	
Other roads	
Bus route terminus	● 100
Principal bus stop and name	• War Memorial
Bus operates in direction of arrow	←
Rail line and station	
NCT timetable retail outlet	T
Public buildings/Places of interest	■ Southwell Minster
Information Bureau	i
Sports hall or swimming pool	

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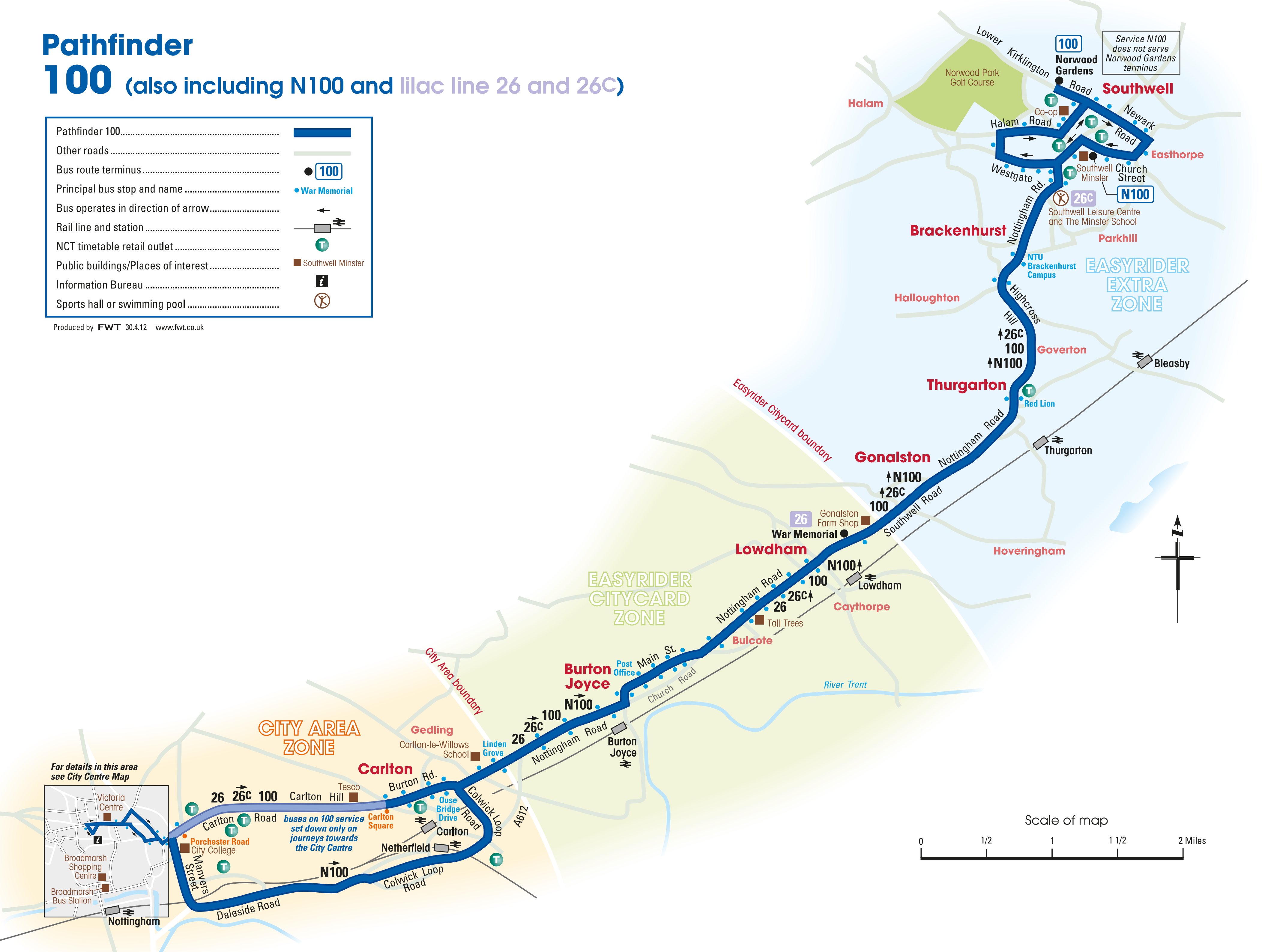


Service N100 does not serve Norwood Gardens terminus
100 Norwood Gardens
Lower Kirklington Road
Norwood Park Golf Course
Southwell
Halam
Co-op
Halam Road
Newark Road
Easthorpe
Westgate
Southwell Minster
Church Street
N100
26C
Southwell Leisure Centre and The Minster School
Nottingham Rd.
Brackenhurst
Parkhill
NTU Brackenhurst Campus
EASYRIDER EXTRA ZONE
Halloughton
Highcross Hill
26C
100
N100
Goverton
Bleasby
Thurgarton
Red Lion
Easyrider Citycard boundary
Nottingham Road
Thurgarton
Gonalston
N100
26C
100
Southwell Road
26 Gonalston Farm Shop
War Memorial
Lowdham
Hoveringham
N100
100
Lowdham
26C
26
Caythorpe
Nottingham Road
Tall Trees
Bulcote
EASYRIDER CITYCARD ZONE
River Trent
Burton Joyce
Post Office
Main St.
Church Road
N100
100
26C
26
Nottingham Road
Burton Joyce
City Area boundary
Gedling
Carlton-le-Willows School
Linden Grove
CITY AREA ZONE
Carlton
Tesco
Burton Rd.
26 26C 100 Carlton Hill
Carlton Road
buses on 100 service set down only on journeys towards the City Centre
Carlton Square
Ouse Bridge Drive
Colwick Loop Road
A612
Carlton
Netherfield
Porchester Road City College
Manvers Street
N100
Colwick Loop Road
Daleside Road
For details in this area see City Centre Map
Victoria Centre
Broadmarsh Shopping Centre
Broadmarsh Bus Station
Nottingham
Scale of map
0 1/2 1 1 1/2 2 Miles
N

100 PATHFINDER

City Centre – Gedling – Burton Joyce – Lowdham – NTU Brackenhurst – Southwell

from Sunday 27 January 2013

Mondays to Fridays

Code:					A													A					A	
Service Number:	100	100	100	100	26C	100	100	100	100	100	100	100		100	100	100		100	26	100	100	100	100	100	100	100
City, King Street	06.10	06.30	06.50	07.20	07.45	08.05	08.15	08.25	08.43	09.03	09.23	09.50		10	30	50		14.30	14.40	14.50	15.10	15.30	15.45	16.00	16.20	16.35	16.50
Carlton, Tesco	06.23	06.43	07.03	07.33	08.01	08.18	08.28	08.38	08.56	09.16	09.36	10.03		23	43	03		14.43	14.58	15.03	15.23	15.43	16.03	16.18	16.38	16.53	17.08
Carlton-le-Willows School	06.27	06.47	07.07	07.37	08.06	08.22	08.32	08.42	09.00	09.20	09.40	10.07		27	47	07		14.47	15.10	15.07	15.27	15.47	16.08	16.23	16.43	16.58	17.13
Burton Joyce, Post Office	06.35	06.55	07.15	07.45	08.13	08.30	08.40	08.50	09.08	09.28	09.48	10.15		35	55	15		14.55	15.17	15.15	15.35	15.55	16.16	16.31	16.51	17.06	17.21
Lowdham, War Memorial	06.42	07.02	07.22	07.52	08.20	08.37	08.47	08.57	09.15	09.35	09.55	10.22		42	02	22		15.02	SA	15.22	15.42	16.02	16.26	16.41	17.01	17.16	17.31
NTU Brackenhurst Campus	06.49	07.09	07.29	07.59	08.27	08.44	08.54	09.04	09.22	09.42	10.02	10.29		49	09	29		15.09	…	15.29	15.49	16.09	16.33	16.48	17.08	…	17.38
Southwell, Norwood Gardens	06.59	07.19	07.39	08.09	M	08.54	09.04	09.14	09.32	09.52	10.12	10.39		59	19	39		15.19	…	15.39	15.59	16.19	16.45	17.00	17.20	…	17.50

every 20 mins — until

Mondays to Fridays

Code:			A								FS	FS	FS
Service Number:	100	100	26	100	100	100	100	100	100	100	N100	N100	N100
City, King Street	17.10	17.30	17.45	18.00	18.30	19.10	20.05	21.05	22.05	23.05	00.00	01.15	02.30
Carlton, Tesco	17.28	17.48	18.03	18.18	18.43	19.23	20.17	21.17	22.17	23.17	C	C	C
Carlton-le-Willows School	17.33	17.53	18.08	18.23	18.47	19.27	20.20	21.20	22.20	23.20	00.16	01.31	02.46
Burton Joyce, Post Office	17.41	18.01	18.16	18.31	18.55	19.35	20.28	21.28	22.28	23.28	00.21	01.36	02.51
Lowdham, War Memorial	17.51	18.11	18.26	18.41	19.02	19.42	20.35	21.35	22.35	23.35	00.26	01.41	02.56
NTU Brackenhurst Campus	17.58	18.18	…	18.48	19.09	19.49	20.42	21.42	22.42	23.42	00.31	01.46	03.01
Southwell, Norwood Gardens	18.10	18.30	…	19.00	19.19	19.59	20.52	21.52	22.52	23.52	SM	SM	SM

To ensure longer distance customers can get home, these buses do not stop to let customers off the bus until they reach Dr Park's Corner.

Saturdays

Code:																			FS	FS	FS
Service Number:	100	100	100	100	100	100	100		100	100	100		100	100	100	100	100	100	N100	N100	N100
City, King Street	06.50	07.20	07.50	08.20	08.50	09.20	09.50		10	30	50		18.30	19.10	20.05	21.05	22.05	23.05	00.00	01.15	02.30
Carlton, Tesco	07.03	07.33	08.03	08.33	09.03	09.33	10.03		23	43	03		18.43	19.23	20.17	21.17	22.17	23.17	C	C	C
Carlton-le-Willows School	07.07	07.37	08.07	08.37	09.07	09.37	10.07		27	47	07		18.47	19.27	20.20	21.20	22.20	23.20	00.16	01.31	02.46
Burton Joyce, Post Office	07.15	07.45	08.15	08.45	09.15	09.45	10.15		35	55	15		18.55	19.35	20.28	21.28	22.28	23.28	00.21	01.36	02.51
Lowdham, War Memorial	07.22	07.52	08.22	08.52	09.22	09.52	10.22		42	02	22		19.02	19.42	20.35	21.35	22.35	23.35	00.26	01.41	02.56
NTU Brackenhurst Campus	07.29	07.59	08.29	08.59	09.29	09.59	10.29		49	09	29		19.09	19.49	20.42	21.42	22.42	23.42	00.31	01.46	03.01
Southwell, Norwood Gardens	07.39	08.09	08.39	09.09	09.39	10.09	10.39		59	19	39		19.19	19.59	20.52	21.52	22.52	23.52	SM	SM	SM

every 20 mins — until

Sundays and Bank Holiday Mondays

Service Number:	100	100	100	100	100	100	100	100	100	100	100	100	100
City, King Street	08.05	09.05	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.05	20.05	22.05
Carlton, Tesco	08.17	09.17	10.13	11.13	12.13	13.13	14.13	15.13	16.13	17.13	18.18	20.17	22.17
Carlton-le-Willows School	08.20	09.20	10.17	11.17	12.17	13.17	14.17	15.17	16.17	17.17	18.22	20.20	22.20
Burton Joyce, Post Office	08.28	09.28	10.25	11.25	12.25	13.25	14.25	15.25	16.25	17.25	18.30	20.28	22.28
Lowdham, War Memorial	08.35	09.35	10.32	11.32	12.32	13.32	14.32	15.32	16.32	17.32	18.37	20.35	22.35
NTU Brackenhurst Campus	08.42	09.42	10.39	11.39	12.39	13.39	14.39	15.39	16.39	17.39	18.44	20.42	22.42
Southwell, Norwood Gardens	08.52	09.52	10.49	11.49	12.49	13.49	14.49	15.49	16.49	17.49	18.54	20.52	22.52

Note:

A Operated by an NCT 'exact fare' bus. All Pathfinder tickets valid, but change is not available from the driver.

C Operates along Daleside Road and Colwick Loop Road, not Carlton Hill

FS Operates on Friday and Saturday night only. A flat fare of £3.00 applies to journeys as far as Carlton-le-Willows School and £5 to Burton Joyce, Lowdham and Southwell. Easyrider Citycards valid to Lowdham.

M Terminates at Southwell Minster School, arriving 08:32

SA Terminates at Shaftesbury Avenue

SM In Southwell, operates along the normal 100 route through to Church Street (Minster) but does not serve Norwood Gardens

100

PATHFINDER

Southwell – NTU Brackenhurst – Lowdham – Burton Joyce – Gedling – City Centre

from Sunday 27 January 2013

Mondays to Fridays

Code:			A							A																
Service Number:	100	100	26	100	100	100	100	100	100	26	100	100	100		100	100	100		100	100	100	100	100	100	100	100	100
Southwell, Norwood Gardens	05.59	06.29	...	07.02	07.12	07.22	07.42	08.02	08.22	...	09.01	09.11	09.21		41	01	21		14.41	15.11	15.31	15.41	16.11	16.31	17.01	17.11	17.41
Southwell, Church Street (Minster)	06.04	06.34	...	07.08	07.18	07.28	07.48	08.08	08.28	...	09.06	09.16	09.26		46	06	26		14.46	15.16	15.36	15.46	16.16	16.36	17.06	17.16	17.46
NTU Brackenhurst Campus	06.06	06.36	...	07.11	07.21	07.31	07.51	08.11	08.31	...	09.08	09.18	09.28		48	08	28		14.48	15.18	15.38	15.48	16.19	16.39	17.09	17.19	17.48
Lowdham, War Memorial	06.14	06.44	06.55	07.20	07.30	07.40	08.00	08.20	08.40	08.50	09.16	09.26	09.36		56	16	36		14.56	15.26	15.46	15.56	16.28	16.48	17.18	17.28	17.56
Burton Joyce, Post Office	06.20	06.50	07.05	07.30	07.40	07.50	08.10	08.30	08.50	09.00	09.22	09.32	09.42		02	22	42		15.02	15.32	15.52	16.02	16.38	16.58	17.28	17.38	18.02
Carlton-le-Willows School	06.24	06.54	07.09	07.34	07.44	07.54	08.14	08.34	08.54	09.04	09.26	09.36	09.46		06	26	46		15.06	15.36	15.56	16.06	16.42	17.02	17.32	17.42	18.06
Carlton, Square	06.29	06.59	07.17	07.41	07.51	08.01	08.21	08.41	09.01	09.12	09.31	09.41	09.51		11	31	51		15.11	15.41	16.01	16.11	16.49	17.09	17.39	17.49	18.11
Carlton, Standhill Road	↓	↓	07.22	↓	↓	↓	↓	↓	↓	09.17	↓	↓	↓		↓	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓	↓
City, King Street	06.45	07.15	07.40	08.00	08.10	08.20	08.40	09.00	09.20	09.35	09.47	09.57	10.07		27	47	07		15.27	15.57	16.17	16.27	17.07	17.27	17.57	18.07	18.27

every 20 mins

until

Mondays to Fridays

Service Number:	100	100	100	100	100	100	100	100
Southwell, Norwood Gardens	18.16	18.44	19.14	19.44	20.14	21.14	22.14	22.54
Southwell, Church Street (Minster)	18.21	18.49	19.19	19.49	20.19	21.19	22.19	22.59
NTU Brackenhurst Campus	18.23	18.51	19.21	19.51	20.21	21.21	22.21	23.01
Lowdham, War Memorial	18.31	18.59	19.29	19.59	20.29	21.29	22.29	23.09
Burton Joyce, Post Office	18.37	19.05	19.35	20.05	20.35	21.35	22.35	23.15
Carlton-le-Willows School	18.41	19.09	19.39	20.09	20.39	21.39	22.39	23.18
Carlton, Square	18.46	19.14	19.44	20.14	20.44	21.44	22.44	23.23
Carlton, Standhill Road	↓	↓	↓	↓	↓	↓	↓	↓
City, King Street	19.02	19.30	20.00	20.30	21.00	22.00	23.00	23.38

Note:

A Operated by an NCT 'exact fare' bus. All Pathfinder tickets valid, but change is not available from the driver.

↓ This journey only stops between Carlton Square and Nottingham City Centre to allow passengers already on the bus to alight

100

PATHFINDER

Southwell – NTU Brackenhurst – Lowdham – Burton Joyce – Gedling – City Centre

from Sunday 27 January 2013

Saturdays

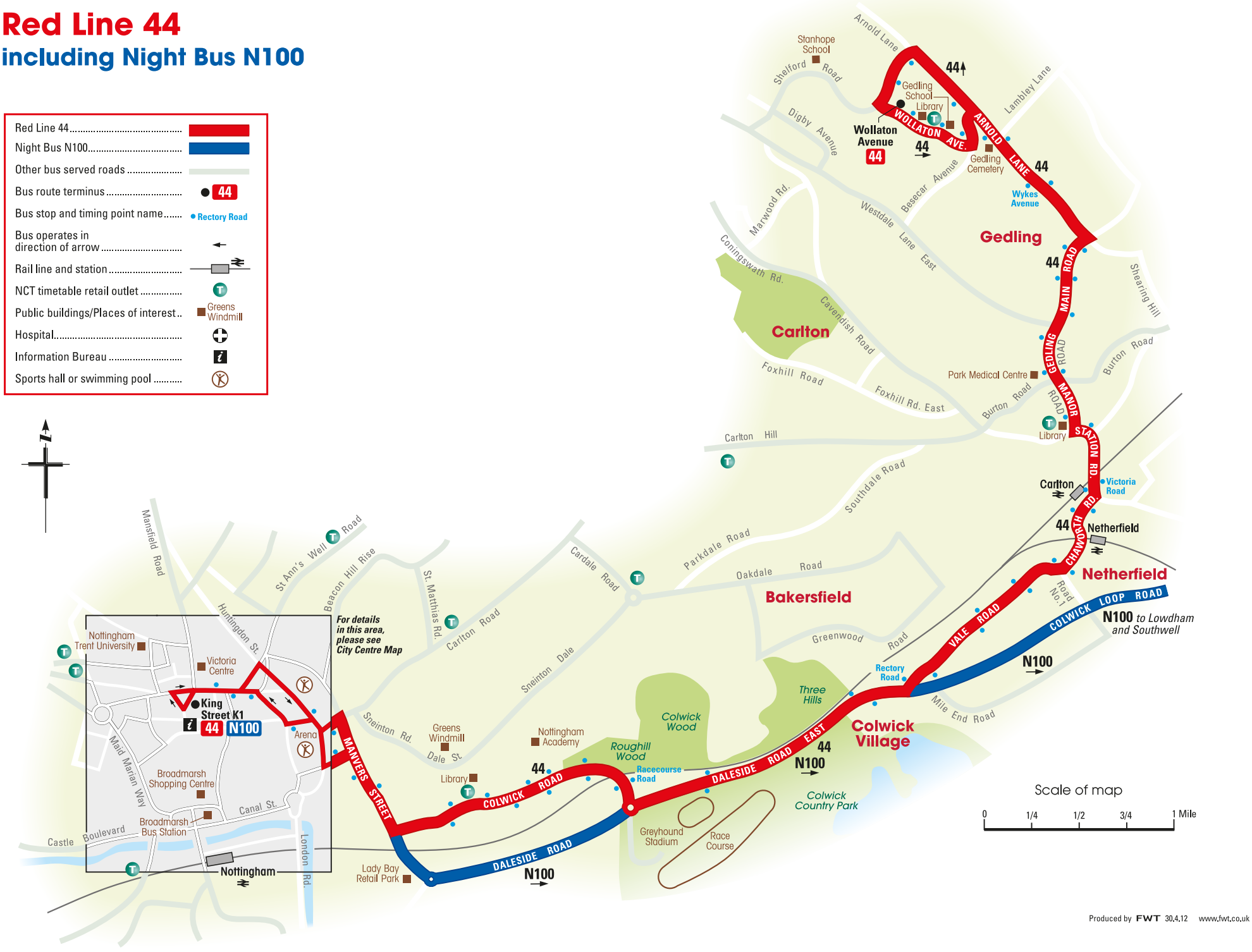
Service Number:	100	100	100	100	100	100	100		100	100	100		100	100	100	100	100	100	100	100
Southwell, Norwood Gardens	06.01	06.31	07.01	07.31	08.01	08.31	09.01		21	41	01		18.21	18.44	19.14	19.44	20.14	21.14	22.14	22.54
Southwell, Church Street (Minster)	06.06	06.36	07.06	07.36	08.06	08.36	09.06		26	46	06		18.26	18.49	19.19	19.49	20.19	21.19	22.19	22.59
NTU Brackenhurst Campus	06.08	06.38	07.08	07.38	08.08	08.38	09.08		28	48	08		18.28	18.51	19.21	19.51	20.21	21.21	22.21	23.01
Lowdham, War Memorial	06.16	06.46	07.16	07.46	08.16	08.46	09.16	every 20 mins	36	56	16	until	18.36	18.59	19.29	19.59	20.29	21.29	22.29	23.09
Burton Joyce, Post Office	06.22	06.52	07.22	07.52	08.22	08.52	09.22		42	02	22		18.42	19.05	19.35	20.05	20.35	21.35	22.35	23.15
Carlton-le-Willows School	06.26	06.56	07.26	07.56	08.26	08.56	09.26		46	06	26		18.46	19.09	19.39	20.09	20.39	21.39	22.39	23.18
Carlton, Square	06.31	07.01	07.31	08.01	08.31	09.01	09.31		51	11	31		18.51	19.14	19.44	20.14	20.44	21.44	22.44	23.23
Carlton, Standhill Road	↓	↓	↓	↓	↓	↓	↓		↓	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓
City, King Street	06.47	07.17	07.47	08.17	08.47	09.17	09.47		07	27	47		19.07	19.30	20.00	20.30	21.00	22.00	23.00	23.38

Sundays and Bank Holiday Mondays

Service Number:	100	100	100	100	100	100	100	100	100	100	100	100
Southwell, Norwood Gardens	09.09	10.09	11.09	12.09	13.09	14.09	15.09	16.09	17.14	19.14	21.14	22.54
Southwell, Church Street (Minster)	09.14	10.14	11.14	12.14	13.14	14.14	15.14	16.14	17.19	19.19	21.19	22.59
NTU Brackenhurst Campus	09.16	10.16	11.16	12.16	13.16	14.16	15.16	16.16	17.21	19.21	21.21	23.01
Lowdham, War Memorial	09.24	10.24	11.24	12.24	13.24	14.24	15.24	16.24	17.29	19.29	21.29	23.09
Burton Joyce, Post Office	09.30	10.30	11.30	12.30	13.30	14.30	15.30	16.30	17.35	19.35	21.35	23.15
Carlton-le-Willows School	09.34	10.34	11.34	12.34	13.34	14.34	15.34	16.34	17.39	19.39	21.39	23.18
Carlton, Square	09.39	10.39	11.39	12.39	13.39	14.39	15.39	16.39	17.44	19.44	21.44	23.23
Carlton, Standhill Road	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
City, King Street	09.55	10.55	11.55	12.55	13.55	14.55	15.55	16.55	18.00	20.00	22.00	23.38

Note:
↓ This journey only stops between Carlton Square and Nottingham City Centre to allow passengers already on the bus to alight

Red Line 44
including Night Bus N100



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44 N100

GO2

City – Sneinton Hermitage – Colwick Village – Netherfield – Gedling

from Sunday 1 September 2013

Mondays to Fridays

Note:																		FS	FS
Service Number	44	44	44	44	44	44	44	44		44	44	44	44		44	44		44	44	N100	N100
City, King Street	05.47	06.17	06.32	06.47	07.02	07.17	07.32	07.47	then every	18.03	18.20	18.40	19.00	every	30	00	until	23.00	00.02	01.30	03.00
Sneinton, Pennyfoot Street	05.54	06.24	06.39	06.54	07.09	07.24	07.39	07.54		18.10	18.27	18.47	19.07		37	07		23.07	00.09	01.37	03.07
Colwick Crossings, Racecourse Rd	05.59	06.29	06.44	06.59	07.14	07.29	07.44	07.59	8-10 mins	18.15	18.32	18.52	19.12	30 mins	42	12		23.12	00.12	01.39*	03.09*
Colwick Village, New Vale Road	06.03	06.33	06.48	07.03	07.18	07.33	07.48	08.03	until	18.19	18.36	18.56	19.16		46	16		23.16	00.16	01.42*	03.12*
Netherfield, Victoria Road	06.08	06.38	06.53	07.08	07.23	07.38	07.53	08.08		18.24	18.41	19.01	19.21		51	21		23.21	00.21	01.45*	03.15*
Gedling, Wollaton Avenue	06.16	06.46	07.01	07.16	07.31	07.46	08.01	08.16		18.32	18.49	19.09	19.29		59	29		23.29	00.29	…	…

Saturdays

Note:																						FS	FS
Service Number	44	44	44	44	44	44	44	44	44	44	44	44		44	44	44	44	44		44	44		44	44	N100	N100
City, King Street	05.47	06.17	06.32	06.47	07.02	07.17	07.32	07.47	08.02	08.17	08.32	08.45	then every	17.45	18.00	18.20	18.40	19.00	every	30	00	until	23.00	00.02	01.30	03.00
Sneinton, Pennyfoot Street	05.54	06.24	06.39	06.54	07.09	07.24	07.39	07.54	08.09	08.24	08.39	08.52		17.52	18.07	18.27	18.47	19.07		37	07		23.07	00.09	01.37	03.07
Colwick Crossings, Racecourse Rd	05.59	06.29	06.44	06.59	07.14	07.29	07.44	07.59	08.14	08.29	08.44	08.57	10 mins	17.57	18.12	18.32	18.52	19.12	30 mins	42	12		23.12	00.12	01.39*	03.09*
Colwick Village, New Vale Road	06.03	06.33	06.48	07.03	07.18	07.33	07.48	08.03	08.18	08.33	08.48	09.01	until	18.01	18.16	18.36	18.56	19.16		46	16		23.16	00.16	01.42*	03.12*
Netherfield, Victoria Road	06.08	06.38	06.53	07.08	07.23	07.38	07.53	08.08	08.23	08.38	08.53	09.06		18.06	18.21	18.41	19.01	19.21		51	21		23.21	00.21	01.45*	03.15*
Gedling, Wollaton Avenue	06.16	06.46	07.01	07.16	07.31	07.46	08.01	08.16	08.31	08.46	09.01	09.14		18.14	18.29	18.49	19.09	19.29		59	29		23.29	00.29	…	…

Sundays and Bank Holiday Mondays

Service Number	44	44	44	44	44	44	44		44	44	44		44	44	44	44	44	44	44	44	44	44
City, King Street	06.32	07.32	08.32	09.00	09.30	10.00	10.25	every	45	05	25	until	17.05	17.30	18.00	18.30	19.00	19.30	20.00	21.00	22.00	23.00
Sneinton, Pennyfoot Street	06.39	07.39	08.39	09.07	09.37	10.07	10.32		52	12	32		17.12	17.37	18.07	18.37	19.07	19.37	20.07	21.07	22.07	23.07
Colwick Crossings, Racecourse Rd	06.42	07.42	08.42	09.10	09.40	10.10	10.37	20 mins	57	17	37		17.17	17.42	18.12	18.42	19.12	19.42	20.12	21.12	22.12	23.12
Colwick Village, New Vale Road	06.46	07.46	08.46	09.14	09.44	10.14	10.41		01	21	41		17.21	17.46	18.16	18.46	19.16	19.46	20.16	21.16	22.16	23.16
Netherfield, Victoria Road	06.51	07.51	08.51	09.19	09.49	10.19	10.46		06	26	46		17.26	17.51	18.21	18.51	19.21	19.51	20.21	21.21	22.21	23.21
Gedling, Wollaton Avenue	06.59	07.59	08.59	09.27	09.57	10.27	10.54		14	34	54		17.34	17.59	18.29	18.59	19.29	19.59	20.29	21.29	22.29	23.29

Notes:

FS Operates on Friday and Saturday night only, premium fates apply

***** N100 operates directly along Colwick Road Loop. Please alight the bus at stops along Colwick Loop Road for Colwick and Netherfield. Buses stop near Victoria Park, Morrisons for people to walk through to Netherfield Town Centre.

44 GO2

Gedling – Netherfield – Colwick Village – Sneinton Hermitage – City

from Sunday 1 September 2013

Mondays to Fridays

Service Number.	44	44	44	44	44		44	44	44	44	44	44	44		44	44		44
Gedling, Wollaton Avenue	05.16	05.57	06.27	06.57	07.14		18.00	18.12	18.27	18.42	18.57	19.12	19.30		00	30		23.30
Gedling, Wykes Avenue	05.19	06.00	06.30	07.00	07.17		18.03	18.15	18.30	18.45	19.00	19.15	19.33		03	33		23.33
Netherfield, Victoria Road	05.24	06.07	06.37	07.07	07.24		18.12	18.24	18.37	18.52	19.07	19.22	19.38		08	38		23.38
Colwick Village, New Vale Road	05.27	06.11	06.41	07.11	07.28		18.16	18.28	18.41	18.56	19.11	19.26	19.41		11	41		23.41
Colwick, Crossings	05.31	06.15	06.45	07.15	07.32		18.23	18.32	18.45	19.00	19.15	19.30	19.45		15	45		23.45
Southwell Road (for Arena)	05.36	06.21	06.51	07.21	07.38		18.31	18.39	18.51	19.06	19.21	19.36	19.51		21	51		23.51
City, King Street	05.43	06.28	06.58	07.28	07.45		18.38	18.46	18.58	19.13	19.28	19.43	19.58		28	58		23.58

then every **8-10** mins until

every **30** mins

until

Saturdays

Service Number.	44	44	44	44	44	44	44	44		44	44	44	44	44	44		44	44		44
Gedling, Wollaton Avenue	05.57	06.27	06.57	07.12	07.27	07.42	07.57	08.12		18.12	18.27	18.42	18.57	19.12	19.30		00	30		23.30
Gedling, Wykes Avenue	06.00	06.30	07.00	07.15	07.30	07.45	08.00	08.15		18.15	18.30	18.45	19.00	19.15	19.33		03	33		23.33
Netherfield, Victoria Road	06.07	06.37	07.07	07.22	07.37	07.52	08.07	08.22		18.22	18.37	18.52	19.07	19.22	19.38		08	38		23.38
Colwick Village, New Vale Road	06.11	06.41	07.11	07.26	07.41	07.56	08.11	08.26		18.26	18.41	18.56	19.11	19.26	19.41		11	41		23.41
Colwick, Crossings	06.15	06.45	07.15	07.30	07.45	08.00	08.15	08.30		18.30	18.45	19.00	19.15	19.30	19.45		15	45		23.45
Southwell Road (for Arena)	06.21	06.51	07.21	07.36	07.51	08.06	08.21	08.36		18.36	18.51	19.06	19.21	19.36	19.51		21	51		23.51
City, King Street	06.28	06.58	07.28	07.43	07.58	08.13	08.28	08.43		18.43	18.58	19.13	19.28	19.43	19.58		28	58		23.58

then every **10** mins until

every **30** mins

until

Sundays and Bank Holiday Mondays

Service Number.	44	44	44	44	44	44		44	44	44		44	44	44	44	44	44	44	44	44	44	44
Gedling, Wollaton Avenue	06.00	07.00	08.00	09.00	09.30	09.52		12	32	52		16.32	17.00	17.30	18.00	18.30	19.00	19.30	20.00	20.30	21.30	22.30
Gedling, Wykes Avenue	06.03	07.03	08.03	09.03	09.33	09.55		15	35	55		16.35	17.03	17.33	18.03	18.33	19.03	19.33	20.03	20.33	21.33	22.33
Netherfield, Victoria Road	06.08	07.08	08.08	09.08	09.38	10.02		22	42	02		16.42	17.08	17.38	18.08	18.38	19.08	19.38	20.08	20.38	21.38	22.38
Colwick Village, New Vale Road	06.11	07.11	08.11	09.11	09.41	10.06		26	46	06		16.46	17.11	17.41	18.11	18.41	19.11	19.41	20.11	20.41	21.41	22.41
Colwick, Crossings	06.15	07.15	08.15	09.15	09.45	10.10		30	50	10		16.50	17.15	17.45	18.15	18.45	19.15	19.45	20.15	20.45	21.45	22.45
Southwell Road (for Arena)	06.21	07.21	08.21	09.21	09.51	10.16		36	56	16		16.56	17.21	17.51	18.21	18.51	19.21	19.51	20.21	20.51	21.51	22.51
City, King Street	06.28	07.28	08.28	09.28	09.58	10.23		43	03	23		17.03	17.28	17.58	18.28	18.58	19.28	19.58	20.28	20.58	21.58	22.58

every **20** mins

until

Sky Blue Line 46, 47, 47B

Produced by FWT 4.2.13 www.fwt.co.uk

46 47 47B

nottingham network

City – Mapperley – Mapperley Plains – Arnold (46) or Lambley – Woodborough – Calverton – Gunthorpe

from Sunday 1 September 2013

Mondays to Fridays

Service Number.	47B	47B	47	46	47	46	47	46	47	46	47	46	47	46	47	46	47	46	47	47B	47B	47B	47B	47B	47B	47B
City, Parliament Street	07.00	07.30	08.00	...	09.00	09.30	10.00	10.30	11.00	11.30	12.00	12.30	13.00	13.30	14.00	14.30	15.00	15.30	16.15	16.40	17.10	17.50	18.30	20.05	21.35	23.05
Mapperley, Shops	07.15	07.45	08.15	08.45	09.15	09.45	10.15	10.45	11.15	11.45	12.15	12.45	13.15	13.45	14.15	14.45	15.15	15.45	16.30	16.55	17.28	18.08	18.45	20.17	21.47	23.17
Mapperley Plains, Spring Lane	07.18	07.48	08.18	08.48	09.18	09.48	10.18	10.48	11.18	11.48	12.18	12.48	13.18	13.48	14.18	14.48	15.18	15.48	16.33	16.58	17.33	18.13	18.48	20.20	21.50	23.20
Arnold, Front Street	...	...	...	08.57	...	09.57	...	10.57	...	11.57	...	12.57	...	13.57	...	14.57	...	15.57	...	...	...	...	...	...	...	...
Lambley, Catfoot Lane	07.24	07.54	08.24	...	09.24	...	10.24	...	11.24	...	12.24	...	13.24	...	14.24	...	15.24	...	16.39	17.04	17.39	18.19	18.54	20.25	21.55	23.25
Woodborough, Church	07.31	08.01	08.31	...	09.31	...	10.31	...	11.31	...	12.31	...	13.31	...	14.31	...	15.31	...	16.46	17.11	17.46	18.26	19.01	20.31	22.01	23.31
Colonel Frank Seely School	...	...	08:36*	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Calverton, St Wilfrid's Square	07.36	08.06	08.40	...	09.36	...	10.36	...	11.36	...	12.36	...	13.36	...	14.36	...	15.36	...	16.51	...	17.56	18.36	19.06	20.36	22.06	23.36
Epperstone, Main Street	...	...	08.47	...	09.43	...	10.43	...	11.43	...	12.43	...	13.43	...	14.43	...	15.43	...	16.58	...	...	...	...	...	...	...
Lowdham, Health Centre	...	...	08.51	...	09.47	...	10.47	...	11.47	...	12.47	...	13.47	...	14.47	...	15.47	...	17.02	...	...	...	...	...	...	...
Lowdham, Station	...	...	08.54	...	09.50	...	10.50	...	11.50	...	12.50	...	13.50	...	14.50	...	15.50	...	17.05	...	...	...	...	...	...	...
Gunthorpe, Unicorn	...	...	08.59	...	09.55	...	10.55	...	11.55	...	12.55	...	13.55	...	14.55	...	15.55	...	17.10	...	...	...	...	...	...	...

Saturdays

Service Number.	47B	47B	47	46	47	46	47	46	47	46	47	46	47	46	47	46	47	46	47	47B	47B	47B	47B	47B	47B	47B
City, Parliament Street	07.00	07.30	08.00	08.30	09.00	09.30	10.00	10.30	11.00	11.30	12.00	12.30	13.00	13.30	14.00	14.30	15.00	15.30	16.00	16.40	17.10	17.50	18.30	20.05	21.35	23.05
Mapperley, Shops	07.15	07.45	08.15	08.45	09.15	09.45	10.15	10.45	11.15	11.45	12.15	12.45	13.15	13.45	14.15	14.45	15.15	15.45	16.15	16.55	17.25	18.05	18.45	20.17	21.47	23.17
Mapperley Plains, Spring Lane	07.18	07.48	08.18	08.48	09.18	09.48	10.18	10.48	11.18	11.48	12.18	12.48	13.18	13.48	14.18	14.48	15.18	15.48	16.18	16.58	17.28	18.08	18.48	20.20	21.50	23.20
Arnold, Front Street	...	...	...	08.57	...	09.57	...	10.57	...	11.57	...	12.57	...	13.57	...	14.57	...	15.57	...	...	...	...	...	...	...	...
Lambley, Catfoot Lane	07.24	07.54	08.24	...	09.24	...	10.24	...	11.24	...	12.24	...	13.24	...	14.24	...	15.24	...	16.24	17.04	17.34	18.14	18.54	20.25	21.55	23.25
Woodborough, Church	07.31	08.01	08.31	...	09.31	...	10.31	...	11.31	...	12.31	...	13.31	...	14.31	...	15.31	...	16.31	17.11	17.41	18.21	19.01	20.31	22.01	23.31
Calverton, St Wilfrid's Square	07.36	08.06	08.36	...	09.36	...	10.36	...	11.36	...	12.36	...	13.36	...	14.36	...	15.36	...	16.36	...	17.46	18.26	19.06	20.36	22.06	23.36
Epperstone, Main Street	...	...	08.43	...	09.43	...	10.43	...	11.43	...	12.43	...	13.43	...	14.43	...	15.43	...	16.43	...	...	...	...	...	...	...
Lowdham, Health Centre	...	...	08.47	...	09.47	...	10.47	...	11.47	...	12.47	...	13.47	...	14.47	...	15.47	...	16.47	...	...	...	...	...	...	...
Lowdham, Station	...	...	08.50	...	09.50	...	10.50	...	11.50	...	12.50	...	13.50	...	14.50	...	15.50	...	16.50	...	...	...	...	...	...	...
Gunthorpe, Unicorn	...	...	08.55	...	09.55	...	10.55	...	11.55	...	12.55	...	13.55	...	14.55	...	15.55	...	16.55	...	...	...	...	...	...	...

Sundays and Bank Holiday Mondays

Service Number.	47B	47B	47B	47B	47B	47B
City, Parliament Street	09.50	11.20	12.50	14.20	15.50	17.20
Mapperley, Shops	10.05	11.35	13.05	14.35	16.05	17.35
Mapperley Plains, Spring Lane	10.08	11.38	13.08	14.38	16.08	17.38
Lambley, Catfoot Lane	10.14	11.44	13.14	14.44	16.14	17.44
Woodborough, Church	10.21	11.51	13.21	14.51	16.21	17.51
Calverton, St Wilfrid's Square	10.26	11.56	13.26	14.56	16.26	17.56

Please note:
* Schooldays only

This service is financially supported by Nottinghamshire County Council

46 47
nottingham network

Gunthorpe – Calverton – Woodborough – Lambley or Arnold (46) – Mapperley Plains – Mapperley – City

from Sunday 1 September 2013

Mondays to Fridays

Service Number.	47	47	47	47	47	46	47	46	47	46	47	46	47	46	47	46	47	46	47	46	47	47	47	47	47
Gunthorpe, Unicorn	...	...	...	...	...	...	09.00	...	10.00	...	11.00	...	12.00	...	13.00	...	14.00	...	15.00	...	16.00	...	17.20	...	...	...	...
Lowdham, Train Station	...	...	...	...	...	...	09.04	...	10.04	...	11.04	...	12.04	...	13.04	...	14.04	...	15.04	...	16.04	...	17.24	...	...	...	...
Lowdham, Health Centre	...	...	...	...	...	...	09.06	...	10.06	...	11.06	...	12.06	...	13.06	...	14.06	...	15.06	...	16.06	...	17.26	...	...	...	...
Epperstone, Main Street	...	...	...	...	...	...	09.11	...	10.11	...	11.11	...	12.11	...	13.11	...	14.11	...	15.11	...	16.11	...	17.31	...	...	...	...
Colonel Frank Seely School	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15:22*	...	...	...	...	...	...	...	...
Calverton, St Wilfrid's Square	06.19	06.49	07.19	07.39	08.09	...	09.19	...	10.19	...	11.19	...	12.19	...	13.19	...	14.19	...	15.30	...	16.29	...	17.49	18.45	19.20	20.55	22.20
Woodborough, Church	06.25	06.55	07.25	07.45	08.15	...	09.25	...	10.25	...	11.25	...	12.25	...	13.25	...	14.25	...	15.40	...	16.35	...	17.55	18.50	19.25	21.00	22.25
Lambley, The Dumbles	06.30	07.00	07.30	07.50	08.20	...	09.30	...	10.30	...	11.30	...	12.30	...	13.30	...	14.30	...	15.45	...	16.40	...	18.00	18.55	19.30	21.05	22.30
Arnold, Front Street	...	...	...	...	...	08.59	...	09.59	...	10.59	...	11.59	...	12.59	...	13.59	...	14.59	...	16.09	...	...	...	...	...	...	...
Mapperley Plains, Spring Lane	06.37	07.07	07.37	07.57	08.27	09.07	09.37	10.07	10.37	11.07	11.37	12.07	12.37	13.07	13.37	14.07	14.37	15.07	15.52	16.17	16.47	17.27	18.07	19.02	19.37	21.12	22.37
Mapperley, Shops	06.40	07.10	07.40	08.05	08.35	09.10	09.40	10.10	10.40	11.10	11.40	12.10	12.40	13.10	13.40	14.10	14.40	15.10	15.55	16.20	16.50	17.30	18.10	19.05	19.40	21.15	22.40
City, Parliament Street	06.55	07.25	07.55	08.25	08.55	09.25	09.55	10.25	10.55	11.25	11.55	12.25	12.55	13.25	13.55	14.25	14.55	15.25	16.10	16.35	17.05	17.45	18.25	19.20	19.55	21.30	22.55

Saturdays

Service Number.	47	47	47	47	47	46	47	46	47	46	47	46	47	46	47	46	47	46	47	46	47	47	47	47	47	47	47
Gunthorpe, Unicorn	...	...	...	...	...	...	09.00	...	10.00	...	11.00	...	12.00	...	13.00	...	14.00	...	15.00	...	16.10	...	17.30	...	...	...	...
Lowdham, Train Station	...	...	...	...	...	...	09.04	...	10.04	...	11.04	...	12.04	...	13.04	...	14.04	...	15.04	...	16.14	...	17.34	...	...	...	...
Lowdham, Health Centre	...	...	...	...	...	...	09.06	...	10.06	...	11.06	...	12.06	...	13.06	...	14.06	...	15.06	...	16.16	...	17.36	...	...	...	...
Epperstone, Main Street	...	...	...	...	...	...	09.11	...	10.11	...	11.11	...	12.11	...	13.11	...	14.11	...	15.11	...	16.21	...	17.41	...	...	...	...
Calverton, St Wilfrid's Square	06.19	06.49	07.19	07.49	08.19	...	09.19	...	10.19	...	11.19	...	12.19	...	13.19	...	14.19	...	15.19	...	16.29	...	17.49	18.45	19.20	20.55	22.20
Woodborough, Church	06.25	06.55	07.25	07.55	08.25	...	09.25	...	10.25	...	11.25	...	12.25	...	13.25	...	14.25	...	15.25	...	16.35	...	17.55	18.50	19.25	21.00	22.25
Lambley, The Dumbles	06.30	07.00	07.30	08.00	08.30	...	09.30	...	10.30	...	11.30	...	12.30	...	13.30	...	14.30	...	15.30	...	16.40	...	18.00	18.55	19.30	21.05	22.30
Arnold, Front Street	...	...	...	...	...	08.59	...	09.59	...	10.59	...	11.59	...	12.59	...	13.59	...	14.59	...	16.09	...	...	...	...	...	...	...
Mapperley Plains, Spring Lane	06.37	07.07	07.37	08.07	08.37	09.07	09.37	10.07	10.37	11.07	11.37	12.07	12.37	13.07	13.37	14.07	14.37	15.07	15.37	16.17	16.47	17.27	18.07	19.02	19.37	21.12	22.37
Mapperley, Shops	06.40	07.10	07.40	08.10	08.40	09.10	09.40	10.10	10.40	11.10	11.40	12.10	12.40	13.10	13.40	14.10	14.40	15.10	15.40	16.20	16.50	17.30	18.10	19.05	19.40	21.15	22.40
City, Parliament Street	06.55	07.25	07.55	08.25	08.55	09.25	09.55	10.25	10.55	11.25	11.55	12.25	12.55	13.25	13.55	14.25	14.55	15.25	15.55	16.35	17.05	17.45	18.25	19.20	19.55	21.30	22.55

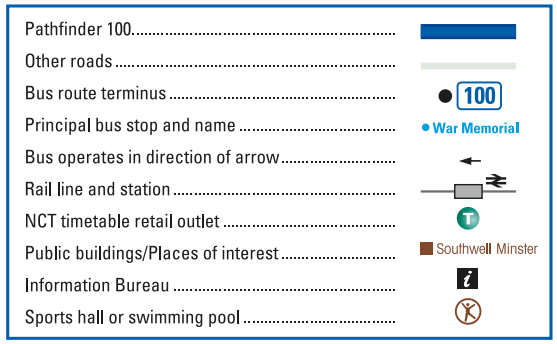
Sundays and Bank Holiday Mondays

Service Number.	47	47	47	47	47	47
Calverton, St Wilfrid's Square	09.09	10.39	12.09	13.39	15.09	16.39
Woodborough, Church	09.15	10.45	12.15	13.45	15.15	16.45
Lambley, The Dumbles	09.20	10.50	12.20	13.50	15.20	16.50
Mapperley Plains, Spring Lane	09.27	10.57	12.27	13.57	15.27	16.57
Mapperley, Shops	09.30	11.00	12.30	14.00	15.30	17.00
City, Parliament Street	09.45	11.15	12.45	14.15	15.45	17.15

Please note:
* Schooldays only

This service is financially supported by Nottinghamshire County Council

Pathfinder
100 (also including N100 and lilac line 26 and 26C)



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Service N100 does not serve Norwood Gardens terminus

Norwood Gardens

Southwell

Easthorpe

Halam

Norwood Park Golf Course

Lower Kirklington Road

Halam Road

Co-op

Newark Road

Westgate

Southwell Minster

Church Street

N100

26C

Southwell Leisure Centre and The Minster School

Nottingham Rd.

Brackenhurst

Parkhill

NTU Brackenhurst Campus

EASYRIDER EXTRA ZONE

Halloughton

Highcross Hill

26C

100

N100

Goverton

Bleasby

Thurgarton

Red Lion

Nottingham Road

Easyrider Citycard boundary

Gonalston

N100

26C

100

26

Gonalston Farm Shop

War Memorial

Southwell Road

Lowdham

Hoveringham

EASYRIDER CITYCARD ZONE

N100

100

26C

26

Nottingham Road

Lowdham

Caythorpe

Tall Trees

Bulcote

City Area boundary

Burton Joyce

Post Office

Main St.

Church Road

River Trent

N100

100

26C

26

Nottingham Road

Burton Joyce

CITY AREA ZONE

Gedling

Carlton-le-Willows School

Linden Grove

Carlton

Burton Rd.

Tesco

26 26C 100 Carlton Hill

Carlton Road

buses on 100 service set down only on journeys towards the City Centre

Carlton Square

Ouse Bridge Drive

Colwick Loop Road

Carlton

Netherfield

A612

N100

Colwick Loop Road

Daleside Road

Manvers Street

Porchester Road City College

For details in this area see City Centre Map

Victoria Centre

Broadmarsh Shopping Centre

Broadmarsh Bus Station

Nottingham

Scale of map

0 1/2 1 1 1/2 2 Miles

100 PATHFINDER

City – Gedling – Burton Joyce – Lowdham – NTU Brackenhurst – Southwell

from Sunday 1 September 2013

Mondays to Fridays

Code:					A													A						A	
Service Number:	100	100	100	100	26C	100	100	100	100	100	100	100		100	100	100		100	26	100	100	100	100	100	100	26	100
City, King Street	06.10	06.30	06.50	07.20	07.45	08.05	08.15	08.25	08.43	09.03	09.23	09.50		10	30	50		14.30	14.40	14.50	15.10	15.30	15.45	16.00	16.20	16.35	16.50
Carlton, Tesco	06.23	06.43	07.03	07.33	08.01	08.18	08.28	08.38	08.56	09.16	09.36	10.03		23	43	03		14.43	14.58	15.03	15.23	15.43	16.03	16.18	16.38	16.53	17.08
Carlton-le-Willows School	06.27	06.47	07.07	07.37	08.06	08.22	08.32	08.42	09.00	09.20	09.40	10.07		27	47	07		14.47	15.10	15.07	15.27	15.47	16.08	16.23	16.43	16.58	17.13
Burton Joyce, Post Office	06.35	06.55	07.15	07.45	08.13	08.30	08.40	08.50	09.08	09.28	09.48	10.15		35	55	15		14.55	15.17	15.15	15.35	15.55	16.16	16.31	16.51	17.06	17.21
Lowdham, War Memorial	06.42	07.02	07.22	07.52	08.20	08.37	08.47	08.57	09.15	09.35	09.55	10.22		42	02	22		15.02	SA	15.22	15.42	16.02	16.26	16.41	17.01	17.16	17.31
NTU Brackenhurst Campus	06.49	07.09	07.29	07.59	08.27	08.44	08.54	09.04	09.22	09.42	10.02	10.29		49	09	29		15.09	…	15.29	15.49	16.09	16.33	16.48	17.08	…	17.38
Southwell, Norwood Gardens	06.59	07.19	07.39	08.09	M	08.54	09.04	09.14	09.32	09.52	10.12	10.39		59	19	39		15.19	…	15.39	15.59	16.19	16.45	17.00	17.20	…	17.50

then every **20** mins at — until

Mondays to Fridays

Code:			A								FS	FS	FS
Service Number:	100	100	26	100	100	100	100	100	100	100	N100	N100	N100
City, King Street	17.10	17.30	17.45	18.00	18.30	19.10	20.05	21.05	22.05	23.05	00.00	01.30	03.00
Carlton, Tesco	17.28	17.48	18.03	18.18	18.43	19.23	20.17	21.17	22.17	23.17	C	C	C
Carlton-le-Willows School	17.33	17.53	18.08	18.23	18.47	19.27	20.20	21.20	22.20	23.20	00.16	01.46	03.16
Burton Joyce, Post Office	17.41	18.01	18.16	18.31	18.55	19.35	20.28	21.28	22.28	23.28	00.21	01.51	03.21
Lowdham, War Memorial	17.51	18.11	18.26	18.41	19.02	19.42	20.35	21.35	22.35	23.35	00.26	01.56	03.26
NTU Brackenhurst Campus	17.58	18.18	…	18.48	19.09	19.49	20.42	21.42	22.42	23.42	00.31	02.01	03.31
Southwell, Norwood Gardens	18.10	18.30	…	19.00	19.19	19.59	20.52	21.52	22.52	23.52	SM	SM	SM

To ensure longer distance customers can get home, these buses do not stop to let customers off the bus until they reach Dr Park's Corner.

Saturdays

Code:																			FS	FS	FS
Service Number:	100	100	100	100	100	100	100		100	100	100		100	100	100	100	100	100	N100	N100	N100
City, King Street	06.50	07.20	07.50	08.20	08.50	09.20	09.50		10	30	50		18.30	19.10	20.05	21.05	22.05	23.05	00.00	01.30	03.00
Carlton, Tesco	07.03	07.33	08.03	08.33	09.03	09.33	10.03		23	43	03		18.43	19.23	20.17	21.17	22.17	23.17	C	C	C
Carlton-le-Willows School	07.07	07.37	08.07	08.37	09.07	09.37	10.07		27	47	07		18.47	19.27	20.20	21.20	22.20	23.20	00.16	01.46	03.16
Burton Joyce, Post Office	07.15	07.45	08.15	08.45	09.15	09.45	10.15		35	55	15		18.55	19.35	20.28	21.28	22.28	23.28	00.21	01.51	03.21
Lowdham, War Memorial	07.22	07.52	08.22	08.52	09.22	09.52	10.22		42	02	22		19.02	19.42	20.35	21.35	22.35	23.35	00.26	01.56	03.26
NTU Brackenhurst Campus	07.29	07.59	08.29	08.59	09.29	09.59	10.29		49	09	29		19.09	19.49	20.42	21.42	22.42	23.42	00.31	02.01	03.31
Southwell, Norwood Gardens	07.39	08.09	08.39	09.09	09.39	10.09	10.39		59	19	39		19.19	19.59	20.52	21.52	22.52	23.52	SM	SM	SM

then every **20** mins at — until

Sundays and Bank Holiday Mondays

Service Number:	100	100	100	100	100	100	100	100	100	100	100	100	100
City, King Street	08.05	09.05	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.05	20.05	22.05
Carlton, Tesco	08.17	09.17	10.13	11.13	12.13	13.13	14.13	15.13	16.13	17.13	18.18	20.17	22.17
Carlton-le-Willows School	08.20	09.20	10.17	11.17	12.17	13.17	14.17	15.17	16.17	17.17	18.22	20.20	22.20
Burton Joyce, Post Office	08.28	09.28	10.25	11.25	12.25	13.25	14.25	15.25	16.25	17.25	18.30	20.28	22.28
Lowdham, War Memorial	08.35	09.35	10.32	11.32	12.32	13.32	14.32	15.32	16.32	17.32	18.37	20.35	22.35
NTU Brackenhurst Campus	08.42	09.42	10.39	11.39	12.39	13.39	14.39	15.39	16.39	17.39	18.44	20.42	22.42
Southwell, Norwood Gardens	08.52	09.52	10.49	11.49	12.49	13.49	14.49	15.49	16.49	17.49	18.54	20.52	22.52

Note:

A Operated by an NCT 'exact fare' bus. All Pathfinder tickets valid, but change is not available from the driver.

C Operates along Daleside Road and Colwick Loop Road, not Carlton Hill

FS Operates on Friday and Saturday night only. A flat fare of £3.00 applies to journeys as far as Carlton-le-Willows School and £5 to Burton Joyce, Lowdham and Southwell. Easyrider Citycards valid to Lowdham.

M Terminates at Southwell Minster School, arriving 08.32

SA Terminates at Shaftesbury Avenue

SM In Southwell, operates along the normal 100 route through to Church Street (Minster) but does not serve Norwood Gardens

100

PATHFINDER

Southwell – NTU Brackenhurst – Lowdham – Burton Joyce – Gedling – City

from Sunday 1 September 2013

Mondays to Fridays

Code:			A							A																
Service Number:	100	100	26	100	100	100	100	100	100	26	100	100	100	then every 20 mins at	100	100	100	until	100	100	100	100	100	100	100	100	100
Southwell, Norwood Gardens	05.59	06.29	…	07.02	07.12	07.22	07.42	08.02	08.22	…	09.01	09.11	09.21		41	01	21		14.41	15.11	15.31	15.41	16.11	16.31	17.01	17.11	17.41
Southwell, Church Street (Minster)	06.04	06.34	…	07.08	07.18	07.28	07.48	08.08	08.28	…	09.06	09.16	09.26		46	06	26		14.46	15.16	15.36	15.46	16.16	16.36	17.06	17.16	17.46
NTU Brackenhurst Campus	06.06	06.36	…	07.11	07.21	07.31	07.51	08.11	08.31	…	09.08	09.18	09.28		48	08	28		14.48	15.18	15.38	15.48	16.19	16.39	17.09	17.19	17.48
Lowdham, War Memorial	06.14	06.44	06.55	07.20	07.30	07.40	08.00	08.20	08.40	08.50	09.16	09.26	09.36		56	16	36		14.56	15.26	15.46	15.56	16.28	16.48	17.18	17.28	17.56
Burton Joyce, Post Office	06.20	06.50	07.05	07.30	07.40	07.50	08.10	08.30	08.50	09.00	09.22	09.32	09.42		02	22	42		15.02	15.32	15.52	16.02	16.38	16.58	17.28	17.38	18.02
Carlton-le-Willows School	06.24	06.54	07.09	07.34	07.44	07.54	08.14	08.34	08.54	09.04	09.26	09.36	09.46		06	26	46		15.06	15.36	15.56	16.06	16.42	17.02	17.32	17.42	18.06
Carlton, Square	06.29	06.59	07.17	07.41	07.51	08.01	08.21	08.41	09.01	09.12	09.31	09.41	09.51		11	31	51		15.11	15.41	16.01	16.11	16.49	17.09	17.39	17.49	18.11
Carlton, Standhill Road	↓	↓	07.22	↓	↓	↓	↓	↓	↓	09.17	↓	↓	↓		↓	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓	↓
City, King Street	06.45	07.15	07.40	08.00	08.10	08.20	08.40	09.00	09.20	09.35	09.47	09.57	10.07		27	47	07		15.27	15.57	16.17	16.27	17.07	17.27	17.57	18.07	18.27

Mondays to Fridays

Service Number:	100	100	100	100	100	100	100	100
Southwell, Norwood Gardens	18.16	18.44	19.14	19.44	20.14	21.14	22.14	22.54
Southwell, Church Street (Minster)	18.21	18.49	19.19	19.49	20.19	21.19	22.19	22.59
NTU Brackenhurst Campus	18.23	18.51	19.21	19.51	20.21	21.21	22.21	23.01
Lowdham, War Memorial	18.31	18.59	19.29	19.59	20.29	21.29	22.29	23.09
Burton Joyce, Post Office	18.37	19.05	19.35	20.05	20.35	21.35	22.35	23.15
Carlton-le-Willows School	18.41	19.09	19.39	20.09	20.39	21.39	22.39	23.18
Carlton, Square	18.46	19.14	19.44	20.14	20.44	21.44	22.44	23.23
Carlton, Standhill Road	↓	↓	↓	↓	↓	↓	↓	↓
City, King Street	19.02	19.30	20.00	20.30	21.00	22.00	23.00	23.38

Note:

A Operated by an NCT 'exact fare' bus. All Pathfinder tickets valid, but change is not available from the driver.

↓ This journey only stops between Carlton Square and Nottingham City Centre to allow passengers already on the bus to alight

100 PATHFINDER

Southwell – NTU Brackenhurst – Lowdham – Burton Joyce – Gedling – City

from Sunday 1 September 2013

Saturdays

Service Number:	100	100	100	100	100	100	100		100	100	100		100	100	100	100	100	100	100	100
Southwell, Norwood Gardens	06.01	06.31	07.01	07.31	08.01	08.31	09.01		21	41	01		18.21	18.44	19.14	19.44	20.14	21.14	22.14	22.54
Southwell, Church Street (Minster)	06.06	06.36	07.06	07.36	08.06	08.36	09.06		26	46	06		18.26	18.49	19.19	19.49	20.19	21.19	22.19	22.59
NTU Brackenhurst Campus	06.08	06.38	07.08	07.38	08.08	08.38	09.08		28	48	08		18.28	18.51	19.21	19.51	20.21	21.21	22.21	23.01
Lowdham, War Memorial	06.16	06.46	07.16	07.46	08.16	08.46	09.16		36	56	16		18.36	18.59	19.29	19.59	20.29	21.29	22.29	23.09
Burton Joyce, Post Office	06.22	06.52	07.22	07.52	08.22	08.52	09.22		42	02	22		18.42	19.05	19.35	20.05	20.35	21.35	22.35	23.15
Carlton-le-Willows School	06.26	06.56	07.26	07.56	08.26	08.56	09.26		46	06	26		18.46	19.09	19.39	20.09	20.39	21.39	22.39	23.18
Carlton, Square	06.31	07.01	07.31	08.01	08.31	09.01	09.31		51	11	31		18.51	19.14	19.44	20.14	20.44	21.44	22.44	23.23
Carlton, Standhill Road	↓	↓	↓	↓	↓	↓	↓		↓	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓
City, King Street	06.47	07.17	07.47	08.17	08.47	09.17	09.47		07	27	47		19.07	19.30	20.00	20.30	21.00	22.00	23.00	23.38

then every **20** mins at — until

Sundays and Bank Holiday Mondays

Service Number:	100	100	100	100	100	100	100	100	100	100	100	100
Southwell, Norwood Gardens	09.09	10.09	11.09	12.09	13.09	14.09	15.09	16.09	17.14	19.14	21.14	22.54
Southwell, Church Street (Minster)	09.14	10.14	11.14	12.14	13.14	14.14	15.14	16.14	17.19	19.19	21.19	22.59
NTU Brackenhurst Campus	09.16	10.16	11.16	12.16	13.16	14.16	15.16	16.16	17.21	19.21	21.21	23.01
Lowdham, War Memorial	09.24	10.24	11.24	12.24	13.24	14.24	15.24	16.24	17.29	19.29	21.29	23.09
Burton Joyce, Post Office	09.30	10.30	11.30	12.30	13.30	14.30	15.30	16.30	17.35	19.35	21.35	23.15
Carlton-le-Willows School	09.34	10.34	11.34	12.34	13.34	14.34	15.34	16.34	17.39	19.39	21.39	23.18
Carlton, Square	09.39	10.39	11.39	12.39	13.39	14.39	15.39	16.39	17.44	19.44	21.44	23.23
Carlton, Standhill Road	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
City, King Street	09.55	10.55	11.55	12.55	13.55	14.55	15.55	16.55	18.00	20.00	22.00	23.38

Note:
↓ This journey only stops between Carlton Square and Nottingham City Centre to allow passengers already on the bus to alight

Appendix H – Capacity Assessments

Proposed Junction Layouts

Priority Junctions

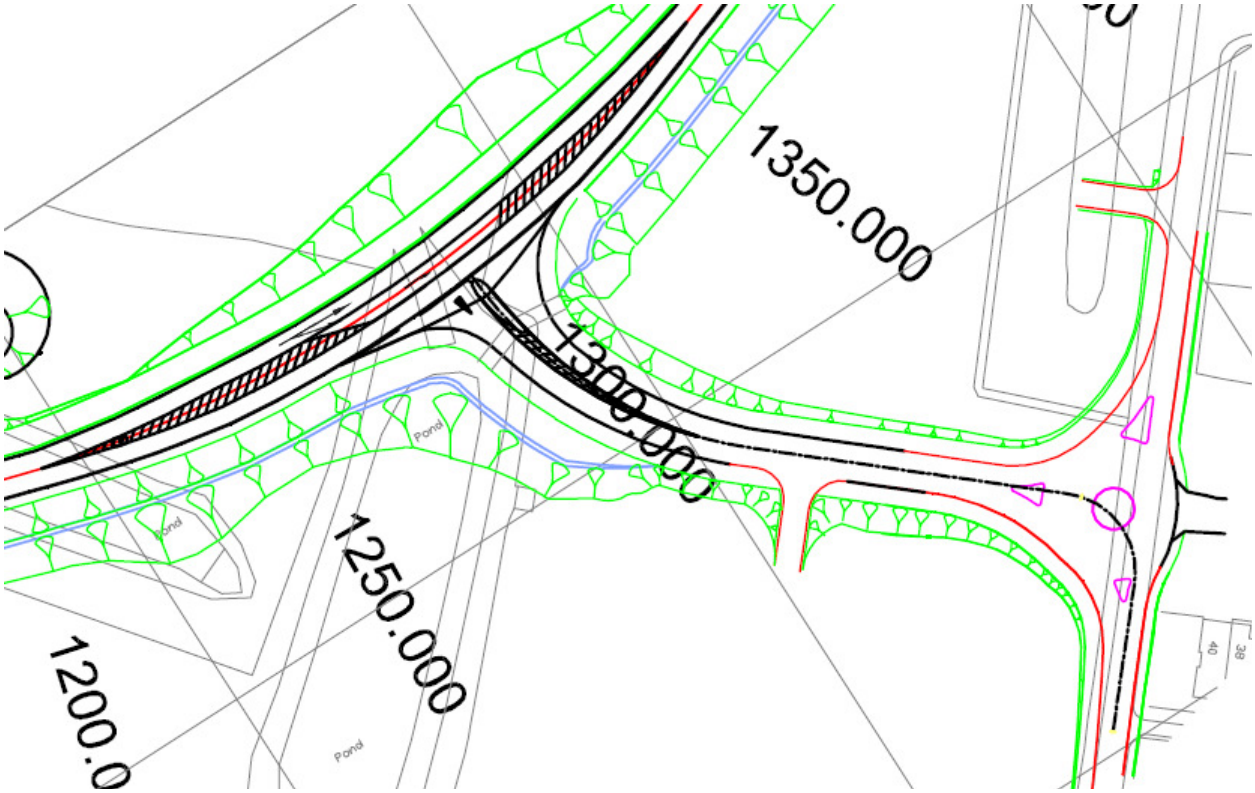
Proposed Priority Junction Layouts on the Gedling Access Road

Extracts from Faber Maunsell/AECOM scheme drawings dated January 2009 (**Extracts not to scale**). See separate drawings for details of the proposed B684 Mapperley Plains Road/Gedling Access Road and A612 Nottingham Road/Burton Road/Whitworth Drive/Gedling Access Road signal controlled junctions.

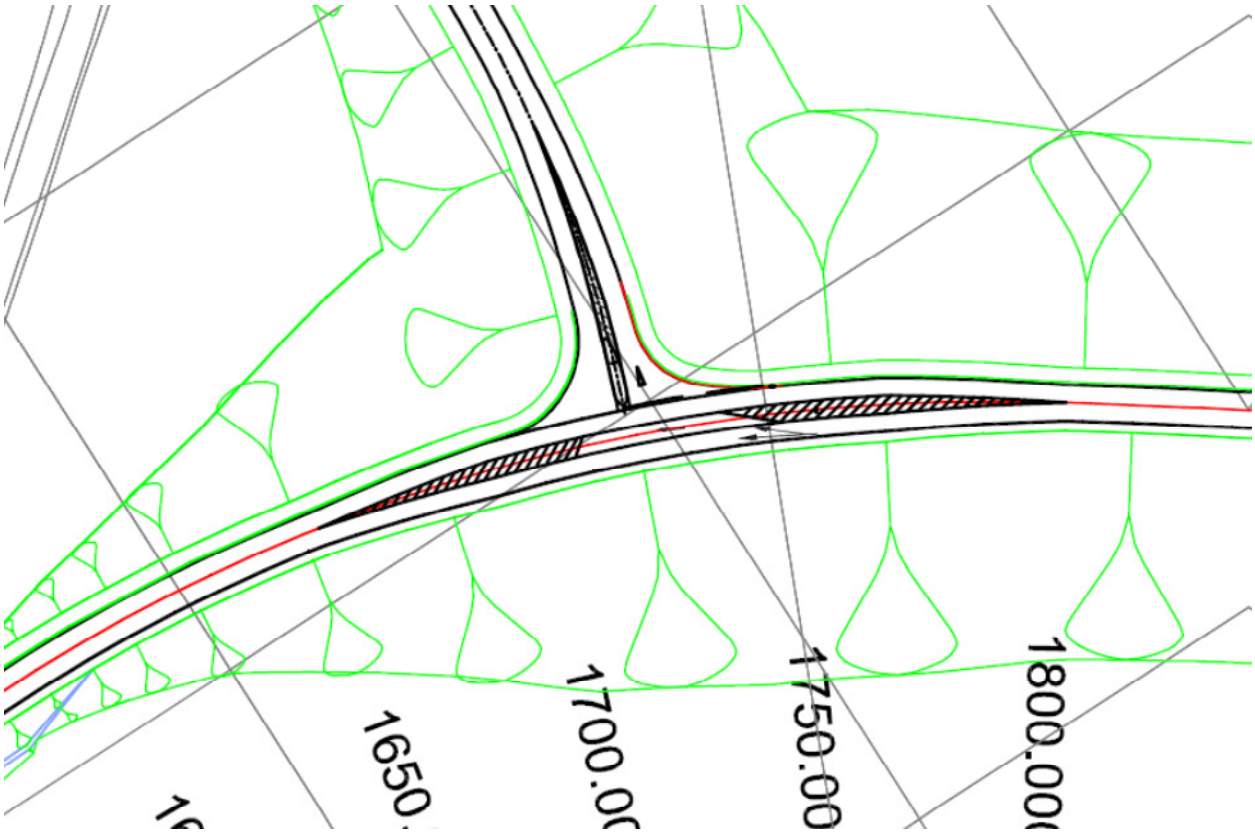
Proposed Gedling Access Road/A6211 Arnold Lane/Gedling Colliery Site Access Roundabout:

Proposed Gedling Access Road/Gedling Colliery Site Access Roundabout:

Proposed Gedling Access Road/Lambley Lane (South) Junction:

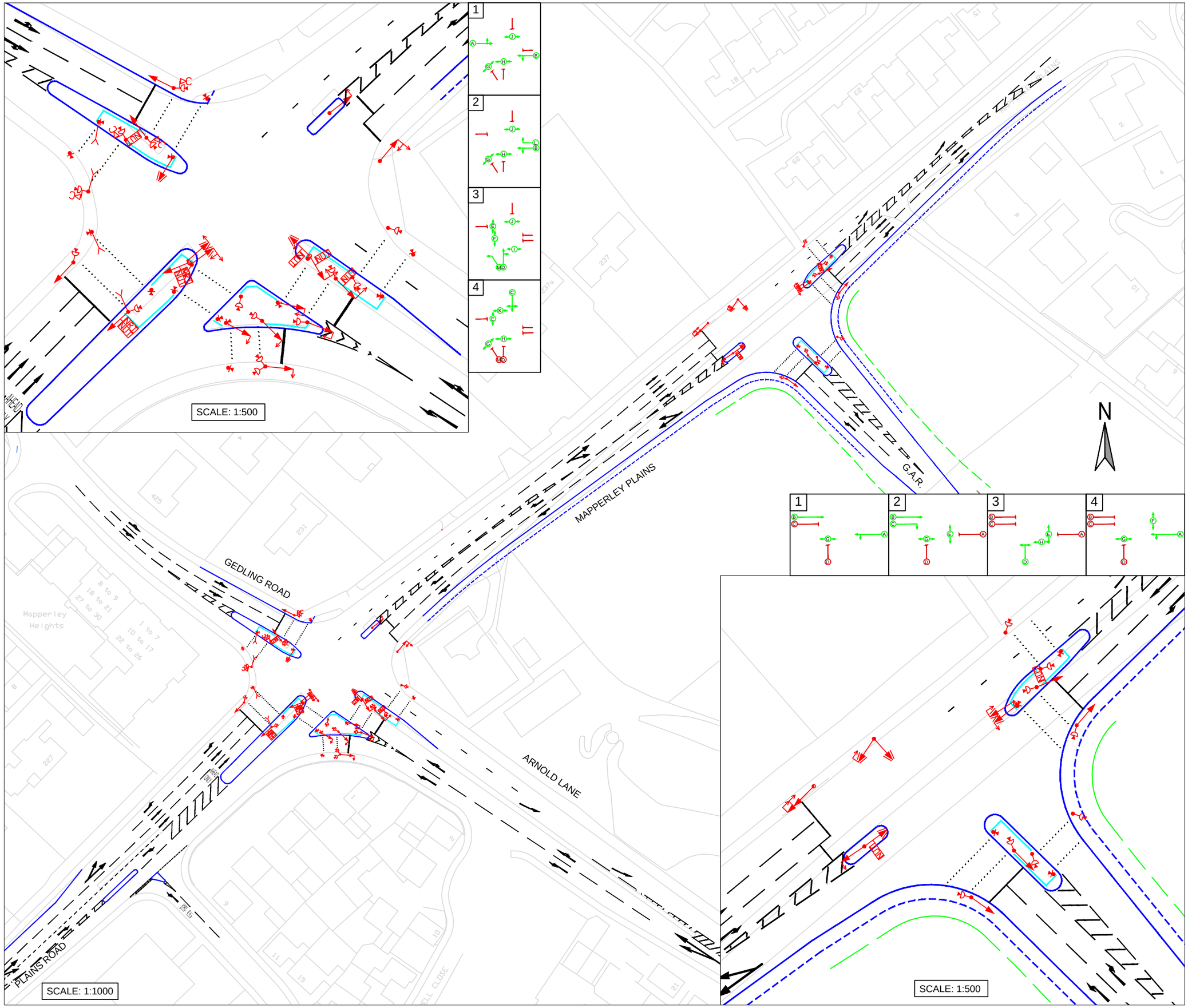


Proposed Gedling Access Road/Lambley Lane (North) Junctions:



Signal Controlled Junctions

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



N

KEY

PROPOSED KERBLINE

PROPOSED SIGNAL EQUIPMENT

REV	DESCRIPTION	BY	CHK	APP	DATE
B	PLAINS ROAD FILTER REMOVED	RB	SMM	AG	21-07-14
A	NEW R/T TOBAILEY DRIVE	RB	SMM	AG	16-07-14

EXECUTIVE PARK
AVALON WAY
ANSTEY
LEICESTER
LE7 7GR
TEL: +44 (0)116 234 8000
FAX: +44 (0)116 234 8001
e-mail: leicester@wyg.com

Project:

GEDLING ACCESS ROAD

Drawing Title:

GAR / MAPPERLEY PLAINS / ARNOLD LANE
SIGNAL JUNCTION LAYOUTS
PRELIMINARY DESIGN

Scale @ A3	Drawn	Date	Checked	Date	Approved	Date
SHOWN	RB	30-05-14	SMM	30-05-14	AG	30-05-14

Project No.	Office	Type	Drawing No.	Revision
A085361	35	18	002	B

FILENAME - N:\PROJECTS\A085361 - GEDLING COLLIERY ACCESS ROAD\ACAD\DWGS\A085361-35-18-002B PLAINS RD - ARNOLD LN - GAR.DWG | PLOTTED BY - RICHARD BISHOP | PLOTTED DATE - 21 July 2014 14:46:22

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

GEDLING ACCESS ROAD (GAR)

A612 NOTTINGHAM ROAD

A612 BURTON ROAD

246

GEDLING
MAJOR I
TRANSP
(GMITS)

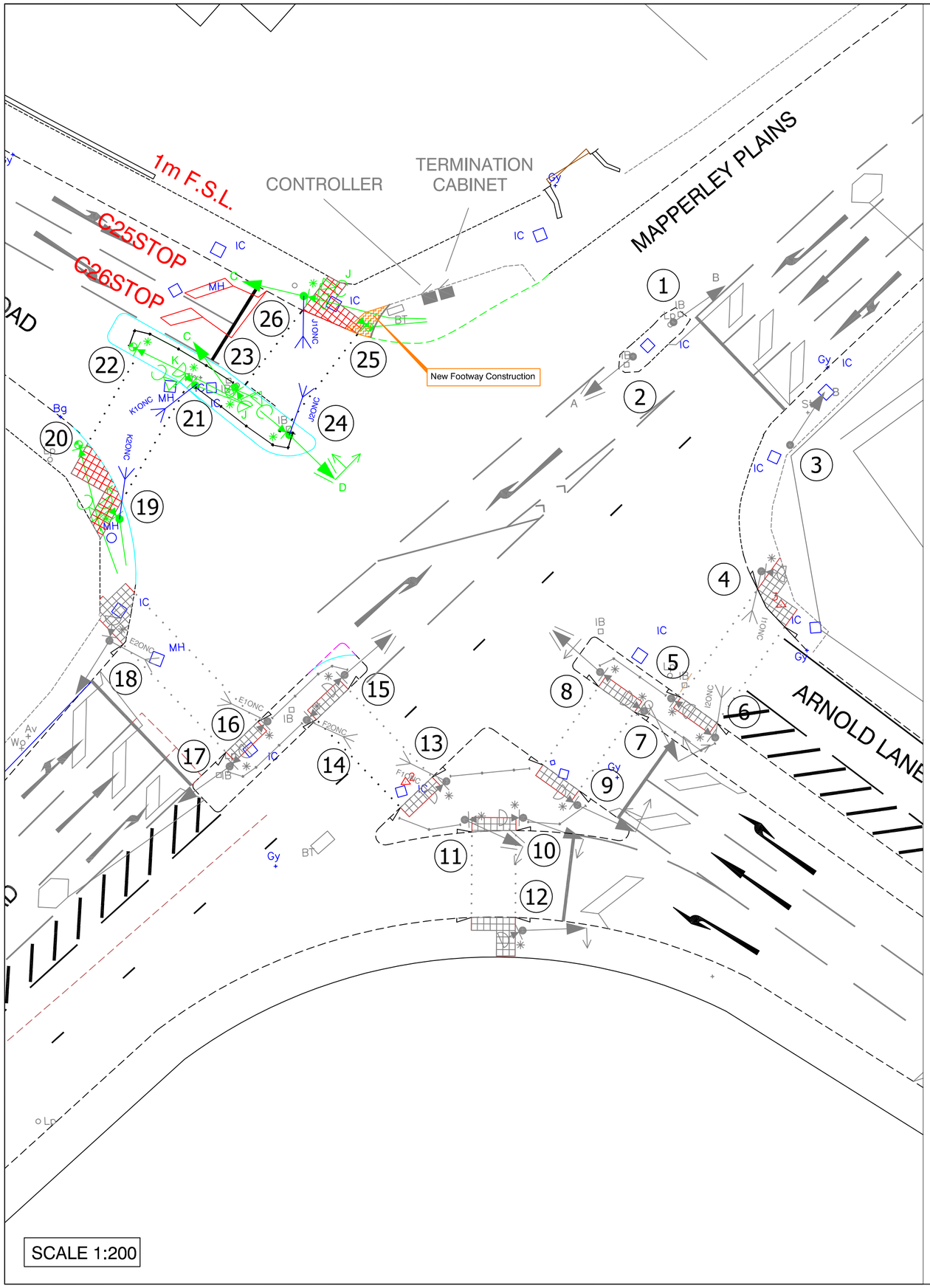
Homes & Communities Agency

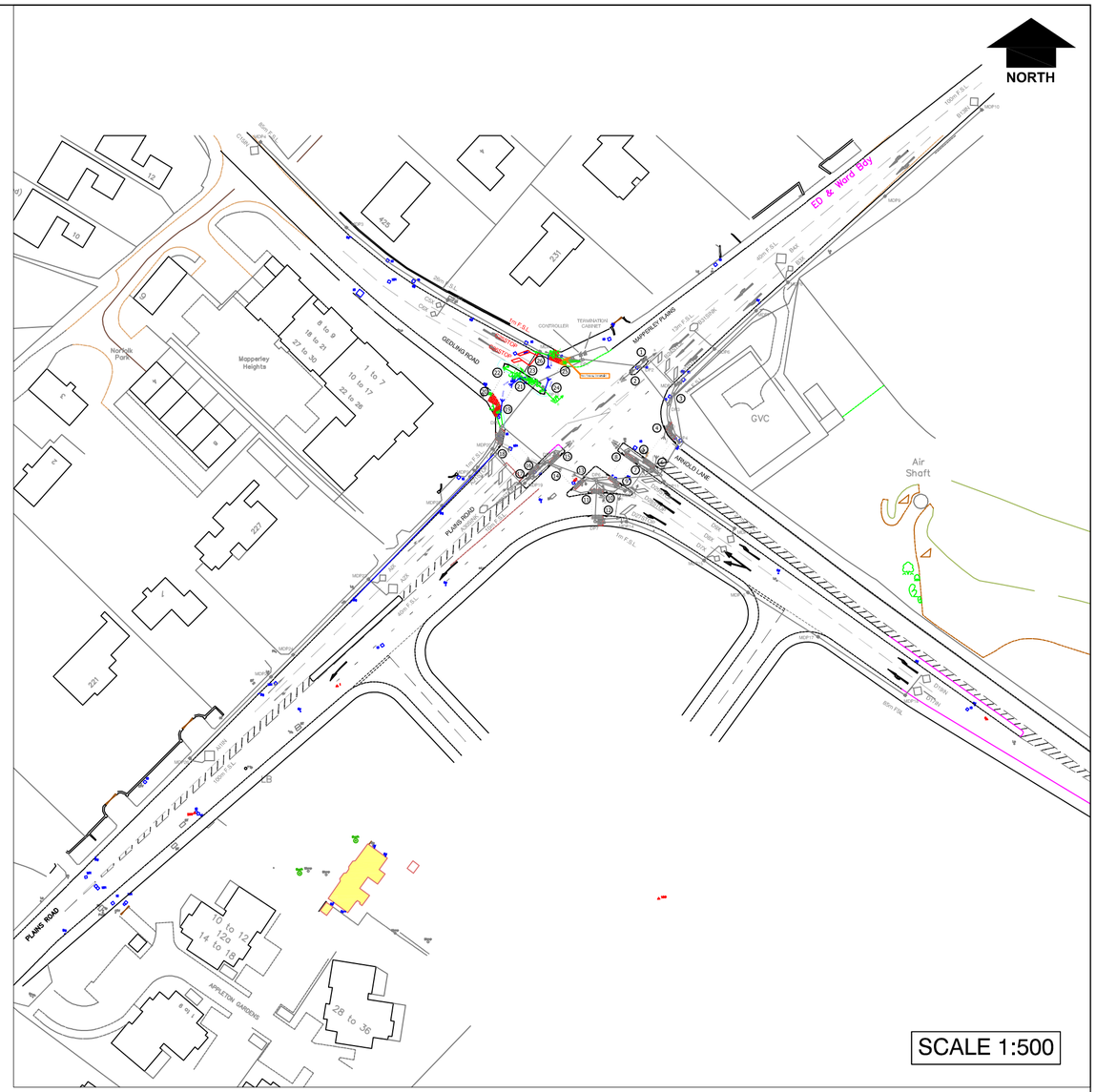
Project:
GEDLING ACCESS ROAD

Drawing Title:
INDICATIVE PROPOSED LAYOUT OF TRAFFIC SIGNALS AT JUNCTION OF WHITWORTH DRIVE WITH BURTON ROAD

Scale	Date	Drawing No.
1:250	July 2014	GAR14

Existing Junction Layouts





METHOD OF CONTROL

STAGE 1	STAGE 2	STAGE 3	STAGE 4
A, B, G, H, J	C, E, G, H, K	D, E, F, I, J	L
			REST ON RED PHASE L

Rev.	Description	Drawn	Chkd	Auth	Date
A	CYCLE CROSSING ADDED ACROSS GEDLING ROAD	VL	CPG	KJA	2-14

Project

PLAINS RD/ARNOLD LN/ GEDLING RD, ARNOLD

Property No. | Project No.

Title

SCN J13795

Scale	Drawn	Date
AS SHOWN	C. ASHTON	AUG 2009
	Chkd C. GOUGH	SEP 2009
	Auth K ALDRIDGE	Traced

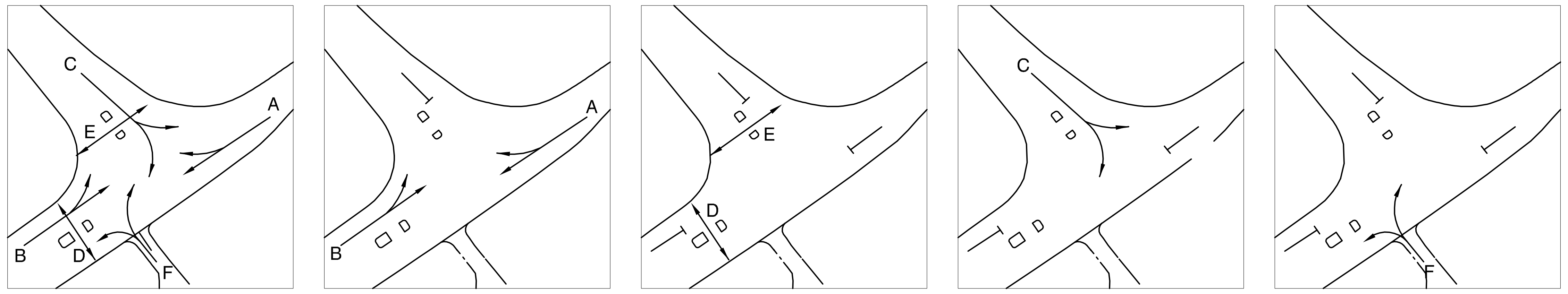
Drawing No. | Rev

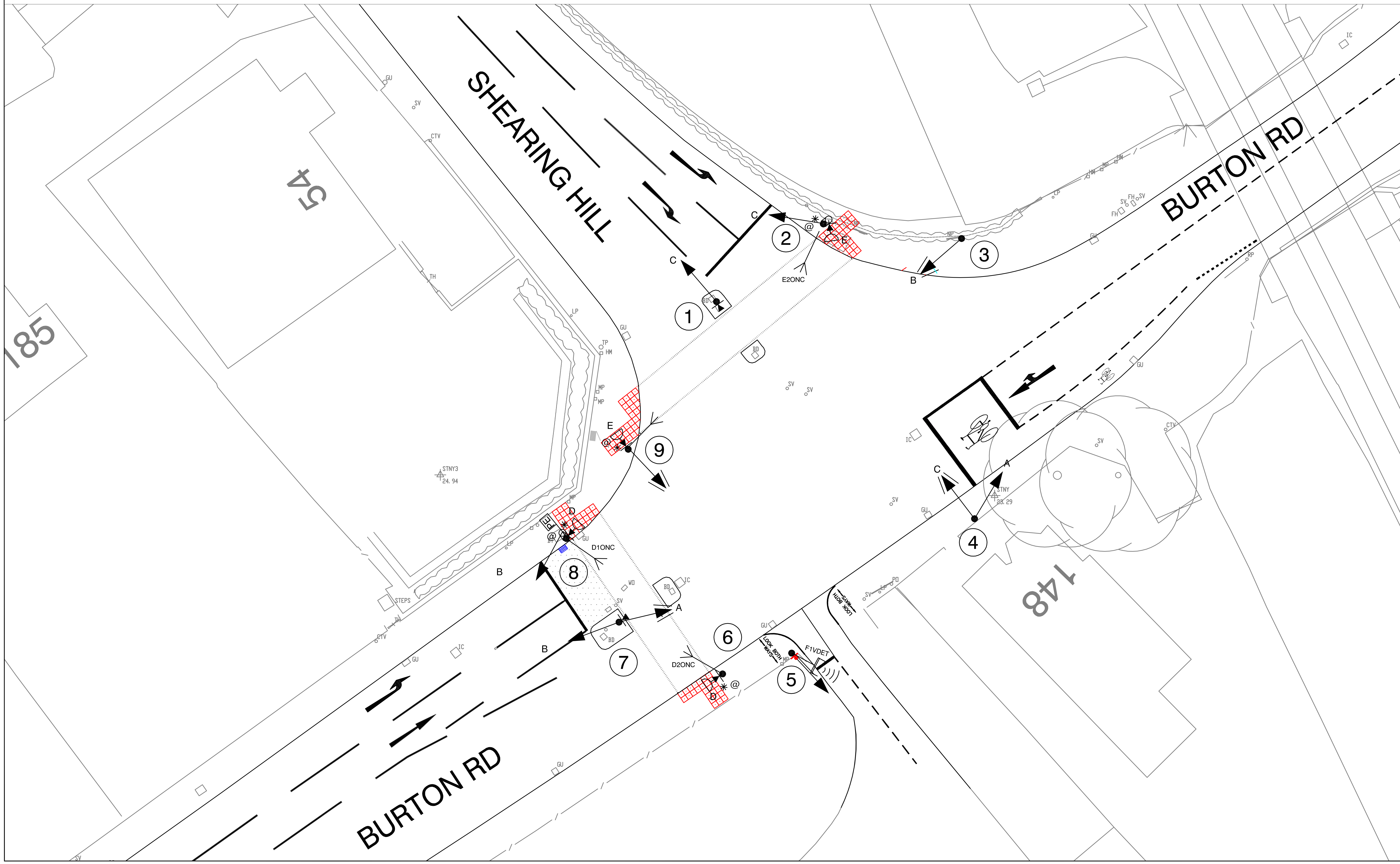
JH14664/03 A

Nottinghamshire County Council
Trent Bridge House, Fox Road,
West Bridgford, Nottingham, NG2 6BJ
Tel: 0300 500 80 80

A2

METHOD OF CONTROL





Rev Status	Description	Drawn	Ch'kd	Auth	Date

Project
BURTON ROAD / SHEARING HILL J14252

Property No. | Project No.

Title
TRAFFIC SIGNALS LAYOUT

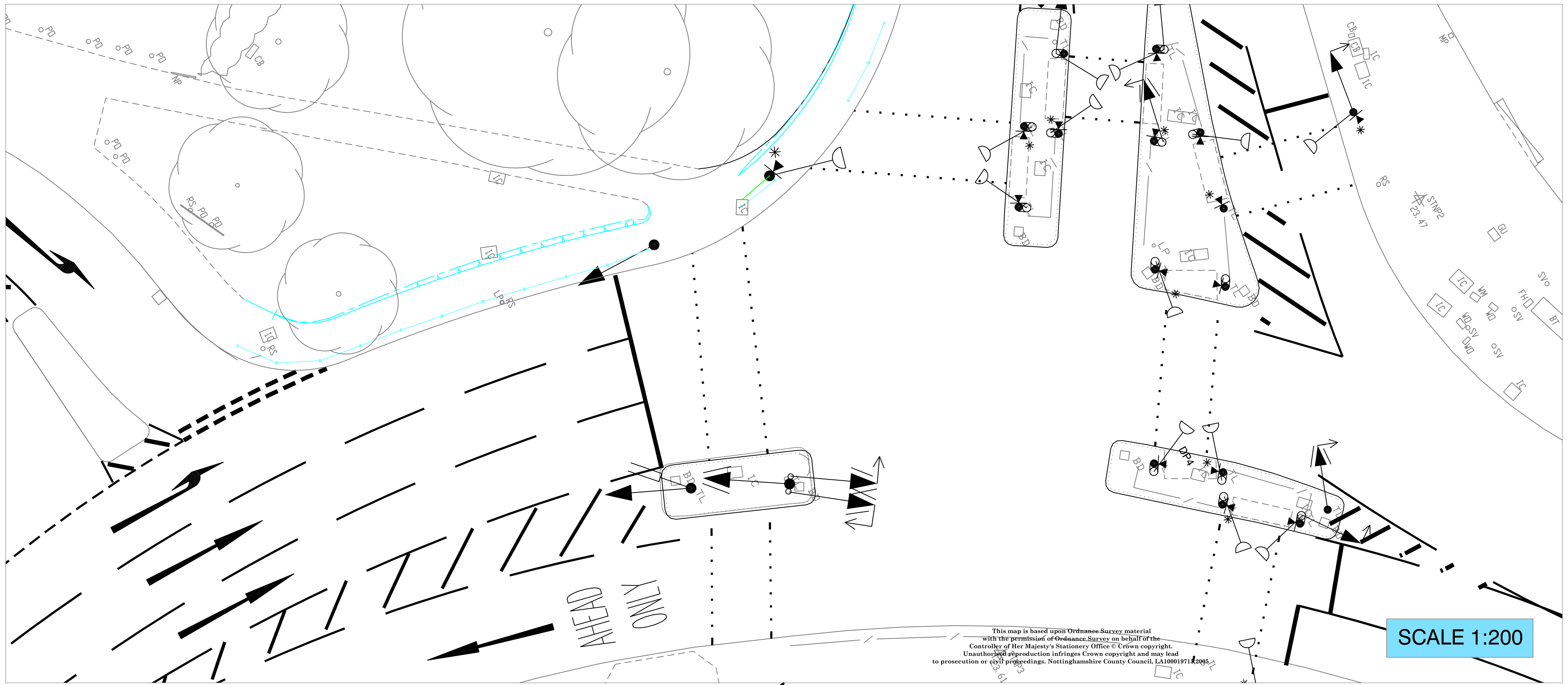
Scale	Drawn	C GOUGH	Date 11-5-09
1:200	Ch'kd	L R	Date 11-5-09
	Auth	KJA	Traced

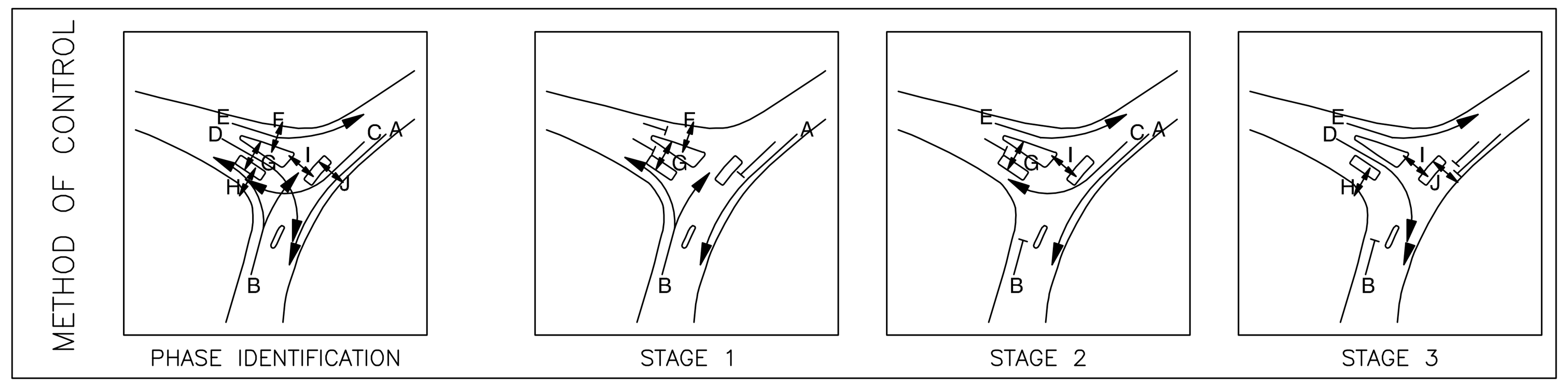
Drawing No. JH13130/10 Rev

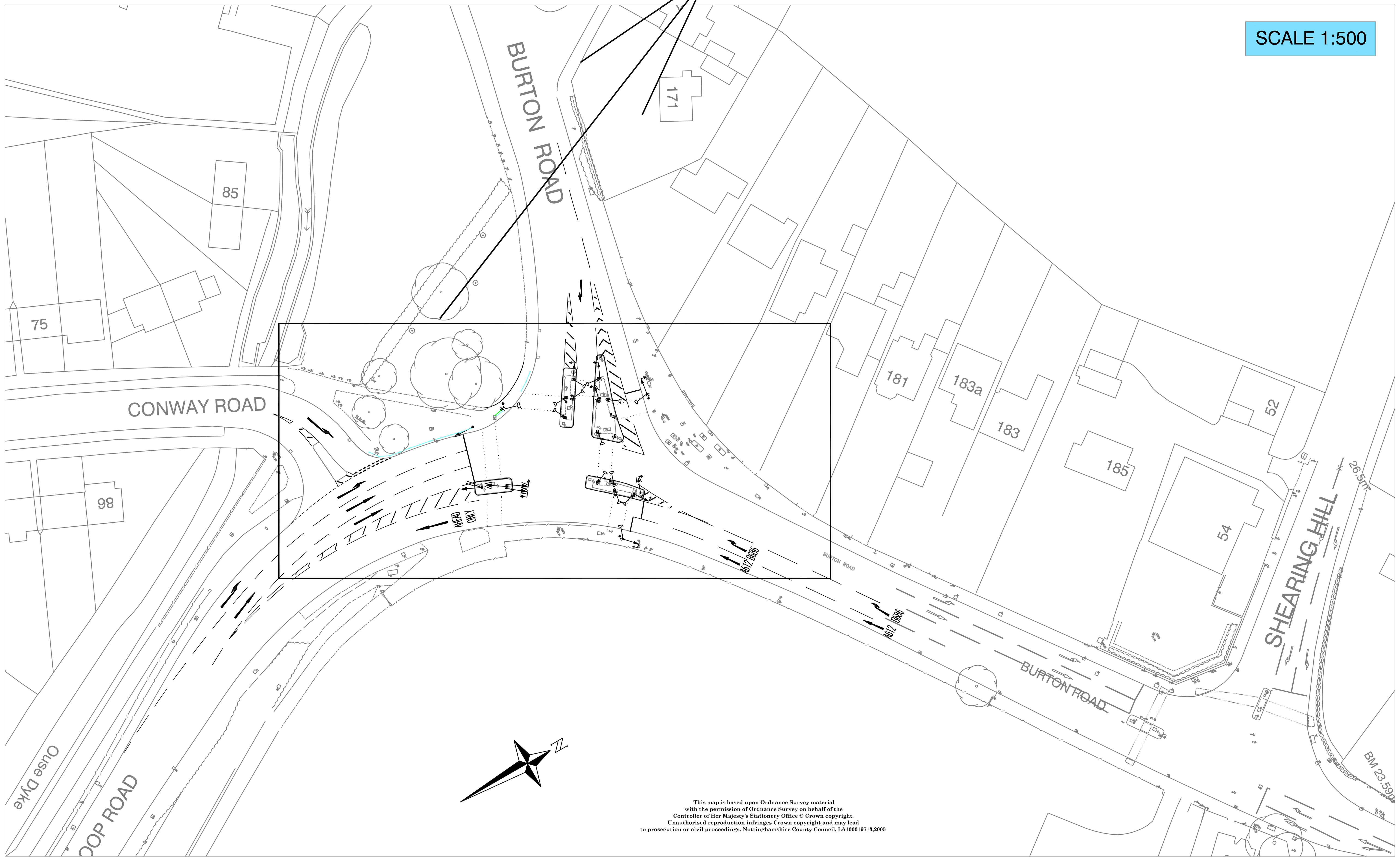
Nottinghamshire County Council
Communities
Corporate Director **Tim Malynn**
Trent Bridge House, Fox Road
West Bridgford, Nottingham NG2 6BJ
Tel: 0115 9823 823

A2

May 12,2009 - 12:31pm N:\Highways\Traffic\Traffic Eng Team\SCN\Gedling (13311-15391&40191-40201)\J14252 Burton Rd, Shearing Hill\CAD\Burton Road _ Shearing Hill scn.dwg







Rev Status	Description	Drawn	Ch'kd	Auth	Date

Project

A612 GEDLING TRANSPORT IMPROVEMENTS

Property No. | Project No. 09080

Title

BURTON ROAD / COLWICK LOOP ROAD JUNCTION (SCN J14241)

Scale			
AS SHOWN	Drawn: CHRIS GOUGH		Date: 08/2007
	Ch'kd: R ROTH		Date: 08/2007
	Auth: K ALDRIDGE	Traced	

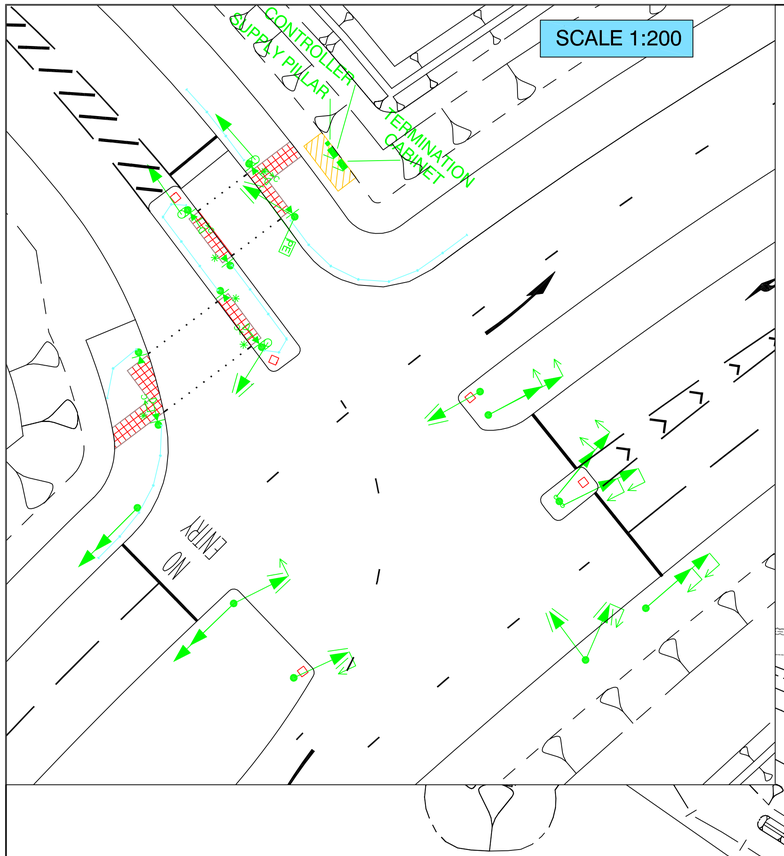
Drawing No. **EN/09080/233** Rev

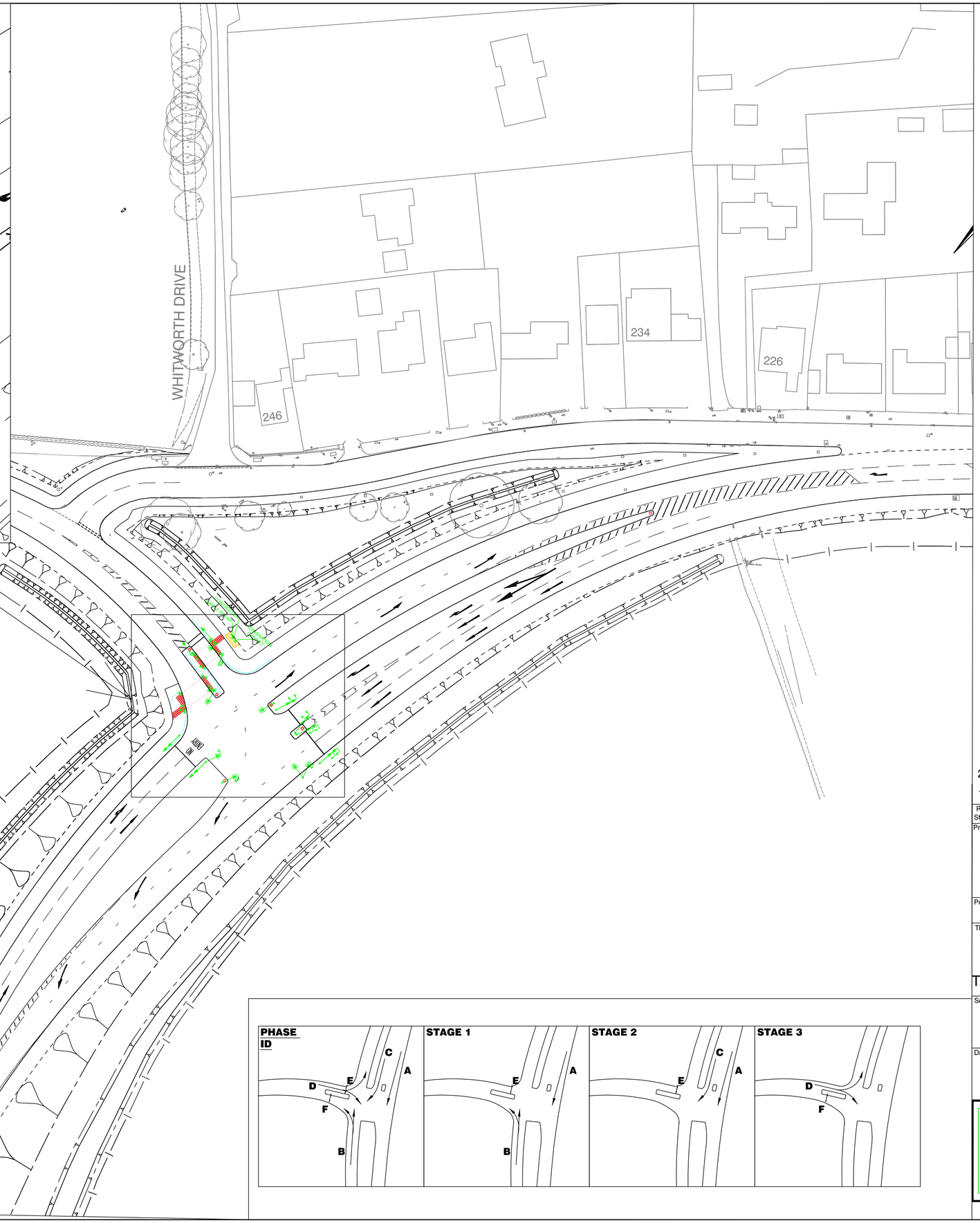
Nottinghamshire County Council
Environment
Director **Peter Webster**
Trent Bridge House, Fox Road
West Bridgford, Nottingham NG2 6BJ
Tel: 0115 9823 823

A1

Mar 31,2008 - 4:16pm N:\Highways\Traffic\Traffic Eng Team\SCN\Gedling (13311-15391&40191-40201)\J14241 Colwick Loop Rd, Burton Rd\CAD\J14241 COLWICK LOOP RD_BURTON RD GTI MODS.dwg

SCALE 1:200





SCALE 1:500

Rev Status	Description	Drawn	Ch'kd	Auth	Date
2	AS BUILT SCN LAYOUT	CPG	RR	KJA	08/07
1	MOVA IN LOOPS ADJUSTED.	CPG	RR	KJA	11/05

Project

A612 GEDLING TRANSPORT IMPROVEMENTS

Property No.	Project No.
	09080

Title

A612 / BURTON ROAD TRAFFIC SIGNAL JUNCTION TRAFFIC SIGNAL LAYOUT (J44293)

Scale	Drawn	Date
AS SHOWN	CPG	06/2005
	Ch'kd RR	Date 08/2005
	Auth K ALDRIDGE	Traced

Drawing No. EN/09080/228 Rev 2

Nottinghamshire
County Council
Environment
Director **Peter Webster**
Trent Bridge House, Fox Road
West Bridgford, Nottingham NG2 6BJ
Tel: 0115 9823 823

A1

Traffic Capacity Assessments

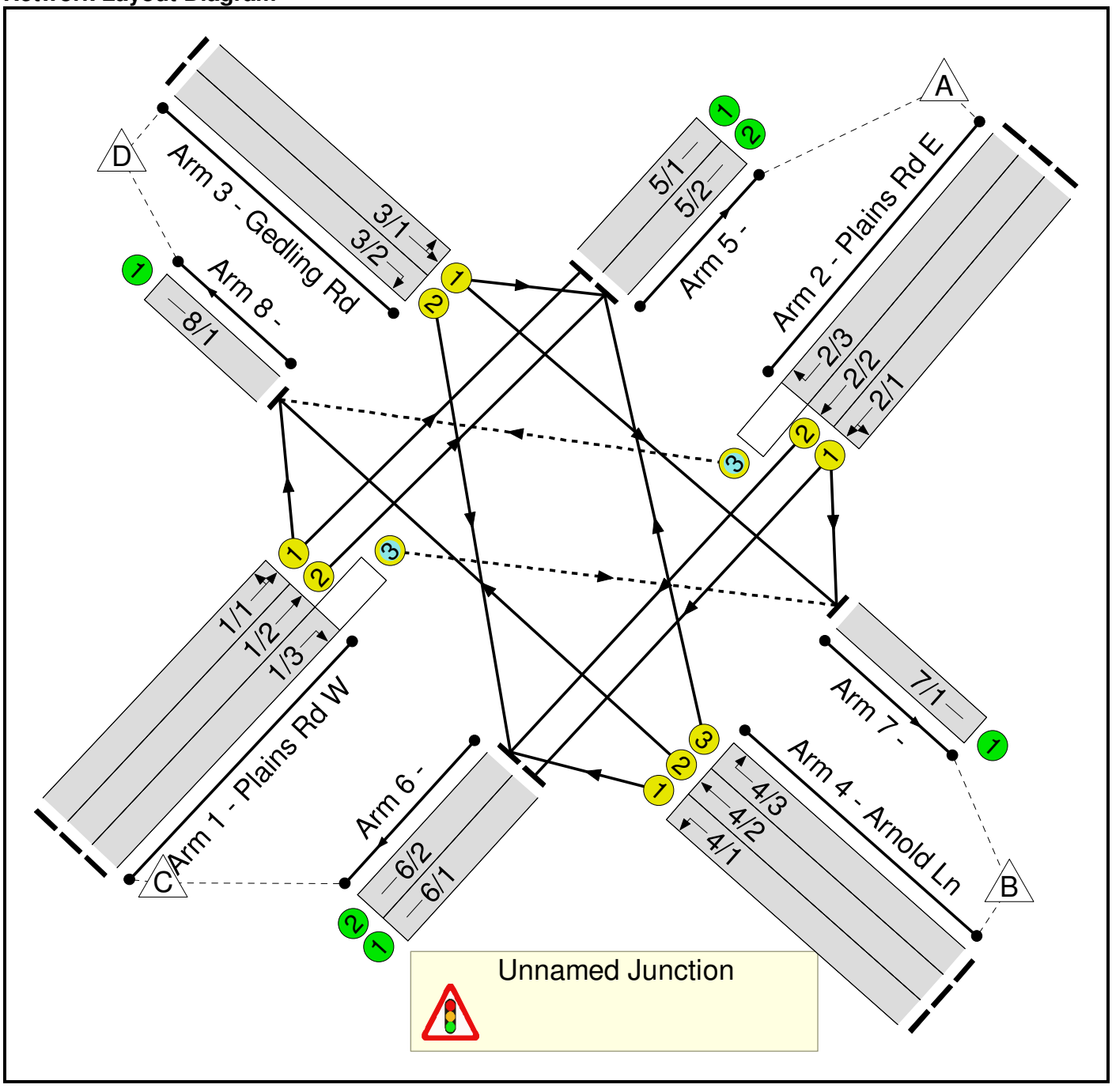
Linsig Assessments

Full Input Data And Results

User and Project Details

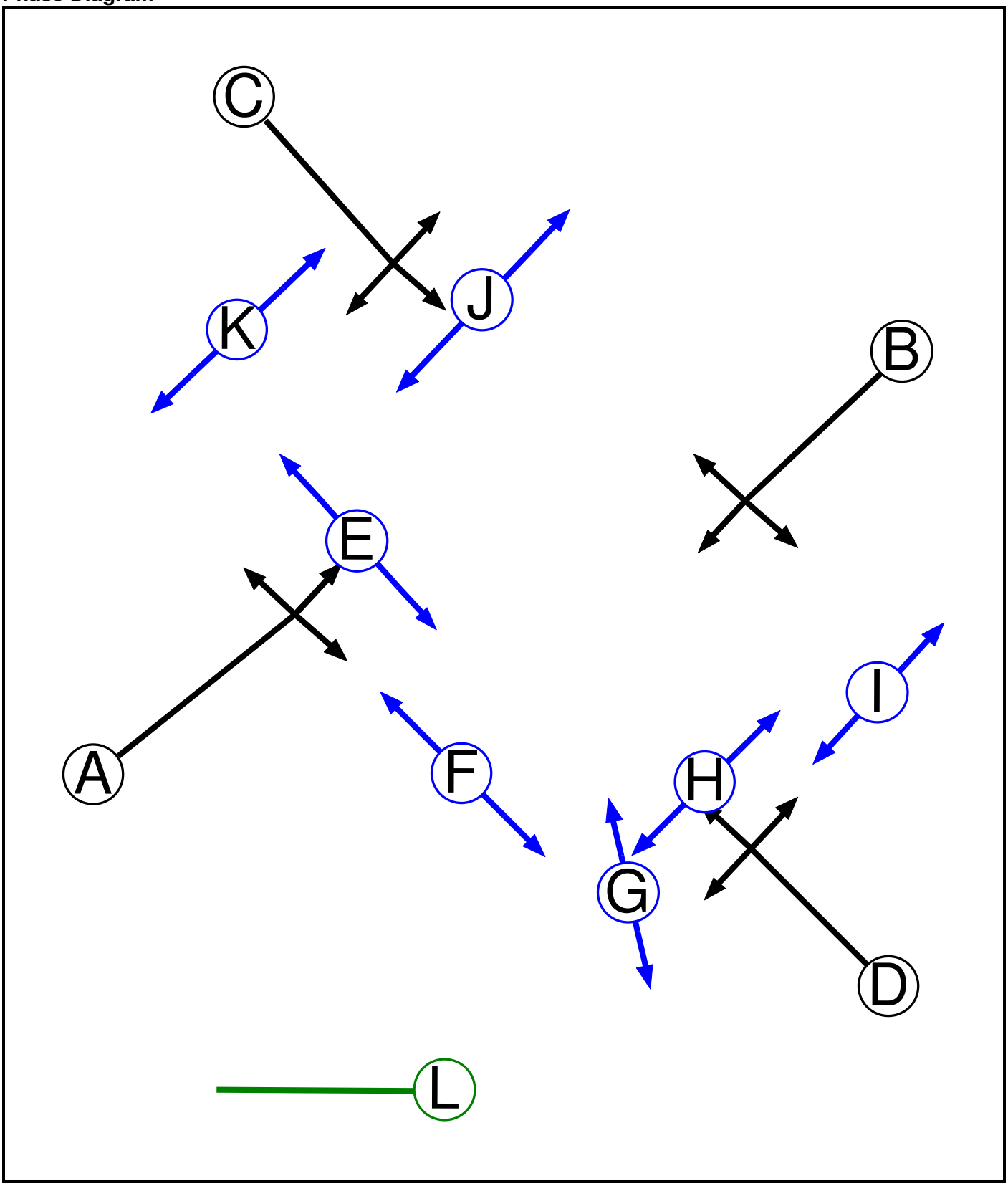
Project:	**A085361**
Title:	**Mapperley Plains / Arnold Lane**
Location:	
File name:	Plains Rd_Arnold Ln cycle crossing.lsg3x
Author:	
Company:	
Address:	
Notes:	Existign Layout - model from NCC. Gradients steepened for RR67 calcs following comments from C Gough.

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

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
I	Pedestrian		5	5
J	Pedestrian		5	5
K	Pedestrian		5	5
L	Dummy R/A		5	5

Phase Intergreens Matrix

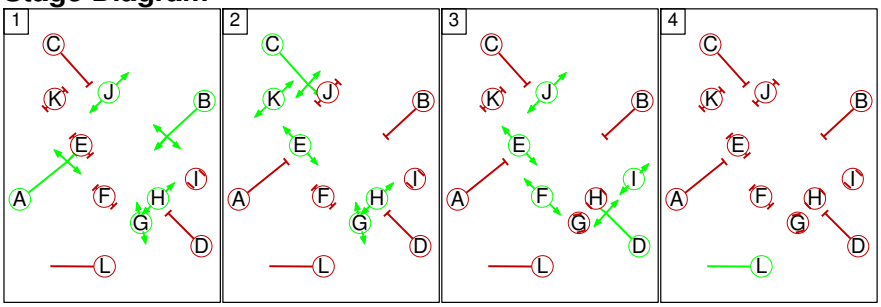
		Starting Phase											
		A	B	C	D	E	F	G	H	I	J	K	L
Terminating Phase	A		-	8	9	7	10	-	-	9	-	7	3
	B	-		8	9	7	10	-	-	9	-	9	3
	C	7	7		8	-	9	-	-	9	5	-	3
	D	7	7	7		-	-	5	5	-	-	9	3
	E	4	4	-	-		-	-	-	-	-	-	4
	F	4	4	4	-	-		-	-	-	-	-	4
	G	-	-	-	7	-	-		-	-	-	-	3
	H	-	-	-	7	-	-	-		-	-	-	3
	I	4	4	4	-	-	-	-	-		-	-	4
	J	-	-	4	-	-	-	-	-	-		-	4
	K	4	4	-	4	-	-	-	-	-	-		4
	L	2	2	2	2	2	2	2	2	2	2	2	

Phases in Stage

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

Full Input Data And Results

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	G	Losing	2	2
1	3	H	Losing	2	2
2	3	G	Losing	1	1
2	3	H	Losing	1	1

Prohibited Stage Change

From Stage	To Stage 1	2	3	4
1		9	10	4
2	7		9	4
3	7	9		4
4	2	2	2	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Unnamed 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)
1/3 (Plains Rd W)	7/1 (Right)	1440	0	2/1	1.09	All	3.00	-	0.50	3	3.00
				2/2	1.09	All					
2/3 (Plains Rd E)	8/1 (Right)	1440	0	1/1	1.09	All	3.00	-	0.50	3	3.00
				1/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Unnamed 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 (Plains Rd W)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
											Arm 8 Left	15.00
1/2 (Plains Rd W)	U	A	2	3	60.0	Geom	-	3.00	0.00	N	Arm 5 Ahead	Inf
1/3 (Plains Rd W)	O	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 7 Right	20.00
2/1 (Plains Rd E)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 6 Ahead	Inf
											Arm 7 Left	15.00
2/2 (Plains Rd E)	U	B	2	3	60.0	Geom	-	3.00	0.00	N	Arm 6 Ahead	Inf
2/3 (Plains Rd E)	O	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 8 Right	20.00
3/1 (Gedling Rd)	U	C	2	3	60.0	Geom	-	2.60	8.00	Y	Arm 5 Left	15.00
											Arm 7 Ahead	Inf
3/2 (Gedling Rd)	U	C	2	3	60.0	Geom	-	2.60	8.00	Y	Arm 6 Right	20.00
4/1 (Arnold Ln)	U	D	2	3	60.0	Geom	-	3.00	10.00	Y	Arm 6 Left	25.00
4/2 (Arnold Ln)	U	D	2	3	60.0	Geom	-	3.00	10.00	Y	Arm 8 Ahead	Inf
4/3 (Arnold Ln)	U	D	2	3	60.0	Geom	-	3.00	10.00	Y	Arm 5 Right	20.00
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak 2008'	08:00	09:00	01:00	
2: 'AM Peak 2022'	08:00	09:00	01:00	
3: 'PM Peak 2008'	16:30	17:30	01:00	
4: 'PM Peak 2022'	16:30	17:30	01:00	
5: 'AM Peak 2022 Design Flows from SW'	08:00	09:00	01:00	
6: 'PM Peak 2022 Design Flows from SW'	16:30	17:30	01:00	
7: 'AM Peak 2013'	08:00	09:00	01:00	F1*1.057
8: 'PM Peak 2013'	16:00	17:00	01:00	F3*1.086
9: 'AM 2028 Reference Test C'	08:00	09:00	01:00	
10: 'PM 2028 Reference Test C'	17:00	18:00	01:00	

Scenario 1: 'AM 2028 Reference Test C' (FG9: 'AM 2028 Reference Test C', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	302	569	110	981
	B	397	0	32	467	896
	C	779	4	0	157	940
	D	48	421	62	0	531
	Tot.	1224	727	663	734	3348

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM 2028 Reference Test C
Junction: Unnamed Junction	
1/1	443
1/2	493
1/3	4
2/1	404
2/2	467
2/3	110
3/1	469
3/2	62
4/1	32
4/2	467
4/3	397
5/1	286
5/2	938
6/1	102
6/2	561
7/1	727
8/1	734

Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed 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 (Plains Rd W)	3.00	0.00	Y	Arm 5 Ahead	Inf	64.6 %	1849	1849
				Arm 8 Left	15.00	35.4 %		
1/2 (Plains Rd W)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
1/3 (Plains Rd W)	3.00	0.00	Y	Arm 7 Right	20.00	100.0 %	1781	1781
2/1 (Plains Rd E)	3.00	0.00	Y	Arm 6 Ahead	Inf	25.2 %	1782	1782
				Arm 7 Left	15.00	74.8 %		
2/2 (Plains Rd E)	3.00	0.00	N	Arm 6 Ahead	Inf	100.0 %	2055	2055
2/3 (Plains Rd E)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
3/1 (Gedling Rd)	2.60	8.00	Y	Arm 5 Left	15.00	10.2 %	1523	1523
				Arm 7 Ahead	Inf	89.8 %		
3/2 (Gedling Rd)	2.60	8.00	Y	Arm 6 Right	20.00	100.0 %	1432	1432
4/1 (Arnold Ln)	3.00	10.00	Y	Arm 6 Left	25.00	100.0 %	1410	1410
4/2 (Arnold Ln)	3.00	10.00	Y	Arm 8 Ahead	Inf	100.0 %	1495	1495
4/3 (Arnold Ln)	3.00	10.00	Y	Arm 5 Right	20.00	100.0 %	1391	1391
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM 2028 Reference Test C' (FG10: 'PM 2028 Reference Test C', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	292	315	58	665
	B	277	0	16	327	620
	C	919	40	0	606	1565
	D	42	416	101	0	559
	Tot.	1238	748	432	991	3409

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM 2028 Reference Test C
Junction: Unnamed Junction	
1/1	704
1/2	821
1/3	40
2/1	292
2/2	315
2/3	58
3/1	458
3/2	101
4/1	16
4/2	327
4/3	277
5/1	98
5/2	1140
6/1	0
6/2	432
7/1	748
8/1	991

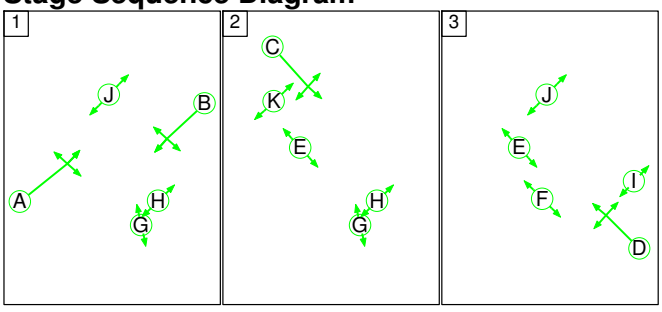
Full Input Data And Results

Lane Saturation Flows

Junction: Unnamed 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 (Plains Rd W)	3.00	0.00	Y	Arm 5 Ahead	Inf	13.9 %	1763	1763
				Arm 8 Left	15.00	86.1 %		
1/2 (Plains Rd W)	3.00	0.00	N	Arm 5 Ahead	Inf	100.0 %	2055	2055
1/3 (Plains Rd W)	3.00	0.00	Y	Arm 7 Right	20.00	100.0 %	1781	1781
2/1 (Plains Rd E)	3.00	0.00	Y	Arm 6 Ahead	Inf	0.0 %	1741	1741
				Arm 7 Left	15.00	100.0 %		
2/2 (Plains Rd E)	3.00	0.00	N	Arm 6 Ahead	Inf	100.0 %	2055	2055
2/3 (Plains Rd E)	3.00	0.00	Y	Arm 8 Right	20.00	100.0 %	1781	1781
3/1 (Gedling Rd)	2.60	8.00	Y	Arm 5 Left	15.00	9.2 %	1525	1525
				Arm 7 Ahead	Inf	90.8 %		
3/2 (Gedling Rd)	2.60	8.00	Y	Arm 6 Right	20.00	100.0 %	1432	1432
4/1 (Arnold Ln)	3.00	10.00	Y	Arm 6 Left	25.00	100.0 %	1410	1410
4/2 (Arnold Ln)	3.00	10.00	Y	Arm 8 Ahead	Inf	100.0 %	1495	1495
4/3 (Arnold Ln)	3.00	10.00	Y	Arm 5 Right	20.00	100.0 %	1391	1391
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM 2028 Reference Test C' (FG9: 'AM 2028 Reference Test C', Plan 1: 'Staging Plan No. 1')

Stage Sequence Diagram

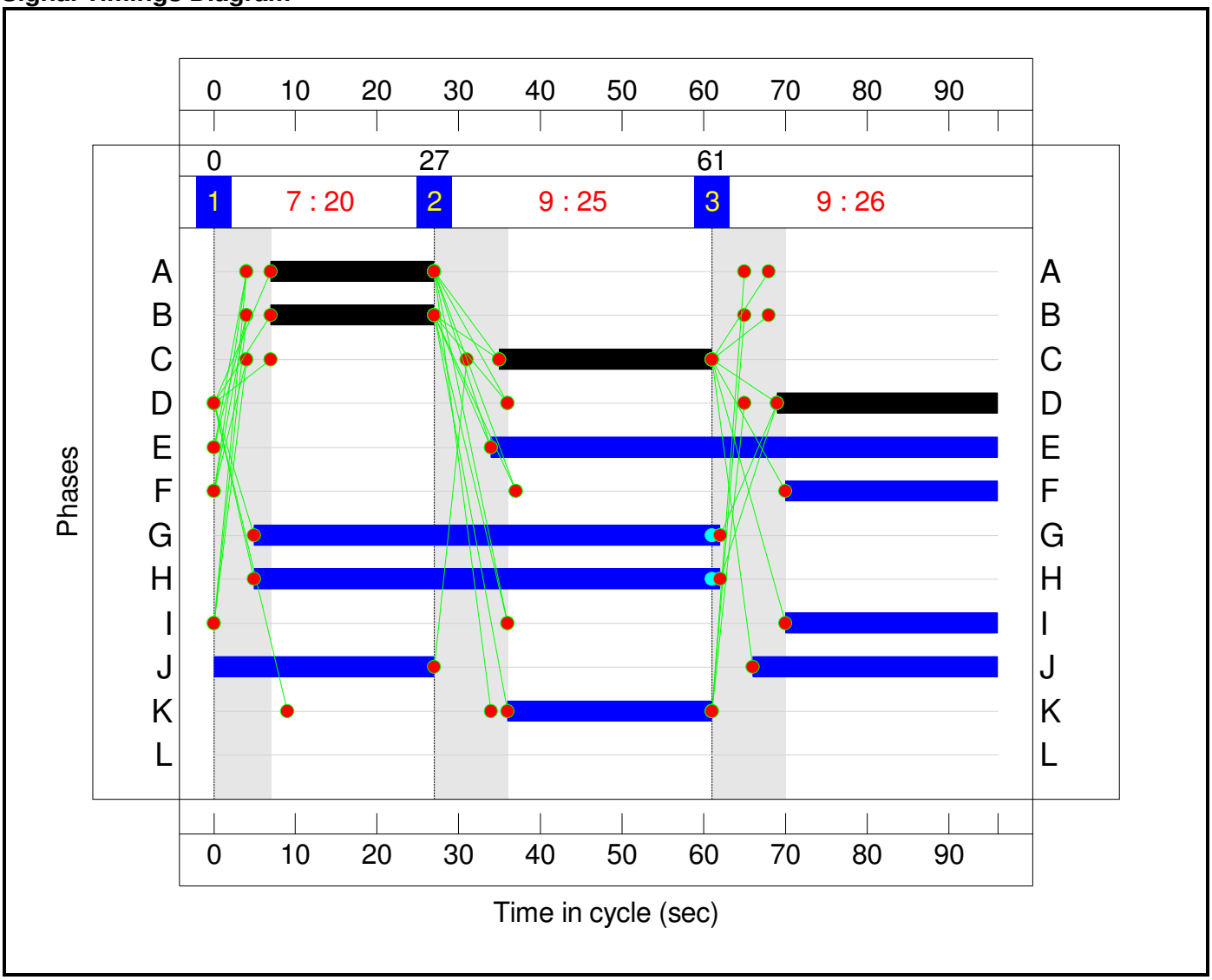


Full Input Data And Results

Stage Timings

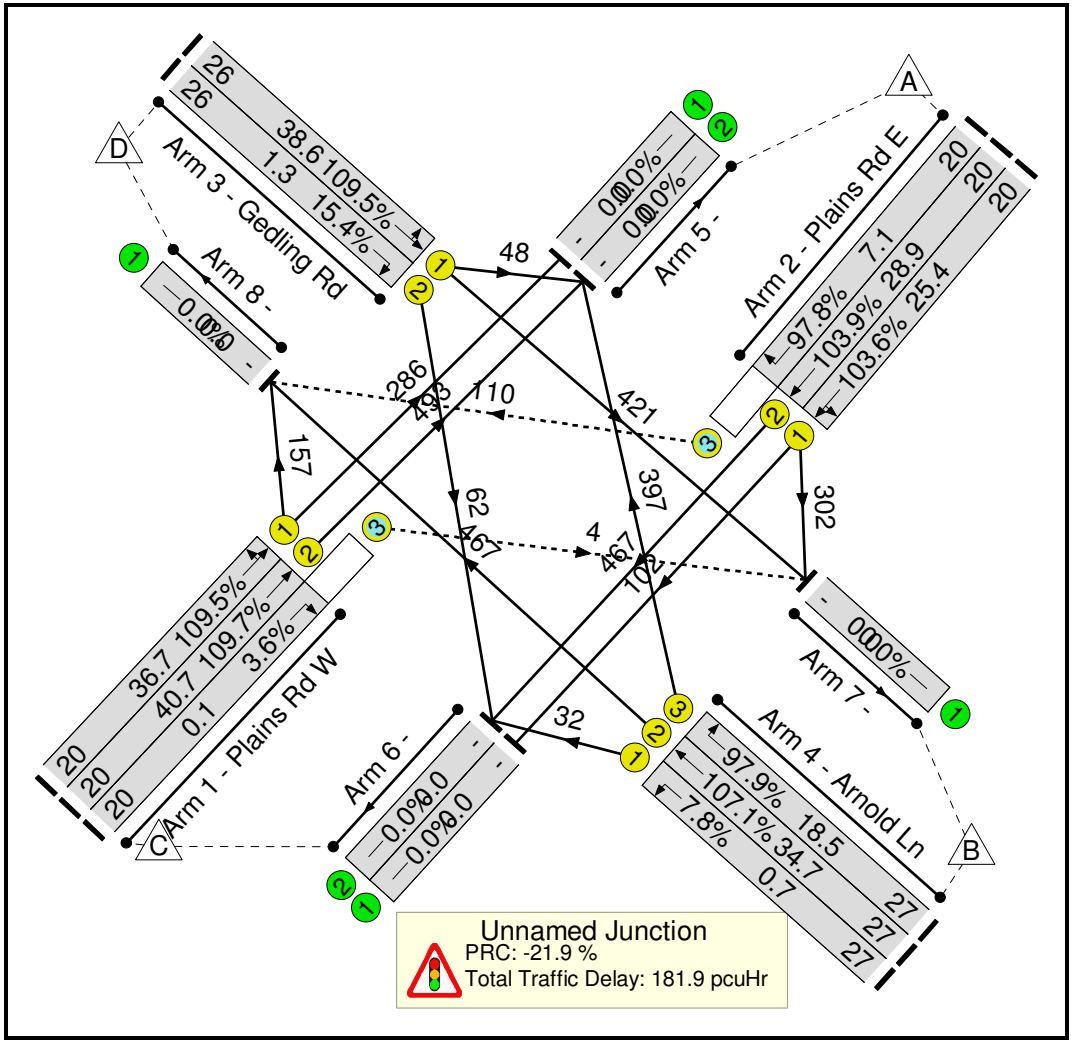
Stage	1	2	3
Duration	20	25	26
Change Point	0	27	61

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Mapperley Plains / Arnold Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**109.7%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**109.7%**
1/1	Plains Rd W Ahead Left	U	N/A	N/A	A		1	20	-	443	1849	404	109.5%
1/2	Plains Rd W Ahead	U	N/A	N/A	A		1	20	-	493	2055	450	109.7%
1/3	Plains Rd W Right	O	N/A	N/A	A		1	20	-	4	1781	113	3.6%
2/1	Plains Rd E Ahead Left	U	N/A	N/A	B		1	20	-	404	1782	390	103.6%
2/2	Plains Rd E Ahead	U	N/A	N/A	B		1	20	-	467	2055	450	103.9%
2/3	Plains Rd E Right	O	N/A	N/A	B		1	20	-	110	1781	113	97.8%
3/1	Gedling Rd Left Ahead	U	N/A	N/A	C		1	26	-	469	1523	428	109.5%
3/2	Gedling Rd Right	U	N/A	N/A	C		1	26	-	62	1432	403	15.4%
4/1	Arnold Ln Left	U	N/A	N/A	D		1	27	-	32	1410	411	7.8%
4/2	Arnold Ln Ahead	U	N/A	N/A	D		1	27	-	467	1495	436	107.1%
4/3	Arnold Ln Right	U	N/A	N/A	D		1	27	-	397	1391	406	97.9%
5/1		U	N/A	N/A	-		-	-	-	286	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	938	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	102	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	561	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	727	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	734	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Mapperley Plains / Arnold Lane	**-**	**-**	**0**	**0**	**114**	**41.9**	**139.4**	**0.6**	**181.9**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**0**	**0**	**114**	**41.9**	**139.4**	**0.6**	**181.9**	**-**	**-**	**-**	**-**
1/1	443	404	-	-	-	6.5	23.9	-	30.4	246.8	12.8	23.9	36.7
1/2	493	450	-	-	-	7.2	26.4	-	33.6	245.6	14.3	26.4	40.7
1/3	4	4	0	0	4	0.0	0.0	0.0	0.1	64.1	0.1	0.0	0.1
2/1	404	390	-	-	-	4.9	14.2	-	19.1	170.1	11.2	14.2	25.4
2/2	467	450	-	-	-	5.7	16.0	-	21.7	167.5	12.9	16.0	28.9
2/3	110	110	0	0	110	1.0	4.7	0.6	6.2	202.4	2.4	4.7	7.1
3/1	469	428	-	-	-	6.1	25.0	-	31.1	238.8	13.6	25.0	38.6
3/2	62	62	-	-	-	0.4	0.1	-	0.5	31.2	1.2	0.1	1.3
4/1	32	32	-	-	-	0.2	0.0	-	0.3	29.4	0.6	0.0	0.7
4/2	467	436	-	-	-	6.2	21.0	-	27.2	209.6	13.7	21.0	34.7
4/3	397	397	-	-	-	3.7	8.0	-	11.7	106.4	10.5	8.0	18.5
5/1	261	261	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	890	890	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	98	98	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	544	544	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	680	680	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	689	689	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

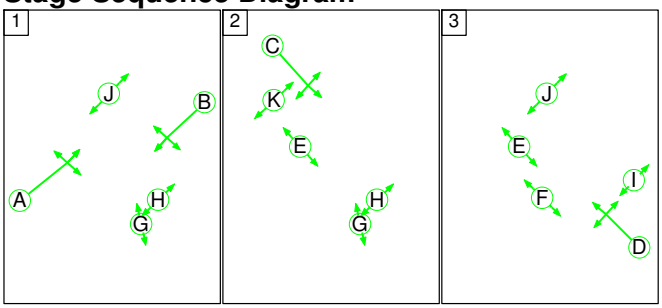
C1 PRC for Signalled Lanes (%): -21.9 Total Delay for Signalled Lanes (pcuHr): 181.91 Cycle Time (s): 96

PRC Over All Lanes (%): -21.9 Total Delay Over All Lanes(pcuHr): 181.91

Full Input Data And Results

Scenario 2: 'PM 2028 Reference Test C' (FG10: 'PM 2028 Reference Test C', Plan 1: 'Staging Plan No. 1')

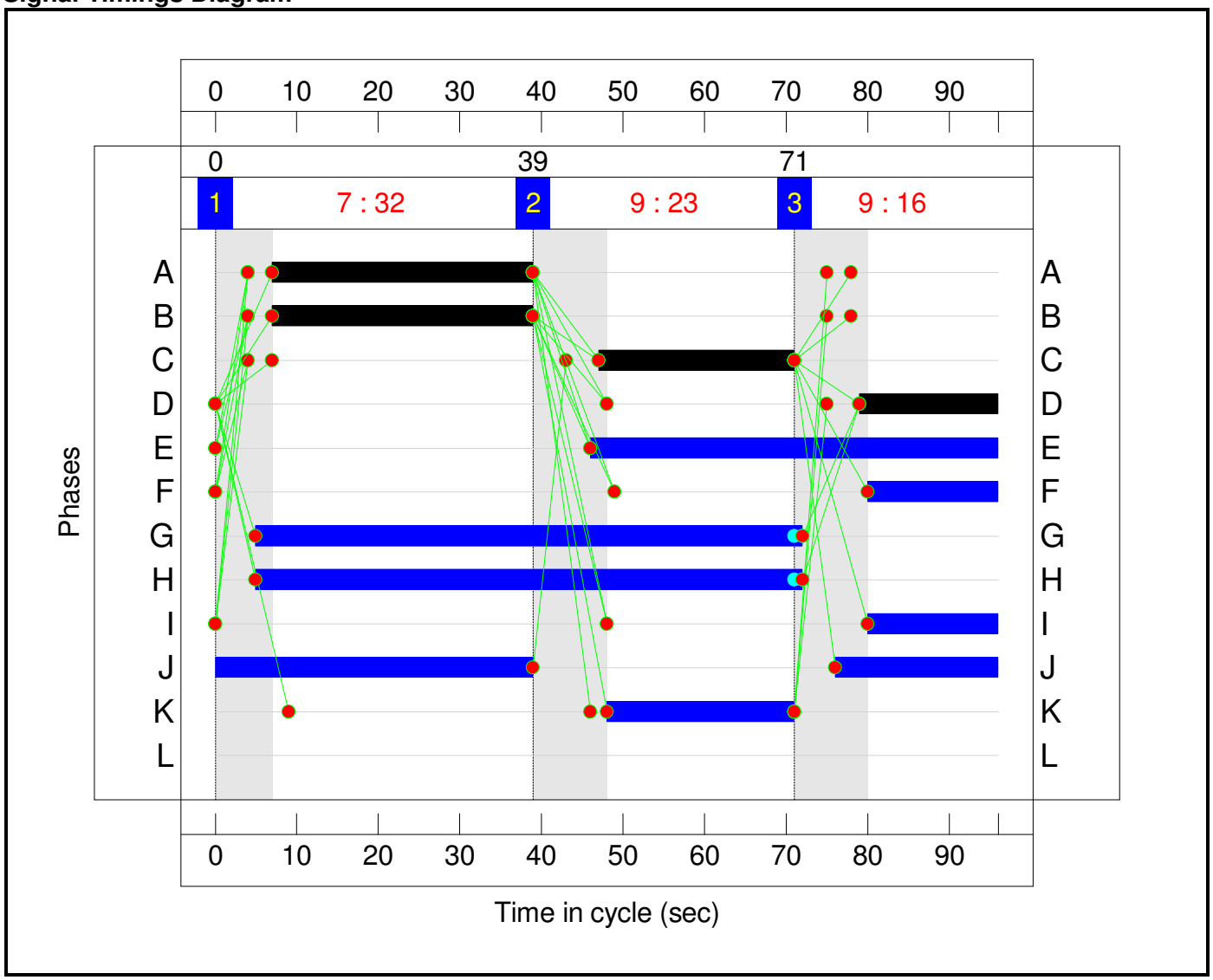
Stage Sequence Diagram



Stage Timings

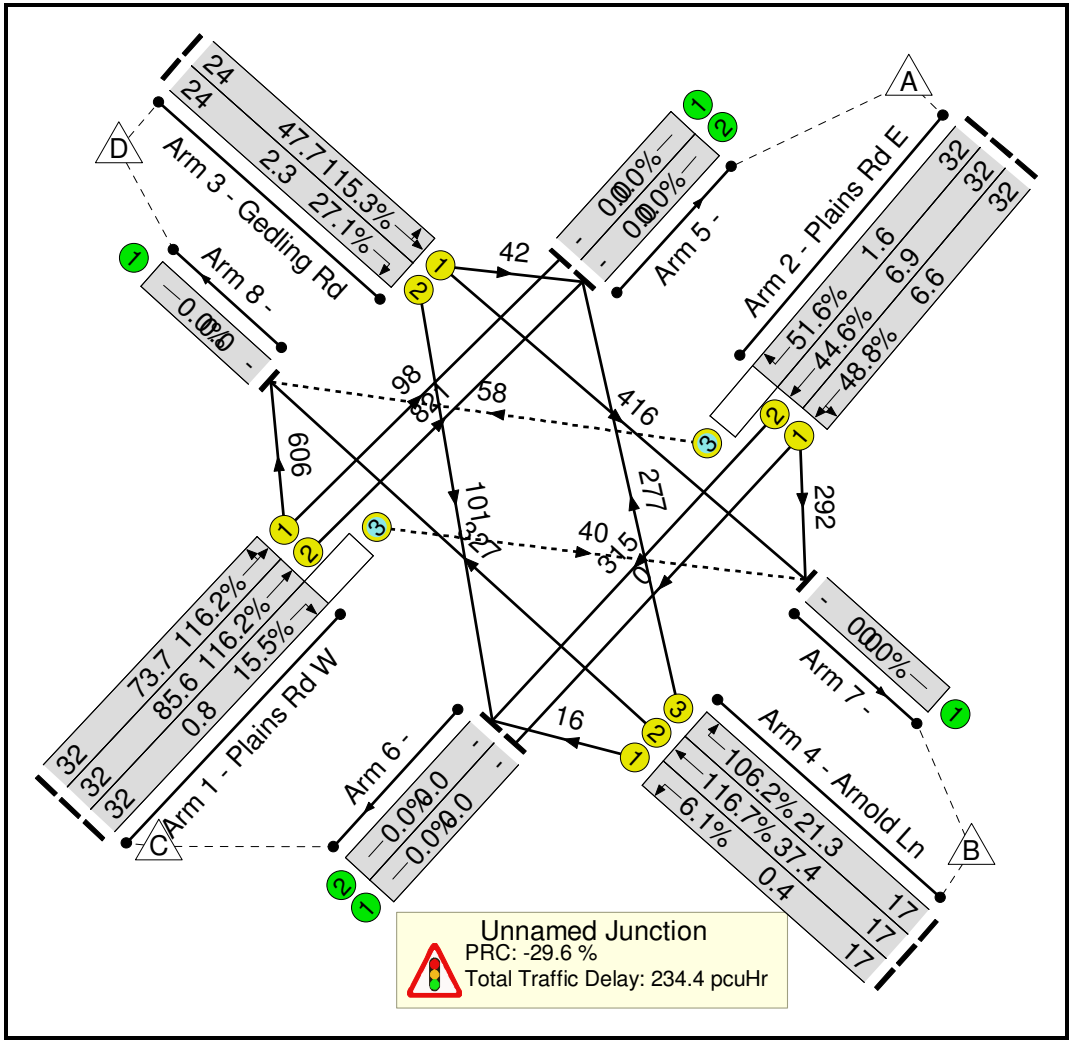
Stage	1	2	3
Duration	32	23	16
Change Point	0	39	71

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Mapperley Plains / Arnold Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.7%**
Unnamed Junction	-	-	**N/A**	-	-		-	-	-	-	-	-	**116.7%**
1/1	Plains Rd W Ahead Left	U	N/A	N/A	A		1	32	-	704	1763	606	116.2%
1/2	Plains Rd W Ahead	U	N/A	N/A	A		1	32	-	821	2055	706	116.2%
1/3	Plains Rd W Right	O	N/A	N/A	A		1	32	-	40	1781	258	15.5%
2/1	Plains Rd E Ahead Left	U	N/A	N/A	B		1	32	-	292	1741	598	48.8%
2/2	Plains Rd E Ahead	U	N/A	N/A	B		1	32	-	315	2055	706	44.6%
2/3	Plains Rd E Right	O	N/A	N/A	B		1	32	-	58	1781	113	51.6%
3/1	Gedling Rd Left Ahead	U	N/A	N/A	C		1	24	-	458	1525	397	115.3%
3/2	Gedling Rd Right	U	N/A	N/A	C		1	24	-	101	1432	373	27.1%
4/1	Arnold Ln Left	U	N/A	N/A	D		1	17	-	16	1410	264	6.1%
4/2	Arnold Ln Ahead	U	N/A	N/A	D		1	17	-	327	1495	280	116.7%
4/3	Arnold Ln Right	U	N/A	N/A	D		1	17	-	277	1391	261	106.2%
5/1		U	N/A	N/A	-		-	-	-	98	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	1140	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	432	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	748	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	991	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Mapperley Plains / Arnold Lane	**-**	**-**	**40**	**0**	**58**	**45.6**	**188.3**	**0.5**	**234.4**	**-**	**-**	**-**	**-**
Unnamed Junction	**-**	**-**	**40**	**0**	**58**	**45.6**	**188.3**	**0.5**	**234.4**	**-**	**-**	**-**	**-**
1/1	704	606	-	-	-	10.7	52.3	-	63.1	322.4	21.4	52.3	73.7
1/2	821	706	-	-	-	12.5	60.7	-	73.2	320.9	24.9	60.7	85.6
1/3	40	40	40	0	0	0.2	0.1	0.1	0.4	39.1	0.7	0.1	0.8
2/1	292	292	-	-	-	2.0	0.5	-	2.5	30.7	6.1	0.5	6.6
2/2	315	315	-	-	-	2.1	0.4	-	2.5	29.0	6.5	0.4	6.9
2/3	58	58	0	0	58	0.3	0.5	0.4	1.3	81.0	1.0	0.5	1.6
3/1	458	397	-	-	-	6.7	33.8	-	40.5	318.7	13.8	33.8	47.7
3/2	101	101	-	-	-	0.8	0.2	-	1.0	34.9	2.1	0.2	2.3
4/1	16	16	-	-	-	0.1	0.0	-	0.2	39.3	0.3	0.0	0.4
4/2	327	280	-	-	-	6.1	26.4	-	32.6	358.4	10.9	26.4	37.4
4/3	277	261	-	-	-	3.9	13.3	-	17.2	223.5	8.0	13.3	21.3
5/1	84	84	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	1004	1004	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	432	432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	693	693	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	860	860	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -29.6 Total Delay for Signalled Lanes (pcuHr): 234.45 Cycle Time (s): 96

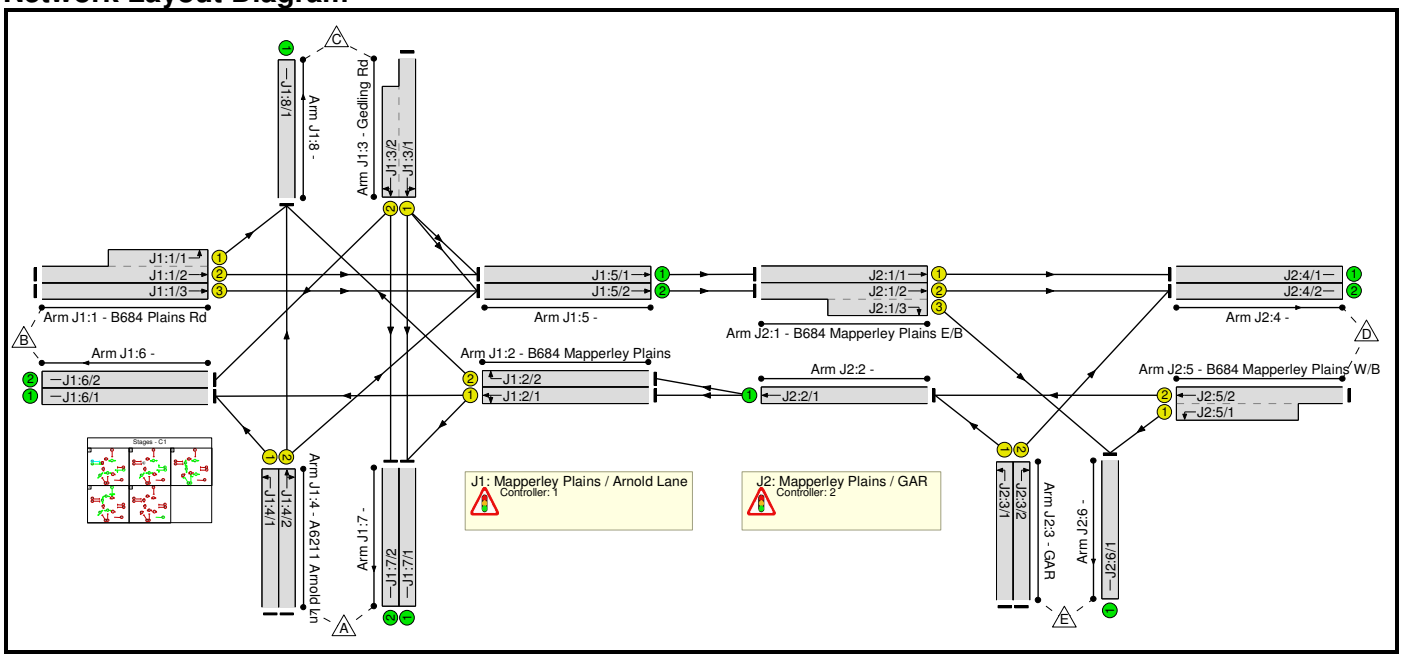
PRC Over All Lanes (%): -29.6 Total Delay Over All Lanes(pcuHr): 234.45

Full Input Data And Results

User and Project Details

Project:	**Gedling Colliery Access Road**
Title:	**Mapperly Plains / Arnold Lane / GAR**
Location:	
File name:	A085361 - Mapperly Plains (21-07-14).lsg3x
Author:	R Bishop
Company:	WYG
Address:	Leicester
Notes:	Scheme differences to AECOM Layout.Arnold Lane: (1) 2 ahead Lanes from Gedling Road; (2) additional left turn lane on Plains Road; (3) Arnold Lane ahead and right turn lanes combined into one 5m wide lane (very low right turn) to improve sat-flow on the steep approach; (4) single ahead lane from Mapperley Plains and more generous lane widths. Intergreens for ahead traffic on roads with limit 40mph or higher have been increased by 2s as per NCoC policy. GAR T Junction: (1) Pedestrian crossing staggers reversed to improve flare lengths; (2) Existing wider Northern footway way necessitate slightly a slightly narrowed East-bound lane 2.

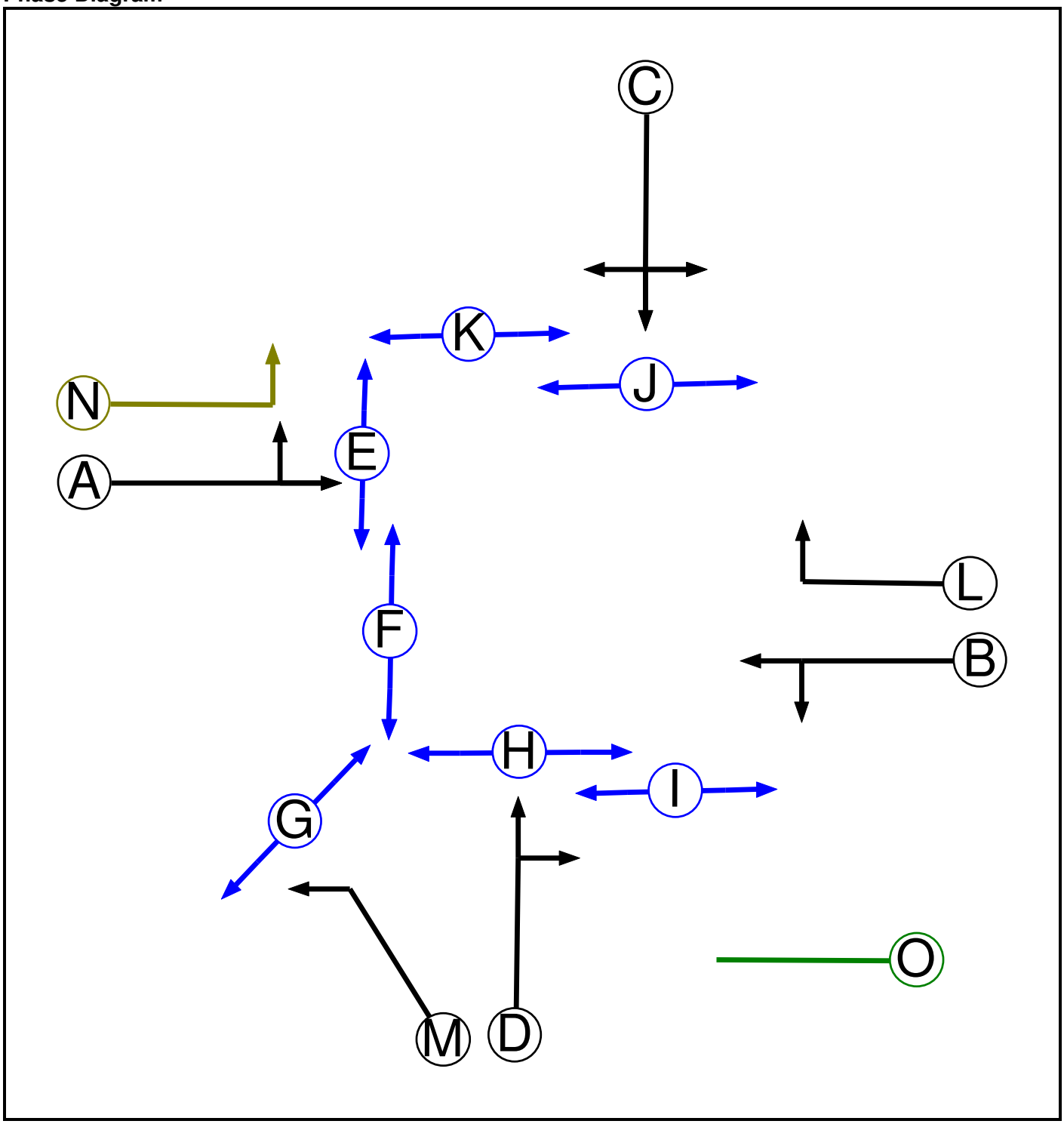
Network Layout Diagram



Full Input Data And Results

C1

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		-9999	7
B	Traffic		-9999	7
C	Traffic		-9999	7
D	Traffic		-9999	7
E	Pedestrian		-9999	5
F	Pedestrian		-9999	5
G	Pedestrian		-9999	5
H	Pedestrian		-9999	5
I	Pedestrian		-9999	5
J	Pedestrian		-9999	5
K	Pedestrian		-9999	5
L	Traffic		-9999	7
M	Traffic		-9999	7
N	Filter	A	-9999	4
O	Dummy R/A		-9999	5

Full Input Data And Results

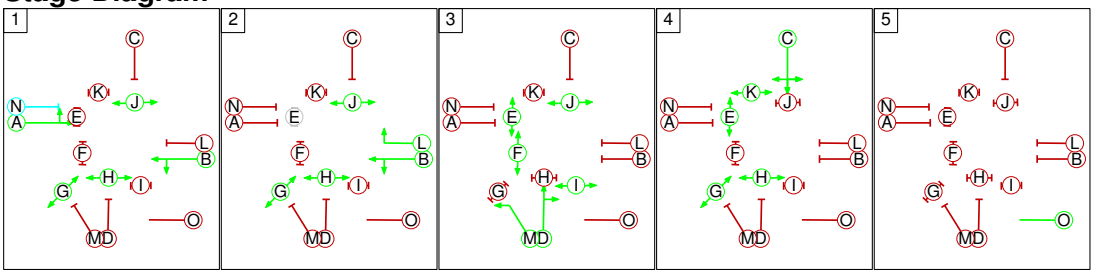
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A		-	8	7	7	-	-	-	-	-	8	7	-	-	3
B	-		7	7	-	10	-	-	9	-	-	-	10	-	3
C	5	6		7	-	9	-	-	9	5	-	7	8	-	3
D	7	7	7		-	-	-	7	-	-	11	7	-	7	3
E	5	-	-	-		-	-	-	-	-	-	-	-	5	3
F	-	6	6	-	-		-	-	-	-	-	-	-	-	3
G	-	-	-	-	-	-		-	-	-	-	-	7	-	3
H	-	-	-	7	-	-	-		-	-	-	-	-	-	3
I	-	6	6	-	-	-	-	-		-	-	-	-	-	3
J	-	-	7	-	-	-	-	-	-		-	-	-	-	3
K	5	-	-	5	-	-	-	-	-	-		5	-	5	3
L	7	-	5	5	-	-	-	-	-	-	11		-	7	3
M	-	7	7	-	-	-	7	-	-	-	-	-		-	3
N	-	-	-	7	7	-	-	-	-	-	8	5	-		3
O	2	2	2	2	2	2	2	2	2	2	2	2	2	2	

Phases in Stage

Stage No.	Phases in Stage
1	A B G H J
2	B G H J L
3	D E F I J M
4	C E G H K
5	O

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	G	Losing	2	2
1	3	H	Losing	2	2
4	3	G	Losing	1	1
4	3	H	Losing	1	1

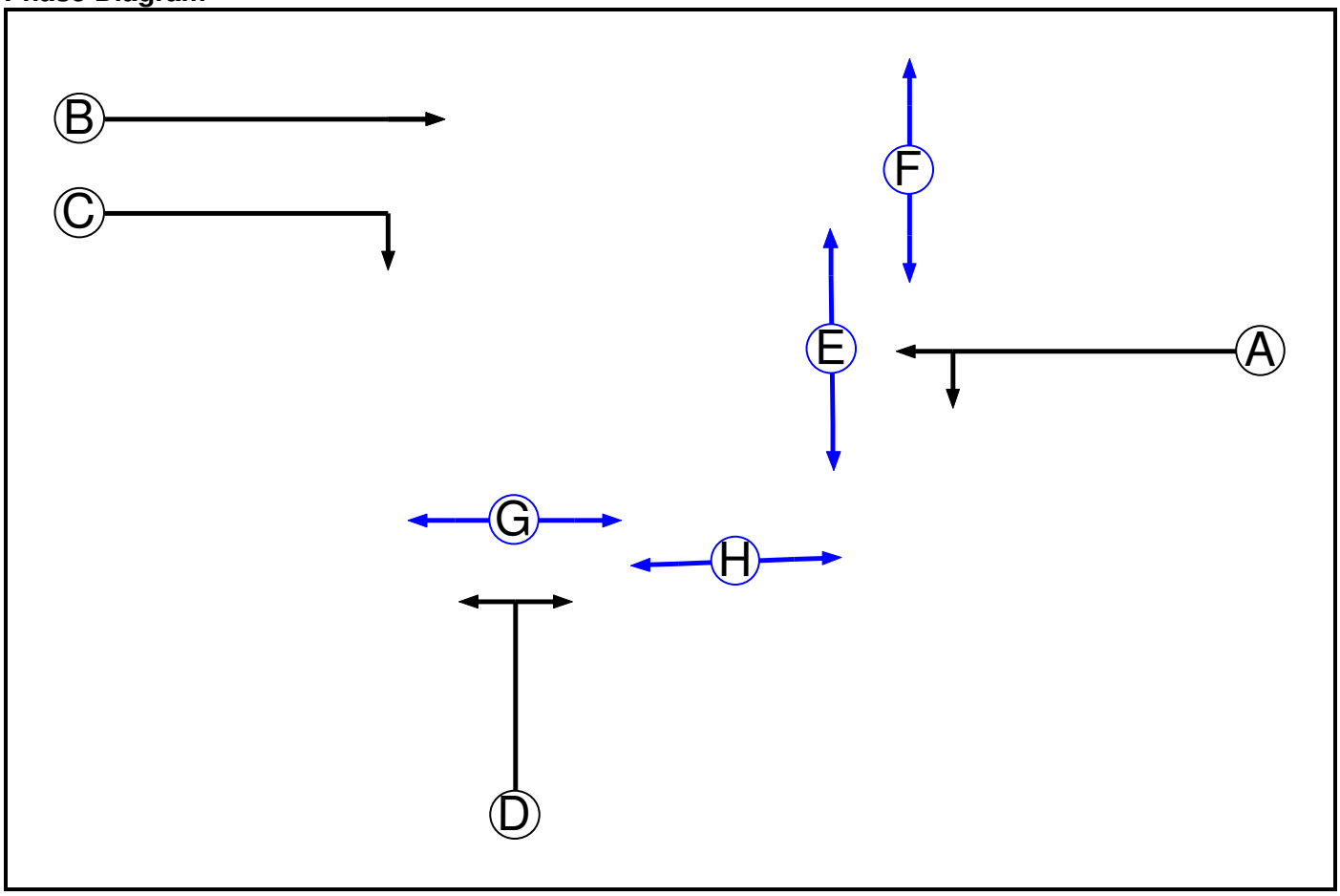
Full Input Data And Results

Prohibited Stage Change

From Stage \ To Stage	1	2	3	4	5
1		7	10	8	3
2	7		10	11	3
3	7	7		11	3
4	6	7	9		3
5	2	2	2	2	

C2

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		-9999	7
B	Traffic		-9999	7
C	Traffic		-9999	7
D	Traffic		-9999	7
E	Pedestrian		-9999	5
F	Pedestrian		-9999	5
G	Pedestrian		-9999	5
H	Pedestrian		-9999	5

Full Input Data And Results

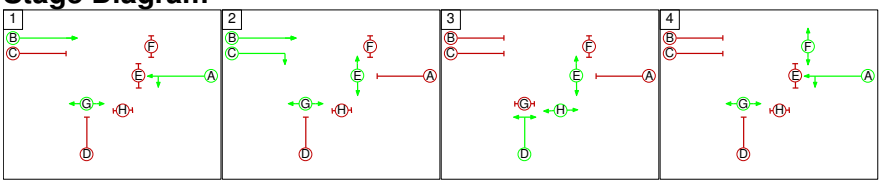
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H
A		-	7	7	7	-	-	8
B	-		-	7	-	11	-	-
C	5	-		7	-	-	-	10
D	5	5	5		-	10	5	-
E	5	-	-	-		-	-	-
F	-	5	-	5	-		-	-
G	-	-	-	5	-	-		-
H	5	-	5	-	-	-	-	

Phases in Stage

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

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
1		7	8	11
2	5		10	11
3	5	5		10
4	5	7	8	

Full Input Data And Results

Give-Way Lane Input Data

Junction: J1: Mapperley Plains / Arnold Lane
There are no Opposed Lanes in this Junction

Junction: J2: Mapperley Plains / GAR
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: Mapperley Plains / Arnold 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)**
J1:1/1 (B684 Plains Rd)	U	A N	2	3	9.0	Geom	-	3.00	0.00	Y	Arm J1:8 Left	10.00
J1:1/2 (B684 Plains Rd)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J1:5 Ahead	Inf
J1:1/3 (B684 Plains Rd)	U	A	2	3	60.0	Geom	-	3.00	0.00	N	Arm J1:5 Ahead	Inf
J1:2/1 (B684 Mapperley Plains)	U	B	2	3	60.0	Geom	-	3.10	0.00	Y	Arm J1:6 Ahead	Inf
											Arm J1:7 Left	12.00
J1:2/2 (B684 Mapperley Plains)	U	L	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J1:8 Right	25.00
J1:3/1 (Gedling Rd)	U	C	2	3	60.0	Geom	-	3.00	8.00	Y	Arm J1:5 Left	14.00
											Arm J1:7 Ahead	Inf
J1:3/2 (Gedling Rd)	U	C	2	3	10.0	Geom	-	3.00	8.00	Y	Arm J1:6 Right	18.00
											Arm J1:7 Ahead	Inf
J1:4/1 (A6211 Arnold Ln)	U	M	2	3	60.0	Geom	-	3.65	10.00	Y	Arm J1:6 Left	35.00
J1:4/2 (A6211 Arnold Ln)	U	D	2	3	60.0	Geom	-	5.00	10.00	Y	Arm J1:5 Right	15.00
											Arm J1:8 Ahead	Inf
J1:5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/2	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:7/2	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:8/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Junction: J2: Mapperley Plains / GAR												
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)**
J2:1/1 (B684 Mapperley Plains E/B)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:4 Ahead	Inf
J2:1/2 (B684 Mapperley Plains E/B)	U	B	2	3	60.0	Geom	-	2.50	0.00	N	Arm J2:4 Ahead	Inf
J2:1/3 (B684 Mapperley Plains E/B)	U	C	2	3	9.0	Geom	-	3.00	0.00	Y	Arm J2:6 Right	20.00
J2:2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:3/1 (GAR)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:2 Left	15.00
J2:3/2 (GAR)	U	D	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:4 Right	15.00
J2:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:4/2	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/1 (B684 Mapperley Plains W/B)	U	A	2	3	11.0	Geom	-	3.00	0.00	Y	Arm J2:6 Left	17.00
J2:5/2 (B684 Mapperley Plains W/B)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm J2:2 Ahead	Inf
J2:6/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM Peak 2008'	08:00	09:00	01:00	
2: 'PM Peak 2008'	16:30	17:30	01:00	
3: 'AM Peak 2013'	08:00	09:00	01:00	F1*1.057
4: 'PM Peak 2013'	16:00	17:00	01:00	F2*1.086
5: 'AM 2028 'Test C' '	08:00	09:00	01:00	
6: 'PM 2028 'Test C"	17:00	18:00	01:00	
7: 'AM 2034 'Test C"	08:00	09:00	01:00	
8: 'PM 2034 'Test C"	17:00	18:00	01:00	

Scenario 1: 'AM 2028 Test C' (FG5: 'AM 2028 'Test C' ', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	38	339	0	0	377
	B	0	0	240	616	91	947
	C	484	192	0	19	1	696
	D	0	373	162	0	389	924
	E	0	193	72	566	0	831
	Tot.	484	796	813	1201	481	3775

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM 2028 Test C
Junction: J1: Mapperley Plains / Arnold Lane	
J1:1/1 (short)	240
J1:1/2 (with short)	580(In) 340(Out)
J1:1/3	367
J1:2/1	566
J1:2/2	234
J1:3/1 (with short)	696(In) 355(Out)
J1:3/2 (short)	341
J1:4/1	38
J1:4/2	339
J1:5/1	352
J1:5/2	375
J1:6/1	604
J1:6/2	192
J1:7/1	335
J1:7/2	149
J1:8/1	813
Junction: J2: Mapperley Plains / GAR	
J2:1/1	352
J2:1/2 (with short)	375(In) 283(Out)
J2:1/3 (short)	92
J2:2/1	800
J2:3/1	265
J2:3/2	566
J2:4/1	352
J2:4/2	849
J2:5/1 (short)	389
J2:5/2 (with short)	924(In) 535(Out)
J2:6/1	481

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Mapperley Plains / Arnold Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (B684 Plains Rd)	3.00	0.00	Y	Arm J1:8 Left	10.00	100.0 %	1665	1665
J1:1/2 (B684 Plains Rd)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1915	1915
J1:1/3 (B684 Plains Rd)	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (B684 Mapperley Plains)	3.10	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1925	1925
				Arm J1:7 Left	12.00	0.0 %		
J1:2/2 (B684 Mapperley Plains)	3.50	0.00	Y	Arm J1:8 Right	25.00	100.0 %	1854	1854
J1:3/1 (Gedling Rd)	3.00	8.00	Y	Arm J1:5 Left	14.00	5.6 %	1570	1570
				Arm J1:7 Ahead	Inf	94.4 %		
J1:3/2 (Gedling Rd)	3.00	8.00	Y	Arm J1:6 Right	18.00	56.3 %	1508	1508
				Arm J1:7 Ahead	Inf	43.7 %		
J1:4/1 (A6211 Arnold Ln)	3.65	10.00	Y	Arm J1:6 Left	35.00	100.0 %	1496	1496
J1:4/2 (A6211 Arnold Ln)	5.00	10.00	Y	Arm J1:5 Right	15.00	0.0 %	1695	1695
				Arm J1:8 Ahead	Inf	100.0 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:5/2	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:6/2	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:7/2	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Mapperley Plains / GAR								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (B684 Mapperley Plains E/B)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (B684 Mapperley Plains E/B)	2.50	0.00	N	Arm J2:4 Ahead	Inf	100.0 %	2005	2005
J2:1/3 (B684 Mapperley Plains E/B)	3.00	0.00	Y	Arm J2:6 Right	20.00	100.0 %	1781	1781
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1 (GAR)	3.25	0.00	Y	Arm J2:2 Left	15.00	100.0 %	1764	1764
J2:3/2 (GAR)	3.25	0.00	Y	Arm J2:4 Right	15.00	100.0 %	1764	1764
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:4/2	Infinite Saturation Flow						Inf	Inf
J2:5/1 (B684 Mapperley Plains W/B)	3.00	0.00	Y	Arm J2:6 Left	17.00	100.0 %	1760	1760
J2:5/2 (B684 Mapperley Plains W/B)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM 2028 Test C' (FG6: 'PM 2028 'Test C'', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	13	361	0	0	374
	B	0	0	321	675	55	1051
	C	489	105	0	31	1	626
	D	0	144	86	0	202	432
	E	0	193	120	382	0	695
	Tot.	489	455	888	1088	258	3178

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM 2028 Test C
Junction: J1: Mapperley Plains / Arnold Lane	
J1:1/1 (short)	321
J1:1/2 (with short)	661(In) 340(Out)
J1:1/3	390
J1:2/1	337
J1:2/2	206
J1:3/1 (with short)	626(In) 313(Out)
J1:3/2 (short)	313
J1:4/1	13
J1:4/2	361
J1:5/1	356
J1:5/2	406
J1:6/1	350
J1:6/2	105
J1:7/1	281
J1:7/2	208
J1:8/1	888
Junction: J2: Mapperley Plains / GAR	
J2:1/1	356
J2:1/2 (with short)	406(In) 350(Out)
J2:1/3 (short)	56
J2:2/1	543
J2:3/1	313
J2:3/2	382
J2:4/1	356
J2:4/2	732
J2:5/1 (short)	202
J2:5/2 (with short)	432(In) 230(Out)
J2:6/1	258

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Mapperley Plains / Arnold Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (B684 Plains Rd)	3.00	0.00	Y	Arm J1:8 Left	10.00	100.0 %	1665	1665
J1:1/2 (B684 Plains Rd)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1915	1915
J1:1/3 (B684 Plains Rd)	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (B684 Mapperley Plains)	3.10	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1925	1925
				Arm J1:7 Left	12.00	0.0 %		
J1:2/2 (B684 Mapperley Plains)	3.50	0.00	Y	Arm J1:8 Right	25.00	100.0 %	1854	1854
J1:3/1 (Gedling Rd)	3.00	8.00	Y	Arm J1:5 Left	14.00	10.2 %	1562	1562
				Arm J1:7 Ahead	Inf	89.8 %		
J1:3/2 (Gedling Rd)	3.00	8.00	Y	Arm J1:6 Right	18.00	33.5 %	1536	1536
				Arm J1:7 Ahead	Inf	66.5 %		
J1:4/1 (A6211 Arnold Ln)	3.65	10.00	Y	Arm J1:6 Left	35.00	100.0 %	1496	1496
J1:4/2 (A6211 Arnold Ln)	5.00	10.00	Y	Arm J1:5 Right	15.00	0.0 %	1695	1695
				Arm J1:8 Ahead	Inf	100.0 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:5/2	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:6/2	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:7/2	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Mapperley Plains / GAR								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (B684 Mapperley Plains E/B)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (B684 Mapperley Plains E/B)	2.50	0.00	N	Arm J2:4 Ahead	Inf	100.0 %	2005	2005
J2:1/3 (B684 Mapperley Plains E/B)	3.00	0.00	Y	Arm J2:6 Right	20.00	100.0 %	1781	1781
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1 (GAR)	3.25	0.00	Y	Arm J2:2 Left	15.00	100.0 %	1764	1764
J2:3/2 (GAR)	3.25	0.00	Y	Arm J2:4 Right	15.00	100.0 %	1764	1764
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:4/2	Infinite Saturation Flow						Inf	Inf
J2:5/1 (B684 Mapperley Plains W/B)	3.00	0.00	Y	Arm J2:6 Left	17.00	100.0 %	1760	1760
J2:5/2 (B684 Mapperley Plains W/B)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:6/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM 2034 Test C' (FG7: 'AM 2034 'Test C'', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	39	351	0	0	390
	B	0	0	248	638	94	980
	C	501	199	0	20	1	721
	D	0	386	168	0	403	957
	E	0	199	75	586	0	860
	Tot.	501	823	842	1244	498	3908

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM 2034 Test C
Junction: J1: Mapperley Plains / Arnold Lane	
J1:1/1 (short)	248
J1:1/2 (with short)	596(In) 348(Out)
J1:1/3	384
J1:2/1	585
J1:2/2	243
J1:3/1 (with short)	721(In) 360(Out)
J1:3/2 (short)	361
J1:4/1	39
J1:4/2	351
J1:5/1	358
J1:5/2	395
J1:6/1	624
J1:6/2	199
J1:7/1	339
J1:7/2	162
J1:8/1	842
Junction: J2: Mapperley Plains / GAR	
J2:1/1	358
J2:1/2 (with short)	395(In) 300(Out)
J2:1/3 (short)	95
J2:2/1	828
J2:3/1	274
J2:3/2	586
J2:4/1	358
J2:4/2	886
J2:5/1 (short)	403
J2:5/2 (with short)	957(In) 554(Out)
J2:6/1	498

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Mapperley Plains / Arnold Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (B684 Plains Rd)	3.00	0.00	Y	Arm J1:8 Left	10.00	100.0 %	1665	1665
J1:1/2 (B684 Plains Rd)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1915	1915
J1:1/3 (B684 Plains Rd)	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (B684 Mapperley Plains)	3.10	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1925	1925
				Arm J1:7 Left	12.00	0.0 %		
J1:2/2 (B684 Mapperley Plains)	3.50	0.00	Y	Arm J1:8 Right	25.00	100.0 %	1854	1854
J1:3/1 (Gedling Rd)	3.00	8.00	Y	Arm J1:5 Left	14.00	5.8 %	1569	1569
				Arm J1:7 Ahead	Inf	94.2 %		
J1:3/2 (Gedling Rd)	3.00	8.00	Y	Arm J1:6 Right	18.00	55.1 %	1510	1510
				Arm J1:7 Ahead	Inf	44.9 %		
J1:4/1 (A6211 Arnold Ln)	3.65	10.00	Y	Arm J1:6 Left	35.00	100.0 %	1496	1496
J1:4/2 (A6211 Arnold Ln)	5.00	10.00	Y	Arm J1:5 Right	15.00	0.0 %	1695	1695
				Arm J1:8 Ahead	Inf	100.0 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:5/2	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:6/2	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:7/2	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Mapperley Plains / GAR								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (B684 Mapperley Plains E/B)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (B684 Mapperley Plains E/B)	2.50	0.00	N	Arm J2:4 Ahead	Inf	100.0 %	2005	2005
J2:1/3 (B684 Mapperley Plains E/B)	3.00	0.00	Y	Arm J2:6 Right	20.00	100.0 %	1781	1781
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1 (GAR)	3.25	0.00	Y	Arm J2:2 Left	15.00	100.0 %	1764	1764
J2:3/2 (GAR)	3.25	0.00	Y	Arm J2:4 Right	15.00	100.0 %	1764	1764
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:4/2	Infinite Saturation Flow						Inf	Inf
J2:5/1 (B684 Mapperley Plains W/B)	3.00	0.00	Y	Arm J2:6 Left	17.00	100.0 %	1760	1760
J2:5/2 (B684 Mapperley Plains W/B)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:6/1	Infinite Saturation Flow						Inf	Inf

Scenario 4: 'PM 2034 Test C' (FG8: 'PM 2034 'Test C'', Plan 1: 'Staging Plan No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	14	375	0	0	389
	B	0	0	334	701	57	1092
	C	509	109	0	32	1	651
	D	0	149	90	0	210	449
	E	0	201	125	397	0	723
	Tot.	509	473	924	1130	268	3304

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM 2034 Test C
Junction: J1: Mapperley Plains / Arnold Lane	
J1:1/1 (short)	334
J1:1/2 (with short)	686(In) 352(Out)
J1:1/3	406
J1:2/1	350
J1:2/2	215
J1:3/1 (with short)	651(In) 325(Out)
J1:3/2 (short)	326
J1:4/1	14
J1:4/2	375
J1:5/1	368
J1:5/2	423
J1:6/1	364
J1:6/2	109
J1:7/1	292
J1:7/2	217
J1:8/1	924
Junction: J2: Mapperley Plains / GAR	
J2:1/1	368
J2:1/2 (with short)	423(In) 365(Out)
J2:1/3 (short)	58
J2:2/1	565
J2:3/1	326
J2:3/2	397
J2:4/1	368
J2:4/2	762
J2:5/1 (short)	210
J2:5/2 (with short)	449(In) 239(Out)
J2:6/1	268

Full Input Data And Results

Lane Saturation Flows

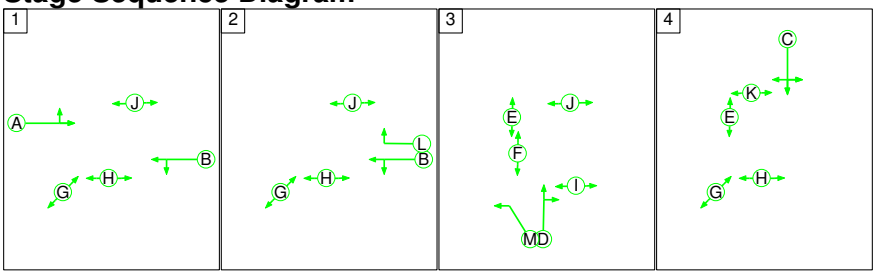
Junction: J1: Mapperley Plains / Arnold Lane								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J1:1/1 (B684 Plains Rd)	3.00	0.00	Y	Arm J1:8 Left	10.00	100.0 %	1665	1665
J1:1/2 (B684 Plains Rd)	3.00	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1915	1915
J1:1/3 (B684 Plains Rd)	3.00	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2055	2055
J1:2/1 (B684 Mapperley Plains)	3.10	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1925	1925
				Arm J1:7 Left	12.00	0.0 %		
J1:2/2 (B684 Mapperley Plains)	3.50	0.00	Y	Arm J1:8 Right	25.00	100.0 %	1854	1854
J1:3/1 (Gedling Rd)	3.00	8.00	Y	Arm J1:5 Left	14.00	10.2 %	1562	1562
				Arm J1:7 Ahead	Inf	89.8 %		
J1:3/2 (Gedling Rd)	3.00	8.00	Y	Arm J1:6 Right	18.00	33.4 %	1536	1536
				Arm J1:7 Ahead	Inf	66.6 %		
J1:4/1 (A6211 Arnold Ln)	3.65	10.00	Y	Arm J1:6 Left	35.00	100.0 %	1496	1496
J1:4/2 (A6211 Arnold Ln)	5.00	10.00	Y	Arm J1:5 Right	15.00	0.0 %	1695	1695
				Arm J1:8 Ahead	Inf	100.0 %		
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:5/2	Infinite Saturation Flow						Inf	Inf
J1:6/1	Infinite Saturation Flow						Inf	Inf
J1:6/2	Infinite Saturation Flow						Inf	Inf
J1:7/1	Infinite Saturation Flow						Inf	Inf
J1:7/2	Infinite Saturation Flow						Inf	Inf
J1:8/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J2: Mapperley Plains / GAR								
Lane	**Lane Width (m)**	**Gradient**	**Nearside Lane**	**Allowed Turns**	**Turning Radius (m)**	**Turning Prop.**	**Sat Flow (PCU/Hr)**	**Flared Sat Flow (PCU/Hr)**
J2:1/1 (B684 Mapperley Plains E/B)	3.00	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1915	1915
J2:1/2 (B684 Mapperley Plains E/B)	2.50	0.00	N	Arm J2:4 Ahead	Inf	100.0 %	2005	2005
J2:1/3 (B684 Mapperley Plains E/B)	3.00	0.00	Y	Arm J2:6 Right	20.00	100.0 %	1781	1781
J2:2/1	Infinite Saturation Flow						Inf	Inf
J2:3/1 (GAR)	3.25	0.00	Y	Arm J2:2 Left	15.00	100.0 %	1764	1764
J2:3/2 (GAR)	3.25	0.00	Y	Arm J2:4 Right	15.00	100.0 %	1764	1764
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:4/2	Infinite Saturation Flow						Inf	Inf
J2:5/1 (B684 Mapperley Plains W/B)	3.00	0.00	Y	Arm J2:6 Left	17.00	100.0 %	1760	1760
J2:5/2 (B684 Mapperley Plains W/B)	3.00	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1915	1915
J2:6/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM 2028 Test C' (FG5: 'AM 2028 'Test C' ', Plan 1: 'Staging Plan No. 1')
C1

Stage Sequence Diagram

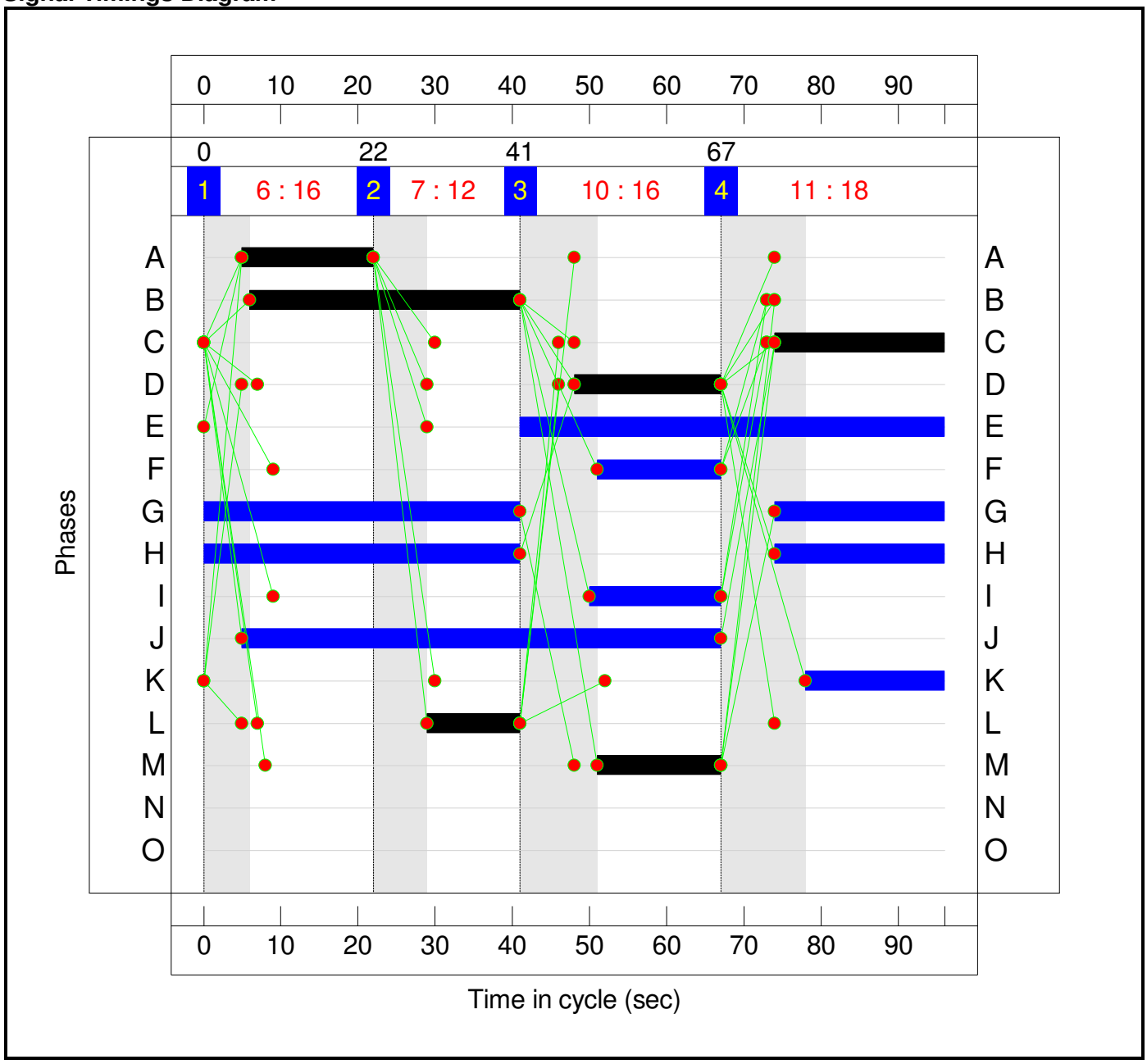


Stage Timings

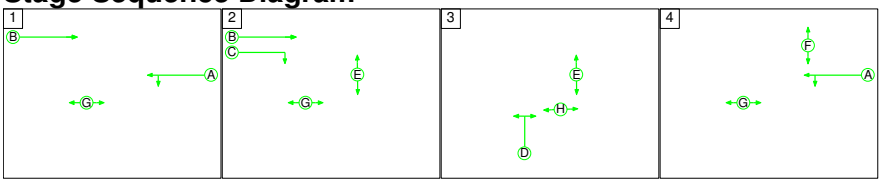
Stage	1	2	3	4
Duration	16	12	16	18
Change Point	0	22	41	67

Full Input Data And Results

Signal Timings Diagram



C2
Stage Sequence Diagram

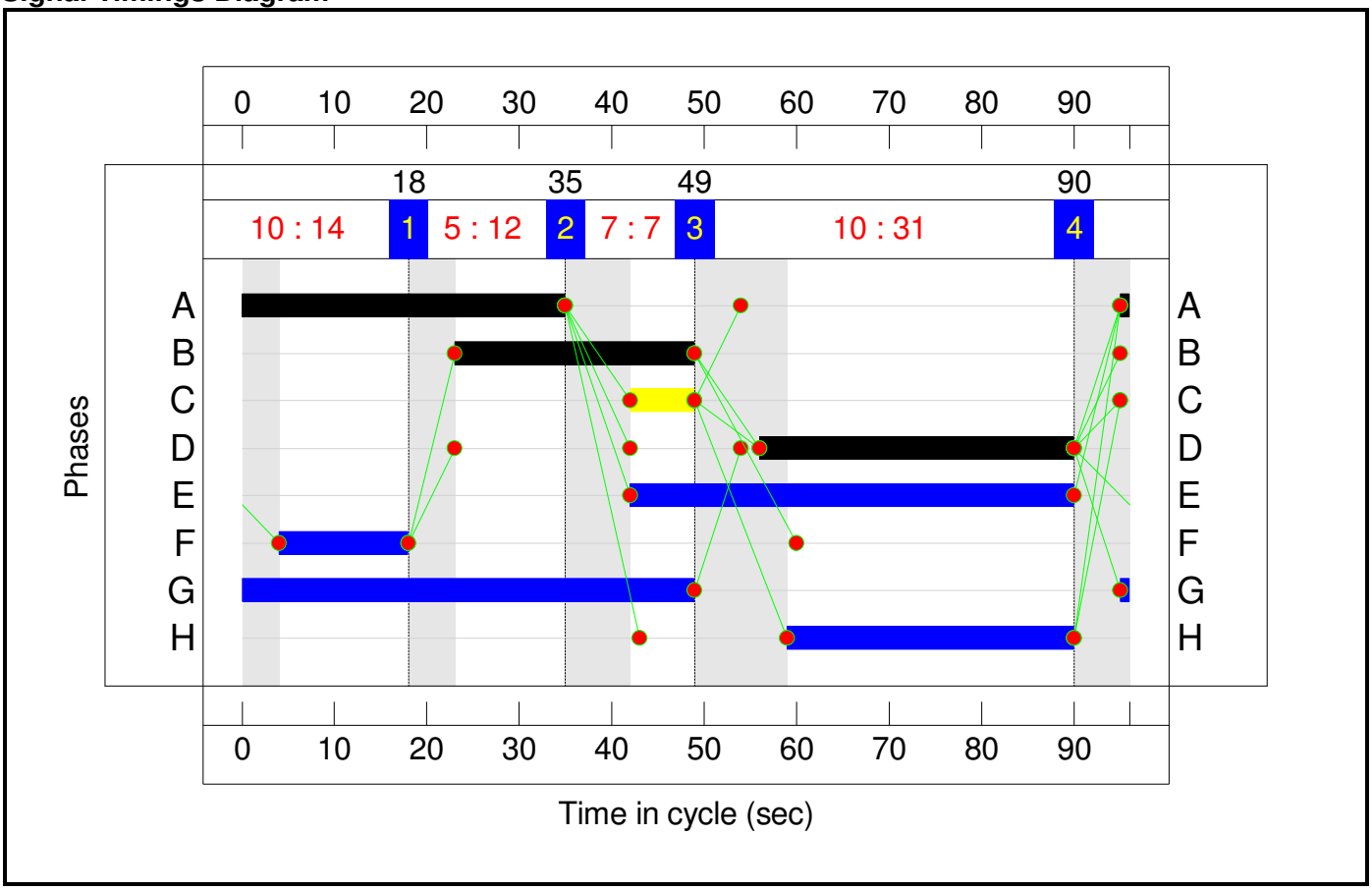


Stage Timings

Stage	1	2	3	4
Duration	12	7	31	14
Change Point	18	35	49	90

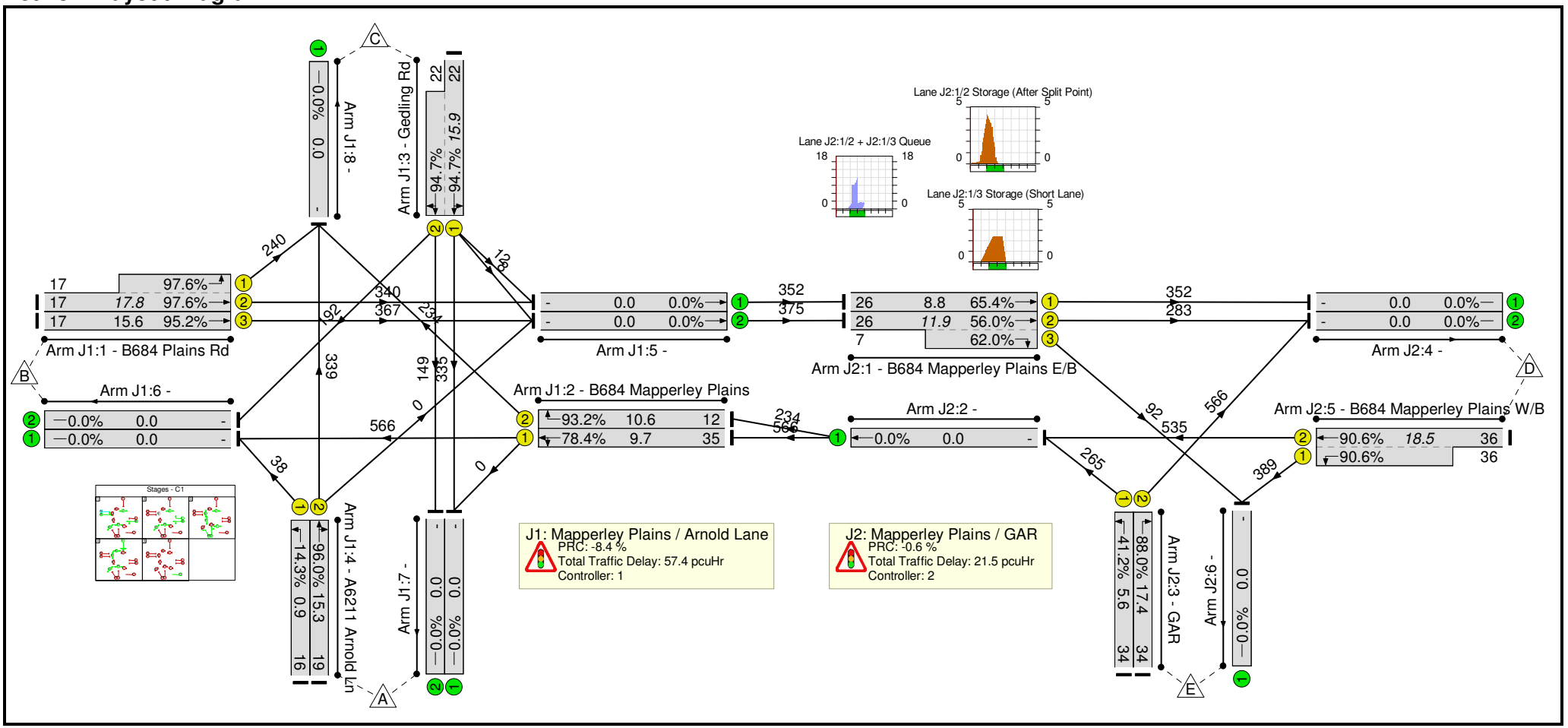
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Mapperly Plains / Arnold Lane / GAR	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.6%**
J1: Mapperley Plains / Arnold Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.6%**
1/2+1/1	B684 Plains Rd Ahead Left	U	N/A	N/A	C1:A	C1:N	1	17	0	580	1915:1665	349+246	97.6 : 97.6%
1/3	B684 Plains Rd Ahead	U	N/A	N/A	C1:A		1	17	-	367	2055	385	95.2%
2/1	B684 Mapperley Plains Ahead Left	U	N/A	N/A	C1:B		1	35	-	566	1925	722	78.4%
2/2	B684 Mapperley Plains Right	U	N/A	N/A	C1:L		1	12	-	234	1854	251	93.2%
3/1+3/2	Gedling Rd Left Right Ahead	U	N/A	N/A	C1:C		1	22	-	696	1570:1508	375+360	94.7 : 94.7%
4/1	A6211 Arnold Ln Left	U	N/A	N/A	C1:M		1	16	-	38	1496	265	14.3%
4/2	A6211 Arnold Ln Right Ahead	U	N/A	N/A	C1:D		1	19	-	339	1695	353	96.0%
5/1	Ahead	U	N/A	N/A	-		-	-	-	352	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	375	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	604	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	192	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	335	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	149	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	813	Inf	Inf	0.0%
J2: Mapperley Plains / GAR	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.6%**
1/1	B684 Mapperley Plains E/B Ahead	U	N/A	N/A	C2:B		1	26	-	352	1915	539	65.4%

Full Input Data And Results

1/2+1/3	B684 Mapperley Plains E/B Ahead Right	U	N/A	N/A	C2:B C2:C		1	26:7	-	375	2005:1781	506+148	56.0 : 62.0%
2/1	Ahead	U	N/A	N/A	-		-	-	-	800	Inf	Inf	0.0%
3/1	GAR Left	U	N/A	N/A	C2:D		1	34	-	265	1764	643	41.2%
3/2	GAR Right	U	N/A	N/A	C2:D		1	34	-	566	1764	643	88.0%
4/1		U	N/A	N/A	-		-	-	-	352	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	849	Inf	Inf	0.0%
5/2+5/1	B684 Mapperley Plains W/B Ahead Left	U	N/A	N/A	C2:A		1	36	-	924	1915:1760	591+429	90.6 : 90.6%
6/1		U	N/A	N/A	-		-	-	-	481	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Mapperly Plains / Arnold Lane / GAR	**-**	**-**	**0**	**0**	**0**	**38.3**	**40.6**	**0.0**	**79.0**	**-**	**-**	**-**	**-**
J1: Mapperley Plains / Arnold Lane	**-**	**-**	**0**	**0**	**0**	**24.9**	**32.5**	**0.0**	**57.4**	**-**	**-**	**-**	**-**
1/2+1/1	580	580	-	-	-	6.1	8.9	-	15.1	93.4	8.9	8.9	17.8
1/3	367	367	-	-	-	3.9	6.0	-	10.0	97.8	9.6	6.0	15.6
2/1	566	566	-	-	-	2.3	0.0	-	2.3	14.4	9.7	0.0	9.7
2/2	234	234	-	-	-	1.8	4.5	-	6.3	96.5	6.1	4.5	10.6
3/1+3/2	696	696	-	-	-	6.9	6.6	-	13.6	70.2	9.3	6.6	15.9
4/1	38	38	-	-	-	0.4	0.1	-	0.4	41.3	0.9	0.1	0.9
4/2	339	339	-	-	-	3.5	6.3	-	9.9	104.8	8.9	6.3	15.3
5/1	352	352	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	375	375	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	604	604	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	192	192	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	335	335	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	149	149	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	813	813	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Mapperley Plains / GAR	**-**	**-**	**0**	**0**	**0**	**13.4**	**8.1**	**0.0**	**21.5**	**-**	**-**	**-**	**-**
1/1	352	352	-	-	-	0.3	0.0	-	0.3	3.5	8.8	0.0	8.8
1/2+1/3	375	375	-	-	-	0.6	0.0	-	0.6	5.6	11.9	0.0	11.9
2/1	800	800	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	265	265	-	-	-	1.7	0.3	-	2.0	27.6	5.2	0.3	5.6
3/2	566	566	-	-	-	4.5	3.4	-	7.9	50.0	14.0	3.4	17.4
4/1	352	352	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	849	849	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

5/2+5/1	924	924	-	-	-	6.3	4.4	-	10.7	41.7	14.1	4.4	18.5
6/1	481	481	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

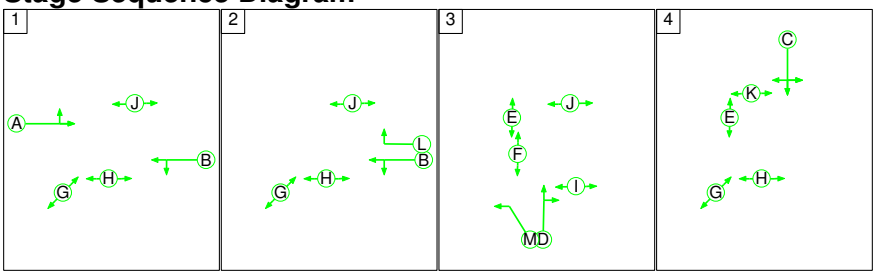
C1	PRC for Signalled Lanes (%):	-8.4	Total Delay for Signalled Lanes (pcuHr):	57.44	Cycle Time (s):	96
C2	PRC for Signalled Lanes (%):	-0.6	Total Delay for Signalled Lanes (pcuHr):	21.53	Cycle Time (s):	96
	PRC Over All Lanes (%):	-8.4	Total Delay Over All Lanes(pcuHr):	78.97		

Full Input Data And Results

Scenario 2: 'PM 2028 Test C' (FG6: 'PM 2028 'Test C'', Plan 1: 'Staging Plan No. 1')

C1

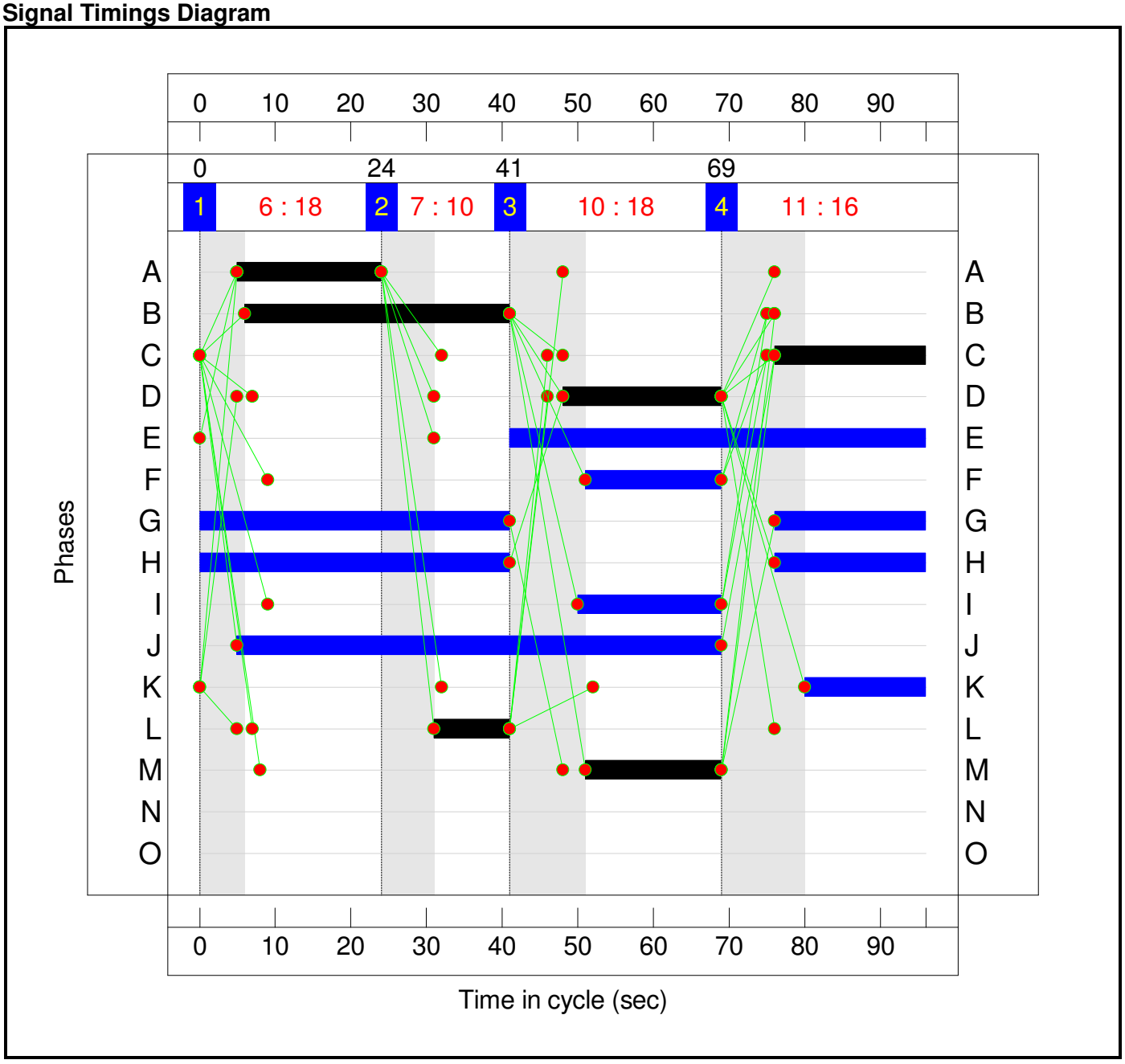
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	18	10	18	16
Change Point	0	24	41	69

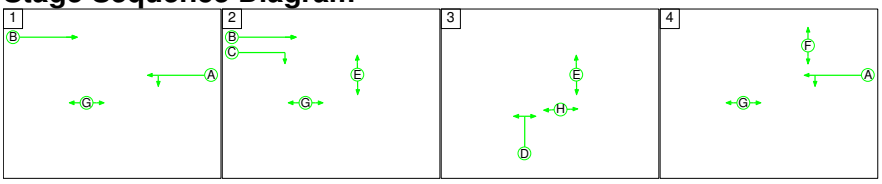
Signal Timings Diagram



Full Input Data And Results

C2

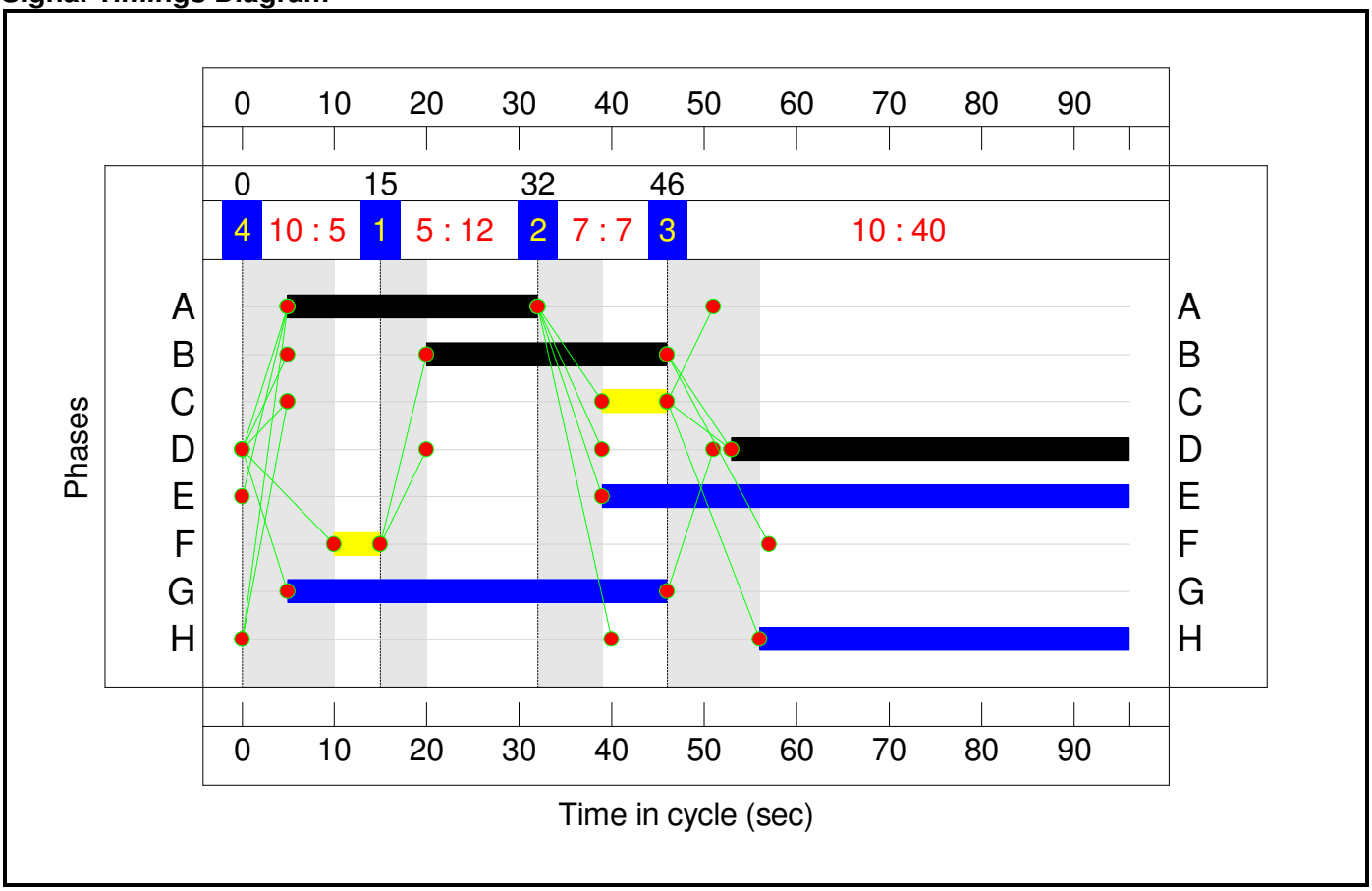
Stage Sequence Diagram



Stage Timings

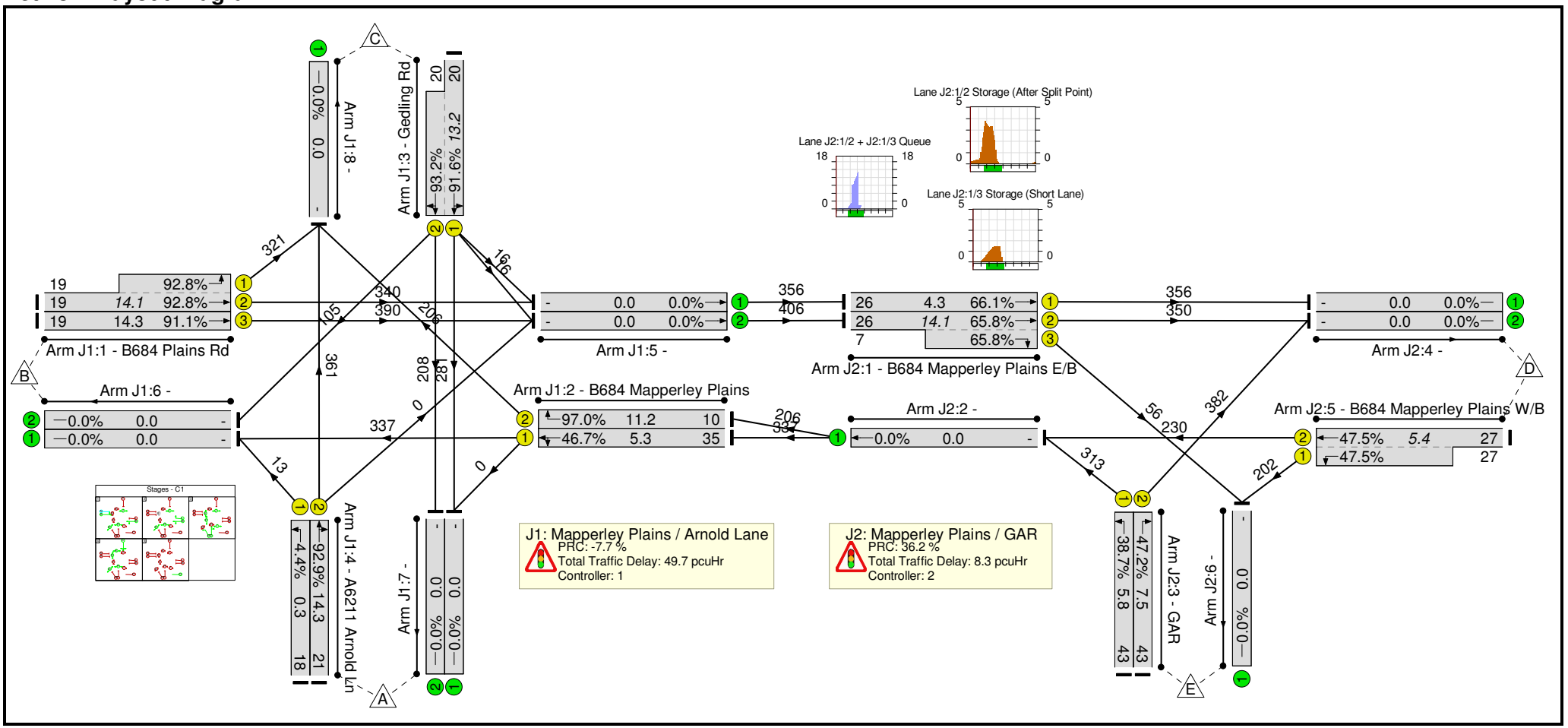
Stage	1	2	3	4
Duration	12	7	40	5
Change Point	15	32	46	0

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Mapperly Plains / Arnold Lane / GAR	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.0%**
J1: Mapperley Plains / Arnold Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**97.0%**
1/2+1/1	B684 Plains Rd Ahead Left	U	N/A	N/A	C1:A	C1:N	1	19	0	661	1915:1665	366+346	92.8 : 92.8%
1/3	B684 Plains Rd Ahead	U	N/A	N/A	C1:A		1	19	-	390	2055	428	91.1%
2/1	B684 Mapperley Plains Ahead Left	U	N/A	N/A	C1:B		1	35	-	337	1925	722	46.7%
2/2	B684 Mapperley Plains Right	U	N/A	N/A	C1:L		1	10	-	206	1854	212	97.0%
3/1+3/2	Gedling Rd Left Right Ahead	U	N/A	N/A	C1:C		1	20	-	626	1562:1536	342+336	91.6 : 93.2%
4/1	A6211 Arnold Ln Left	U	N/A	N/A	C1:M		1	18	-	13	1496	296	4.4%
4/2	A6211 Arnold Ln Right Ahead	U	N/A	N/A	C1:D		1	21	-	361	1695	388	92.9%
5/1	Ahead	U	N/A	N/A	-		-	-	-	356	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	406	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	350	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	105	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	281	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	208	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	888	Inf	Inf	0.0%
J2: Mapperley Plains / GAR	-	-	**N/A**	-	-		-	-	-	-	-	-	**66.1%**
1/1	B684 Mapperley Plains E/B Ahead	U	N/A	N/A	C2:B		1	26	-	356	1915	539	66.1%

Full Input Data And Results

1/2+1/3	B684 Mapperley Plains E/B Ahead Right	U	N/A	N/A	C2:B C2:C		1	26:7	-	406	2005:1781	532+85	65.8 : 65.8%
2/1	Ahead	U	N/A	N/A	-		-	-	-	543	Inf	Inf	0.0%
3/1	GAR Left	U	N/A	N/A	C2:D		1	43	-	313	1764	808	38.7%
3/2	GAR Right	U	N/A	N/A	C2:D		1	43	-	382	1764	808	47.2%
4/1		U	N/A	N/A	-		-	-	-	356	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	732	Inf	Inf	0.0%
5/2+5/1	B684 Mapperley Plains W/B Ahead Left	U	N/A	N/A	C2:A		1	27	-	432	1915:1760	484+425	47.5 : 47.5%
6/1		U	N/A	N/A	-		-	-	-	258	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Mapperly Plains / Arnold Lane / GAR	**-**	**-**	**0**	**0**	**0**	**31.6**	**26.5**	**0.0**	**58.1**	**-**	**-**	**-**	**-**
J1: Mapperley Plains / Arnold Lane	**-**	**-**	**0**	**0**	**0**	**24.5**	**25.2**	**0.0**	**49.7**	**-**	**-**	**-**	**-**
1/2+1/1	661	661	-	-	-	6.8	5.4	-	12.1	66.1	8.7	5.4	14.1
1/3	390	390	-	-	-	4.0	4.2	-	8.2	75.8	10.1	4.2	14.3
2/1	337	337	-	-	-	1.5	0.0	-	1.5	16.3	5.3	0.0	5.3
2/2	206	206	-	-	-	2.0	5.7	-	7.8	136.0	5.5	5.7	11.2
3/1+3/2	626	626	-	-	-	6.4	5.1	-	11.4	65.8	8.2	5.1	13.2
4/1	13	13	-	-	-	0.1	0.0	-	0.1	37.6	0.3	0.0	0.3
4/2	361	361	-	-	-	3.6	4.9	-	8.5	84.7	9.4	4.9	14.3
5/1	356	356	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	406	406	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	350	350	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	105	105	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	281	281	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	208	208	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	888	888	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Mapperley Plains / GAR	**-**	**-**	**0**	**0**	**0**	**7.1**	**1.2**	**0.0**	**8.3**	**-**	**-**	**-**	**-**
1/1	356	356	-	-	-	0.2	0.0	-	0.2	1.6	4.3	0.0	4.3
1/2+1/3	406	406	-	-	-	0.3	0.0	-	0.3	2.6	14.1	0.0	14.1
2/1	543	543	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	313	313	-	-	-	1.5	0.3	-	1.8	20.8	5.5	0.3	5.8
3/2	382	382	-	-	-	1.9	0.4	-	2.4	22.2	7.0	0.4	7.5
4/1	356	356	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	732	732	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

5/2+5/1	432	432	-	-	-	3.3	0.5	-	3.7	31.1	4.9	0.5	5.4
6/1	258	258	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

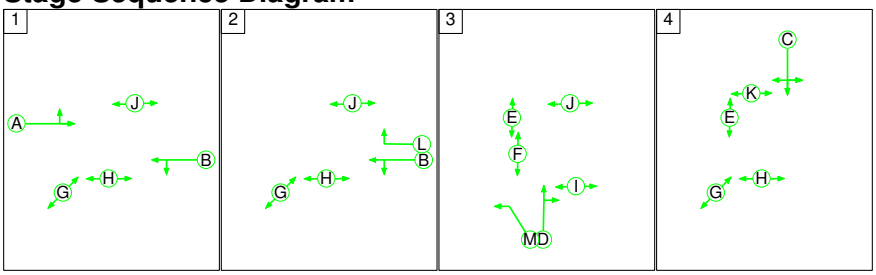
C1	PRC for Signalled Lanes (%):	-7.7	Total Delay for Signalled Lanes (pcuHr):	49.74	Cycle Time (s): 96
C2	PRC for Signalled Lanes (%):	36.2	Total Delay for Signalled Lanes (pcuHr):	8.34	Cycle Time (s): 96
	PRC Over All Lanes (%):	-7.7	Total Delay Over All Lanes(pcuHr):	58.09	

Full Input Data And Results

Scenario 3: 'AM 2034 Test C' (FG7: 'AM 2034 'Test C", Plan 1: 'Staging Plan No. 1')

C1

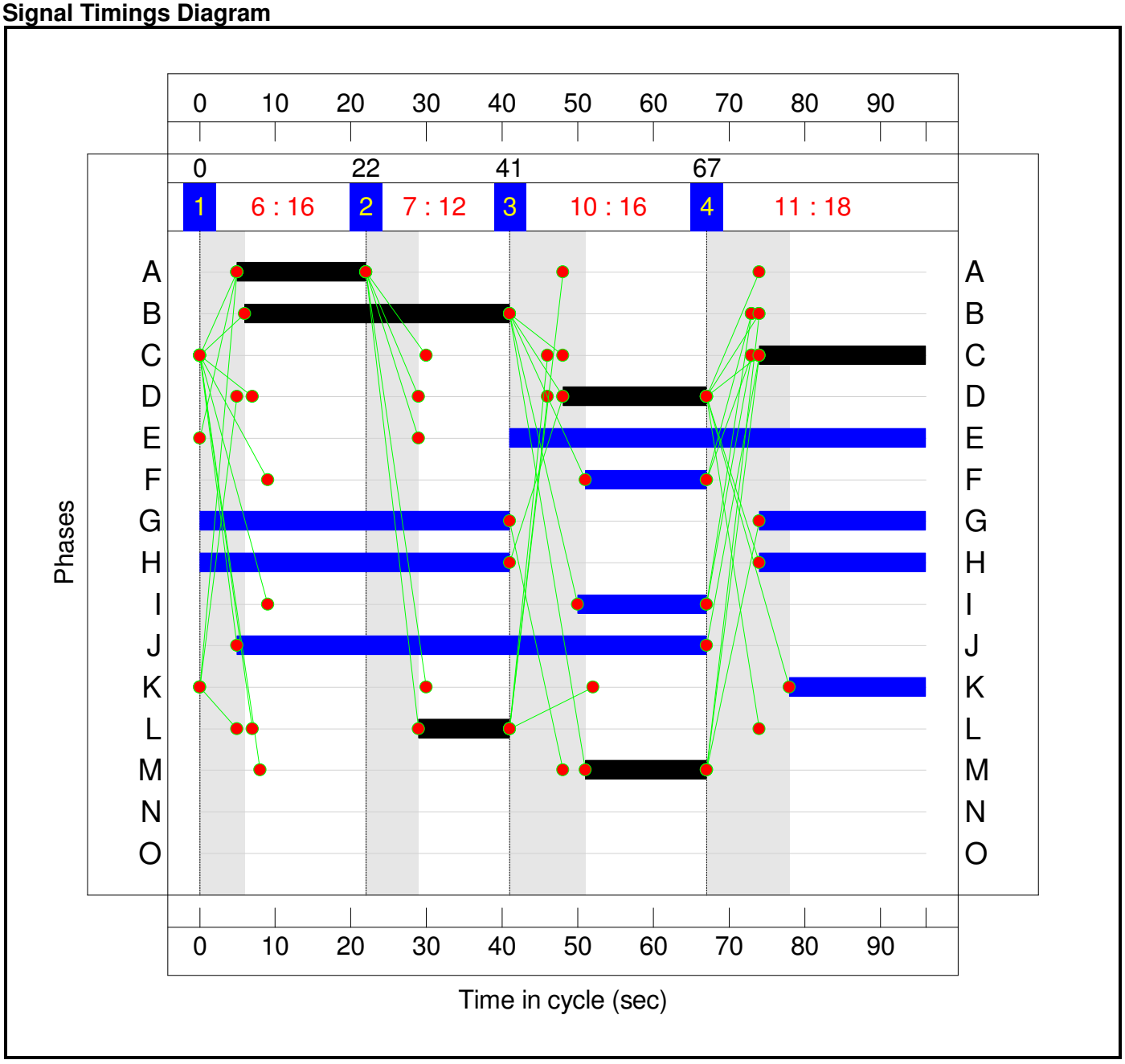
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	16	12	16	18
Change Point	0	22	41	67

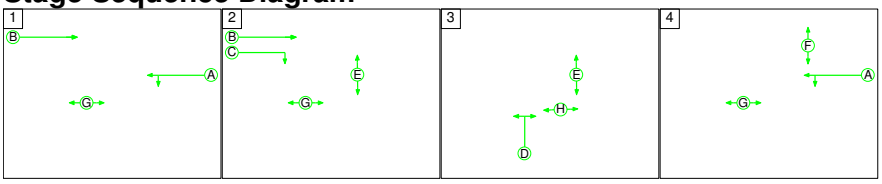
Signal Timings Diagram



Full Input Data And Results

C2

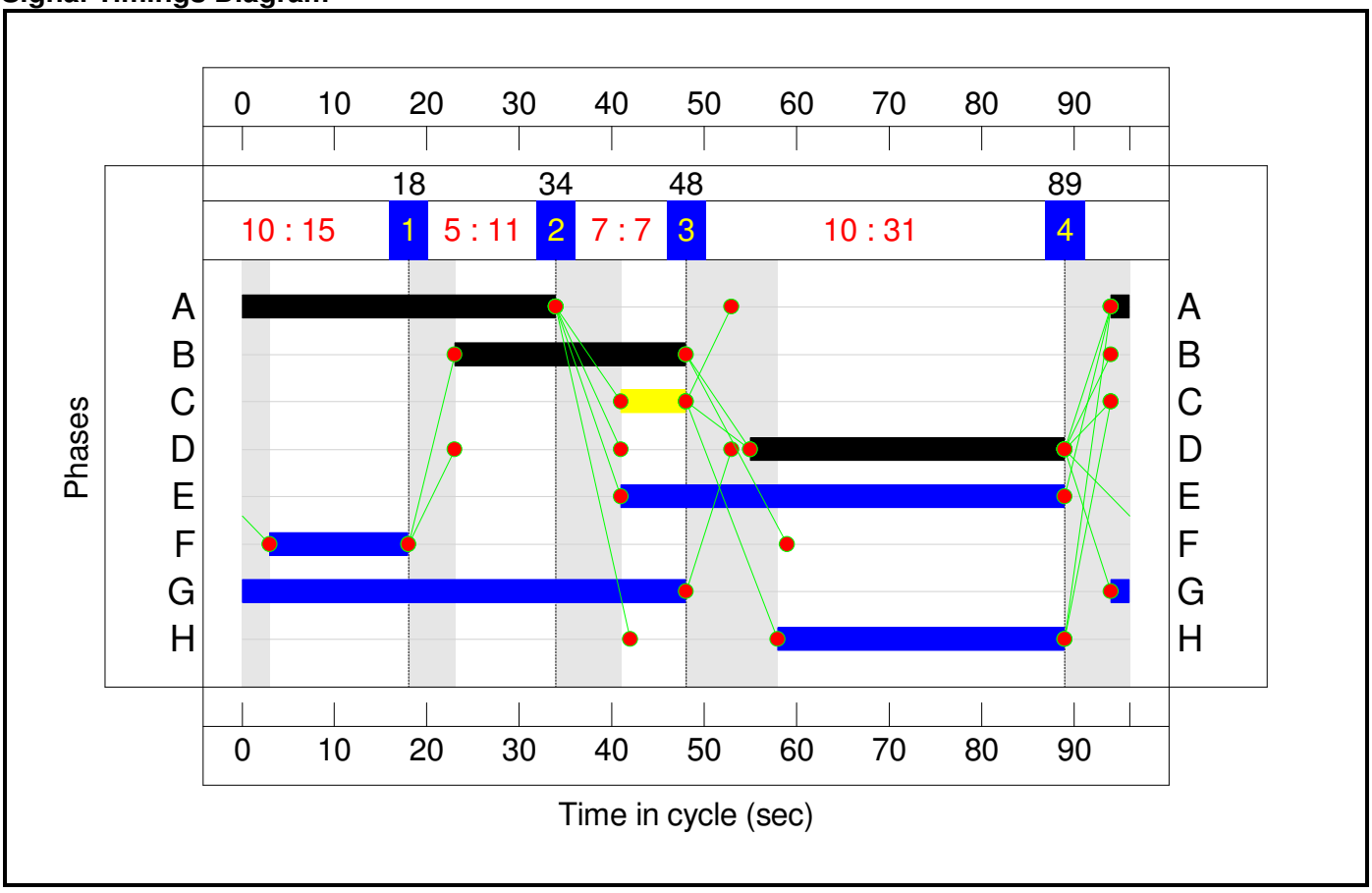
Stage Sequence Diagram



Stage Timings

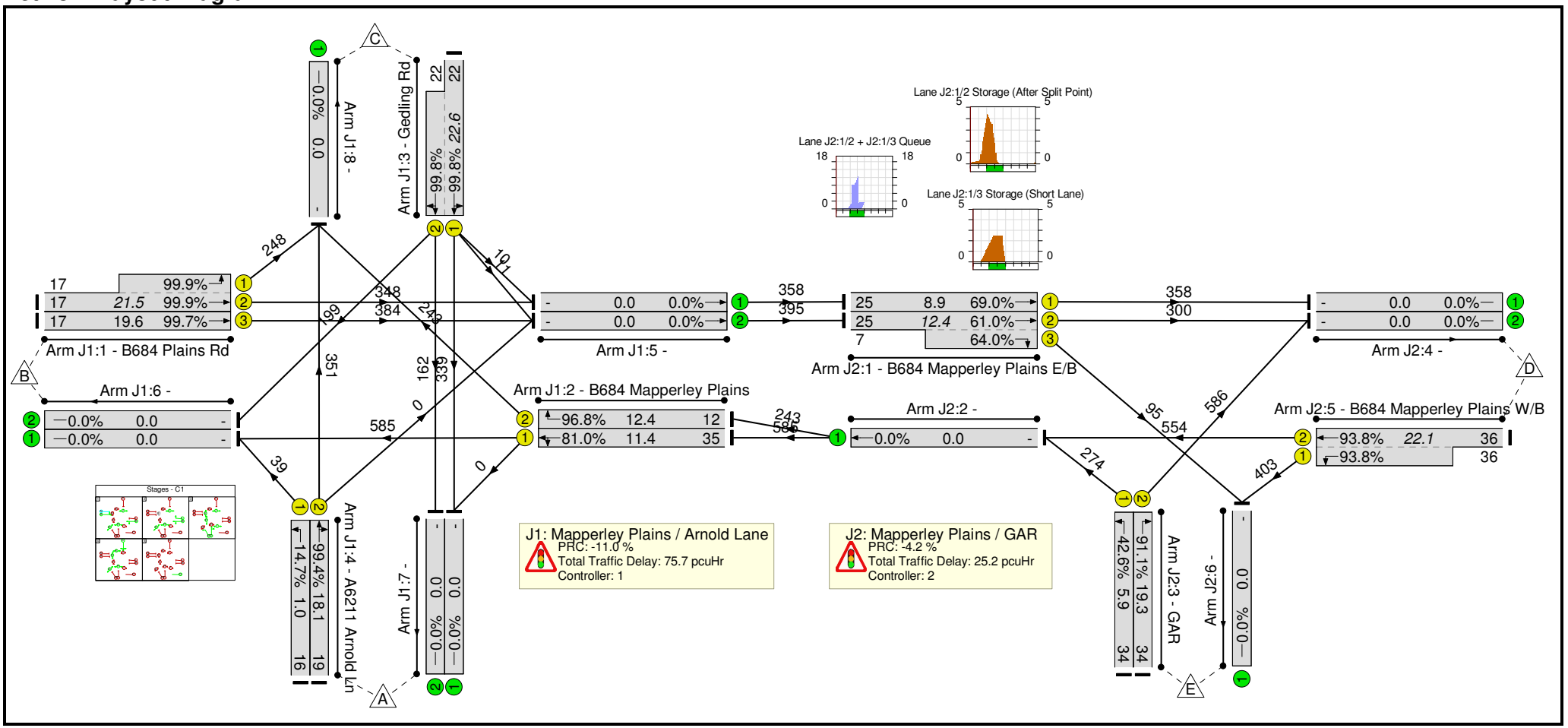
Stage	1	2	3	4
Duration	11	7	31	15
Change Point	18	34	48	89

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Mapperly Plains / Arnold Lane / GAR	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.9%**
J1: Mapperley Plains / Arnold Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.9%**
1/2+1/1	B684 Plains Rd Ahead Left	U	N/A	N/A	C1:A	C1:N	1	17	0	596	1915:1665	348+248	99.9 : 99.9%
1/3	B684 Plains Rd Ahead	U	N/A	N/A	C1:A		1	17	-	384	2055	385	99.7%
2/1	B684 Mapperley Plains Ahead Left	U	N/A	N/A	C1:B		1	35	-	585	1925	722	81.0%
2/2	B684 Mapperley Plains Right	U	N/A	N/A	C1:L		1	12	-	243	1854	251	96.8%
3/1+3/2	Gedling Rd Left Right Ahead	U	N/A	N/A	C1:C		1	22	-	721	1569:1510	361+362	99.8 : 99.8%
4/1	A6211 Arnold Ln Left	U	N/A	N/A	C1:M		1	16	-	39	1496	265	14.7%
4/2	A6211 Arnold Ln Right Ahead	U	N/A	N/A	C1:D		1	19	-	351	1695	353	99.4%
5/1	Ahead	U	N/A	N/A	-		-	-	-	358	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	395	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	624	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	199	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	339	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	162	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	842	Inf	Inf	0.0%
J2: Mapperley Plains / GAR	-	-	**N/A**	-	-		-	-	-	-	-	-	**93.8%**
1/1	B684 Mapperley Plains E/B Ahead	U	N/A	N/A	C2:B		1	25	-	358	1915	519	69.0%

Full Input Data And Results

1/2+1/3	B684 Mapperley Plains E/B Ahead Right	U	N/A	N/A	C2:B C2:C		1	25:7	-	395	2005:1781	491+148	61.0 : 64.0%
2/1	Ahead	U	N/A	N/A	-		-	-	-	828	Inf	Inf	0.0%
3/1	GAR Left	U	N/A	N/A	C2:D		1	34	-	274	1764	643	42.6%
3/2	GAR Right	U	N/A	N/A	C2:D		1	34	-	586	1764	643	91.1%
4/1		U	N/A	N/A	-		-	-	-	358	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	886	Inf	Inf	0.0%
5/2+5/1	B684 Mapperley Plains W/B Ahead Left	U	N/A	N/A	C2:A		1	36	-	957	1915:1760	591+430	93.8 : 93.8%
6/1		U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Mapperly Plains / Arnold Lane / GAR	**-**	**-**	**0**	**0**	**0**	**40.3**	**60.6**	**0.0**	**100.9**	**-**	**-**	**-**	**-**
J1: Mapperley Plains / Arnold Lane	**-**	**-**	**0**	**0**	**0**	**26.2**	**49.5**	**0.0**	**75.7**	**-**	**-**	**-**	**-**
1/2+1/1	596	596	-	-	-	6.4	12.0	-	18.4	111.0	9.5	12.0	21.5
1/3	384	384	-	-	-	4.2	9.5	-	13.6	127.8	10.1	9.5	19.6
2/1	585	585	-	-	-	2.5	0.0	-	2.5	15.1	11.4	0.0	11.4
2/2	243	243	-	-	-	1.9	6.0	-	7.9	117.6	6.4	6.0	12.4
3/1+3/2	721	721	-	-	-	7.3	13.0	-	20.3	101.4	9.5	13.0	22.6
4/1	39	39	-	-	-	0.4	0.1	-	0.4	41.4	0.9	0.1	1.0
4/2	351	351	-	-	-	3.7	8.9	-	12.6	128.7	9.3	8.9	18.1
5/1	358	358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	395	395	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	624	624	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	199	199	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	339	339	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	162	162	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	842	842	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Mapperley Plains / GAR	**-**	**-**	**0**	**0**	**0**	**14.1**	**11.1**	**0.0**	**25.2**	**-**	**-**	**-**	**-**
1/1	358	358	-	-	-	0.3	0.0	-	0.3	3.5	8.9	0.0	8.9
1/2+1/3	395	395	-	-	-	0.6	0.0	-	0.6	5.4	12.4	0.0	12.4
2/1	828	828	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	274	274	-	-	-	1.7	0.4	-	2.1	27.8	5.5	0.4	5.9
3/2	586	586	-	-	-	4.7	4.4	-	9.2	56.3	14.8	4.4	19.3
4/1	358	358	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	886	886	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

5/2+5/1	957	957	-	-	-	6.7	6.3	-	13.0	48.9	15.8	6.3	22.1
6/1	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

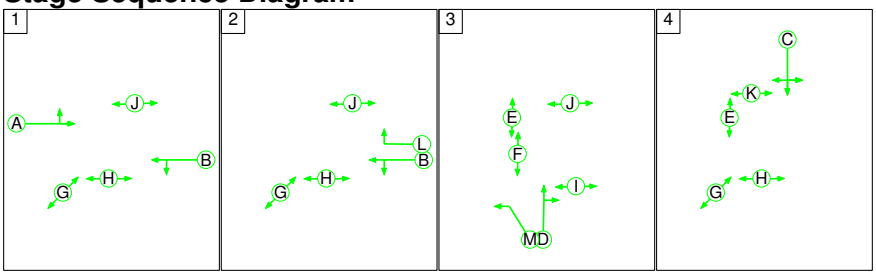
C1	PRC for Signalled Lanes (%):	-11.0	Total Delay for Signalled Lanes (pcuHr):	75.71	Cycle Time (s): 96
C2	PRC for Signalled Lanes (%):	-4.2	Total Delay for Signalled Lanes (pcuHr):	25.21	Cycle Time (s): 96
	PRC Over All Lanes (%):	-11.0	Total Delay Over All Lanes(pcuHr):	100.91	

Full Input Data And Results

Scenario 4: 'PM 2034 Test C' (FG8: 'PM 2034 'Test C'', Plan 1: 'Staging Plan No. 1')

C1

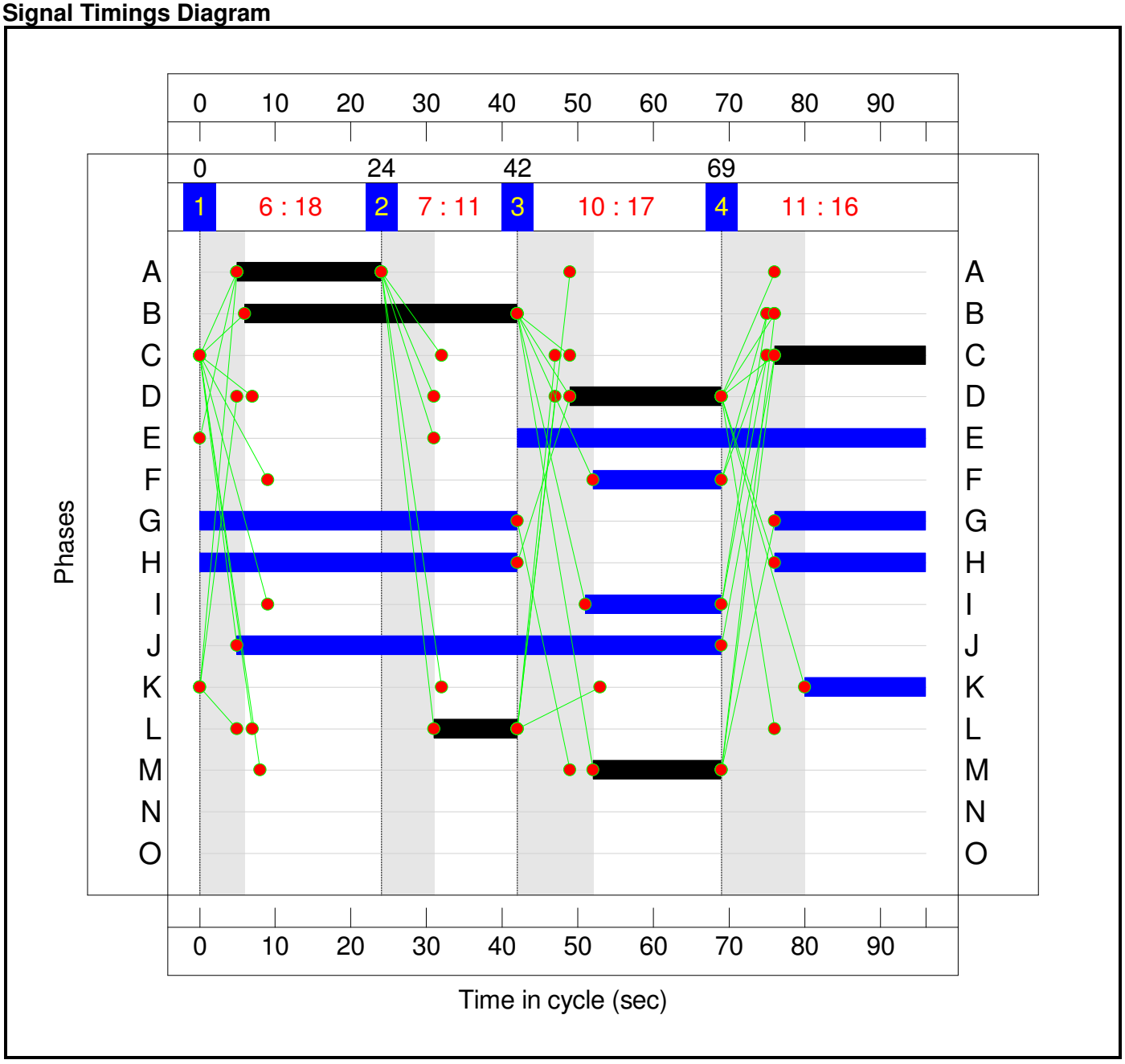
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4
Duration	18	11	17	16
Change Point	0	24	42	69

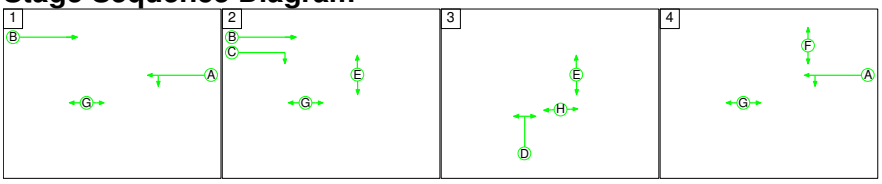
Signal Timings Diagram



Full Input Data And Results

C2

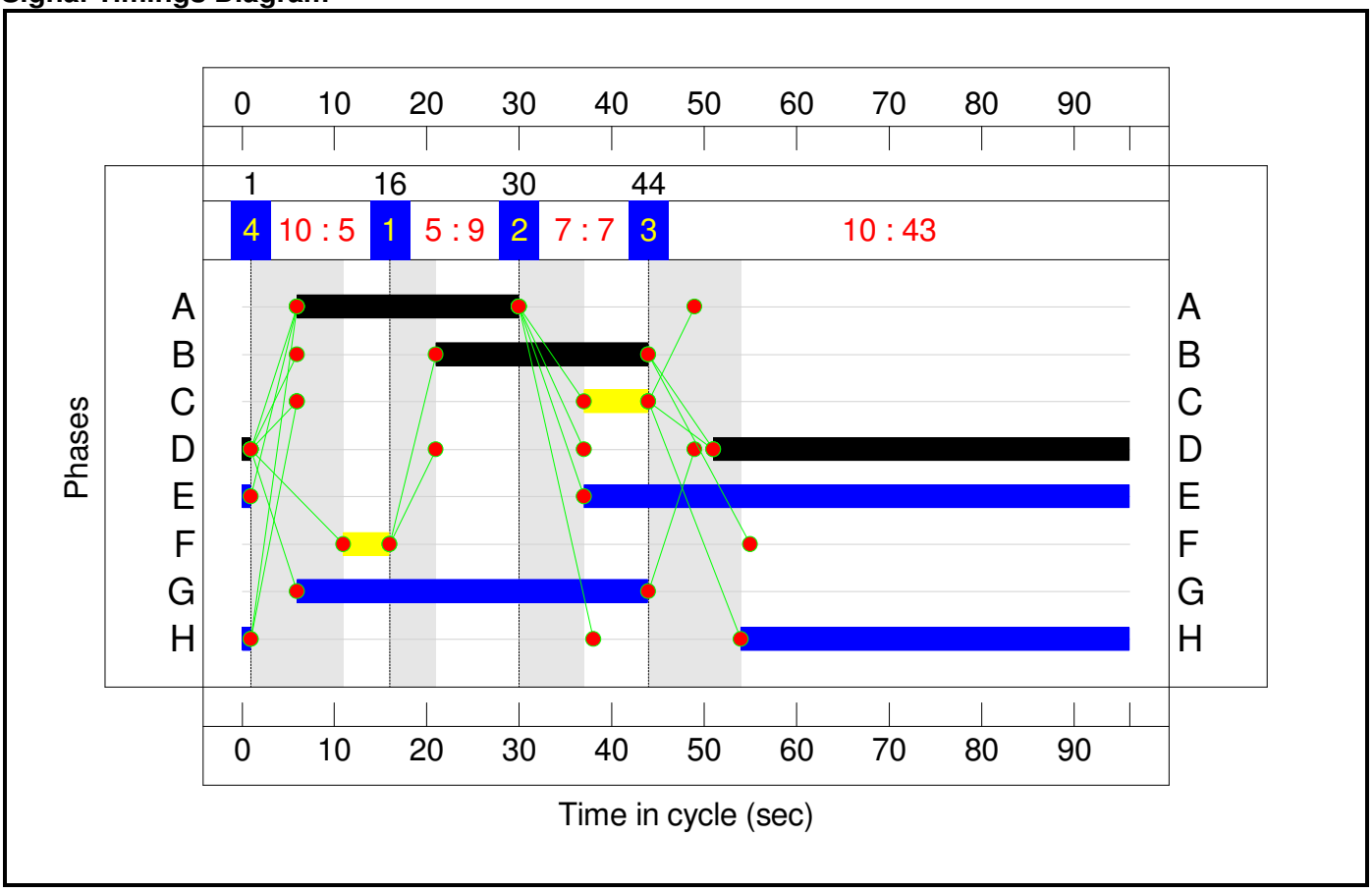
Stage Sequence Diagram



Stage Timings

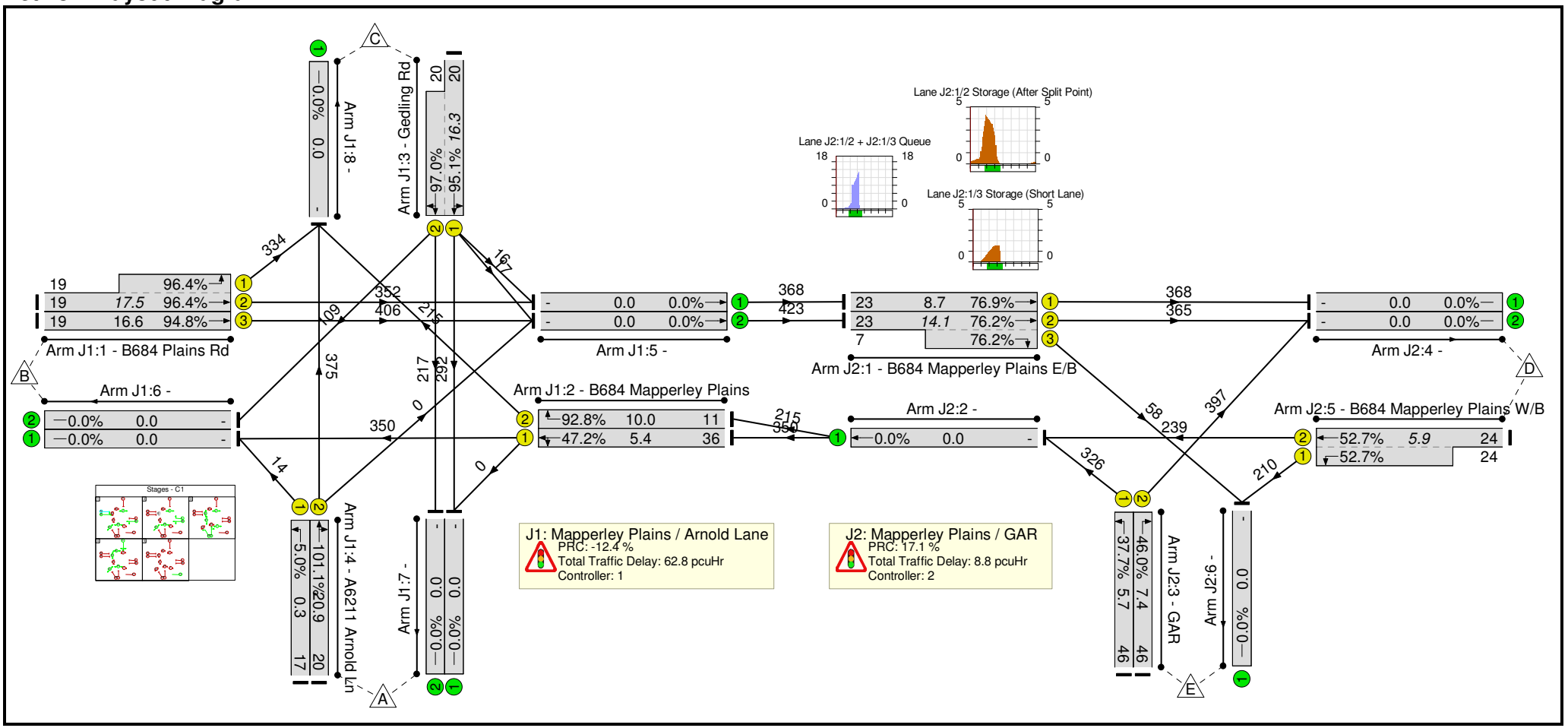
Stage	1	2	3	4
Duration	9	7	43	5
Change Point	16	30	44	1

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Mapperly Plains / Arnold Lane / GAR	-	-	**N/A**	-	-		-	-	-	-	-	-	**101.1%**
J1: Mapperley Plains / Arnold Lane	-	-	**N/A**	-	-		-	-	-	-	-	-	**101.1%**
1/2+1/1	B684 Plains Rd Ahead Left	U	N/A	N/A	C1:A	C1:N	1	19	0	686	1915:1665	365+347	96.4 : 96.4%
1/3	B684 Plains Rd Ahead	U	N/A	N/A	C1:A		1	19	-	406	2055	428	94.8%
2/1	B684 Mapperley Plains Ahead Left	U	N/A	N/A	C1:B		1	36	-	350	1925	742	47.2%
2/2	B684 Mapperley Plains Right	U	N/A	N/A	C1:L		1	11	-	215	1854	232	92.8%
3/1+3/2	Gedling Rd Left Right Ahead	U	N/A	N/A	C1:C		1	20	-	651	1562:1536	342+336	95.1 : 97.0%
4/1	A6211 Arnold Ln Left	U	N/A	N/A	C1:M		1	17	-	14	1496	281	5.0%
4/2	A6211 Arnold Ln Right Ahead	U	N/A	N/A	C1:D		1	20	-	375	1695	371	101.1%
5/1	Ahead	U	N/A	N/A	-		-	-	-	368	Inf	Inf	0.0%
5/2	Ahead	U	N/A	N/A	-		-	-	-	423	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	364	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	109	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	292	Inf	Inf	0.0%
7/2		U	N/A	N/A	-		-	-	-	217	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	924	Inf	Inf	0.0%
J2: Mapperley Plains / GAR	-	-	**N/A**	-	-		-	-	-	-	-	-	**76.9%**
1/1	B684 Mapperley Plains E/B Ahead	U	N/A	N/A	C2:B		1	23	-	368	1915	479	76.9%

Full Input Data And Results

1/2+1/3	B684 Mapperley Plains E/B Ahead Right	U	N/A	N/A	C2:B C2:C		1	23:7	-	423	2005:1781	479+76	76.2 : 76.2%
2/1	Ahead	U	N/A	N/A	-		-	-	-	565	Inf	Inf	0.0%
3/1	GAR Left	U	N/A	N/A	C2:D		1	46	-	326	1764	864	37.7%
3/2	GAR Right	U	N/A	N/A	C2:D		1	46	-	397	1764	864	46.0%
4/1		U	N/A	N/A	-		-	-	-	368	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	762	Inf	Inf	0.0%
5/2+5/1	B684 Mapperley Plains W/B Ahead Left	U	N/A	N/A	C2:A		1	24	-	449	1915:1760	453+398	52.7 : 52.7%
6/1		U	N/A	N/A	-		-	-	-	268	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Mapperly Plains / Arnold Lane / GAR	**-**	**-**	**0**	**0**	**0**	**33.4**	**38.2**	**0.0**	**71.6**	**-**	**-**	**-**	**-**
J1: Mapperley Plains / Arnold Lane	**-**	**-**	**0**	**0**	**0**	**25.9**	**36.9**	**0.0**	**62.8**	**-**	**-**	**-**	**-**
1/2+1/1	686	686	-	-	-	7.1	8.2	-	15.2	80.0	9.4	8.2	17.5
1/3	406	406	-	-	-	4.2	6.0	-	10.2	90.4	10.6	6.0	16.6
2/1	350	350	-	-	-	1.6	0.0	-	1.6	16.1	5.4	0.0	5.4
2/2	215	215	-	-	-	2.1	4.3	-	6.3	106.0	5.7	4.3	10.0
3/1+3/2	651	651	-	-	-	6.7	7.7	-	14.4	79.8	8.6	7.7	16.3
4/1	14	14	-	-	-	0.1	0.0	-	0.2	38.8	0.3	0.0	0.3
4/2	375	371	-	-	-	4.1	10.8	-	14.9	142.6	10.1	10.8	20.9
5/1	368	368	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	423	423	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	364	364	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	109	109	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	292	292	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/2	217	217	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	920	920	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J2: Mapperley Plains / GAR	**-**	**-**	**0**	**0**	**0**	**7.6**	**1.3**	**0.0**	**8.8**	**-**	**-**	**-**	**-**
1/1	368	368	-	-	-	0.3	0.0	-	0.3	3.1	8.7	0.0	8.7
1/2+1/3	423	423	-	-	-	0.3	0.0	-	0.3	2.8	14.1	0.0	14.1
2/1	565	565	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	326	326	-	-	-	1.4	0.3	-	1.7	18.7	5.4	0.3	5.7
3/2	397	397	-	-	-	1.8	0.4	-	2.2	20.0	6.9	0.4	7.4
4/1	368	368	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

4/2	762	762	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2+5/1	449	449	-	-	-	3.7	0.6	-	4.3	34.4	5.4	0.6	5.9
6/1	268	268	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

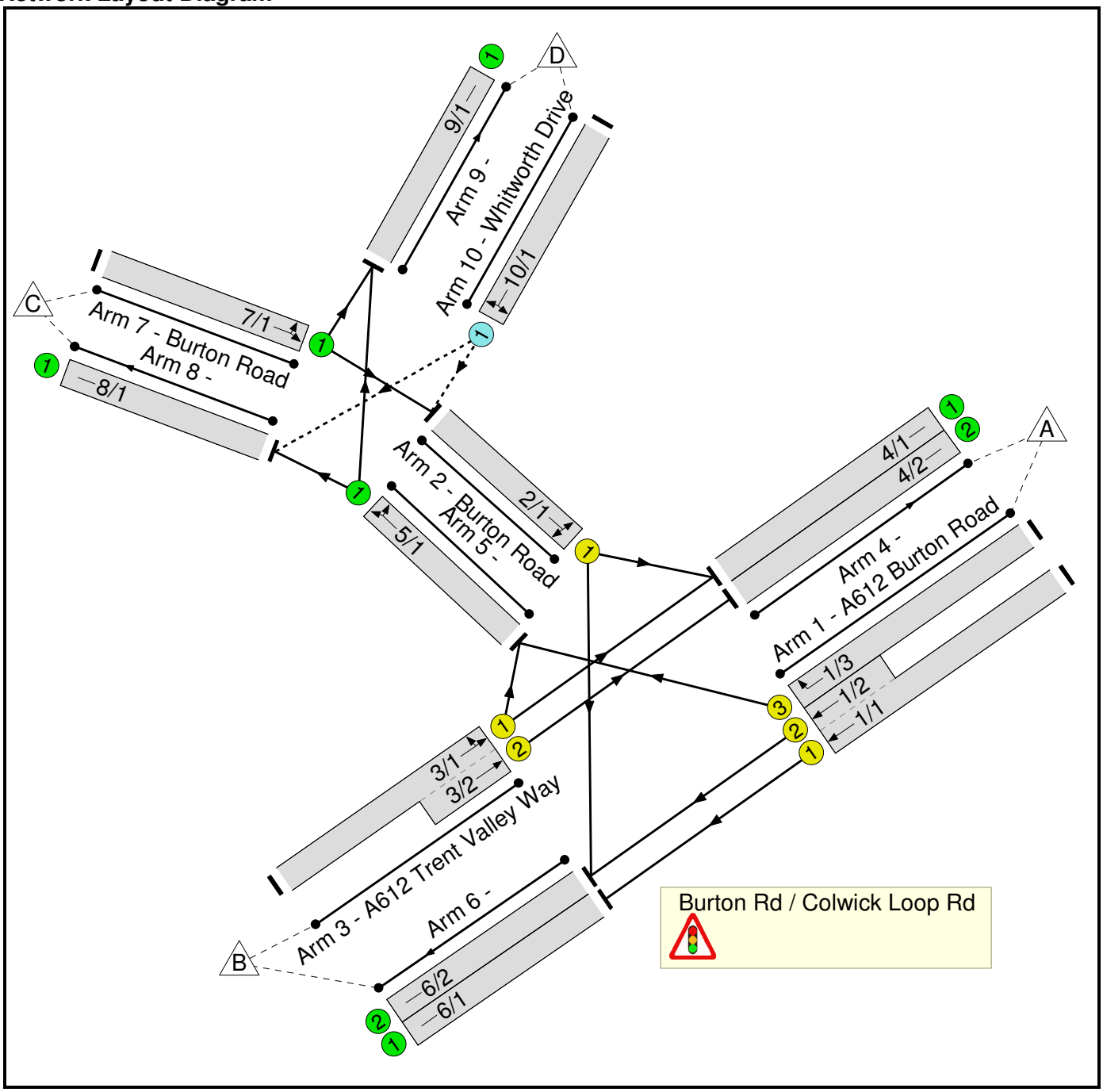
C1	PRC for Signalled Lanes (%):	-12.4	Total Delay for Signalled Lanes (pcuHr):	62.77	Cycle Time (s):	96
C2	PRC for Signalled Lanes (%):	17.1	Total Delay for Signalled Lanes (pcuHr):	8.83	Cycle Time (s):	96
	PRC Over All Lanes (%):	-12.4	Total Delay Over All Lanes(pcuHr):	71.61		

Full Input Data And Results

User and Project Details

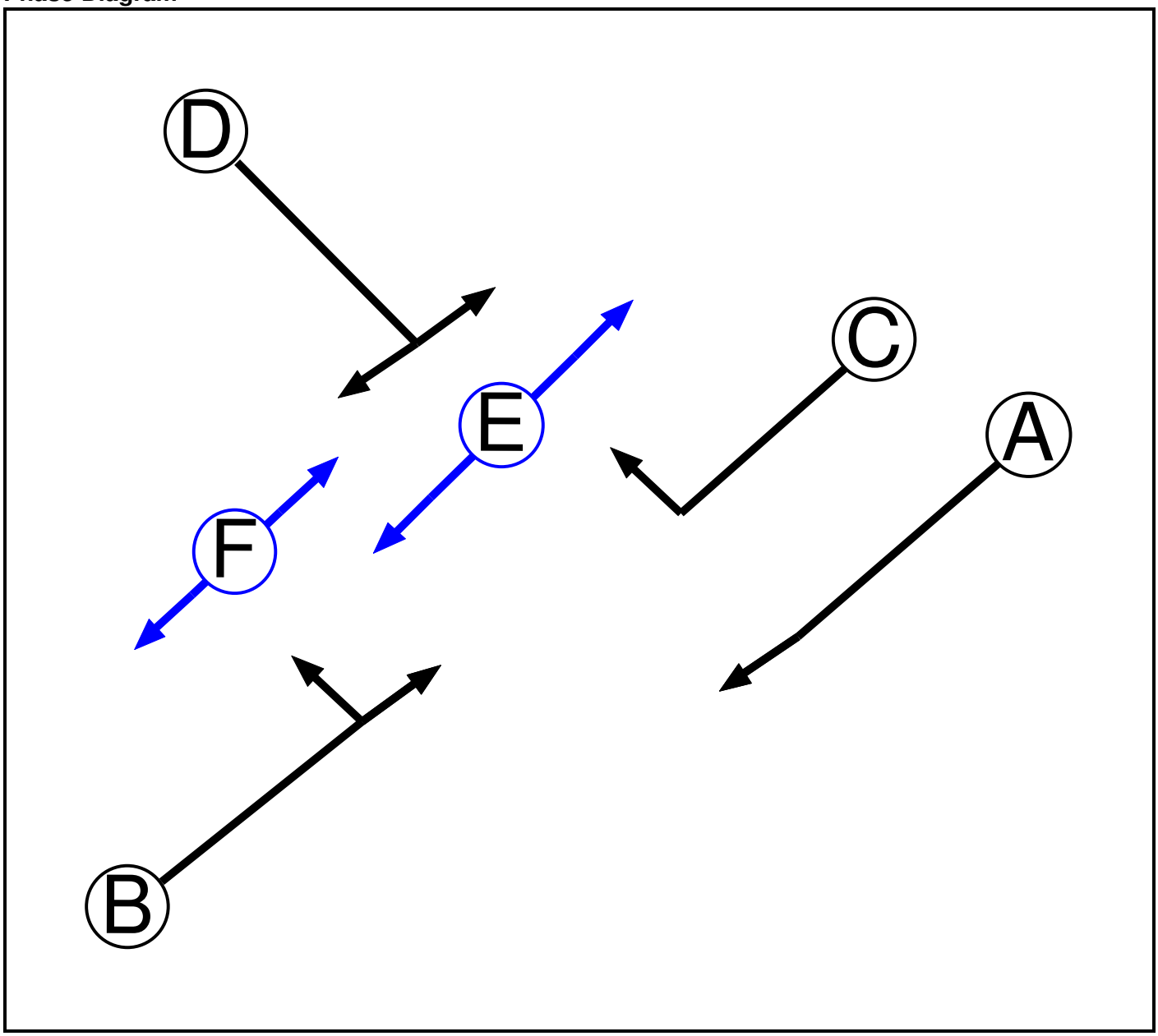
Project:	**A085361 Gedling Access Road**
Title:	**Colwick Loop Rd / Burton Road - Existing Layout**
Location:	
File name:	A085361 J44293 Burton Road - GTI Existing Test C.lsg3x
Author:	
Company:	
Address:	
Notes:	

Network Layout Diagram



Full Input Data And Results

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		6	5
F	Pedestrian		6	6

Full Input Data And Results

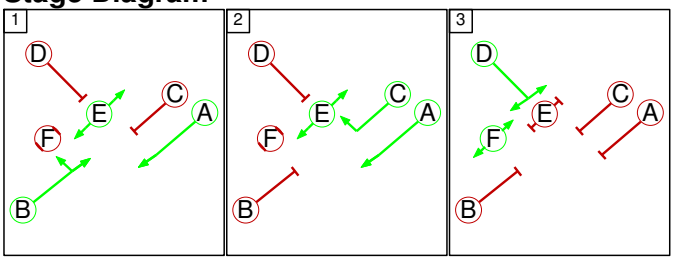
Phase Intergreens Matrix

Terminating Phase	Starting Phase						
		A	B	C	D	E	F
	A		-	-	6	-	-
	B	-		7	7	-	8
	C	-	6		6	-	8
	D	7	7	7		5	-
	E	-	-	-	5		-
	F	-	8	7	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B E
2	A C E
3	D F

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	3	E	Losing	2	2
2	3	E	Losing	1	1
3	1	D	Losing	1	1

Prohibited Stage Change

From Stage	To Stage			
		1	2	3
	1		7	8
	2	6		8
	3	8	7	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Burton Rd / Colwick Loop 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)
10/1 (Whitworth Drive)	2/1 (Left)	715	0	7/1	0.22	All	-	-	-	-	-
	8/1 (Right)			7/1	0.22	All					
				5/1	0.22	All					

Full Input Data And Results

Lane Input Data

Junction: Burton Rd / Colwick Loop 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 (A612 Burton Road)	U	A	2	3	60.0	User	1800	-	-	-	-	-
1/2 (A612 Burton Road)	U	A	2	3	5.0	User	1800	-	-	-	-	-
1/3 (A612 Burton Road)	U	C	2	3	60.0	User	1800	-	-	-	-	-
2/1 (Burton Road)	U	D	2	3	60.0	User	1800	-	-	-	-	-
3/1 (A612 Trent Valley Way)	U	B	2	3	60.0	User	1800	-	-	-	-	-
3/2 (A612 Trent Valley Way)	U	B	2	3	5.0	User	1800	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2	U		2	3	60.0	Inf	-	-	-	-	-	-
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1	U		2	3	60.0	Inf	-	-	-	-	-	-
6/2	U		2	3	60.0	Inf	-	-	-	-	-	-
7/1 (Burton Road)	U		2	3	60.0	Inf	-	-	-	-	-	-
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1 (Whitworth Drive)	O		2	3	60.0	Inf	-	-	-	-	-	-

Full Input Data And Results

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'Do Nothing Saturn flows AM Peak'	08:00	09:00	01:00	
2: 'Do Nothing Saturn flows Inter Peak'	11:00	12:00	01:00	
3: 'Do Nothing Saturn flows PM Peak'	17:00	18:00	01:00	
4: 'Do Something 1 Saturn flows AM Peak'	08:00	09:00	01:00	
5: 'Do Something 1 Saturn flows Inter Peak'	11:00	12:00	01:00	
6: 'Do Something 1 Saturn flows PM Peak'	17:00	18:00	01:00	
7: 'Do Something 2 Saturn flows AM Peak'	08:00	09:00	01:00	
8: 'Do Something 2 Saturn flows Inter Peak'	11:00	12:00	01:00	
9: 'Do Something 2 Saturn flows PM Peak'	17:00	18:00	01:00	
10: 'DS3 AM 2010'	08:00	09:00	01:00	
11: 'DS3 IP 2010'	11:00	12:00	01:00	
12: 'DS3 PM PEAK'	17:00	18:00	01:00	
13: 'DS4 AM PEAK'	08:00	09:00	01:00	
14: 'DS4 IP PEAK'	11:00	12:00	01:00	
15: 'DS4 PM PEAK'	17:00	18:00	01:00	
16: 'AM 2028 Reference Test C'	08:00	09:00	01:00	
17: 'PM 2028 Reference Test C'	17:00	18:00	01:00	

Scenario 1: '2028 AM Ref Test C' (FG16: 'AM 2028 Reference Test C', Plan 1: 'Stage Sequence No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	959	527	10	1496
	B	637	0	13	10	660
	C	115	0	0	10	125
	D	10	10	10	0	30
	Tot.	762	969	550	30	2311

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: 2028 AM Ref Test C
Junction: Burton Rd / Colwick Loop Rd	
1/1 (with short)	959(In) 480(Out)
1/2 (short)	479
1/3	537
2/1	135
3/1 (with short)	660(In) 330(Out)
3/2 (short)	330
4/1	432
4/2	330
5/1	560
6/1	480
6/2	489
7/1	125
8/1	550
9/1	30
10/1	30

Full Input Data And Results

Lane Saturation Flows

Junction: Burton Rd / Colwick Loop 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 (A612 Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A612 Burton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (A612 Burton Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A612 Trent Valley Way Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A612 Trent Valley Way Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1 (Burton Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
10/1 (Whitworth Drive Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 2: '2028 PM Ref Test C' (FG17: 'PM 2028 Reference Test C', Plan 1: 'Stage Sequence No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	884	432	10	1326
	B	977	0	9	10	996
	C	142	0	0	10	152
	D	10	10	10	0	30
	Tot.	1129	894	451	30	2504

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: 2028 PM Ref Test C
Junction: Burton Rd / Colwick Loop Rd	
1/1 (with short)	884(In) 442(Out)
1/2 (short)	442
1/3	442
2/1	162
3/1 (with short)	996(In) 498(Out)
3/2 (short)	498
4/1	631
4/2	498
5/1	461
6/1	442
6/2	452
7/1	152
8/1	451
9/1	30
10/1	30

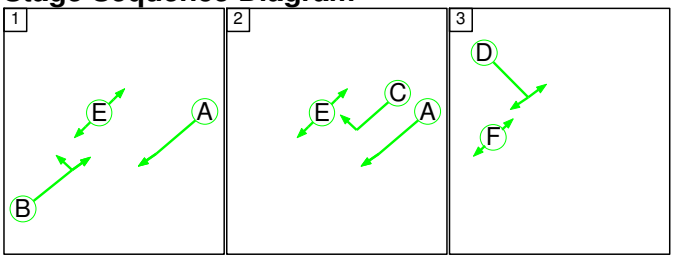
Full Input Data And Results

Lane Saturation Flows

Junction: Burton Rd / Colwick Loop 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 (A612 Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (A612 Burton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
1/3 (A612 Burton Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (A612 Trent Valley Way Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (A612 Trent Valley Way Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf
6/2	Infinite Saturation Flow						Inf	Inf
7/1 (Burton Road Lane 1)	Infinite Saturation Flow						Inf	Inf
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
10/1 (Whitworth Drive Lane 1)	Infinite Saturation Flow						Inf	Inf

Scenario 1: '2028 AM Ref Test C' (FG16: 'AM 2028 Reference Test C', Plan 1: 'Stage Sequence No. 1')

Stage Sequence Diagram

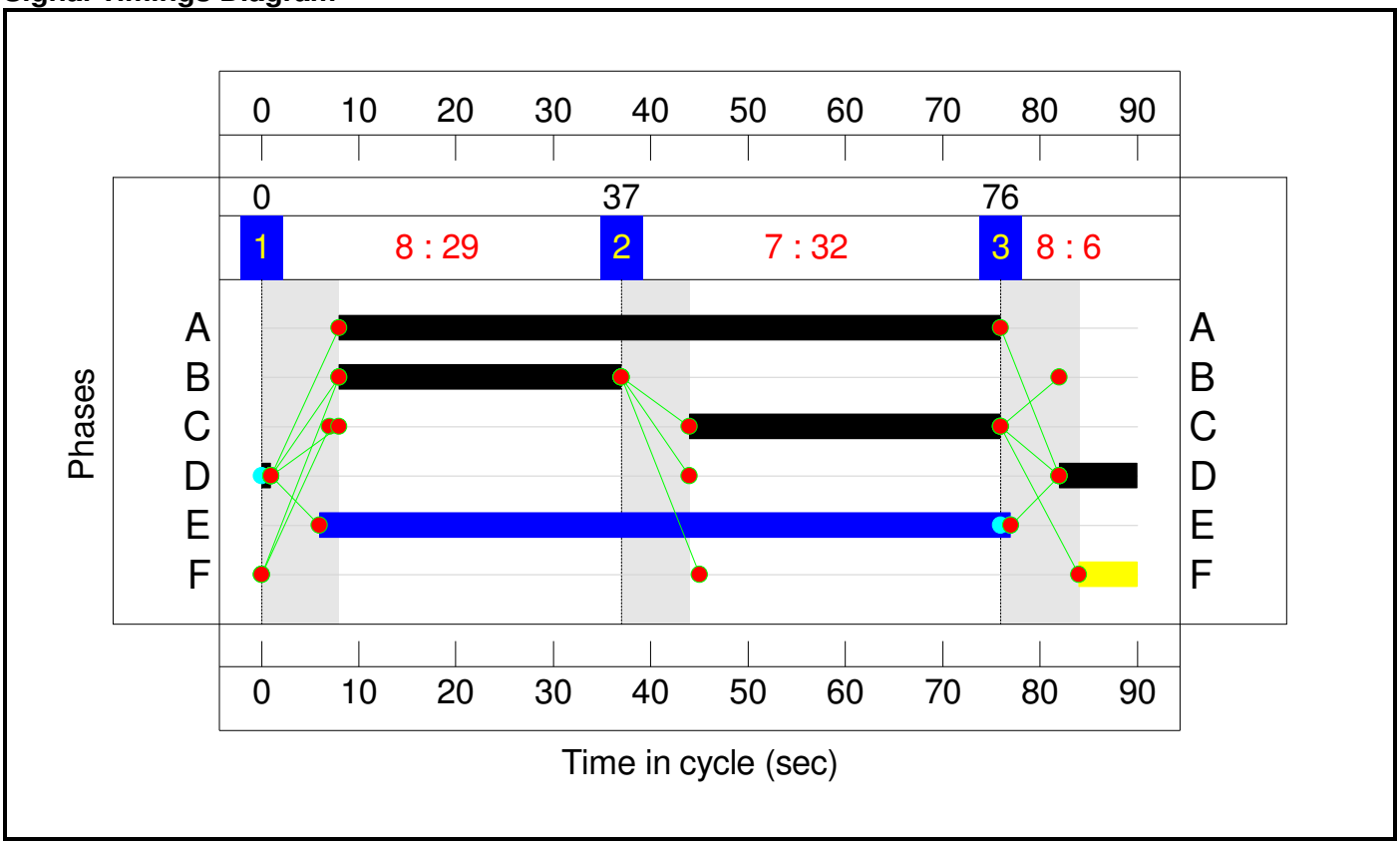


Stage Timings

Stage	1	2	3
Duration	29	32	6
Change Point	0	37	76

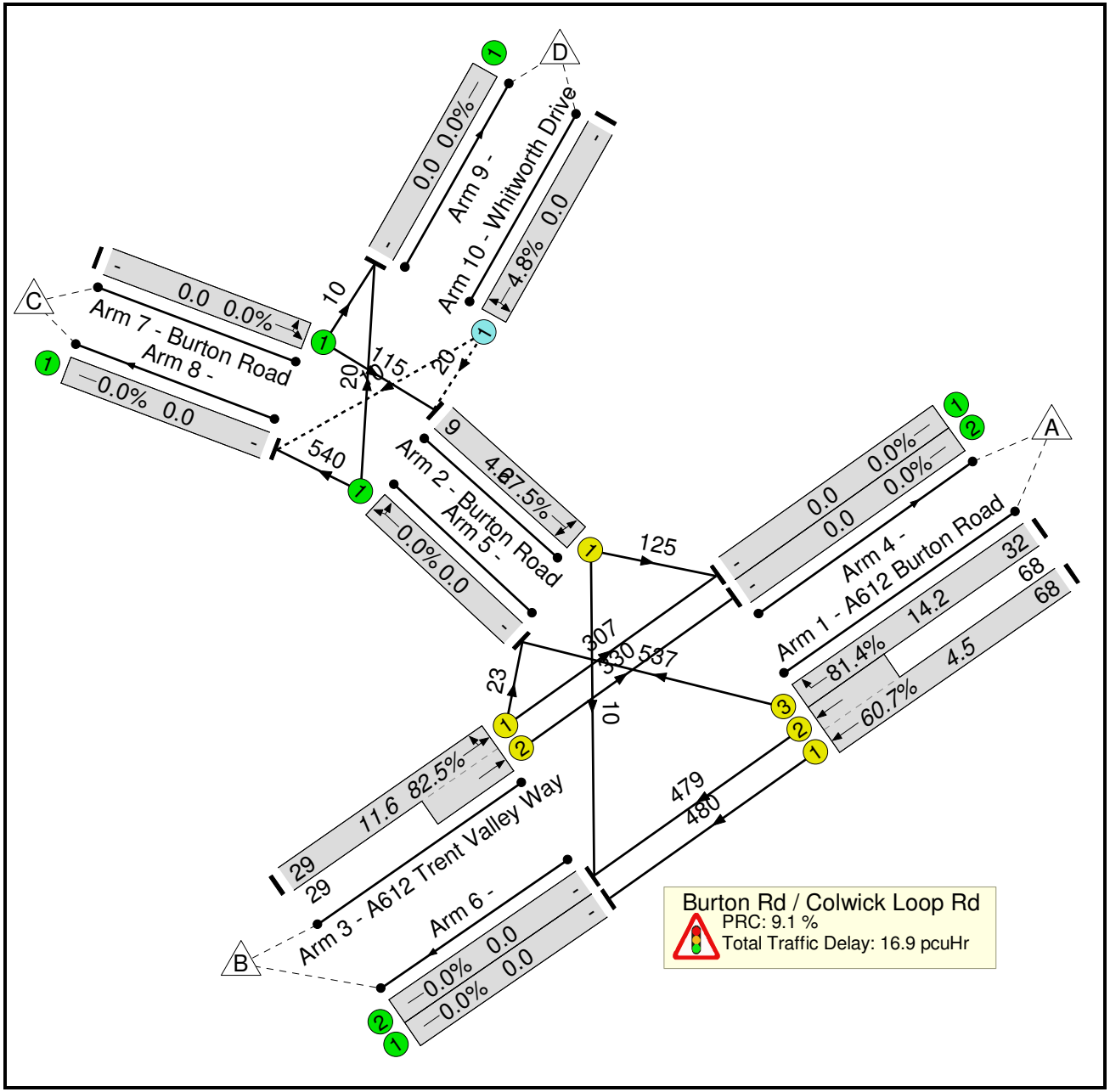
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Colwick Loop Rd / Burton Road - Existing Layout	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.5%**
Burton Rd / Colwick Loop Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**82.5%**
1/1+1/2	A612 Burton Road Ahead	U	N/A	N/A	A		1	68	-	959	1800:1800	1580	60.7%
1/3	A612 Burton Road Right	U	N/A	N/A	C		1	32	-	537	1800	660	81.4%
2/1	Burton Road Left Right	U	N/A	N/A	D		1	9	-	135	1800	200	67.5%
3/1+3/2	A612 Trent Valley Way Ahead Left	U	N/A	N/A	B		1	29	-	660	1800:1800	800	82.5%
4/1		U	N/A	N/A	-		-	-	-	432	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	330	Inf	Inf	0.0%
5/1	Ahead Right	U	N/A	N/A	-		-	-	-	560	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	480	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	489	Inf	Inf	0.0%
7/1	Burton Road Ahead Left	U	N/A	N/A	-		-	-	-	125	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	550	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	30	Inf	Inf	0.0%
10/1	Whitworth Drive Left Right	O	N/A	N/A	-		-	-	-	30	Inf	625	4.8%

Full Input Data And Results

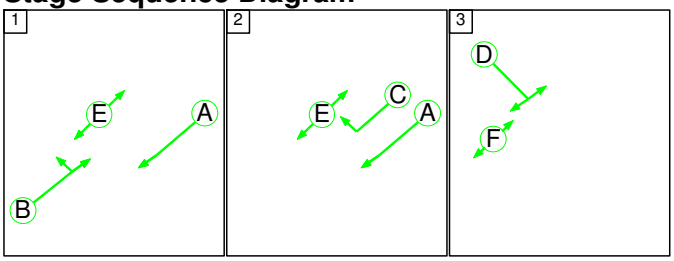
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Colwick Loop Rd / Burton Road - Existing Layout	**-**	**-**	**30**	**0**	**0**	**10.7**	**6.2**	**0.0**	**16.9**	**-**	**-**	**-**	**-**
Burton Rd / Colwick Loop Rd	**-**	**-**	**30**	**0**	**0**	**10.7**	**6.2**	**0.0**	**16.9**	**-**	**-**	**-**	**-**
1/1+1/2	959	959	-	-	-	0.9	0.8	-	1.7	6.2	3.7	0.8	4.5
1/3	537	537	-	-	-	3.8	2.1	-	5.9	39.9	12.1	2.1	14.2
2/1	135	135	-	-	-	1.4	1.0	-	2.4	65.3	3.2	1.0	4.2
3/1+3/2	660	660	-	-	-	4.6	2.3	-	6.9	37.4	9.3	2.3	11.6
4/1	432	432	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	330	330	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	560	560	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	480	480	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	489	489	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	125	125	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	550	550	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	30	30	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	30	30	30	0	0	0.0	0.0	-	0.0	3.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 9.1 Total Delay for Signalled Lanes (pcuHr): 16.92 Cycle Time (s): 90
PRC Over All Lanes (%): 9.1 Total Delay Over All Lanes(pcuHr): 16.94

Full Input Data And Results

Scenario 2: '2028 PM Ref Test C' (FG17: 'PM 2028 Reference Test C', Plan 1: 'Stage Sequence No. 1')

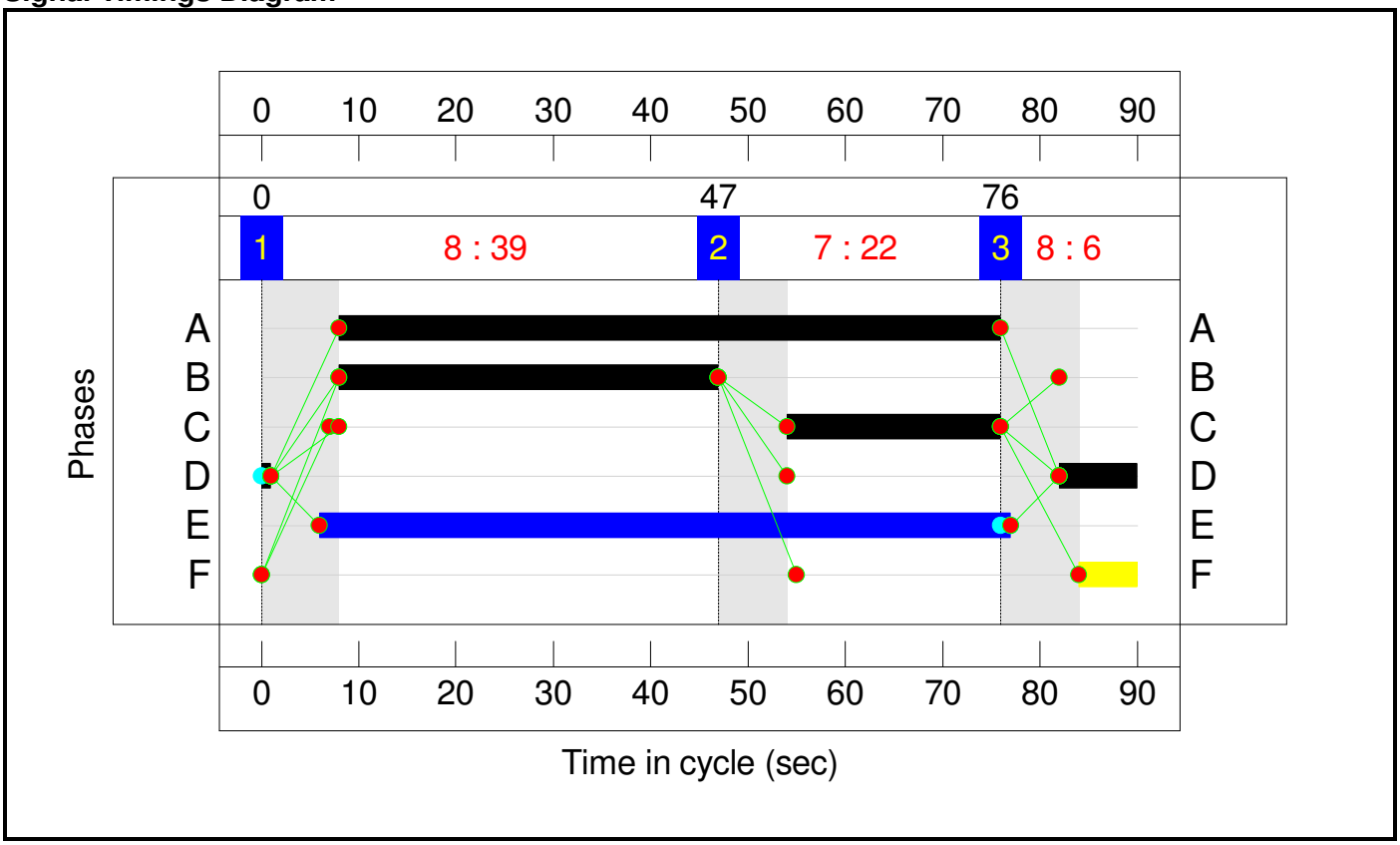
Stage Sequence Diagram



Stage Timings

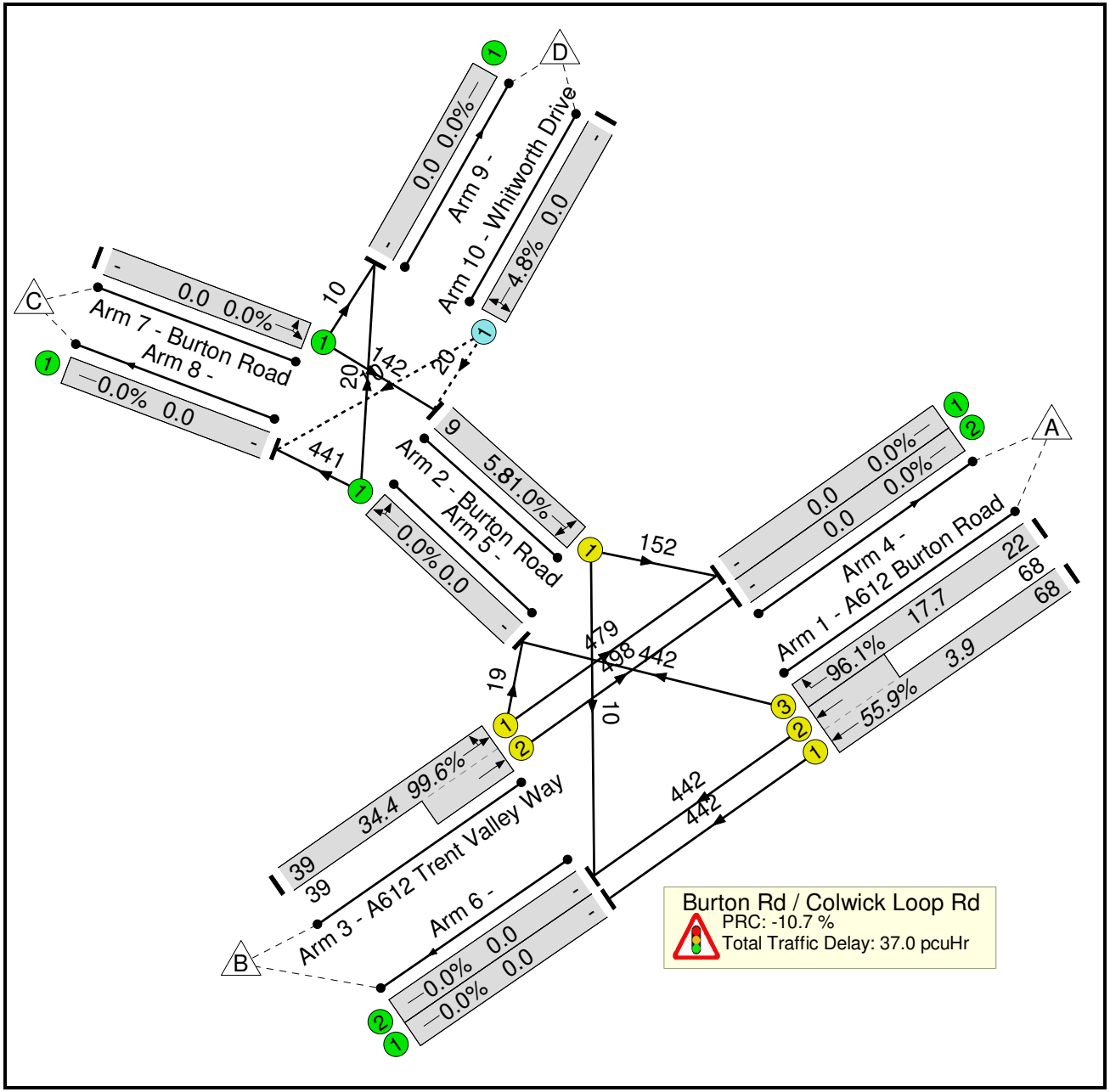
Stage	1	2	3
Duration	39	22	6
Change Point	0	47	76

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Colwick Loop Rd / Burton Road - Existing Layout	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.6%**
Burton Rd / Colwick Loop Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**99.6%**
1/1+1/2	A612 Burton Road Ahead	U	N/A	N/A	A		1	68	-	884	1800:1800	1580	55.9%
1/3	A612 Burton Road Right	U	N/A	N/A	C		1	22	-	442	1800	460	96.1%
2/1	Burton Road Left Right	U	N/A	N/A	D		1	9	-	162	1800	200	81.0%
3/1+3/2	A612 Trent Valley Way Ahead Left	U	N/A	N/A	B		1	39	-	996	1800:1800	1000	99.6%
4/1		U	N/A	N/A	-		-	-	-	631	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	498	Inf	Inf	0.0%
5/1	Ahead Right	U	N/A	N/A	-		-	-	-	461	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	442	Inf	Inf	0.0%
6/2		U	N/A	N/A	-		-	-	-	452	Inf	Inf	0.0%
7/1	Burton Road Ahead Left	U	N/A	N/A	-		-	-	-	152	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	451	Inf	Inf	0.0%
9/1		U	N/A	N/A	-		-	-	-	30	Inf	Inf	0.0%
10/1	Whitworth Drive Left Right	O	N/A	N/A	-		-	-	-	30	Inf	629	4.8%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Colwick Loop Rd / Burton Road - Existing Layout	**-**	**-**	**30**	**0**	**0**	**12.7**	**24.3**	**0.0**	**37.0**	**-**	**-**	**-**	**-**
Burton Rd / Colwick Loop Rd	**-**	**-**	**30**	**0**	**0**	**12.7**	**24.3**	**0.0**	**37.0**	**-**	**-**	**-**	**-**
1/1+1/2	884	884	-	-	-	0.8	0.6	-	1.4	5.8	3.3	0.6	3.9
1/3	442	442	-	-	-	4.1	6.9	-	11.0	89.5	10.8	6.9	17.7
2/1	162	162	-	-	-	1.8	1.9	-	3.7	82.1	3.9	1.9	5.8
3/1+3/2	996	996	-	-	-	6.1	14.8	-	20.9	75.4	19.6	14.8	34.4
4/1	631	631	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	498	498	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	461	461	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	442	442	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2	452	452	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	152	152	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	451	451	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	30	30	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	30	30	30	0	0	0.0	0.0	-	0.0	3.0	0.0	0.0	0.0

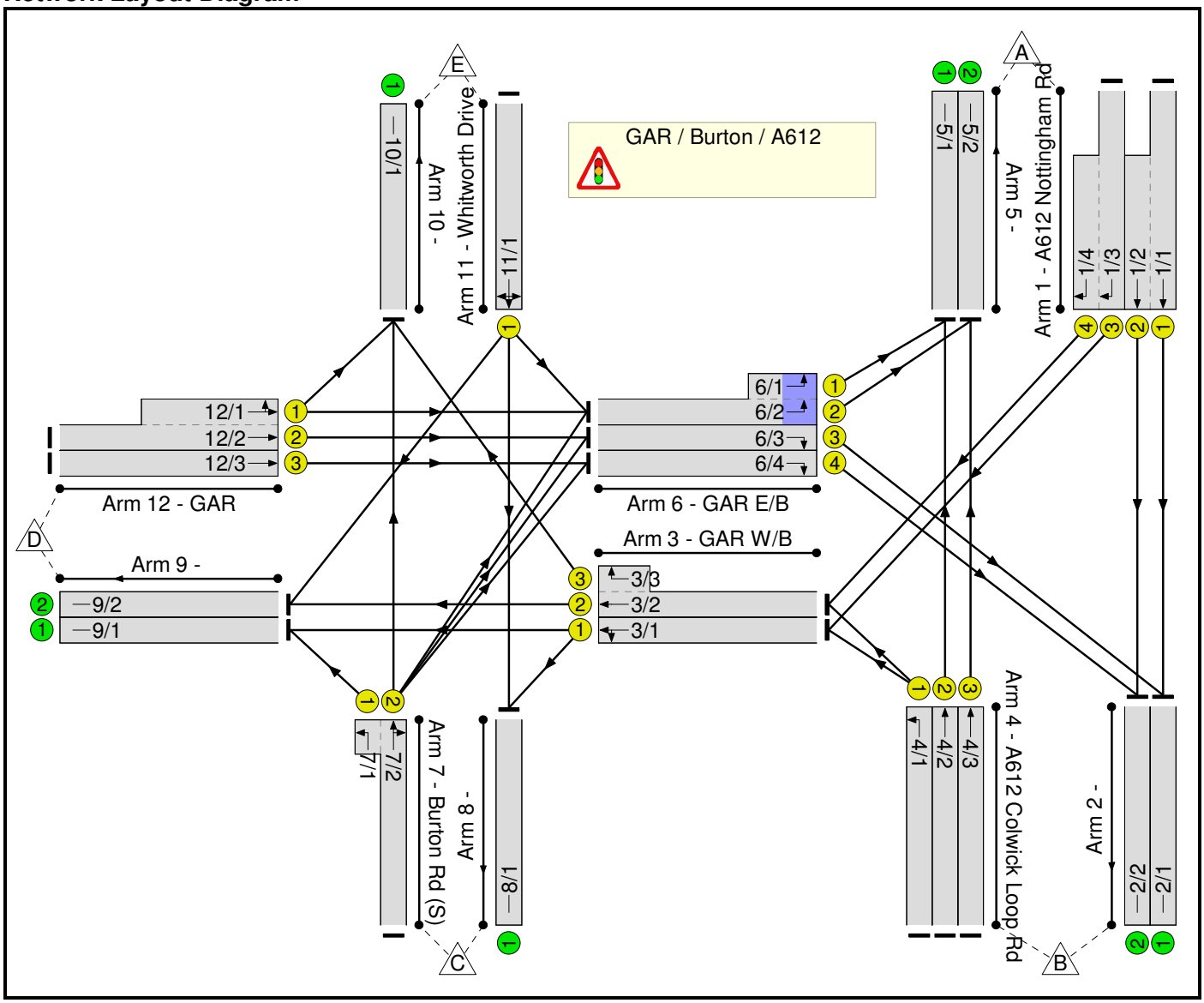
C1 PRC for Signalled Lanes (%): -10.7 Total Delay for Signalled Lanes (pcuHr): 36.99 Cycle Time (s): 90
PRC Over All Lanes (%): -10.7 Total Delay Over All Lanes(pcuHr): 37.02

Full Input Data And Results

User and Project Details

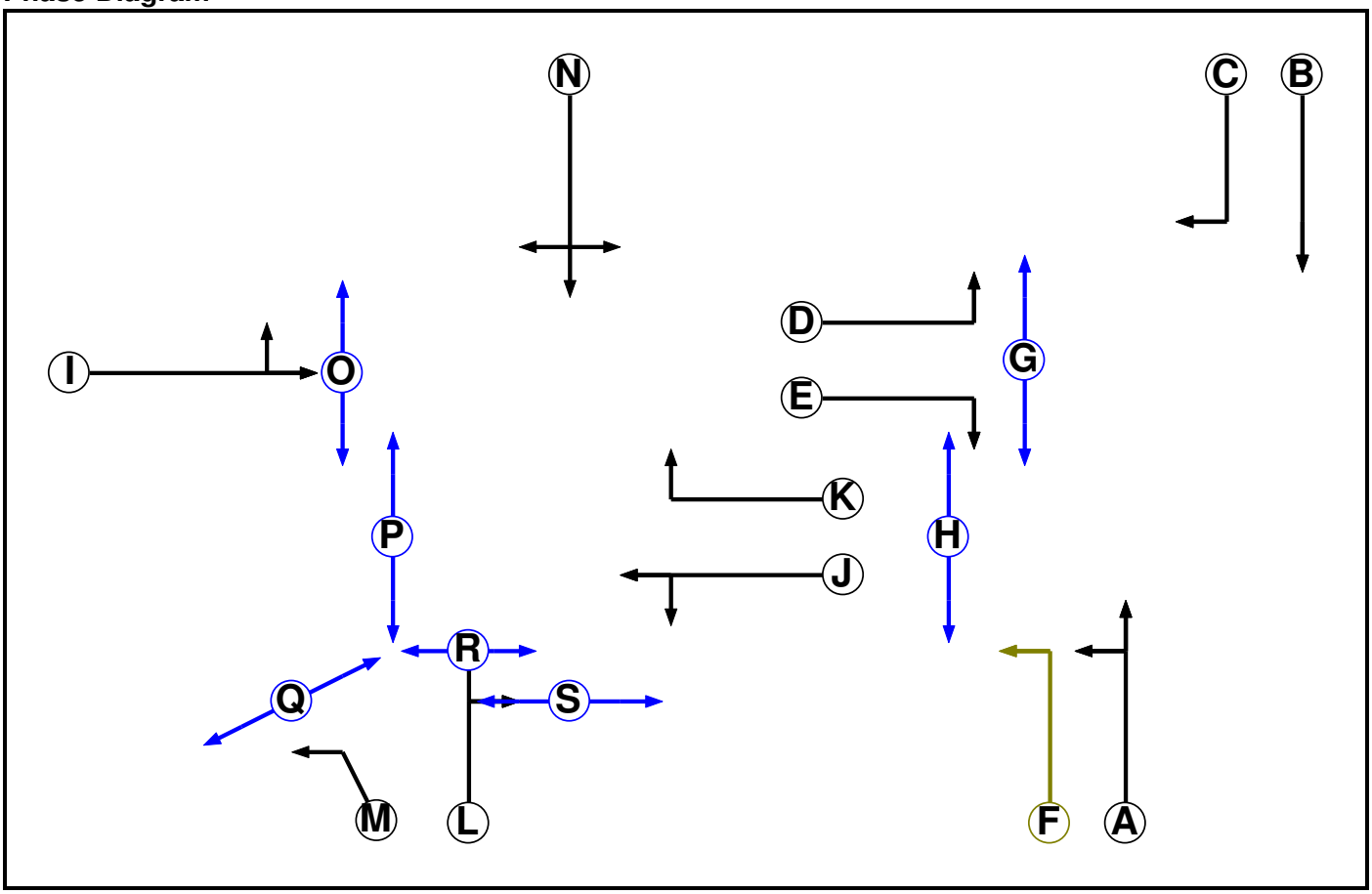
Project:	**A085361 Gedling Access Road**
Title:	**GAR / A612 / Burton Rd**
Location:	
File name:	A085361 GAR - Burton Road (Test C).lsg3x
Author:	R Bishop
Company:	WYG
Address:	Leicester
Notes:	Differences from NCoC Layout: Colwick Loop Rd LT only from lane 1 and on a filter phase.

Network Layout Diagram



Full Input Data And Results

Phase Diagram



Full Input Data And Results

Phase Input Data

Phase Name	Phase Type	Assoc. Phase	Street Min	Cont Min
A	Traffic		-9999	7
B	Traffic		-9999	7
C	Traffic		-9999	7
D	Traffic		-9999	7
E	Traffic		-9999	7
F	Filter	A	-9999	4
G	Pedestrian		-9999	6
H	Pedestrian		-9999	5
I	Traffic		-9999	7
J	Traffic		-9999	7
K	Traffic		-9999	7
L	Traffic		-9999	7
M	Traffic		-9999	7
N	Traffic		-9999	7
O	Pedestrian		-9999	5
P	Pedestrian		-9999	5
Q	Pedestrian		-9999	5
R	Pedestrian		-9999	5
S	Pedestrian		-9999	5

Full Input Data And Results

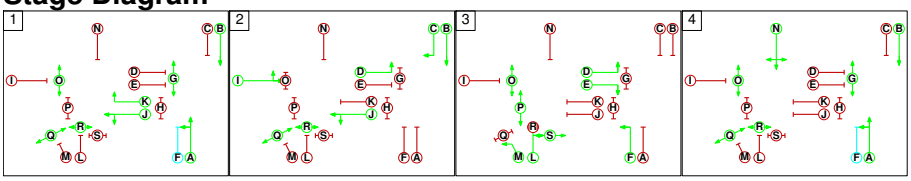
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
A		-	7	7	7	-	-	8	-	-	-	-	-	-	-	-	-	-	-
B	-		-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C	7	-		-	6	7	-	8	-	-	-	-	-	-	-	-	-	-	-
D	5	-	-		-	-	5	-	-	-	-	-	-	-	-	-	-	-	-
E	5	7	6	-		-	5	-	-	-	-	-	-	-	-	-	-	-	-
F	-	-	-	-	-		-	8	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	5	5	-		-	-	-	-	-	-	-	-	-	-	-	-
H	5	-	5	-	-	5	-		-	-	-	-	-	-	-	-	-	-	-
I	-	-	-	-	-	-	-	-		-	6	6	-	7	6	-	-	-	-
J	-	-	-	-	-	-	-	-	-		-	6	7	5	-	7	-	-	7
K	-	-	-	-	-	-	-	-	5	-		5	-	6	-	7	-	-	-
L	-	-	-	-	-	-	-	-	5	5	6		-	7	-	-	-	5	-
M	-	-	-	-	-	-	-	-	-	5	-	-		5	-	-	5	-	-
N	-	-	-	-	-	-	-	-	5	7	7	7	7		-	9	-	-	9
O	-	-	-	-	-	-	-	-	5	-	-	-	-	-		-	-	-	-
P	-	-	-	-	-	-	-	-	-	5	5	-	-	5	-		-	-	-
Q	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-		-	-
R	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-		-
S	-	-	-	-	-	-	-	-	-	5	-	-	-	5	-	-	-	-	

Phases in Stage

Stage No.	Phases in Stage
1	A B G J K O Q R
2	B C D I J Q R
3	D E F L M O P S
4	A B G N O Q R

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
2	3	J	Losing	7	7
3	1	D	Losing	7	7
3	1	E	Losing	7	7
3	4	D	Losing	7	7
3	4	E	Losing	7	7

Full Input Data And Results

Prohibited Stage Change

		To Stage			
		1	2	3	4
From Stage	1		7	7	6
	2	7		14	7
	3	14	X		14
	4	7	7	9	

Full Input Data And Results

Give-Way Lane Input Data

Junction: GAR / Burton / A612
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: GAR / Burton / A612

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 (A612 Nottingham Rd)	U	B	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 2 Ahead	Inf
1/2 (A612 Nottingham Rd)	U	B	2	3	9.0	Geom	-	3.00	0.00	N	Arm 2 Ahead	Inf
1/3 (A612 Nottingham Rd)	U	C	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 3 Right	15.00
1/4 (A612 Nottingham Rd)	U	C	2	3	9.0	Geom	-	3.00	0.00	N	Arm 3 Right	15.00
2/1	U		2	3	60.0	Inf	-	-	-	-	-	-
2/2	U		2	3	60.0	Inf	-	-	-	-	-	-
3/1 (GAR W/B)	U	J	2	3	7.0	Geom	-	3.65	0.00	Y	Arm 8 Left	12.00
											Arm 9 Ahead	Inf
3/2 (GAR W/B)	U	J	2	3	7.0	Geom	-	3.65	0.00	N	Arm 9 Ahead	Inf
3/3 (GAR W/B)	U	K	2	3	3.0	Geom	-	3.00	0.00	Y	Arm 10 Right	8.00
4/1 (A612 Colwick Loop Rd)	U	A F	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 3 Left	12.00
4/2 (A612 Colwick Loop Rd)	U	A	2	3	60.0	Geom	-	3.00	0.00	N	Arm 5 Ahead	12.00
4/3 (A612 Colwick Loop Rd)	U	A	2	3	60.0	Geom	-	3.00	0.00	Y	Arm 5 Ahead	Inf
5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
5/2	U		2	3	60.0	Inf	-	-	-	-	-	-
6/1 (GAR E/B)	U	D	2	3	4.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
6/2 (GAR E/B)	U	D	2	3	7.0	Geom	-	3.00	0.00	Y	Arm 5 Left	12.00
6/3 (GAR E/B)	U	E	2	3	7.0	Geom	-	3.00	0.00	Y	Arm 2 Right	15.00
6/4 (GAR E/B)	U	E	2	3	7.0	Geom	-	3.00	0.00	N	Arm 2 Right	15.00
7/1 (Burton Rd (S))	U	M	2	3	2.0	Geom	-	3.65	0.00	Y	Arm 9 Left	25.00

Full Input Data And Results

7/2 (Burton Rd (S))	U	L	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Right	15.00
											Arm 10 Ahead	Inf
8/1	U		2	3	60.0	Inf	-	-	-	-	-	-
9/1	U		2	3	60.0	Inf	-	-	-	-	-	-
9/2	U		2	3	60.0	Inf	-	-	-	-	-	-
10/1	U		2	3	60.0	Inf	-	-	-	-	-	-
11/1 (Whitworth Drive)	U	N	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Left	6.00
											Arm 8 Ahead	Inf
											Arm 9 Right	15.00
12/1 (GAR)	U	I	2	3	8.0	Geom	-	3.65	0.00	Y	Arm 6 Ahead	Inf
											Arm 10 Left	8.00
12/2 (GAR)	U	I	2	3	60.0	Geom	-	3.65	0.00	Y	Arm 6 Ahead	Inf
12/3 (GAR)	U	I	2	3	60.0	Geom	-	3.65	0.00	N	Arm 6 Ahead	Inf

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: 'AM 2028 'Test C"	08:00	09:00	01:00	
2: 'PM 2028 'Test C"	17:00	18:00	01:00	
3: 'AM 2034 'Test C"	08:00	09:00	01:00	
4: 'PM 2034 'Test C"	17:00	18:00	01:00	

Scenario 1: 'AM 2028 'Test C" (FG1: 'AM 2028 'Test C", Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	930	412	155	1	1498
	B	350	0	1	366	0	717
	C	174	1	0	0	0	175
	D	114	529	0	0	9	652
	E	1	0	0	0	0	1
	Tot.	639	1460	413	521	10	3043

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM 2028 'Test C'
Junction: GAR / Burton / A612	
1/1 (with short)	930(In) 465(Out)
1/2 (short)	465
1/3 (with short)	568(In) 412(Out)
1/4 (short)	156
2/1	731
2/2	729
3/1	596
3/2 (with short)	339(In) 338(Out)
3/3 (short)	1
4/1	367
4/2	175
4/3	175
5/1	320
5/2	319
6/1 (short)	145
6/2 (with short)	289(In) 144(Out)
6/3	266
6/4	264
7/1 (short)	0
7/2 (with short)	175(In) 175(Out)
8/1	413
9/1	183
9/2	338
10/1	10
11/1	1
12/1 (short)	123
12/2 (with short)	388(In) 265(Out)
12/3	264

Full Input Data And Results

Lane Saturation Flows

Junction: GAR / Burton / A612								
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 (A612 Nottingham Rd)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A612 Nottingham Rd)	3.00	0.00	N	Arm 2 Ahead	Inf	100.0 %	2055	2055
1/3 (A612 Nottingham Rd)	3.00	0.00	Y	Arm 3 Right	15.00	100.0 %	1741	1741
1/4 (A612 Nottingham Rd)	3.00	0.00	N	Arm 3 Right	15.00	100.0 %	1868	1868
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1 (GAR W/B)	3.65	0.00	Y	Arm 8 Left	12.00	69.3 %	1822	1822
				Arm 9 Ahead	Inf	30.7 %		
3/2 (GAR W/B)	3.65	0.00	N	Arm 9 Ahead	Inf	100.0 %	2120	2120
3/3 (GAR W/B)	3.00	0.00	Y	Arm 10 Right	8.00	100.0 %	1613	1613
4/1 (A612 Colwick Loop Rd)	3.00	0.00	Y	Arm 3 Left	12.00	100.0 %	1702	1702
4/2 (A612 Colwick Loop Rd)	3.00	0.00	N	Arm 5 Ahead	12.00	100.0 %	1827	1827
4/3 (A612 Colwick Loop Rd)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1 (GAR E/B)	3.00	0.00	Y	Arm 5 Left	12.00	100.0 %	1702	1702
6/2 (GAR E/B)	3.00	0.00	Y	Arm 5 Left	12.00	100.0 %	1702	1702
6/3 (GAR E/B)	3.00	0.00	Y	Arm 2 Right	15.00	100.0 %	1741	1741
6/4 (GAR E/B)	3.00	0.00	N	Arm 2 Right	15.00	100.0 %	1868	1868
7/1 (Burton Rd (S))	3.65	0.00	Y	Arm 9 Left	25.00	0.0 %	1980	1980
7/2 (Burton Rd (S))	3.65	0.00	Y	Arm 6 Right	15.00	100.0 %	1800	1800
				Arm 10 Ahead	Inf	0.0 %		
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
11/1 (Whitworth Drive)	3.65	0.00	Y	Arm 6 Left	6.00	100.0 %	1584	1584
				Arm 8 Ahead	Inf	0.0 %		
				Arm 9 Right	15.00	0.0 %		

12/1 (GAR)	3.65	0.00	Y	Arm 6 Ahead	Inf	92.7 %	1953	1953
				Arm 10 Left	8.00	7.3 %		
12/2 (GAR)	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
12/3 (GAR)	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120

Scenario 2: 'PM 2028 'Test C'' (FG2: 'PM 2028 'Test C'', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	854	346	236	0	1436
	B	553	0	0	420	0	973
	C	418	0	0	1	0	419
	D	139	338	0	0	25	502
	E	7	0	0	0	0	7
	Tot.	1117	1192	346	657	25	3337

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 2: PM 2028 'Test C'
Junction: GAR / Burton / A612	
1/1 (with short)	854(In) 427(Out)
1/2 (short)	427
1/3 (with short)	582(In) 346(Out)
1/4 (short)	236
2/1	596
2/2	596
3/1	556
3/2 (with short)	446(In) 446(Out)
3/3 (short)	0
4/1	420
4/2	277
4/3	276
5/1	560
5/2	557
6/1 (short)	283
6/2 (with short)	564(In) 281(Out)
6/3	169
6/4	169
7/1 (short)	1
7/2 (with short)	419(In) 418(Out)
8/1	346
9/1	211
9/2	446
10/1	25
11/1	7
12/1 (short)	164
12/2 (with short)	333(In) 169(Out)
12/3	169

Full Input Data And Results

Lane Saturation Flows

Junction: GAR / Burton / A612								
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 (A612 Nottingham Rd)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A612 Nottingham Rd)	3.00	0.00	N	Arm 2 Ahead	Inf	100.0 %	2055	2055
1/3 (A612 Nottingham Rd)	3.00	0.00	Y	Arm 3 Right	15.00	100.0 %	1741	1741
1/4 (A612 Nottingham Rd)	3.00	0.00	N	Arm 3 Right	15.00	100.0 %	1868	1868
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1 (GAR W/B)	3.65	0.00	Y	Arm 8 Left	12.00	62.2 %	1837	1837
				Arm 9 Ahead	Inf	37.8 %		
3/2 (GAR W/B)	3.65	0.00	N	Arm 9 Ahead	Inf	100.0 %	2120	2120
3/3 (GAR W/B)	3.00	0.00	Y	Arm 10 Right	8.00	0.0 %	1915	1915
4/1 (A612 Colwick Loop Rd)	3.00	0.00	Y	Arm 3 Left	12.00	100.0 %	1702	1702
4/2 (A612 Colwick Loop Rd)	3.00	0.00	N	Arm 5 Ahead	12.00	100.0 %	1827	1827
4/3 (A612 Colwick Loop Rd)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1 (GAR E/B)	3.00	0.00	Y	Arm 5 Left	12.00	100.0 %	1702	1702
6/2 (GAR E/B)	3.00	0.00	Y	Arm 5 Left	12.00	100.0 %	1702	1702
6/3 (GAR E/B)	3.00	0.00	Y	Arm 2 Right	15.00	100.0 %	1741	1741
6/4 (GAR E/B)	3.00	0.00	N	Arm 2 Right	15.00	100.0 %	1868	1868
7/1 (Burton Rd (S))	3.65	0.00	Y	Arm 9 Left	25.00	100.0 %	1868	1868
7/2 (Burton Rd (S))	3.65	0.00	Y	Arm 6 Right	15.00	100.0 %	1800	1800
				Arm 10 Ahead	Inf	0.0 %		
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
11/1 (Whitworth Drive)	3.65	0.00	Y	Arm 6 Left	6.00	100.0 %	1584	1584
				Arm 8 Ahead	Inf	0.0 %		
				Arm 9 Right	15.00	0.0 %		

12/1 (GAR)	3.65	0.00	Y	Arm 6 Ahead	Inf	84.8 %	1925	1925
				Arm 10 Left	8.00	15.2 %		
12/2 (GAR)	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
12/3 (GAR)	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120

Scenario 3: 'AM 2034 'Test C" (FG3: 'AM 2034 'Test C", Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	963	426	160	1	1550
	B	362	0	1	379	0	742
	C	180	1	0	0	0	181
	D	118	548	0	0	9	675
	E	1	0	0	0	0	1
	Tot.	661	1512	427	539	10	3149

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM 2034 'Test C'
Junction: GAR / Burton / A612	
1/1 (with short)	963(In) 481(Out)
1/2 (short)	482
1/3 (with short)	587(In) 426(Out)
1/4 (short)	161
2/1	756
2/2	756
3/1	616
3/2 (with short)	351(In) 350(Out)
3/3 (short)	1
4/1	380
4/2	181
4/3	181
5/1	331
5/2	330
6/1 (short)	150
6/2 (with short)	299(In) 149(Out)
6/3	275
6/4	274
7/1 (short)	0
7/2 (with short)	181(In) 181(Out)
8/1	427
9/1	189
9/2	350
10/1	10
11/1	1
12/1 (short)	127
12/2 (with short)	401(In) 274(Out)
12/3	274

Full Input Data And Results

Lane Saturation Flows

Junction: GAR / Burton / A612								
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 (A612 Nottingham Rd)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A612 Nottingham Rd)	3.00	0.00	N	Arm 2 Ahead	Inf	100.0 %	2055	2055
1/3 (A612 Nottingham Rd)	3.00	0.00	Y	Arm 3 Right	15.00	100.0 %	1741	1741
1/4 (A612 Nottingham Rd)	3.00	0.00	N	Arm 3 Right	15.00	100.0 %	1868	1868
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1 (GAR W/B)	3.65	0.00	Y	Arm 8 Left	12.00	69.3 %	1822	1822
				Arm 9 Ahead	Inf	30.7 %		
3/2 (GAR W/B)	3.65	0.00	N	Arm 9 Ahead	Inf	100.0 %	2120	2120
3/3 (GAR W/B)	3.00	0.00	Y	Arm 10 Right	8.00	100.0 %	1613	1613
4/1 (A612 Colwick Loop Rd)	3.00	0.00	Y	Arm 3 Left	12.00	100.0 %	1702	1702
4/2 (A612 Colwick Loop Rd)	3.00	0.00	N	Arm 5 Ahead	12.00	100.0 %	1827	1827
4/3 (A612 Colwick Loop Rd)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1 (GAR E/B)	3.00	0.00	Y	Arm 5 Left	12.00	100.0 %	1702	1702
6/2 (GAR E/B)	3.00	0.00	Y	Arm 5 Left	12.00	100.0 %	1702	1702
6/3 (GAR E/B)	3.00	0.00	Y	Arm 2 Right	15.00	100.0 %	1741	1741
6/4 (GAR E/B)	3.00	0.00	N	Arm 2 Right	15.00	100.0 %	1868	1868
7/1 (Burton Rd (S))	3.65	0.00	Y	Arm 9 Left	25.00	0.0 %	1980	1980
7/2 (Burton Rd (S))	3.65	0.00	Y	Arm 6 Right	15.00	100.0 %	1800	1800
				Arm 10 Ahead	Inf	0.0 %		
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
11/1 (Whitworth Drive)	3.65	0.00	Y	Arm 6 Left	6.00	100.0 %	1584	1584
				Arm 8 Ahead	Inf	0.0 %		
				Arm 9 Right	15.00	0.0 %		

12/1 (GAR)	3.65	0.00	Y	Arm 6 Ahead	Inf	92.9 %	1954	1954
				Arm 10 Left	8.00	7.1 %		
12/2 (GAR)	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
12/3 (GAR)	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120

Scenario 4: 'PM 2034 'Test C'' (FG4: 'PM 2034 'Test C'', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination					
		A	B	C	D	E	Tot.
Origin	A	0	888	360	245	0	1493
	B	575	0	0	437	0	1012
	C	435	0	0	1	0	436
	D	145	352	0	0	26	523
	E	7	0	0	0	0	7
	Tot.	1162	1240	360	683	26	3471

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 4: PM 2034 'Test C'
Junction: GAR / Burton / A612	
1/1 (with short)	888(In) 444(Out)
1/2 (short)	444
1/3 (with short)	605(In) 360(Out)
1/4 (short)	245
2/1	620
2/2	620
3/1	578
3/2 (with short)	464(In) 464(Out)
3/3 (short)	0
4/1	437
4/2	288
4/3	287
5/1	583
5/2	579
6/1 (short)	295
6/2 (with short)	587(In) 292(Out)
6/3	176
6/4	176
7/1 (short)	1
7/2 (with short)	436(In) 435(Out)
8/1	360
9/1	219
9/2	464
10/1	26
11/1	7
12/1 (short)	171
12/2 (with short)	347(In) 176(Out)
12/3	176

Full Input Data And Results

Lane Saturation Flows

Junction: GAR / Burton / A612								
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 (A612 Nottingham Rd)	3.00	0.00	Y	Arm 2 Ahead	Inf	100.0 %	1915	1915
1/2 (A612 Nottingham Rd)	3.00	0.00	N	Arm 2 Ahead	Inf	100.0 %	2055	2055
1/3 (A612 Nottingham Rd)	3.00	0.00	Y	Arm 3 Right	15.00	100.0 %	1741	1741
1/4 (A612 Nottingham Rd)	3.00	0.00	N	Arm 3 Right	15.00	100.0 %	1868	1868
2/1	Infinite Saturation Flow						Inf	Inf
2/2	Infinite Saturation Flow						Inf	Inf
3/1 (GAR W/B)	3.65	0.00	Y	Arm 8 Left	12.00	62.3 %	1837	1837
				Arm 9 Ahead	Inf	37.7 %		
3/2 (GAR W/B)	3.65	0.00	N	Arm 9 Ahead	Inf	100.0 %	2120	2120
3/3 (GAR W/B)	3.00	0.00	Y	Arm 10 Right	8.00	0.0 %	1915	1915
4/1 (A612 Colwick Loop Rd)	3.00	0.00	Y	Arm 3 Left	12.00	100.0 %	1702	1702
4/2 (A612 Colwick Loop Rd)	3.00	0.00	N	Arm 5 Ahead	12.00	100.0 %	1827	1827
4/3 (A612 Colwick Loop Rd)	3.00	0.00	Y	Arm 5 Ahead	Inf	100.0 %	1915	1915
5/1	Infinite Saturation Flow						Inf	Inf
5/2	Infinite Saturation Flow						Inf	Inf
6/1 (GAR E/B)	3.00	0.00	Y	Arm 5 Left	12.00	100.0 %	1702	1702
6/2 (GAR E/B)	3.00	0.00	Y	Arm 5 Left	12.00	100.0 %	1702	1702
6/3 (GAR E/B)	3.00	0.00	Y	Arm 2 Right	15.00	100.0 %	1741	1741
6/4 (GAR E/B)	3.00	0.00	N	Arm 2 Right	15.00	100.0 %	1868	1868
7/1 (Burton Rd (S))	3.65	0.00	Y	Arm 9 Left	25.00	100.0 %	1868	1868
7/2 (Burton Rd (S))	3.65	0.00	Y	Arm 6 Right	15.00	100.0 %	1800	1800
				Arm 10 Ahead	Inf	0.0 %		
8/1	Infinite Saturation Flow						Inf	Inf
9/1	Infinite Saturation Flow						Inf	Inf
9/2	Infinite Saturation Flow						Inf	Inf
10/1	Infinite Saturation Flow						Inf	Inf
11/1 (Whitworth Drive)	3.65	0.00	Y	Arm 6 Left	6.00	100.0 %	1584	1584
				Arm 8 Ahead	Inf	0.0 %		
				Arm 9 Right	15.00	0.0 %		

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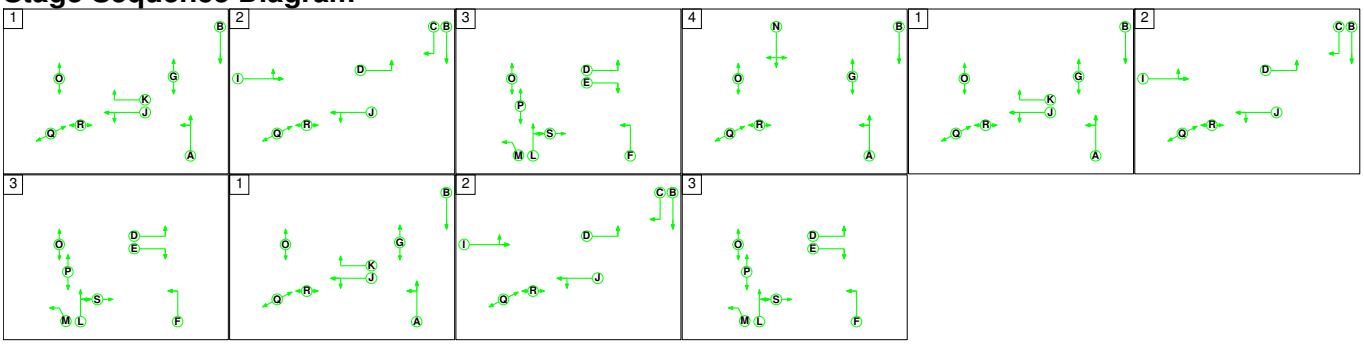
12/1 (GAR)	3.65	0.00	Y	Arm 6 Ahead	Inf	84.8 %	1925	1925
				Arm 10 Left	8.00	15.2 %		
12/2 (GAR)	3.65	0.00	Y	Arm 6 Ahead	Inf	100.0 %	1980	1980
12/3 (GAR)	3.65	0.00	N	Arm 6 Ahead	Inf	100.0 %	2120	2120

Scenario 1: 'AM 2028 'Test C" (FG1: 'AM 2028 'Test C", Plan 1: 'Network Control Plan 1')

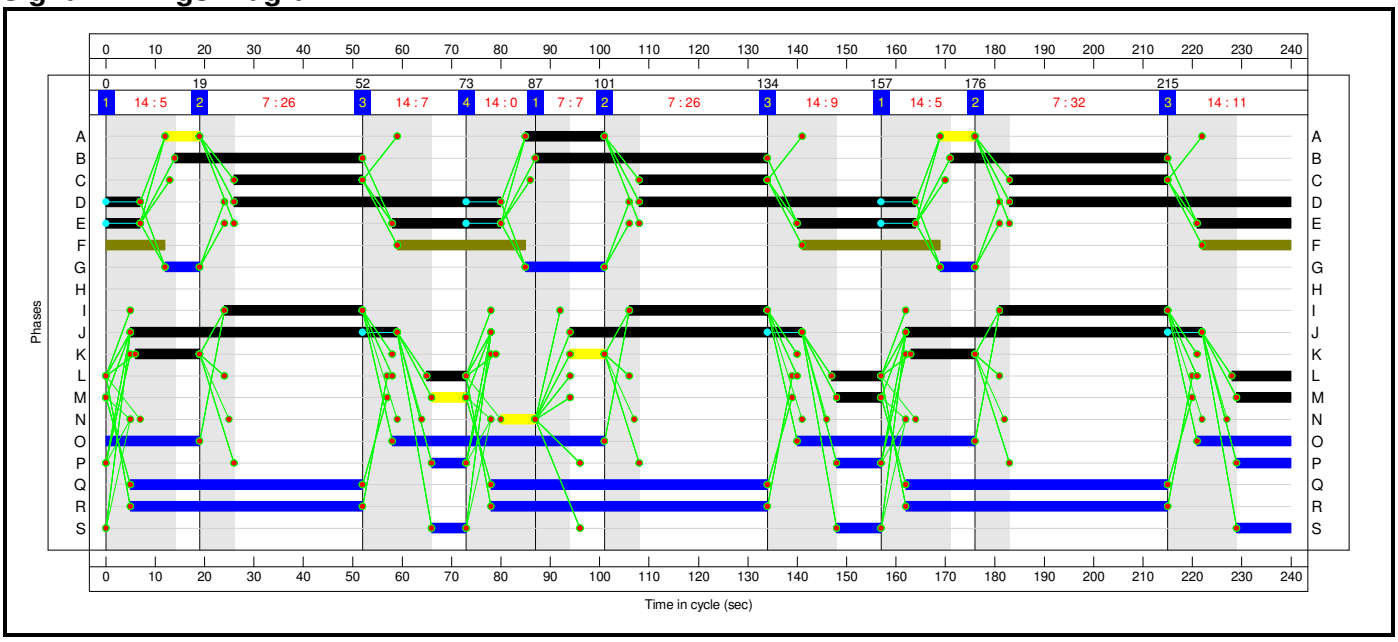
Stage Sequence Diagram



Stage Timings

Stage	1	2	3	4	1	2	3	1	2	3
Duration	5	26	7	0	7	26	9	5	32	11
Change Point	0	19	52	73	87	101	134	157	176	215

Signal Timings Diagram



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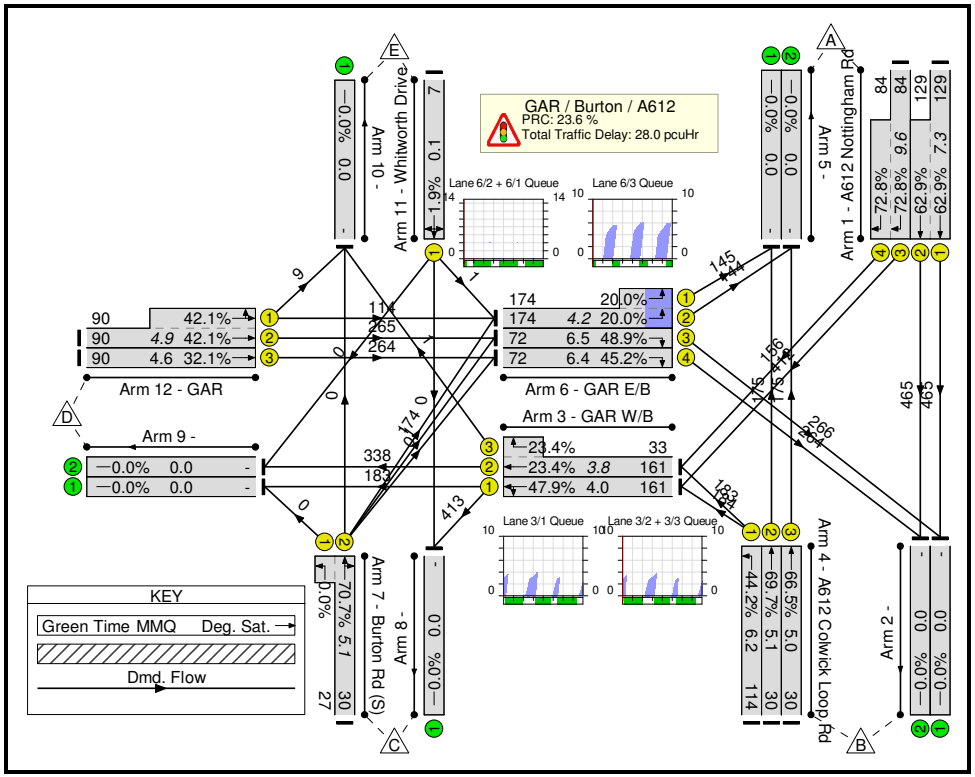
Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: GAR / A612 / Burton Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.8%**
GAR / Burton / A612	-	-	**N/A**	-	-		-	-	-	-	-	-	**72.8%**
1/1+1/2	A612 Nottingham Rd Ahead	U	N/A	N/A	B		3	129	-	930	1915:2055	740+740	62.9 : 62.9%
1/3+1/4	A612 Nottingham Rd Right	U	N/A	N/A	C		3	84	-	568	1741:1868	566+214	72.8 : 72.8%
2/1		U	N/A	N/A	-		-	-	-	731	Inf	Inf	0.0%
2/2		U	N/A	N/A	-		-	-	-	729	Inf	Inf	0.0%
3/1	GAR W/B Left Ahead	U	N/A	N/A	J		3	161	-	596	1822	1245	47.9%
3/2+3/3	GAR W/B Ahead Right	U	N/A	N/A	J K		3	161:33	-	339	2120:1613	1446+4	23.4 : 23.4%
4/1	A612 Colwick Loop Rd Left	U	N/A	N/A	A	F	3	114	84	367	1702	830	44.2%
4/2	A612 Colwick Loop Rd Ahead	U	N/A	N/A	A		3	30	-	175	1827	251	69.7%
4/3	A612 Colwick Loop Rd Ahead	U	N/A	N/A	A		3	30	-	175	1915	263	66.5%
5/1		U	N/A	N/A	-		-	-	-	320	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	319	Inf	Inf	0.0%
6/2+6/1	GAR E/B Left	U	N/A	N/A	D		3	174	-	289	1702:1702	719+724	20.0 : 20.0%
6/3	GAR E/B Right	U	N/A	N/A	E		3	72	-	266	1741	544	48.9%
6/4	GAR E/B Right	U	N/A	N/A	E		3	72	-	264	1868	584	45.2%
7/2+7/1	Burton Rd (S) Right Left Ahead	U	N/A	N/A	L M		3	30:27	-	175	1800:1980	248+0	70.7 : 0.0%
8/1		U	N/A	N/A	-		-	-	-	413	Inf	Inf	0.0%

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9/1		U	N/A	N/A	-		-	-	-	183	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	338	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	10	Inf	Inf	0.0%
11/1	Whitworth Drive Left Ahead Right	U	N/A	N/A	N		1	7	-	1	1584	53	1.9%
12/2+12/1	GAR Ahead Left	U	N/A	N/A	I		3	90	-	388	1980:1953	629+292	42.1 : 42.1%
12/3	GAR Ahead	U	N/A	N/A	I		3	90	-	264	2120	821	32.1%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: GAR / A612 / Burton Rd	**-**	**-**	**0**	**0**	**0**	**20.6**	**7.4**	**0.0**	**28.0**	**-**	**-**	**-**	**-**
GAR / Burton / A612	**-**	**-**	**0**	**0**	**0**	**20.6**	**7.4**	**0.0**	**28.0**	**-**	**-**	**-**	**-**
1/1+1/2	930	930	-	-	-	2.7	0.8	-	3.6	13.9	6.5	0.8	7.3
1/3+1/4	568	568	-	-	-	3.2	1.3	-	4.5	28.8	8.2	1.3	9.6
2/1	731	731	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	729	729	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	596	596	-	-	-	0.7	0.0	-	0.7	4.2	4.0	0.0	4.0
3/2+3/3	339	339	-	-	-	0.7	0.0	-	0.7	7.0	3.8	0.0	3.8
4/1	367	367	-	-	-	1.4	0.4	-	1.8	17.3	5.8	0.4	6.2
4/2	175	175	-	-	-	1.6	1.1	-	2.7	56.0	4.0	1.1	5.1
4/3	175	175	-	-	-	1.6	1.0	-	2.6	52.8	4.0	1.0	5.0
5/1	320	320	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	319	319	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2+6/1	289	289	-	-	-	0.0	0.1	-	0.1	1.7	4.1	0.1	4.2
6/3	266	266	-	-	-	2.0	0.5	-	2.5	33.4	6.0	0.5	6.5
6/4	264	264	-	-	-	2.0	0.4	-	2.4	32.3	6.0	0.4	6.4
7/2+7/1	175	175	-	-	-	1.6	1.2	-	2.8	57.1	3.9	1.2	5.1
8/1	413	413	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	183	183	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	338	338	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	10	10	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1	1	-	-	-	0.0	0.0	-	0.0	147.3	0.1	0.0	0.1
12/2+12/1	388	388	-	-	-	1.8	0.4	-	2.2	20.4	4.5	0.4	4.9
12/3	264	264	-	-	-	1.3	0.2	-	1.5	20.4	4.4	0.2	4.6

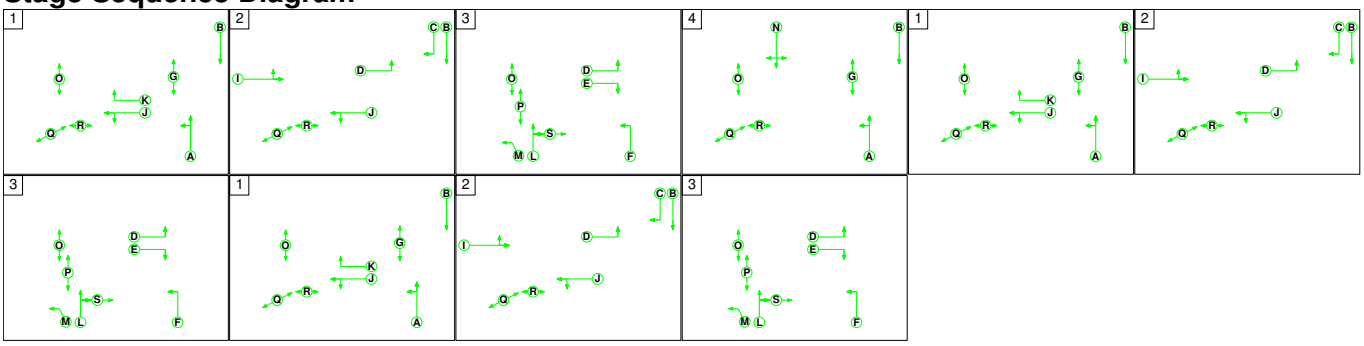
C1 PRC for Signalled Lanes (%): 23.6 Total Delay for Signalled Lanes (pcuHr): 28.02 Cycle Time (s): 240
PRC Over All Lanes (%): 23.6 Total Delay Over All Lanes(pcuHr): 28.02

Full Input Data And Results

Full Input Data And Results

Scenario 2: 'PM 2028 'Test C" (FG2: 'PM 2028 'Test C", Plan 1: 'Network Control Plan 1')

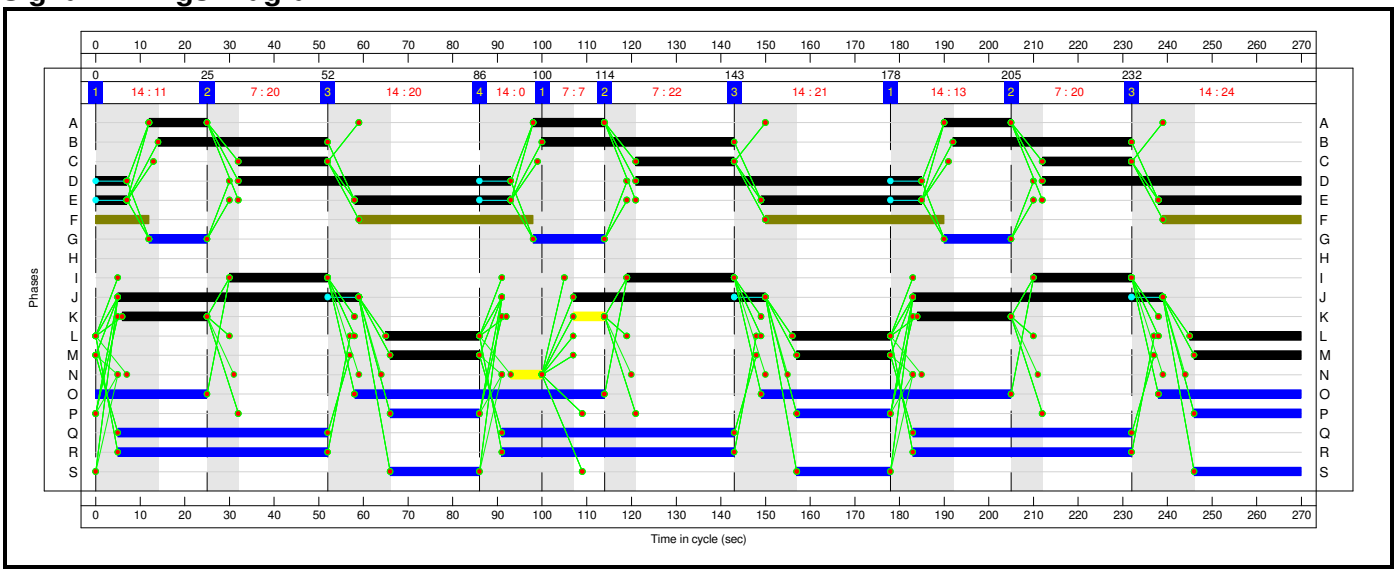
Stage Sequence Diagram



Stage Timings

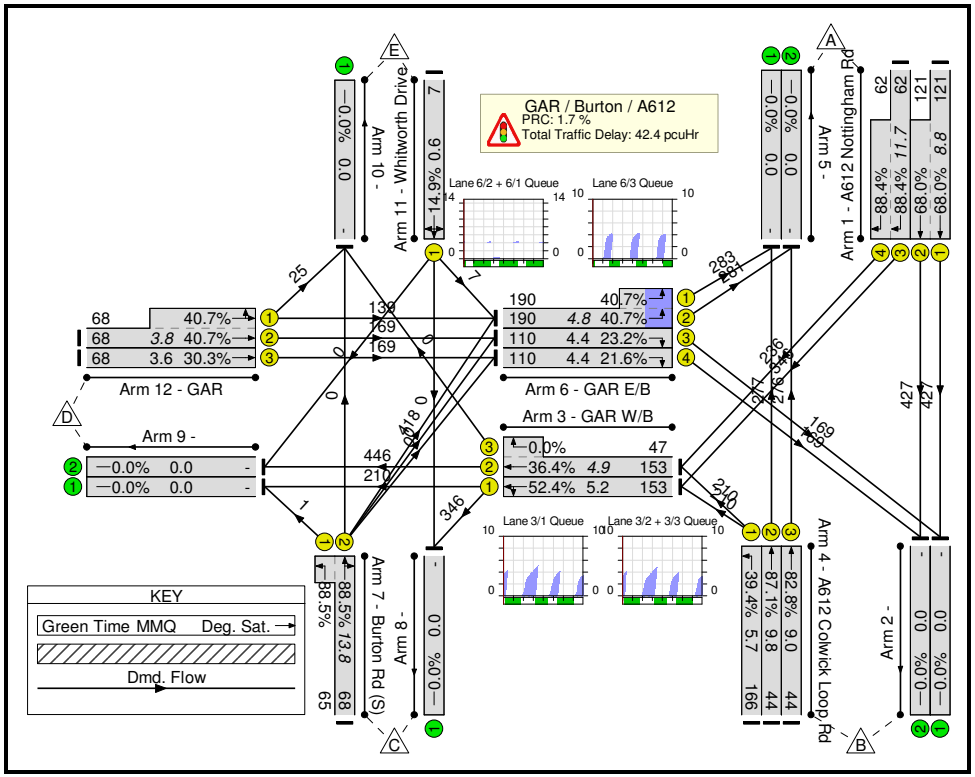
Stage	1	2	3	4	1	2	3	1	2	3
Duration	11	20	20	0	7	22	21	13	20	24
Change Point	0	25	52	86	100	114	143	178	205	232

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: GAR / A612 / Burton Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.5%**
GAR / Burton / A612	-	-	**N/A**	-	-		-	-	-	-	-	-	**88.5%**
1/1+1/2	A612 Nottingham Rd Ahead	U	N/A	N/A	B		3	121	-	854	1915:2055	628+628	68.0 : 68.0%
1/3+1/4	A612 Nottingham Rd Right	U	N/A	N/A	C		3	62	-	582	1741:1868	392+267	88.4 : 88.4%
2/1		U	N/A	N/A	-		-	-	-	596	Inf	Inf	0.0%
2/2		U	N/A	N/A	-		-	-	-	596	Inf	Inf	0.0%
3/1	GAR W/B Left Ahead	U	N/A	N/A	J		3	153	-	556	1837	1061	52.4%
3/2+3/3	GAR W/B Ahead Right	U	N/A	N/A	J K		3	153:47	-	446	2120:1915	1225+0	36.4 : 0.0%
4/1	A612 Colwick Loop Rd Left	U	N/A	N/A	A	F	3	166	122	420	1702	1065	39.4%
4/2	A612 Colwick Loop Rd Ahead	U	N/A	N/A	A		3	44	-	277	1827	318	87.1%
4/3	A612 Colwick Loop Rd Ahead	U	N/A	N/A	A		3	44	-	276	1915	333	82.8%
5/1		U	N/A	N/A	-		-	-	-	560	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	557	Inf	Inf	0.0%
6/2+6/1	GAR E/B Left	U	N/A	N/A	D		3	190	-	564	1702:1702	690+695	40.7 : 40.7%
6/3	GAR E/B Right	U	N/A	N/A	E		3	110	-	169	1741	729	23.2%
6/4	GAR E/B Right	U	N/A	N/A	E		3	110	-	169	1868	782	21.6%
7/2+7/1	Burton Rd (S) Right Left Ahead	U	N/A	N/A	L M		3	68:65	-	419	1800:1868	472+1	88.5 : 88.5%
8/1		U	N/A	N/A	-		-	-	-	346	Inf	Inf	0.0%

Full Input Data And Results

9/1		U	N/A	N/A	-		-	-	-	211	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	446	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	25	Inf	Inf	0.0%
11/1	Whitworth Drive Left Ahead Right	U	N/A	N/A	N		1	7	-	7	1584	47	14.9%
12/2+12/1	GAR Ahead Left	U	N/A	N/A	I		3	68	-	333	1980:1925	415+403	40.7 : 40.7%
12/3	GAR Ahead	U	N/A	N/A	I		3	68	-	169	2120	557	30.3%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: GAR / A612 / Burton Rd	**-**	**-**	**0**	**0**	**0**	**27.7**	**14.7**	**0.0**	**42.4**	**-**	**-**	**-**	**-**
GAR / Burton / A612	**-**	**-**	**0**	**0**	**0**	**27.7**	**14.7**	**0.0**	**42.4**	**-**	**-**	**-**	**-**
1/1+1/2	854	854	-	-	-	4.0	1.1	-	5.0	21.3	7.7	1.1	8.8
1/3+1/4	582	582	-	-	-	5.1	3.5	-	8.5	52.8	8.3	3.5	11.7
2/1	596	596	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	596	596	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	556	556	-	-	-	1.2	0.0	-	1.2	8.0	5.2	0.0	5.2
3/2+3/3	446	446	-	-	-	1.1	0.0	-	1.1	9.3	4.9	0.0	4.9
4/1	420	420	-	-	-	1.0	0.3	-	1.3	11.2	5.4	0.3	5.7
4/2	277	277	-	-	-	2.8	3.0	-	5.7	74.6	6.8	3.0	9.8
4/3	276	276	-	-	-	2.8	2.2	-	5.0	65.0	6.7	2.2	9.0
5/1	560	560	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	557	557	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2+6/1	564	564	-	-	-	0.1	0.3	-	0.4	2.8	4.4	0.3	4.8
6/3	169	169	-	-	-	1.0	0.2	-	1.1	24.1	4.3	0.2	4.4
6/4	169	169	-	-	-	1.0	0.1	-	1.1	23.7	4.3	0.1	4.4
7/2+7/1	419	419	-	-	-	3.7	3.4	-	7.1	61.2	10.4	3.4	13.8
8/1	346	346	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	211	211	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	446	446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	25	25	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	7	7	-	-	-	0.2	0.1	-	0.3	172.6	0.5	0.1	0.6
12/2+12/1	333	333	-	-	-	2.5	0.3	-	2.8	30.4	3.4	0.3	3.8
12/3	169	169	-	-	-	1.2	0.2	-	1.5	31.2	3.4	0.2	3.6

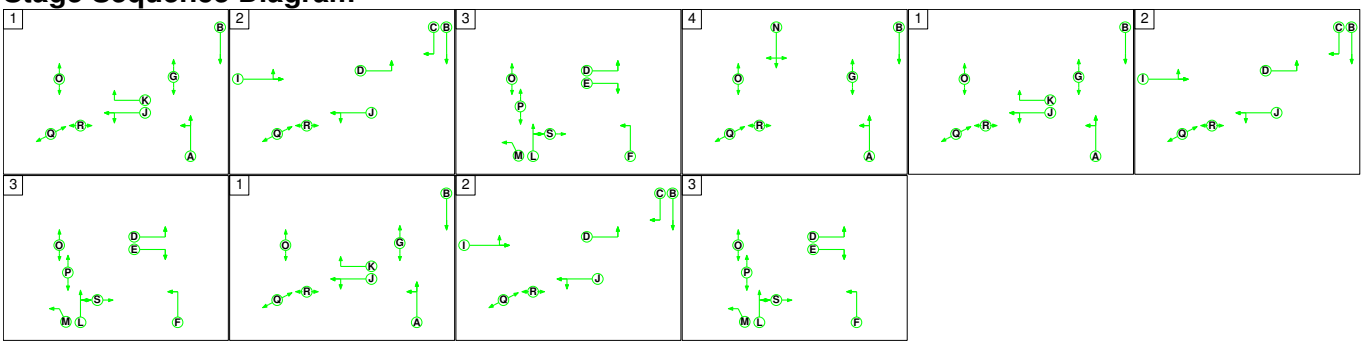
C1 PRC for Signalled Lanes (%): 1.7 Total Delay for Signalled Lanes (pcuHr): 42.41 Cycle Time (s): 270
PRC Over All Lanes (%): 1.7 Total Delay Over All Lanes(pcuHr): 42.41

Full Input Data And Results

Full Input Data And Results

Scenario 3: 'AM 2034 'Test C" (FG3: 'AM 2034 'Test C", Plan 1: 'Network Control Plan 1')

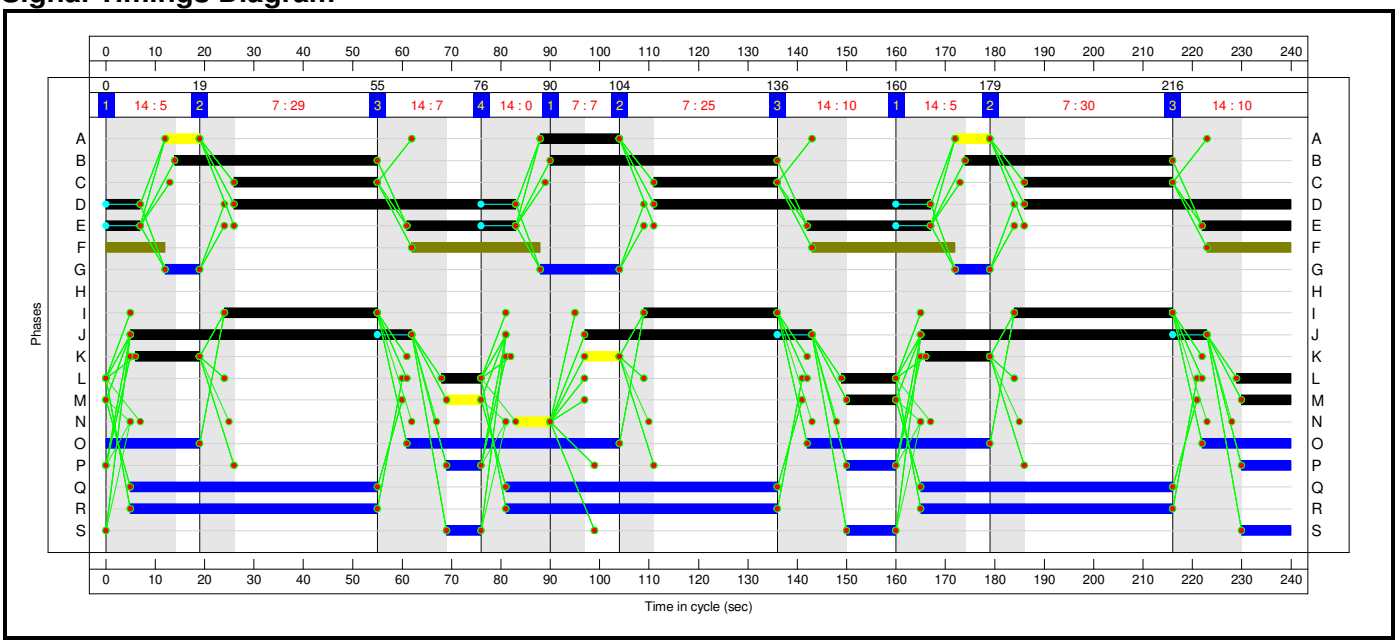
Stage Sequence Diagram



Stage Timings

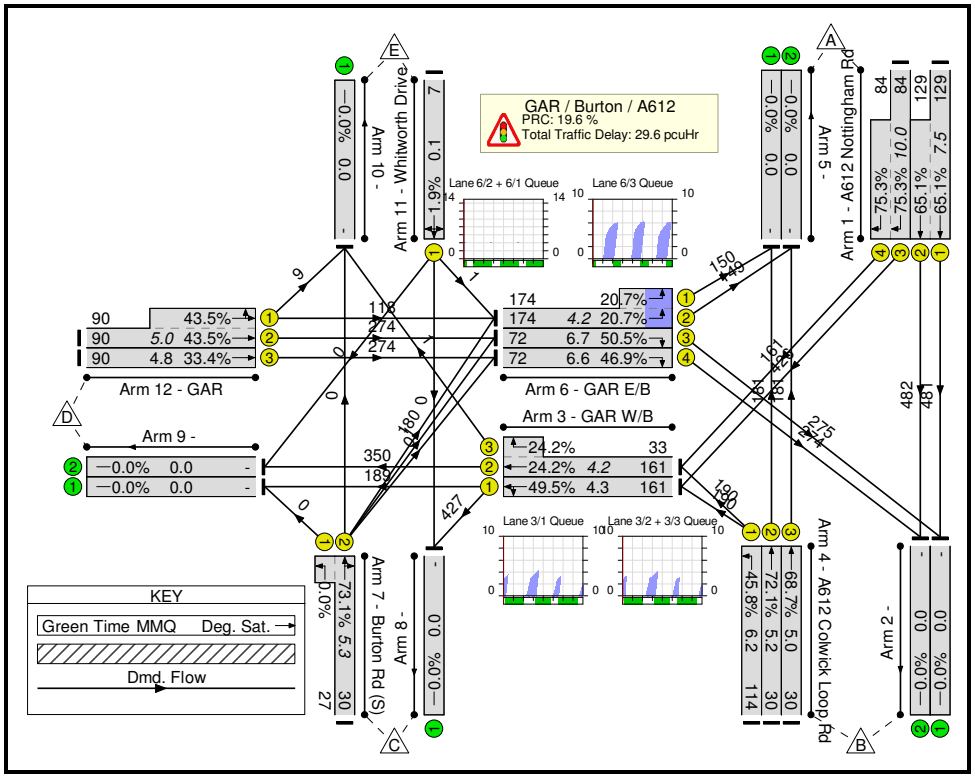
Stage	1	2	3	4	1	2	3	1	2	3
Duration	5	29	7	0	7	25	10	5	30	10
Change Point	0	19	55	76	90	104	136	160	179	216

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: GAR / A612 / Burton Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.3%**
GAR / Burton / A612	-	-	**N/A**	-	-		-	-	-	-	-	-	**75.3%**
1/1+1/2	A612 Nottingham Rd Ahead	U	N/A	N/A	B		3	129	-	963	1915:2055	739+741	65.1 : 65.1%
1/3+1/4	A612 Nottingham Rd Right	U	N/A	N/A	C		3	84	-	587	1741:1868	566+214	75.3 : 75.3%
2/1		U	N/A	N/A	-		-	-	-	756	Inf	Inf	0.0%
2/2		U	N/A	N/A	-		-	-	-	756	Inf	Inf	0.0%
3/1	GAR W/B Left Ahead	U	N/A	N/A	J		3	161	-	616	1822	1245	49.5%
3/2+3/3	GAR W/B Ahead Right	U	N/A	N/A	J K		3	161:33	-	351	2120:1613	1446+4	24.2 : 24.2%
4/1	A612 Colwick Loop Rd Left	U	N/A	N/A	A	F	3	114	84	380	1702	830	45.8%
4/2	A612 Colwick Loop Rd Ahead	U	N/A	N/A	A		3	30	-	181	1827	251	72.1%
4/3	A612 Colwick Loop Rd Ahead	U	N/A	N/A	A		3	30	-	181	1915	263	68.7%
5/1		U	N/A	N/A	-		-	-	-	331	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	330	Inf	Inf	0.0%
6/2+6/1	GAR E/B Left	U	N/A	N/A	D		3	174	-	299	1702:1702	719+724	20.7 : 20.7%
6/3	GAR E/B Right	U	N/A	N/A	E		3	72	-	275	1741	544	50.5%
6/4	GAR E/B Right	U	N/A	N/A	E		3	72	-	274	1868	584	46.9%
7/2+7/1	Burton Rd (S) Right Left Ahead	U	N/A	N/A	L M		3	30:27	-	181	1800:1980	248+0	73.1 : 0.0%
8/1		U	N/A	N/A	-		-	-	-	427	Inf	Inf	0.0%

Full Input Data And Results

9/1		U	N/A	N/A	-		-	-	-	189	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	350	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	10	Inf	Inf	0.0%
11/1	Whitworth Drive Left Ahead Right	U	N/A	N/A	N		1	7	-	1	1584	53	1.9%
12/2+12/1	GAR Ahead Left	U	N/A	N/A	I		3	90	-	401	1980:1954	629+292	43.5 : 43.5%
12/3	GAR Ahead	U	N/A	N/A	I		3	90	-	274	2120	821	33.4%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: GAR / A612 / Burton Rd	**-**	**-**	**0**	**0**	**0**	**21.4**	**8.2**	**0.0**	**29.6**	**-**	**-**	**-**	**-**
GAR / Burton / A612	**-**	**-**	**0**	**0**	**0**	**21.4**	**8.2**	**0.0**	**29.6**	**-**	**-**	**-**	**-**
1/1+1/2	963	963	-	-	-	2.9	0.9	-	3.8	14.2	6.5	0.9	7.5
1/3+1/4	587	587	-	-	-	3.4	1.5	-	4.9	29.8	8.5	1.5	10.0
2/1	756	756	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	756	756	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	616	616	-	-	-	0.7	0.0	-	0.7	4.2	4.3	0.0	4.3
3/2+3/3	351	351	-	-	-	0.7	0.0	-	0.7	7.1	4.2	0.0	4.2
4/1	380	380	-	-	-	1.4	0.4	-	1.9	17.6	5.8	0.4	6.2
4/2	181	181	-	-	-	1.7	1.2	-	2.9	57.8	4.0	1.2	5.2
4/3	181	181	-	-	-	1.7	1.1	-	2.7	54.2	4.0	1.1	5.0
5/1	331	331	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	330	330	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2+6/1	299	299	-	-	-	0.0	0.1	-	0.1	1.8	4.1	0.1	4.2
6/3	275	275	-	-	-	2.1	0.5	-	2.6	33.7	6.2	0.5	6.7
6/4	274	274	-	-	-	2.0	0.4	-	2.5	32.6	6.2	0.4	6.6
7/2+7/1	181	181	-	-	-	1.7	1.3	-	3.0	59.2	4.0	1.3	5.3
8/1	427	427	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	189	189	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	350	350	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	10	10	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	1	1	-	-	-	0.0	0.0	-	0.0	147.3	0.1	0.0	0.1
12/2+12/1	401	401	-	-	-	1.9	0.4	-	2.3	20.5	4.6	0.4	5.0
12/3	274	274	-	-	-	1.3	0.3	-	1.6	20.6	4.6	0.3	4.8

C1 PRC for Signalled Lanes (%): 19.6 Total Delay for Signalled Lanes (pcuHr): 29.62 Cycle Time (s): 240

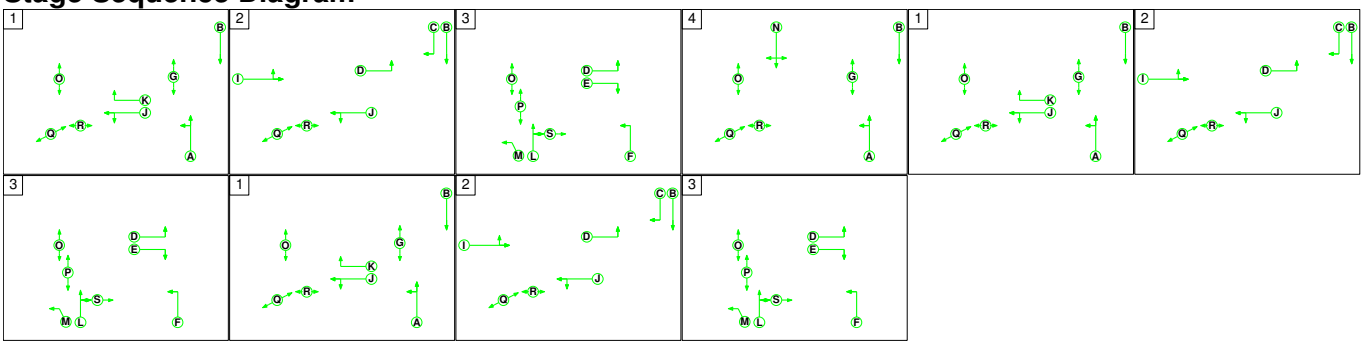
PRC Over All Lanes (%): 19.6 Total Delay Over All Lanes(pcuHr): 29.62

Full Input Data And Results

Full Input Data And Results

Scenario 4: 'PM 2034 'Test C" (FG4: 'PM 2034 'Test C", Plan 1: 'Network Control Plan 1')

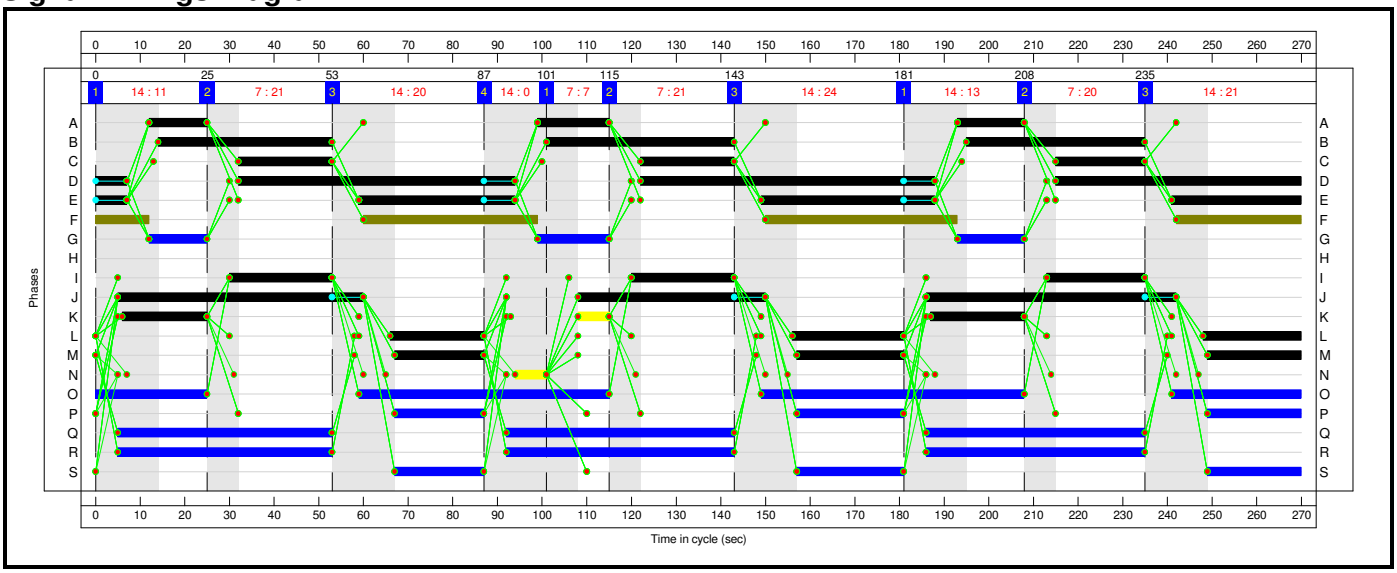
Stage Sequence Diagram



Stage Timings

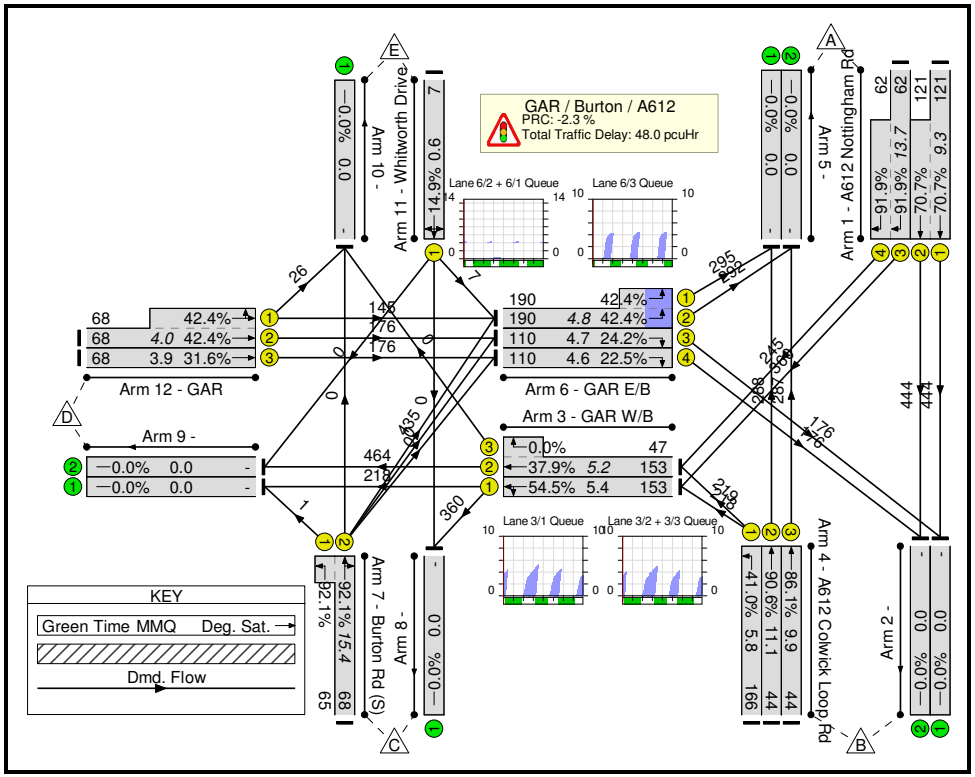
Stage	1	2	3	4	1	2	3	1	2	3
Duration	11	21	20	0	7	21	24	13	20	21
Change Point	0	25	53	87	101	115	143	181	208	235

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: GAR / A612 / Burton Rd	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.1%**
GAR / Burton / A612	-	-	**N/A**	-	-		-	-	-	-	-	-	**92.1%**
1/1+1/2	A612 Nottingham Rd Ahead	U	N/A	N/A	B		3	121	-	888	1915:2055	628+628	70.7 : 70.7%
1/3+1/4	A612 Nottingham Rd Right	U	N/A	N/A	C		3	62	-	605	1741:1868	392+266	91.9 : 91.9%
2/1		U	N/A	N/A	-		-	-	-	620	Inf	Inf	0.0%
2/2		U	N/A	N/A	-		-	-	-	620	Inf	Inf	0.0%
3/1	GAR W/B Left Ahead	U	N/A	N/A	J		3	153	-	578	1837	1061	54.5%
3/2+3/3	GAR W/B Ahead Right	U	N/A	N/A	J K		3	153:47	-	464	2120:1915	1225+0	37.9 : 0.0%
4/1	A612 Colwick Loop Rd Left	U	N/A	N/A	A	F	3	166	122	437	1702	1065	41.0%
4/2	A612 Colwick Loop Rd Ahead	U	N/A	N/A	A		3	44	-	288	1827	318	90.6%
4/3	A612 Colwick Loop Rd Ahead	U	N/A	N/A	A		3	44	-	287	1915	333	86.1%
5/1		U	N/A	N/A	-		-	-	-	583	Inf	Inf	0.0%
5/2		U	N/A	N/A	-		-	-	-	579	Inf	Inf	0.0%
6/2+6/1	GAR E/B Left	U	N/A	N/A	D		3	190	-	587	1702:1702	688+695	42.4 : 42.4%
6/3	GAR E/B Right	U	N/A	N/A	E		3	110	-	176	1741	729	24.2%
6/4	GAR E/B Right	U	N/A	N/A	E		3	110	-	176	1868	782	22.5%
7/2+7/1	Burton Rd (S) Right Left Ahead	U	N/A	N/A	L M		3	68:65	-	436	1800:1868	472+1	92.1 : 92.1%
8/1		U	N/A	N/A	-		-	-	-	360	Inf	Inf	0.0%

Full Input Data And Results

9/1		U	N/A	N/A	-		-	-	-	219	Inf	Inf	0.0%
9/2		U	N/A	N/A	-		-	-	-	464	Inf	Inf	0.0%
10/1		U	N/A	N/A	-		-	-	-	26	Inf	Inf	0.0%
11/1	Whitworth Drive Left Ahead Right	U	N/A	N/A	N		1	7	-	7	1584	47	14.9%
12/2+12/1	GAR Ahead Left	U	N/A	N/A	I		3	68	-	347	1980:1925	415+404	42.4 : 42.4%
12/3	GAR Ahead	U	N/A	N/A	I		3	68	-	176	2120	557	31.6%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: GAR / A612 / Burton Rd	**-**	**-**	**0**	**0**	**0**	**29.0**	**19.0**	**0.0**	**48.0**	**-**	**-**	**-**	**-**
GAR / Burton / A612	**-**	**-**	**0**	**0**	**0**	**29.0**	**19.0**	**0.0**	**48.0**	**-**	**-**	**-**	**-**
1/1+1/2	888	888	-	-	-	4.2	1.2	-	5.4	21.8	8.1	1.2	9.3
1/3+1/4	605	605	-	-	-	5.3	4.8	-	10.1	60.3	8.9	4.8	13.7
2/1	620	620	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/2	620	620	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
3/1	578	578	-	-	-	1.3	0.0	-	1.3	8.1	5.4	0.0	5.4
3/2+3/3	464	464	-	-	-	1.2	0.0	-	1.2	9.3	5.2	0.0	5.2
4/1	437	437	-	-	-	1.0	0.3	-	1.4	11.3	5.5	0.3	5.8
4/2	288	288	-	-	-	2.9	3.8	-	6.7	84.2	7.3	3.8	11.1
4/3	287	287	-	-	-	2.9	2.8	-	5.6	70.8	7.2	2.8	9.9
5/1	583	583	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/2	579	579	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/2+6/1	587	587	-	-	-	0.1	0.4	-	0.5	2.9	4.4	0.4	4.8
6/3	176	176	-	-	-	1.0	0.2	-	1.2	24.2	4.5	0.2	4.7
6/4	176	176	-	-	-	1.0	0.1	-	1.2	23.8	4.5	0.1	4.6
7/2+7/1	436	436	-	-	-	3.9	4.7	-	8.6	70.7	10.8	4.7	15.4
8/1	360	360	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/1	219	219	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
9/2	464	464	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
10/1	26	26	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
11/1	7	7	-	-	-	0.2	0.1	-	0.3	172.6	0.5	0.1	0.6
12/2+12/1	347	347	-	-	-	2.6	0.4	-	3.0	30.7	3.7	0.4	4.0
12/3	176	176	-	-	-	1.3	0.2	-	1.5	31.4	3.7	0.2	3.9

C1 PRC for Signalled Lanes (%): -2.3 Total Delay for Signalled Lanes (pcuHr): 48.00 Cycle Time (s): 270

PRC Over All Lanes (%): -2.3 Total Delay Over All Lanes(pcuHr): 48.00

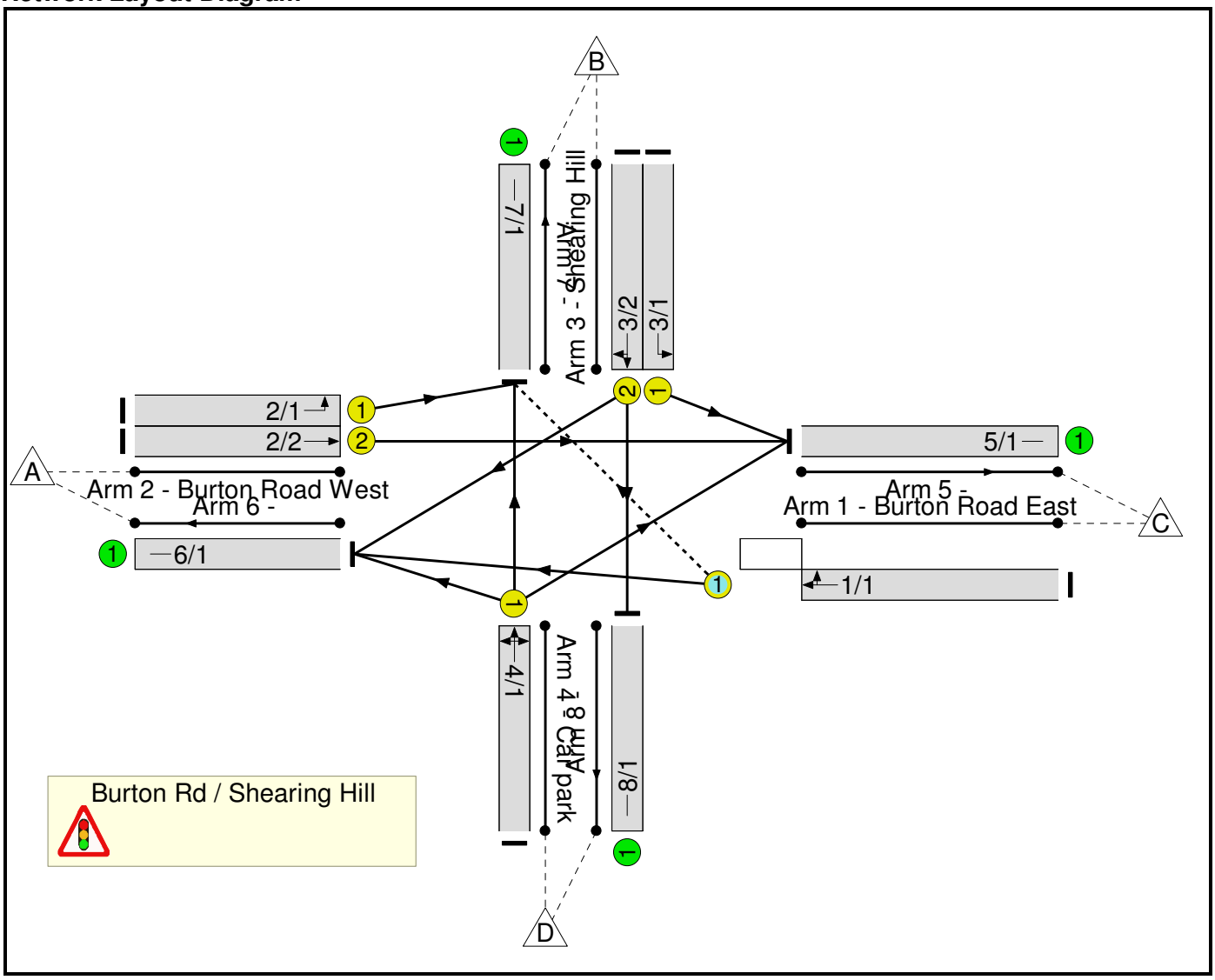
Full Input Data And Results

Full Input Data And Results

User and Project Details

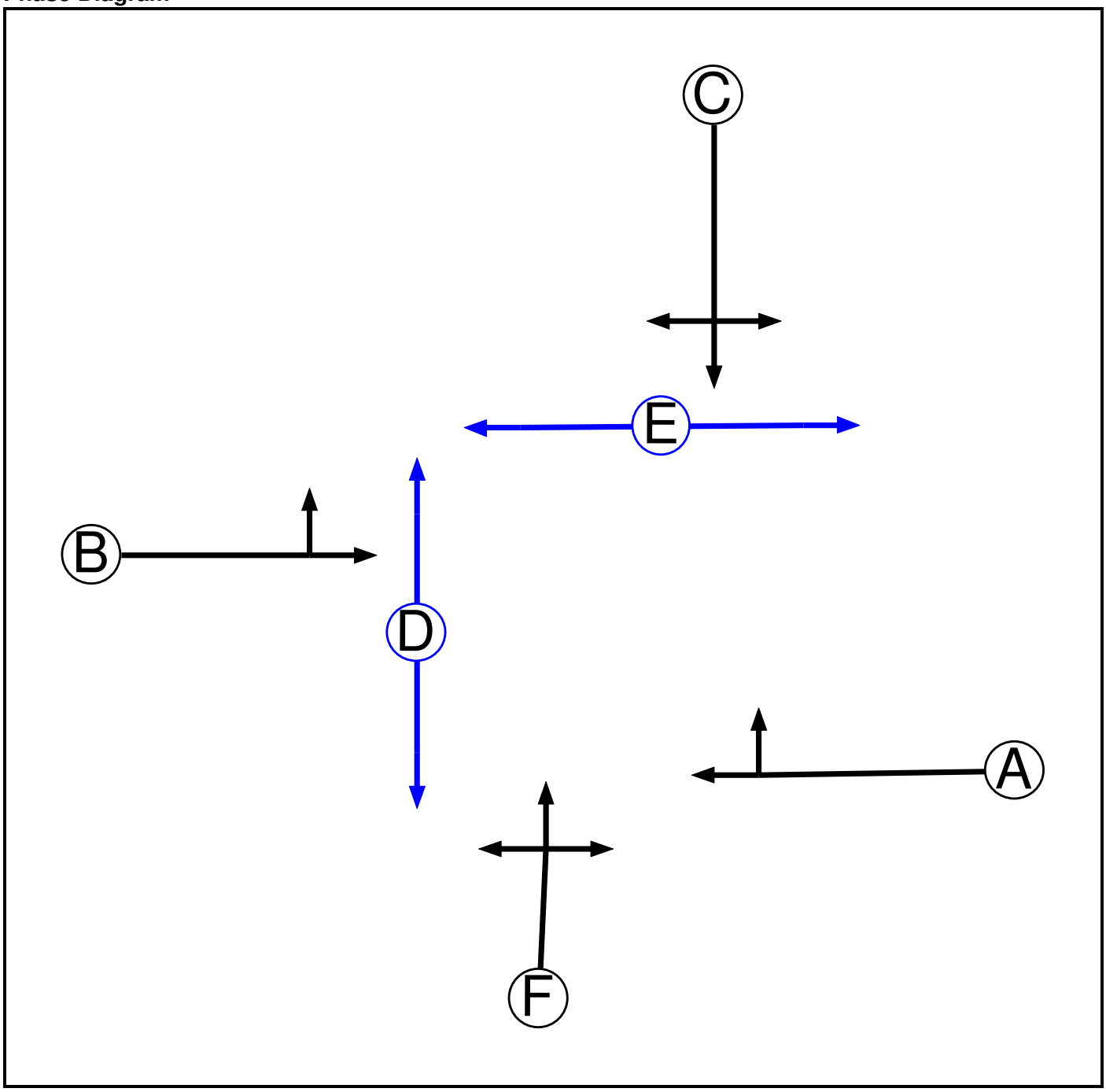
Project:	**A085361 Gedling Access Road**
Title:	**Burton Road / Shearing Hill**
Location:	
File name:	J14252 Burton Road - Shearing hill Linsig ISSUE 4 (Test C).lsg3x
Author:	
Company:	
Address:	
Notes:	Linsig Model from NCoC

Network Layout Diagram



Full Input Data And Results

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	Pedestrian		5	5
E	Pedestrian		5	5
F	Traffic		7	7

Full Input Data And Results

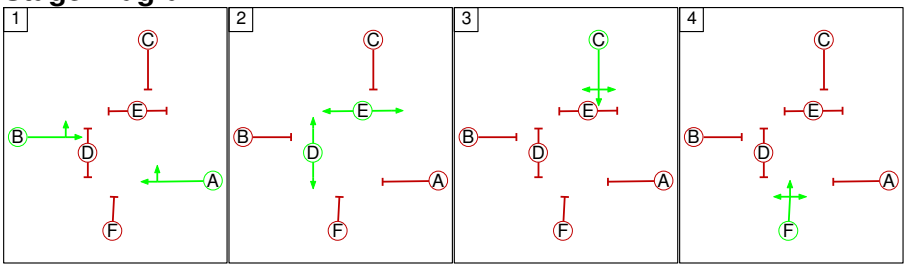
Phase Intergreens Matrix

Terminating Phase	Starting Phase					
	A	B	C	D	E	F
A		-	7	8	8	6
B	-		7	8	8	6
C	7	7		8	8	7
D	5	5	5		-	5
E	5	5	5	-		5
F	5	5	6	7	7	

Phases in Stage

Stage No.	Phases in Stage
1	A B
2	D E
3	C
4	F

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
1		8	7	6
2	5		5	5
3	7	8		7
4	5	7	6	

Full Input Data And Results

Give-Way Lane Input Data

Junction: Burton Rd / Shearing Hill

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 (Burton Road East)	7/1 (Right)	1440	0	2/1	1.09	All	3.00	3.00	0.50	3	2.00
				2/2	1.09	All					

Full Input Data And Results

Lane Input Data

Junction: Burton Rd / Shearing Hill												
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 (Burton Road East)	O	A	2	3	60.0	User	1800	-	-	-	-	-
2/1 (Burton Road West)	U	B	2	3	60.0	User	1800	-	-	-	-	-
2/2 (Burton Road West)	U	B	2	3	60.0	User	1800	-	-	-	-	-
3/1 (Shearing Hill)	U	C	2	3	60.0	User	1800	-	-	-	-	-
3/2 (Shearing Hill)	U	C	2	3	60.0	User	1800	-	-	-	-	-
4/1 (Car park)	U	F	2	3	60.0	User	1800	-	-	-	-	-
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 2028 Reference Test C'	08:00	09:00	01:00	
2: 'PM 2028 Reference Test C'	17:00	18:00	01:00	
3: 'AM 2028 Design 'Test C''	08:00	09:00	01:00	
4: 'PM 2028 Design 'Test C''	17:00	18:00	01:00	
5: 'AM 2034 Design 'Test C''	08:00	09:00	01:00	
6: 'PM 2034 Design 'Test C''	17:00	18:00	01:00	

Scenario 1: 'AM 2028 Reference Test C' (FG1: 'AM 2028 Reference Test C', Plan 2: 'Stage seq 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	497	119	0	616
	B	534	0	63	0	597
	C	494	156	0	0	650
	D	0	0	0	0	0
	Tot.	1028	653	182	0	1863

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM 2028 Reference Test C
Junction: Burton Rd / Shearing Hill	
1/1	650
2/1	497
2/2	119
3/1	63
3/2	534
4/1	0
5/1	182
6/1	1028
7/1	653
8/1	0

Lane Saturation Flows

Junction: Burton Rd / Shearing Hill								
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 (Burton Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road West Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road West Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Shearing Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Shearing Hill Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Car park Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
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

Full Input Data And Results

Scenario 2: 'PM 2028 Reference Test C' (FG2: 'PM 2028 Reference Test C', Plan 2: 'Stage seq 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	524	169	0	693
	B	359	0	71	0	430
	C	393	114	0	0	507
	D	0	0	0	0	0
	Tot.	752	638	240	0	1630

Traffic Lane Flows

Lane	Scenario 2: PM 2028 Reference Test C
Junction: Burton Rd / Shearing Hill	
1/1	507
2/1	524
2/2	169
3/1	71
3/2	359
4/1	0
5/1	240
6/1	752
7/1	638
8/1	0

Lane Saturation Flows

Junction: Burton Rd / Shearing Hill								
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 (Burton Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road West Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road West Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Shearing Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Shearing Hill Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Car park Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
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 2028 Design Test C' (FG3: 'AM 2028 Design 'Test C'', Plan 2: 'Stage seq 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	367	162	0	529
	B	154	0	30	0	184
	C	420	92	0	0	512
	D	0	0	0	0	0
	Tot.	574	459	192	0	1225

Traffic Lane Flows

Lane	Scenario 3: AM 2028 Design Test C
Junction: Burton Rd / Shearing Hill	
1/1	512
2/1	367
2/2	162
3/1	30
3/2	154
4/1	0
5/1	192
6/1	574
7/1	459
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: Burton Rd / Shearing Hill								
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 (Burton Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road West Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road West Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Shearing Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Shearing Hill Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Car park Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
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 2028 Design Test C' (FG4: 'PM 2028 Design 'Test C'', Plan 2: 'Stage seq 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	588	395	0	983
	B	87	0	26	0	113
	C	364	41	0	0	405
	D	0	0	0	0	0
	Tot.	451	629	421	0	1501

Traffic Lane Flows

Lane	Scenario 4: PM 2028 Design Test C
Junction: Burton Rd / Shearing Hill	
1/1	405
2/1	588
2/2	395
3/1	26
3/2	87
4/1	0
5/1	421
6/1	451
7/1	629
8/1	0

Full Input Data And Results

Lane Saturation Flows

Junction: Burton Rd / Shearing Hill								
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 (Burton Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road West Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road West Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Shearing Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Shearing Hill Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Car park Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
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 2034 Design Test C' (FG5: 'AM 2034 Design 'Test C'', Plan 2: 'Stage seq 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	380	168	0	548
	B	159	0	31	0	190
	C	435	95	0	0	530
	D	0	0	0	0	0
	Tot.	594	475	199	0	1268

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: AM 2034 Design Test C
Junction: Burton Rd / Shearing Hill	
1/1	530
2/1	380
2/2	168
3/1	31
3/2	159
4/1	0
5/1	199
6/1	594
7/1	475
8/1	0

Lane Saturation Flows

Junction: Burton Rd / Shearing Hill								
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 (Burton Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road West Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road West Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Shearing Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Shearing Hill Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Car park Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
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

Full Input Data And Results

Scenario 6: 'AM 2034 Design Test C' (FG6: 'PM 2034 Design 'Test C'', Plan 2: 'Stage seq 2')

Traffic Flows, Desired

Desired Flow :

		Destination				
		A	B	C	D	Tot.
Origin	A	0	612	411	0	1023
	B	90	0	27	0	117
	C	379	43	0	0	422
	D	0	0	0	0	0
	Tot.	469	655	438	0	1562

Traffic Lane Flows

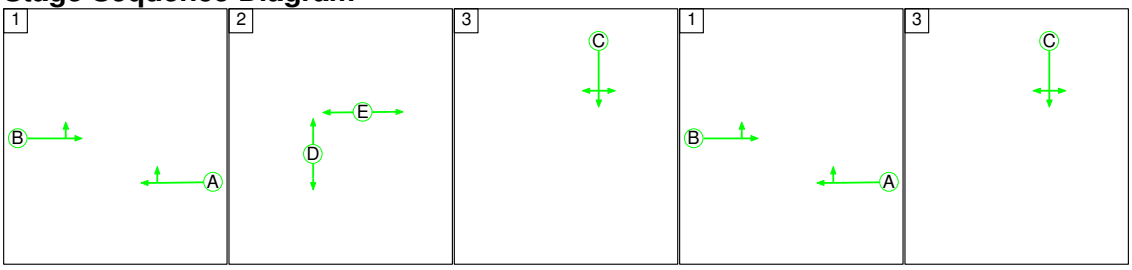
Lane	Scenario 6: AM 2034 Design Test C
Junction: Burton Rd / Shearing Hill	
1/1	422
2/1	612
2/2	411
3/1	27
3/2	90
4/1	0
5/1	438
6/1	469
7/1	655
8/1	0

Lane Saturation Flows

Junction: Burton Rd / Shearing Hill								
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 (Burton Road East Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road West Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road West Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Shearing Hill Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Shearing Hill Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
4/1 (Car park Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
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 1: 'AM 2028 Reference Test C' (FG1: 'AM 2028 Reference Test C', Plan 2: 'Stage seq 2')

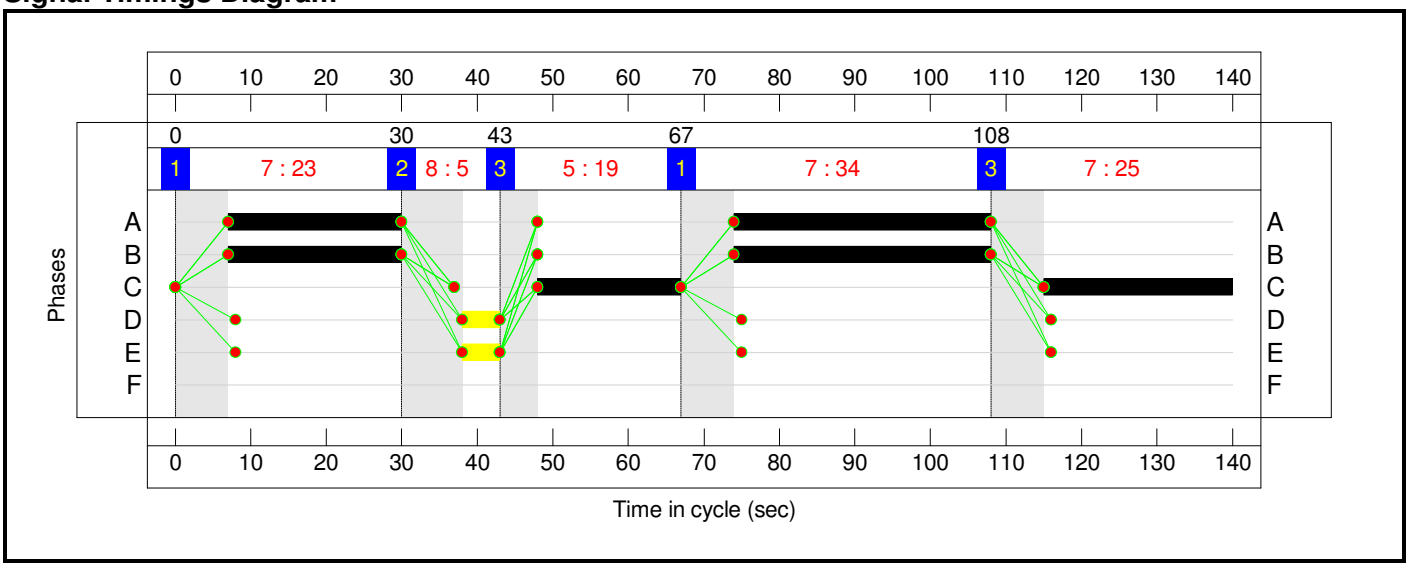
Stage Sequence Diagram



Stage Timings

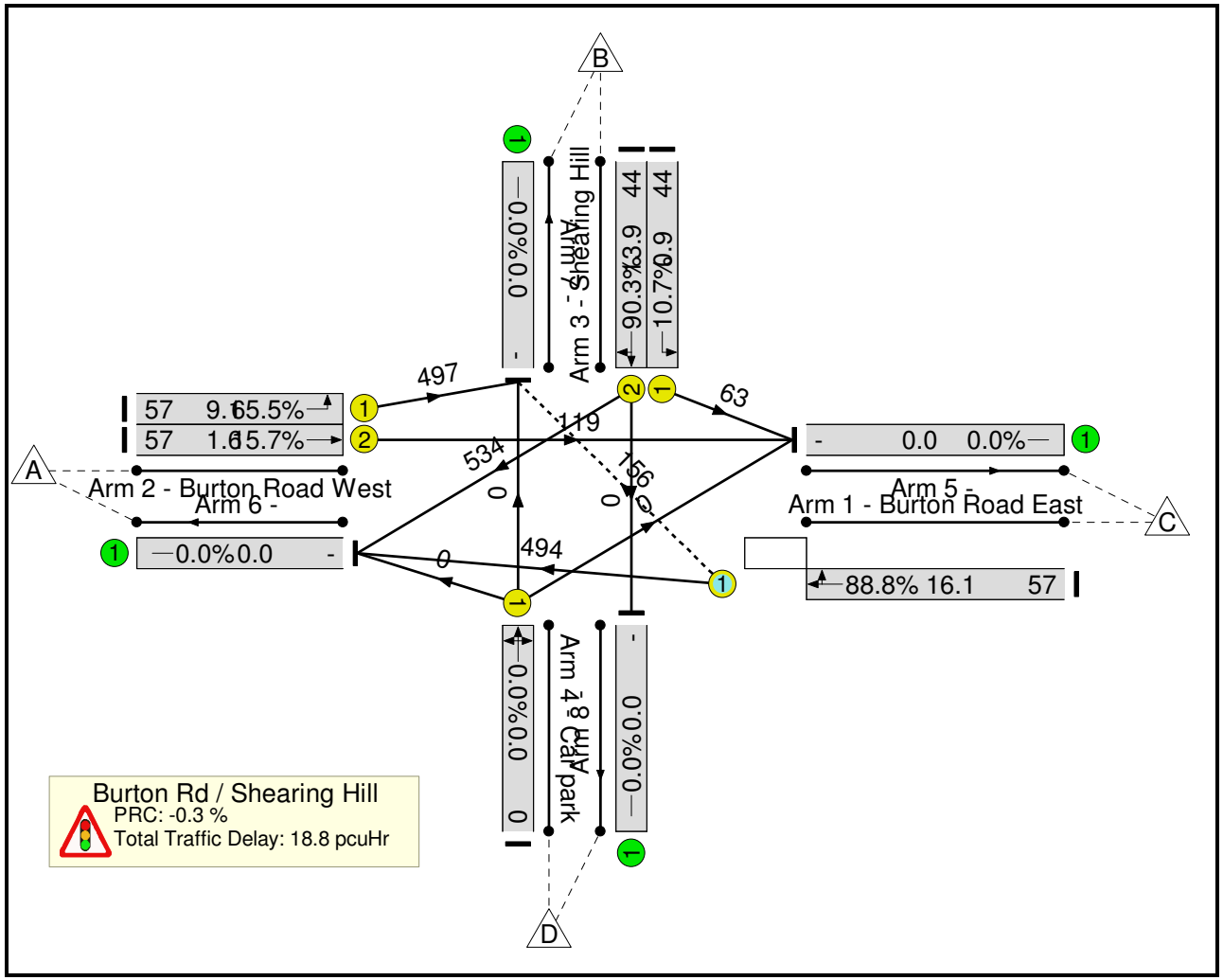
Stage	1	2	3	1	3
Duration	23	5	19	34	25
Change Point	0	30	43	67	108

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Burton Road / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.3%**
Burton Rd / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**90.3%**
1/1	Burton Road East Ahead Right	O	N/A	N/A	A		2	57	-	650	1800	732	88.8%
2/1	Burton Road West Left	U	N/A	N/A	B		2	57	-	497	1800	759	65.5%
2/2	Burton Road West Ahead	U	N/A	N/A	B		2	57	-	119	1800	759	15.7%
3/1	Shearing Hill Left	U	N/A	N/A	C		2	44	-	63	1800	591	10.7%
3/2	Shearing Hill Right Ahead	U	N/A	N/A	C		2	44	-	534	1800	591	90.3%
4/1	Car park Right Left Ahead	U	N/A	N/A	F		0	0	-	0	1800	0	0.0%
5/1		U	N/A	N/A	-		-	-	-	182	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	1028	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	653	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Burton Road / Shearing Hill	**-**	**-**	**136**	**0**	**20**	**9.6**	**8.8**	**0.4**	**18.8**	**-**	**-**	**-**	**-**
Burton Rd / Shearing Hill	**-**	**-**	**136**	**0**	**20**	**9.6**	**8.8**	**0.4**	**18.8**	**-**	**-**	**-**	**-**
1/1	650	650	136	0	20	3.4	3.6	0.4	7.4	40.9	12.5	3.6	16.1
2/1	497	497	-	-	-	2.2	0.9	-	3.2	23.1	8.1	0.9	9.1
2/2	119	119	-	-	-	0.4	0.1	-	0.5	15.4	1.5	0.1	1.6
3/1	63	63	-	-	-	0.3	0.1	-	0.3	19.8	0.8	0.1	0.9
3/2	534	534	-	-	-	3.3	4.1	-	7.4	49.9	9.8	4.1	13.9
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	182	182	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	1028	1028	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	653	653	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

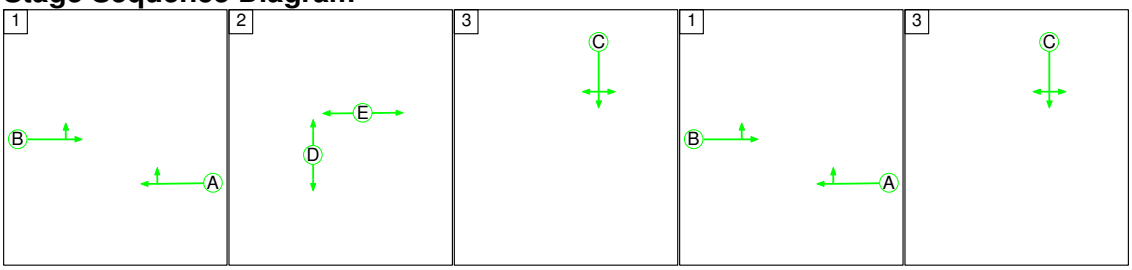
C1 PRC for Signalled Lanes (%): -0.3 Total Delay for Signalled Lanes (pcuHr): 18.83 Cycle Time (s): 140

PRC Over All Lanes (%): -0.3 Total Delay Over All Lanes(pcuHr): 18.83

Full Input Data And Results

Scenario 2: 'PM 2028 Reference Test C' (FG2: 'PM 2028 Reference Test C', Plan 2: 'Stage seq 2')

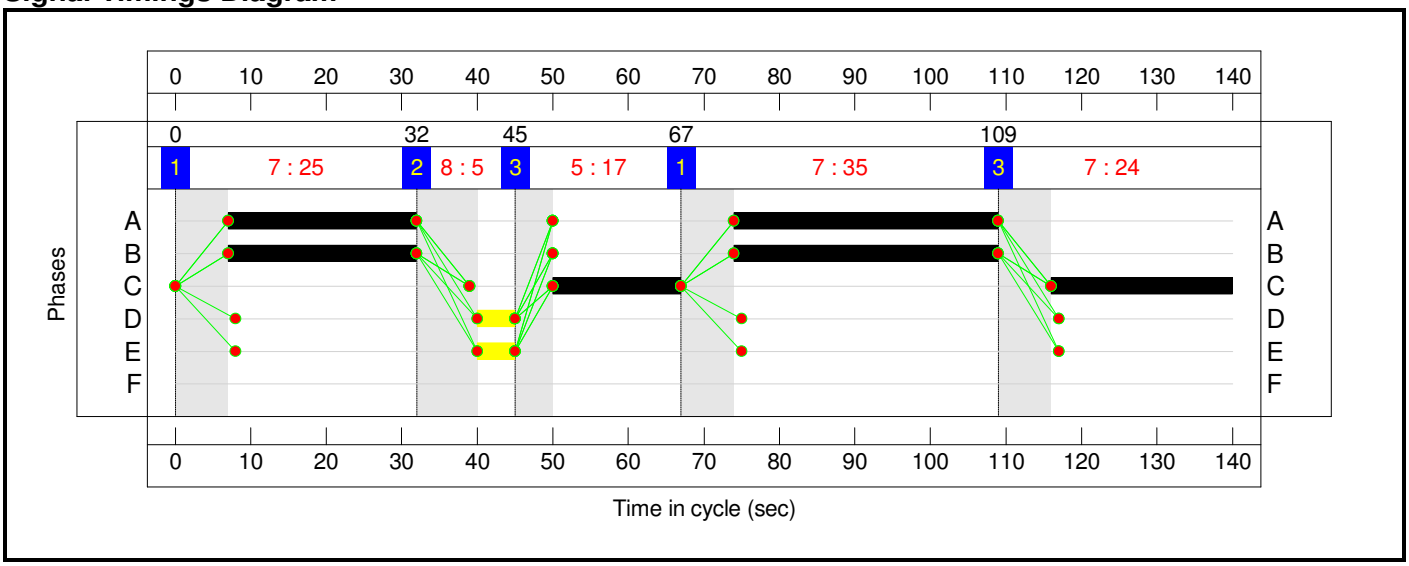
Stage Sequence Diagram



Stage Timings

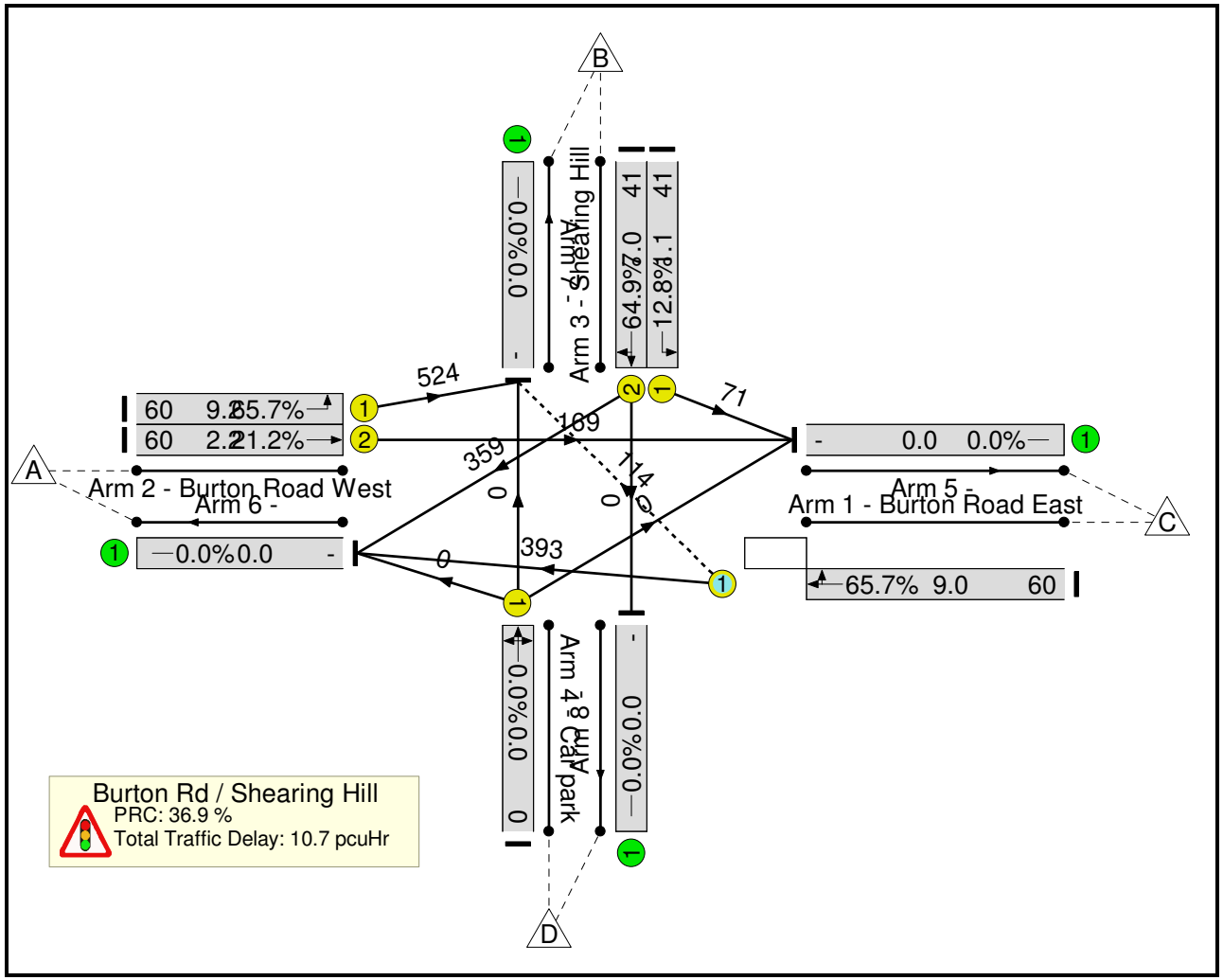
Stage	1	2	3	1	3
Duration	25	5	17	35	24
Change Point	0	32	45	67	109

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Burton Road / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**65.7%**
Burton Rd / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**65.7%**
1/1	Burton Road East Ahead Right	O	N/A	N/A	A		2	60	-	507	1800	771	65.7%
2/1	Burton Road West Left	U	N/A	N/A	B		2	60	-	524	1800	797	65.7%
2/2	Burton Road West Ahead	U	N/A	N/A	B		2	60	-	169	1800	797	21.2%
3/1	Shearing Hill Left	U	N/A	N/A	C		2	41	-	71	1800	553	12.8%
3/2	Shearing Hill Right Ahead	U	N/A	N/A	C		2	41	-	359	1800	553	64.9%
4/1	Car park Right Left Ahead	U	N/A	N/A	F		0	0	-	0	1800	0	0.0%
5/1		U	N/A	N/A	-		-	-	-	240	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	752	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	638	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

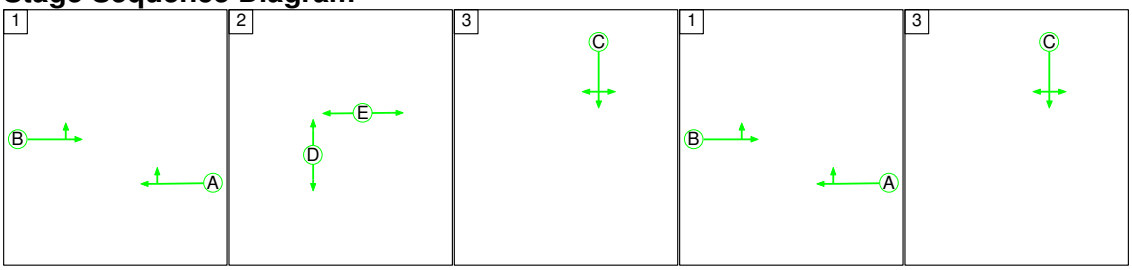
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Burton Road / Shearing Hill	**-**	**-**	**112**	**0**	**2**	**7.4**	**3.0**	**0.3**	**10.7**	**-**	**-**	**-**	**-**
Burton Rd / Shearing Hill	**-**	**-**	**112**	**0**	**2**	**7.4**	**3.0**	**0.3**	**10.7**	**-**	**-**	**-**	**-**
1/1	507	507	112	0	2	2.1	1.0	0.3	3.4	24.2	8.0	1.0	9.0
2/1	524	524	-	-	-	2.2	1.0	-	3.2	21.9	8.3	1.0	9.2
2/2	169	169	-	-	-	0.6	0.1	-	0.7	14.9	2.1	0.1	2.2
3/1	71	71	-	-	-	0.3	0.1	-	0.4	21.2	1.0	0.1	1.1
3/2	359	359	-	-	-	2.1	0.9	-	3.0	30.2	6.1	0.9	7.0
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	240	240	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	752	752	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	638	638	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 36.9 Total Delay for Signalled Lanes (pcuHr): 10.73 Cycle Time (s): 140
PRC Over All Lanes (%): 36.9 Total Delay Over All Lanes(pcuHr): 10.73

Full Input Data And Results

Scenario 3: 'AM 2028 Design Test C' (FG3: 'AM 2028 Design 'Test C'', Plan 2: 'Stage seq 2')

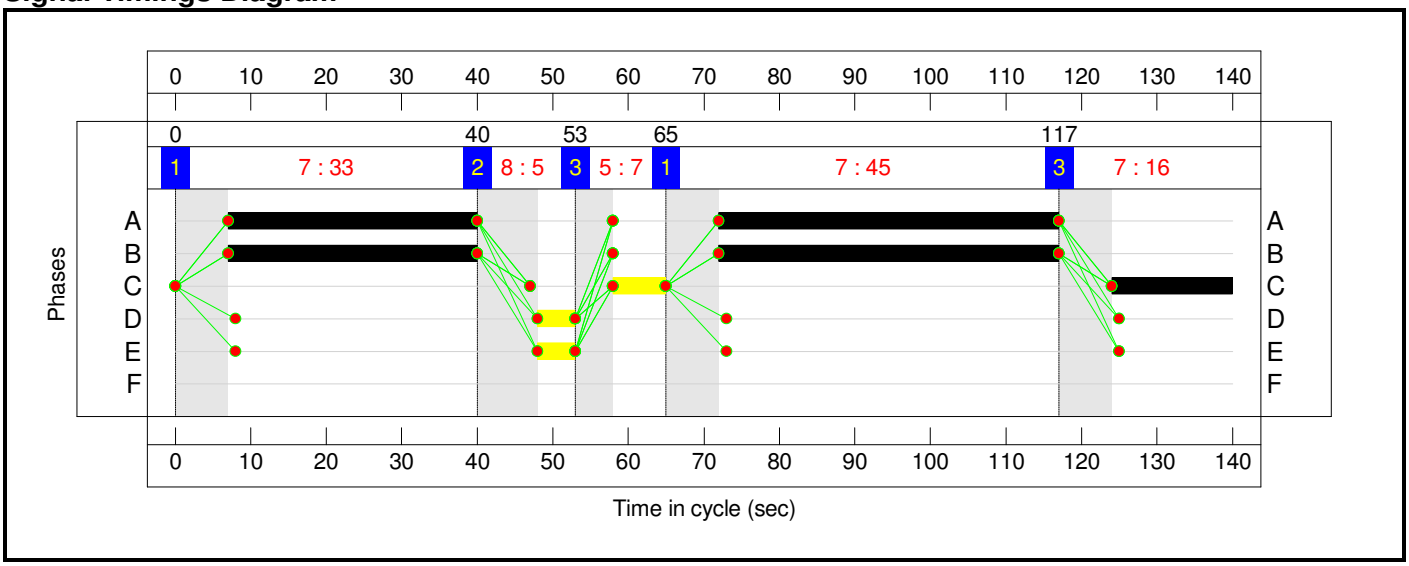
Stage Sequence Diagram



Stage Timings

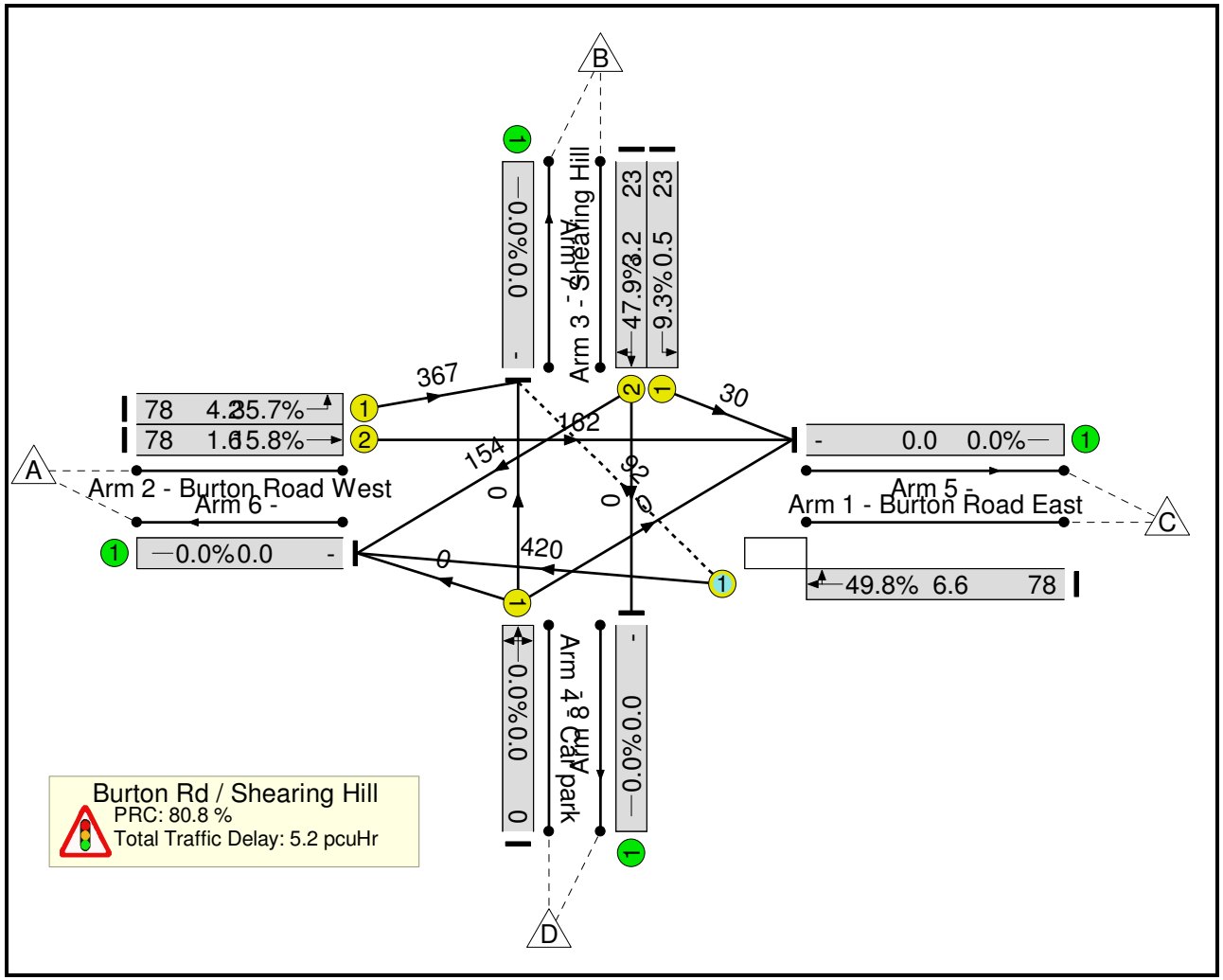
Stage	1	2	3	1	3
Duration	33	5	7	45	16
Change Point	0	40	53	65	117

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Burton Road / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**49.8%**
Burton Rd / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**49.8%**
1/1	Burton Road East Ahead Right	O	N/A	N/A	A		2	78	-	512	1800	1029	49.8%
2/1	Burton Road West Left	U	N/A	N/A	B		2	78	-	367	1800	1029	35.7%
2/2	Burton Road West Ahead	U	N/A	N/A	B		2	78	-	162	1800	1029	15.8%
3/1	Shearing Hill Left	U	N/A	N/A	C		2	23	-	30	1800	321	9.3%
3/2	Shearing Hill Right Ahead	U	N/A	N/A	C		2	23	-	154	1800	321	47.9%
4/1	Car park Right Left Ahead	U	N/A	N/A	F		0	0	-	0	1800	0	0.0%
5/1		U	N/A	N/A	-		-	-	-	192	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	574	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	459	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

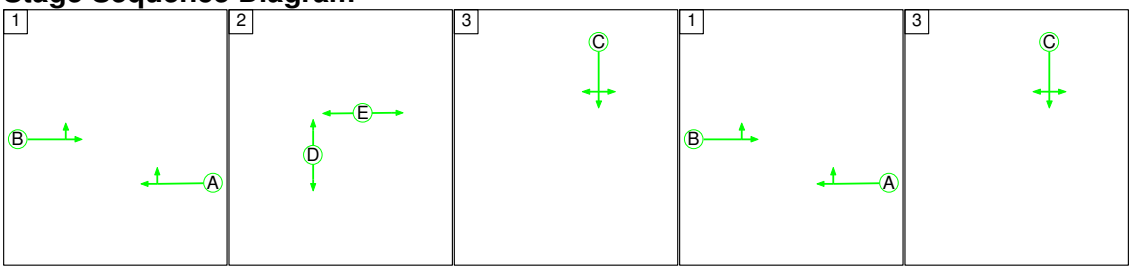
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Burton Road / Shearing Hill	**-**	**-**	**91**	**0**	**1**	**3.7**	**1.4**	**0.0**	**5.2**	**-**	**-**	**-**	**-**
Burton Rd / Shearing Hill	**-**	**-**	**91**	**0**	**1**	**3.7**	**1.4**	**0.0**	**5.2**	**-**	**-**	**-**	**-**
1/1	512	512	91	0	1	1.3	0.5	0.0	1.8	12.8	6.1	0.5	6.6
2/1	367	367	-	-	-	0.8	0.3	-	1.1	10.8	3.9	0.3	4.2
2/2	162	162	-	-	-	0.3	0.1	-	0.4	9.2	1.5	0.1	1.6
3/1	30	30	-	-	-	0.2	0.1	-	0.3	30.2	0.5	0.1	0.5
3/2	154	154	-	-	-	1.1	0.5	-	1.6	36.5	2.7	0.5	3.2
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	192	192	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	574	574	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	459	459	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 80.8 Total Delay for Signalled Lanes (pcuHr): 5.15 Cycle Time (s): 140
PRC Over All Lanes (%): 80.8 Total Delay Over All Lanes(pcuHr): 5.15

Full Input Data And Results

Scenario 4: 'PM 2028 Design Test C' (FG4: 'PM 2028 Design 'Test C'', Plan 2: 'Stage seq 2')

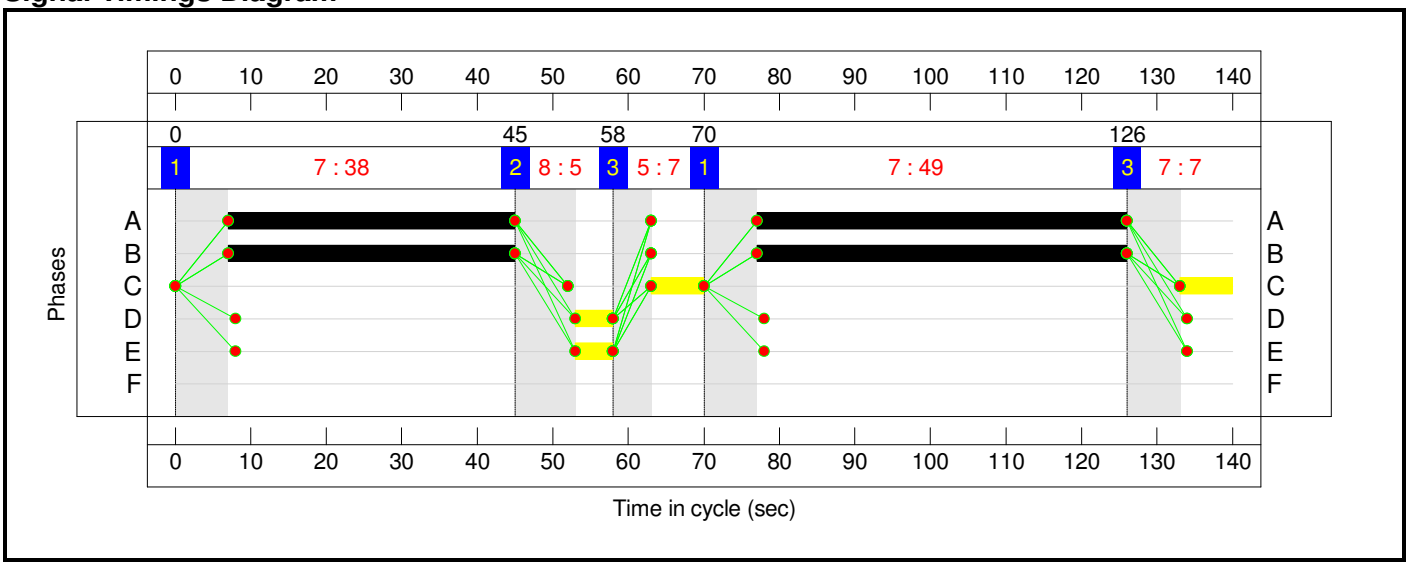
Stage Sequence Diagram



Stage Timings

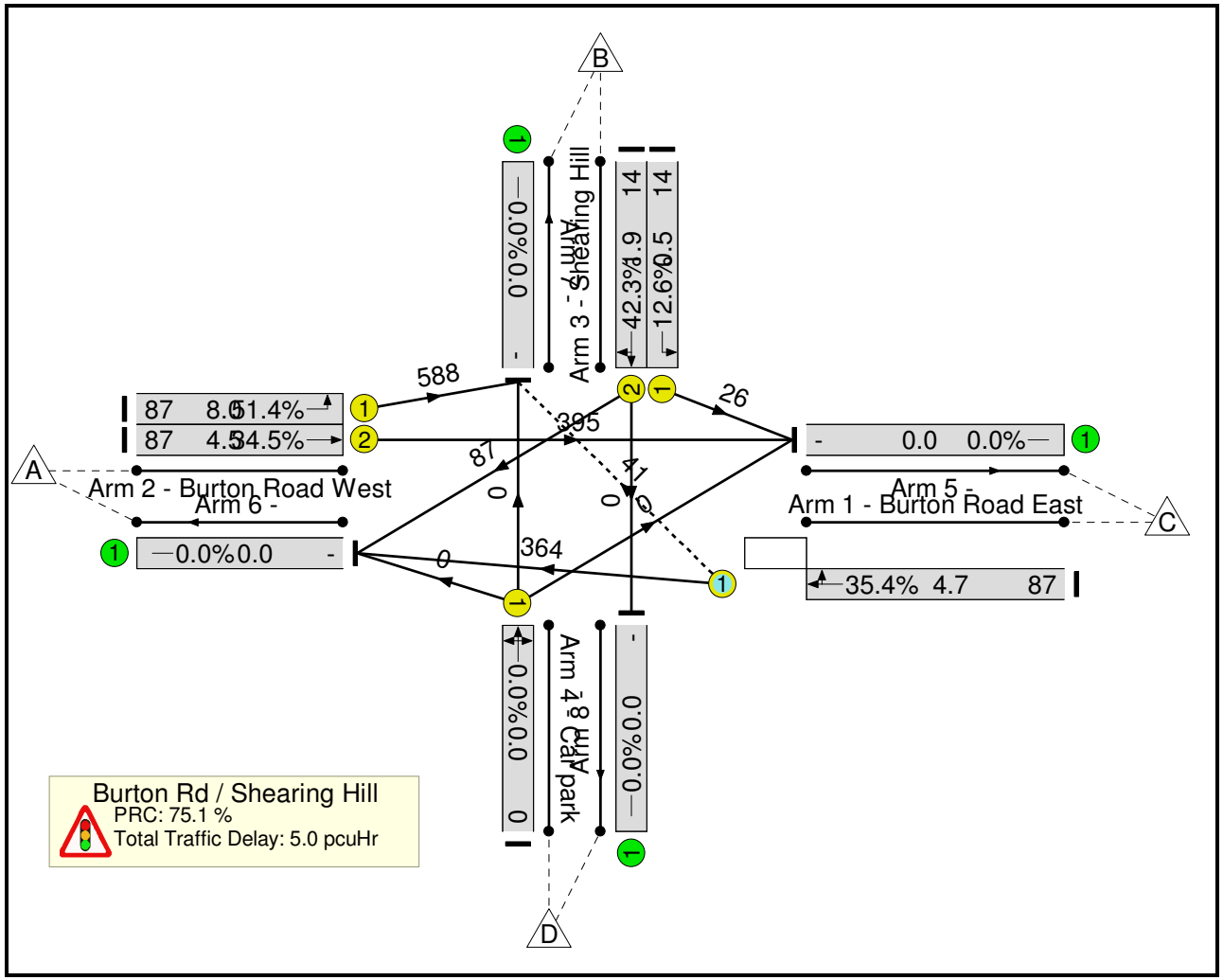
Stage	1	2	3	1	3
Duration	38	5	7	49	7
Change Point	0	45	58	70	126

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Burton Road / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**51.4%**
Burton Rd / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**51.4%**
1/1	Burton Road East Ahead Right	O	N/A	N/A	A		2	87	-	405	1800	1144	35.4%
2/1	Burton Road West Left	U	N/A	N/A	B		2	87	-	588	1800	1144	51.4%
2/2	Burton Road West Ahead	U	N/A	N/A	B		2	87	-	395	1800	1144	34.5%
3/1	Shearing Hill Left	U	N/A	N/A	C		2	14	-	26	1800	206	12.6%
3/2	Shearing Hill Right Ahead	U	N/A	N/A	C		2	14	-	87	1800	206	42.3%
4/1	Car park Right Left Ahead	U	N/A	N/A	F		0	0	-	0	1800	0	0.0%
5/1		U	N/A	N/A	-		-	-	-	421	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	451	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	629	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

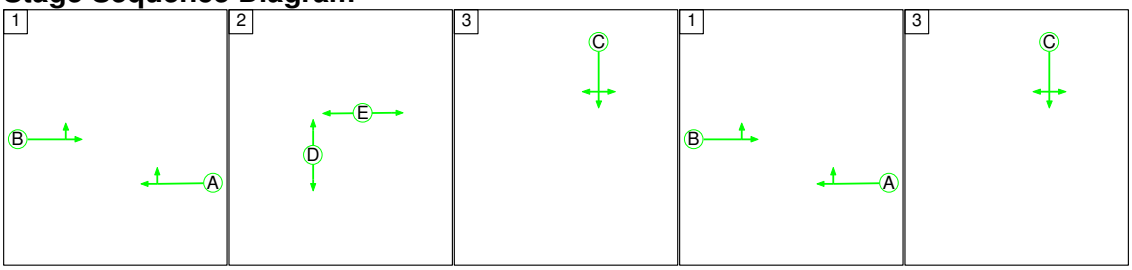
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Burton Road / Shearing Hill	**-**	**-**	**40**	**0**	**1**	**3.5**	**1.5**	**0.1**	**5.0**	**-**	**-**	**-**	**-**
Burton Rd / Shearing Hill	**-**	**-**	**40**	**0**	**1**	**3.5**	**1.5**	**0.1**	**5.0**	**-**	**-**	**-**	**-**
1/1	405	405	40	0	1	0.7	0.3	0.1	1.0	9.2	4.4	0.3	4.7
2/1	588	588	-	-	-	1.2	0.5	-	1.7	10.5	7.5	0.5	8.0
2/2	395	395	-	-	-	0.7	0.3	-	0.9	8.6	4.3	0.3	4.5
3/1	26	26	-	-	-	0.2	0.1	-	0.3	37.9	0.4	0.1	0.5
3/2	87	87	-	-	-	0.7	0.4	-	1.1	43.9	1.6	0.4	1.9
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	421	421	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	451	451	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	629	629	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 75.1 Total Delay for Signalled Lanes (pcuHr): 5.03 Cycle Time (s): 140
PRC Over All Lanes (%): 75.1 Total Delay Over All Lanes(pcuHr): 5.03

Full Input Data And Results

Scenario 5: 'AM 2034 Design Test C' (FG5: 'AM 2034 Design 'Test C'', Plan 2: 'Stage seq 2')

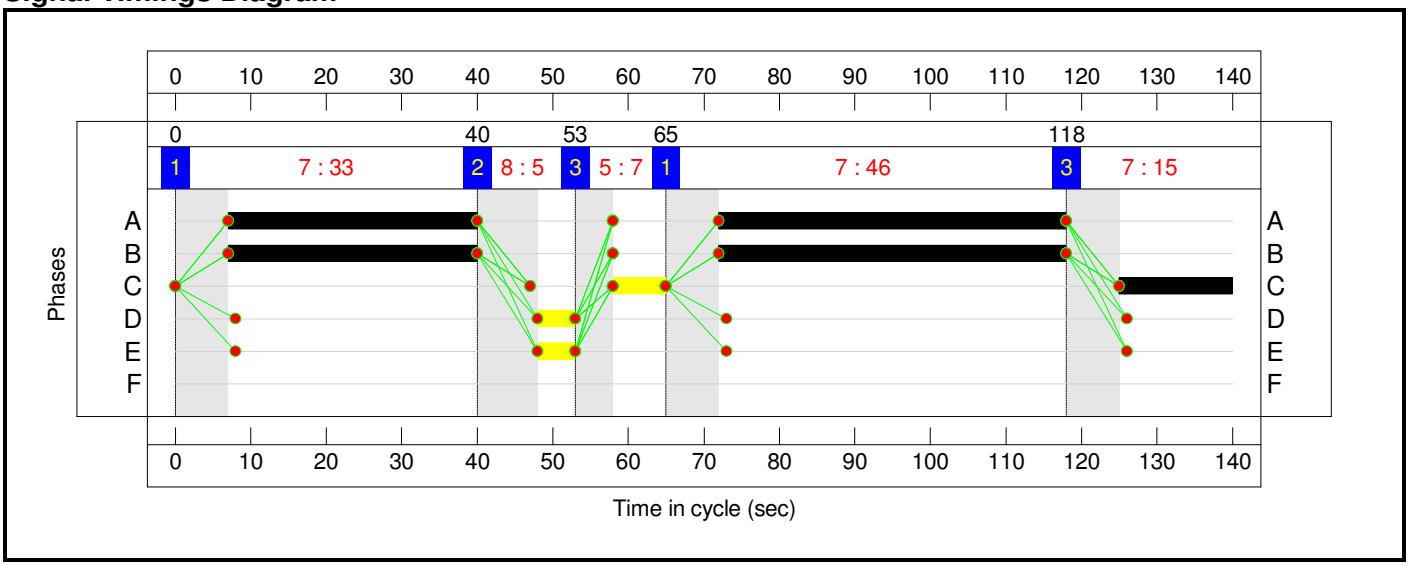
Stage Sequence Diagram



Stage Timings

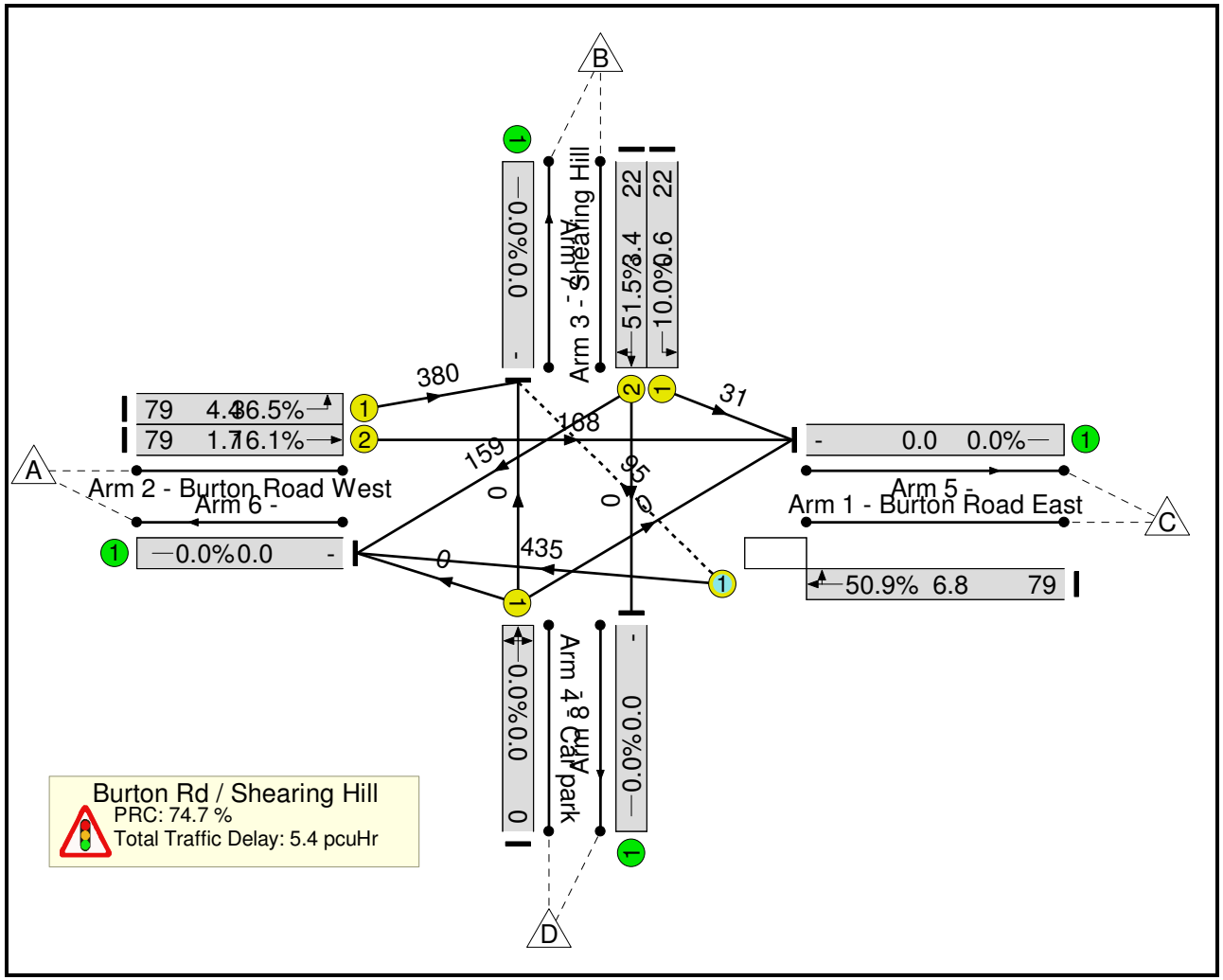
Stage	1	2	3	1	3
Duration	33	5	7	46	15
Change Point	0	40	53	65	118

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Burton Road / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**51.5%**
Burton Rd / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**51.5%**
1/1	Burton Road East Ahead Right	O	N/A	N/A	A		2	79	-	530	1800	1041	50.9%
2/1	Burton Road West Left	U	N/A	N/A	B		2	79	-	380	1800	1041	36.5%
2/2	Burton Road West Ahead	U	N/A	N/A	B		2	79	-	168	1800	1041	16.1%
3/1	Shearing Hill Left	U	N/A	N/A	C		2	22	-	31	1800	309	10.0%
3/2	Shearing Hill Right Ahead	U	N/A	N/A	C		2	22	-	159	1800	309	51.5%
4/1	Car park Right Left Ahead	U	N/A	N/A	F		0	0	-	0	1800	0	0.0%
5/1		U	N/A	N/A	-		-	-	-	199	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	594	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	475	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

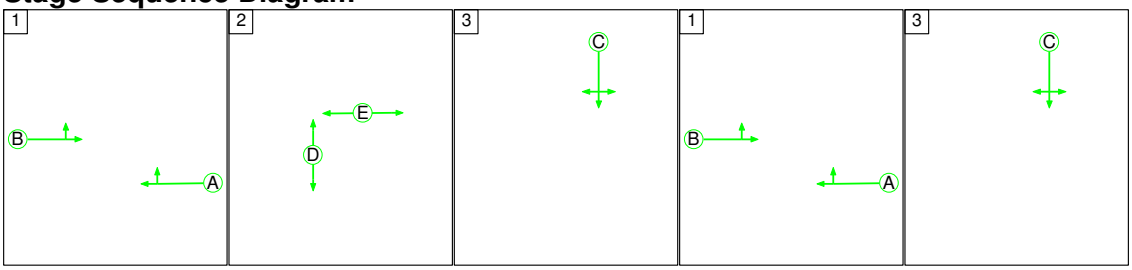
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Burton Road / Shearing Hill	**-**	**-**	**94**	**0**	**1**	**3.8**	**1.5**	**0.1**	**5.4**	**-**	**-**	**-**	**-**
Burton Rd / Shearing Hill	**-**	**-**	**94**	**0**	**1**	**3.8**	**1.5**	**0.1**	**5.4**	**-**	**-**	**-**	**-**
1/1	530	530	94	0	1	1.3	0.5	0.1	1.9	12.7	6.3	0.5	6.8
2/1	380	380	-	-	-	0.8	0.3	-	1.1	10.6	4.1	0.3	4.4
2/2	168	168	-	-	-	0.3	0.1	-	0.4	8.9	1.6	0.1	1.7
3/1	31	31	-	-	-	0.2	0.1	-	0.3	30.9	0.5	0.1	0.6
3/2	159	159	-	-	-	1.2	0.5	-	1.7	38.3	2.8	0.5	3.4
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	199	199	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	594	594	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	475	475	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 74.7 Total Delay for Signalled Lanes (pcuHr): 5.37 Cycle Time (s): 140
PRC Over All Lanes (%): 74.7 Total Delay Over All Lanes(pcuHr): 5.37

Full Input Data And Results

Scenario 6: 'AM 2034 Design Test C' (FG6: 'PM 2034 Design 'Test C'', Plan 2: 'Stage seq 2')

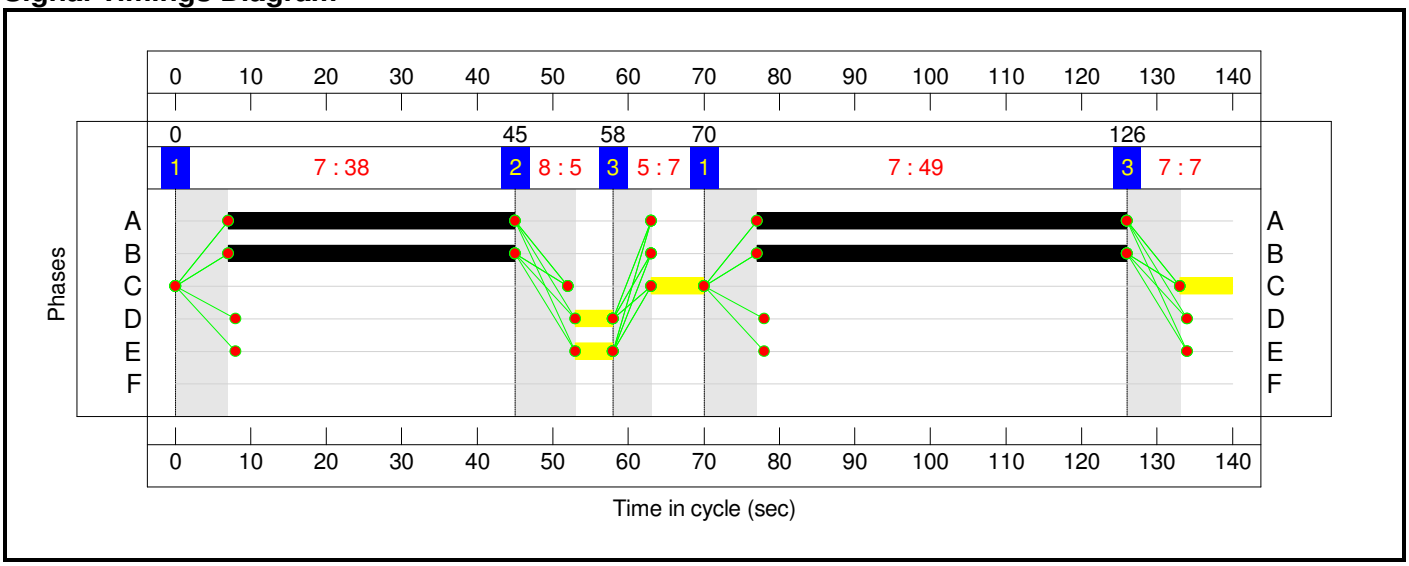
Stage Sequence Diagram



Stage Timings

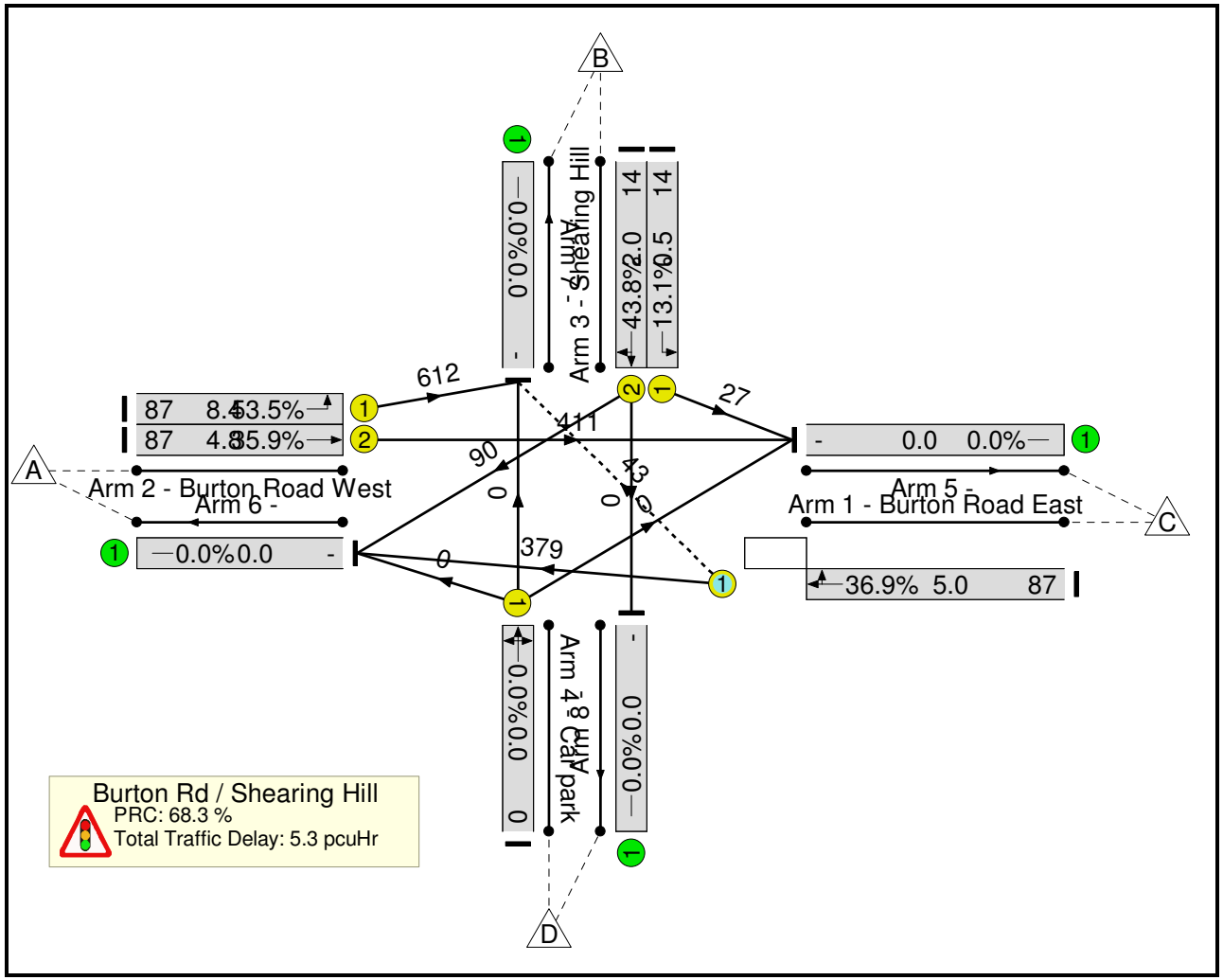
Stage	1	2	3	1	3
Duration	38	5	7	49	7
Change Point	0	45	58	70	126

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: Burton Road / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**53.5%**
Burton Rd / Shearing Hill	-	-	**N/A**	-	-		-	-	-	-	-	-	**53.5%**
1/1	Burton Road East Ahead Right	O	N/A	N/A	A		2	87	-	422	1800	1144	36.9%
2/1	Burton Road West Left	U	N/A	N/A	B		2	87	-	612	1800	1144	53.5%
2/2	Burton Road West Ahead	U	N/A	N/A	B		2	87	-	411	1800	1144	35.9%
3/1	Shearing Hill Left	U	N/A	N/A	C		2	14	-	27	1800	206	13.1%
3/2	Shearing Hill Right Ahead	U	N/A	N/A	C		2	14	-	90	1800	206	43.8%
4/1	Car park Right Left Ahead	U	N/A	N/A	F		0	0	-	0	1800	0	0.0%
5/1		U	N/A	N/A	-		-	-	-	438	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	469	Inf	Inf	0.0%
7/1		U	N/A	N/A	-		-	-	-	655	Inf	Inf	0.0%
8/1		U	N/A	N/A	-		-	-	-	0	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: Burton Road / Shearing Hill	**-**	**-**	**42**	**0**	**1**	**3.6**	**1.6**	**0.1**	**5.3**	**-**	**-**	**-**	**-**
Burton Rd / Shearing Hill	**-**	**-**	**42**	**0**	**1**	**3.6**	**1.6**	**0.1**	**5.3**	**-**	**-**	**-**	**-**
1/1	422	422	42	0	1	0.7	0.3	0.1	1.1	9.5	4.7	0.3	5.0
2/1	612	612	-	-	-	1.3	0.6	-	1.8	10.7	7.8	0.6	8.4
2/2	411	411	-	-	-	0.7	0.3	-	1.0	8.8	4.6	0.3	4.8
3/1	27	27	-	-	-	0.2	0.1	-	0.3	38.0	0.5	0.1	0.5
3/2	90	90	-	-	-	0.7	0.4	-	1.1	44.4	1.6	0.4	2.0
4/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	438	438	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	469	469	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
7/1	655	655	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
8/1	0	0	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

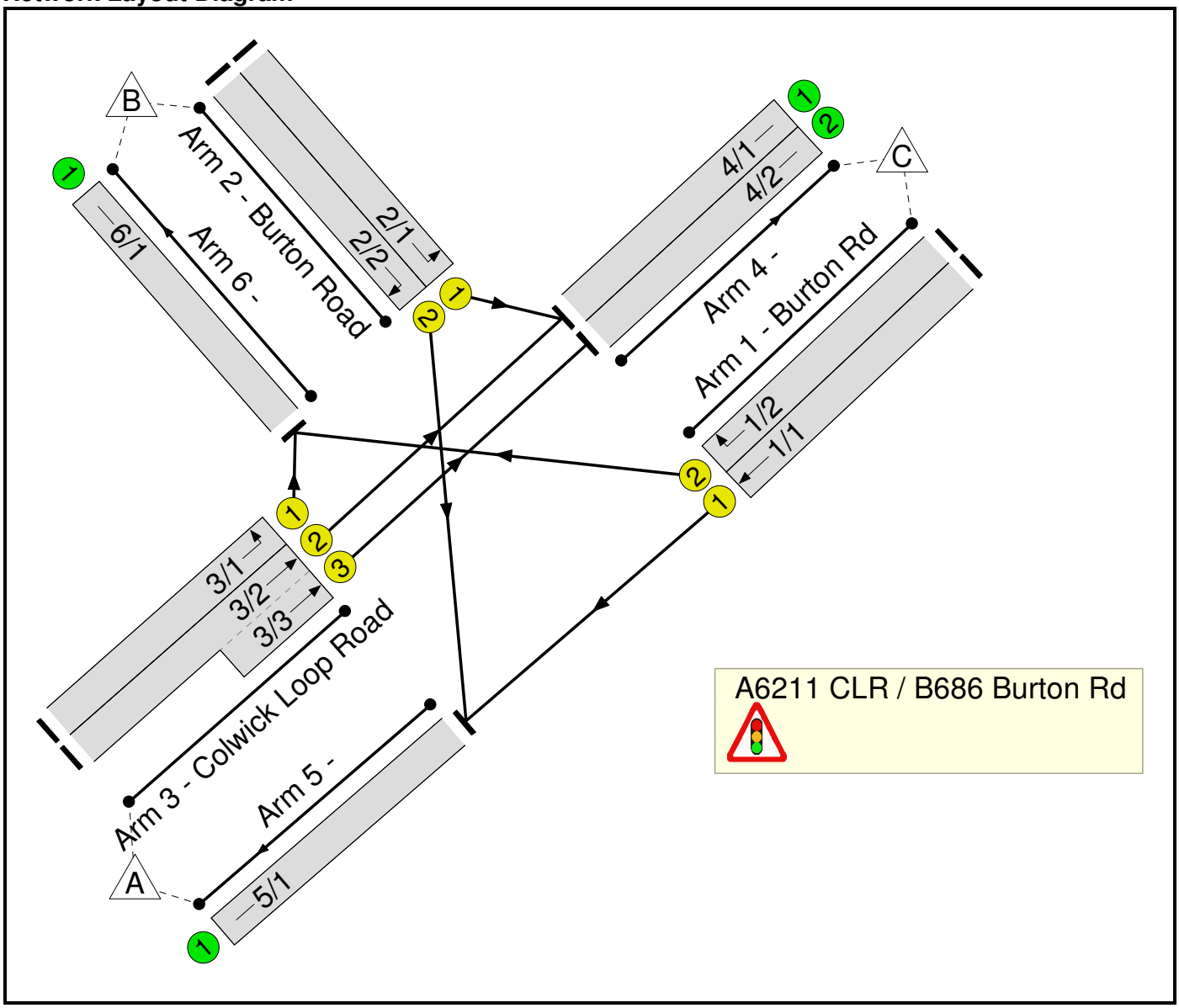
C1 PRC for Signalled Lanes (%): 68.3 Total Delay for Signalled Lanes (pcuHr): 5.33 Cycle Time (s): 140
PRC Over All Lanes (%): 68.3 Total Delay Over All Lanes(pcuHr): 5.33

Full Input Data And Results

User and Project Details

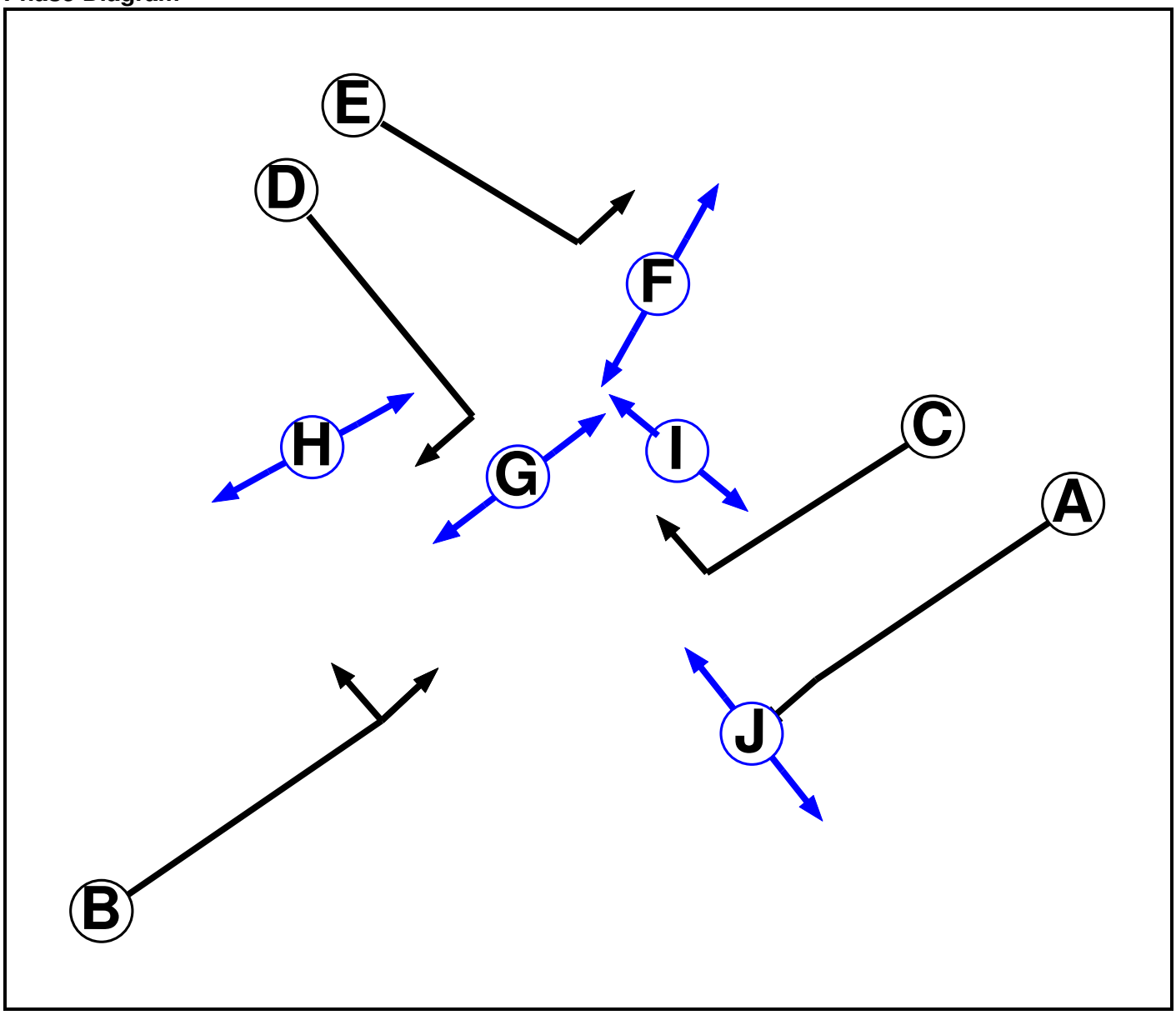
Project:	**A085361 Gedling Access Road**
Title:	**A6211 Colwick Loop Road / B686 Burton Road**
Location:	
File name:	A085361 CLR - Burton Rd (Test C).lsg3x
Author:	
Company:	
Address:	
Notes:	Created from NCC Linsig 1 file

Network Layout Diagram



Full Input Data And Results

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	3
E	Traffic		7	5
F	Pedestrian		6	5
G	Pedestrian		6	6
H	Pedestrian		6	6
I	Pedestrian		6	6
J	Pedestrian		6	4

Full Input Data And Results

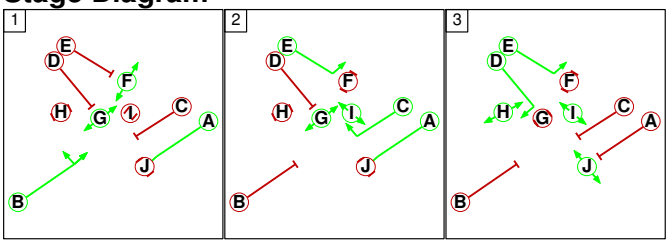
Phase Intergreens Matrix

Terminating Phase \ Starting Phase	A	B	C	D	E	F	G	H	I	J
A		-	-	6	-	-	-	-	-	5
B	-		5	8	8	-	-	7	7	-
C	-	5		6	-	-	-	9	-	5
D	6	6	6		-	-	5	-	-	-
E	-	5	-	-		5	-	-	-	-
F	-	-	-	-	7		-	-	-	-
G	-	-	-	6	-	-		-	-	-
H	-	10	10	-	-	-	-		-	-
I	-	7	-	-	-	-	-	-		-
J	8	-	8	-	-	-	-	-	-	

Phases in Stage

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

Stage Diagram



Phase Delays

Term. Stage	Start Stage	Phase	Type	Value	Cont value
1	2	F	Losing	1	1
1	3	F	Losing	1	1
1	3	G	Losing	2	2
1	3	J	Gaining absolute	7	7
2	1	C	Losing	2	2
2	1	E	Losing	2	2
3	1	D	Losing	4	4
3	1	E	Losing	4	4
3	1	I	Losing	2	2
3	1	J	Losing	2	2
3	2	D	Losing	4	4
3	2	J	Losing	2	2

Full Input Data And Results

Prohibited Stage Change

From Stage	To Stage		
	1	2	3
1		8	8
2	7		9
3	10	10	

Full Input Data And Results

Give-Way Lane Input Data

Junction: A6211 CLR / B686 Burton Rd
There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: A6211 CLR / B686 Burton 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 (Burton Rd)	U	A	2	3	60.0	User	1800	-	-	-	-	-
1/2 (Burton Rd)	U	C	2	3	60.0	User	1800	-	-	-	-	-
2/1 (Burton Road)	U	E	2	3	60.0	User	1800	-	-	-	-	-
2/2 (Burton Road)	U	D	2	3	60.0	User	1800	-	-	-	-	-
3/1 (Colwick Loop Road)	U	B	2	3	60.0	User	1800	-	-	-	-	-
3/2 (Colwick Loop Road)	U	B	2	3	60.0	User	1800	-	-	-	-	-
3/3 (Colwick Loop Road)	U	B	2	3	5.0	User	1800	-	-	-	-	-
4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
4/2	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 2028 Reference Test C'	08:00	09:00	01:00	
2: 'PM 2028 Reference Test C'	17:00	18:00	01:00	
3: 'AM 2028 Design Test C'	08:00	09:00	01:00	
4: 'PM 2028 Design Test C'	17:00	18:00	01:00	
5: 'AM 2034 Design Test C'	08:00	09:00	01:00	
6: 'PM 2034 Design Test C'	17:00	18:00	01:00	

Scenario 1: 'AM 2028 Reference Test C' (FG1: 'AM 2028 Reference Test C', Plan 1: 'Stage Sequence No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	160	591	751
	B	61	0	25	86
	C	664	364	0	1028
	Tot.	725	524	616	1865

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 1: AM 2028 Reference Test C
Junction: A6211 CLR / B686 Burton Rd	
1/1	664
1/2	364
2/1	25
2/2	61
3/1	160
3/2 (with short)	591(In) 295(Out)
3/3 (short)	296
4/1	320
4/2	296
5/1	725
6/1	524

Lane Saturation Flows

Junction: A6211 CLR / B686 Burton 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 (Burton Rd Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Burton Rd Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Colwick Loop Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Colwick Loop Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Colwick Loop Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 2: 'PM 2028 Reference Test C' (FG2: 'PM 2028 Reference Test C', Plan 1: 'Stage Sequence No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	144	638	782
	B	240	0	55	295
	C	450	302	0	752
	Tot.	690	446	693	1829

Traffic Lane Flows

Lane	Scenario 2: PM 2028 Reference Test C
Junction: A6211 CLR / B686 Burton Rd	
1/1	450
1/2	302
2/1	55
2/2	240
3/1	144
3/2 (with short)	638(In) 319(Out)
3/3 (short)	319
4/1	374
4/2	319
5/1	690
6/1	446

Full Input Data And Results

Lane Saturation Flows

Junction: A6211 CLR / B686 Burton 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 (Burton Rd Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Burton Rd Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Colwick Loop Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Colwick Loop Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Colwick Loop Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 3: 'AM 2028 Design Test C' (FG3: 'AM 2028 Design Test C', Plan 1: 'Stage Sequence No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	167	426	593
	B	20	0	103	123
	C	286	289	0	575
	Tot.	306	456	529	1291

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 3: AM 2028 Design Test C
Junction: A6211 CLR / B686 Burton Rd	
1/1	286
1/2	289
2/1	103
2/2	20
3/1	167
3/2 (with short)	426(In) 213(Out)
3/3 (short)	213
4/1	316
4/2	213
5/1	306
6/1	456

Lane Saturation Flows

Junction: A6211 CLR / B686 Burton 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 (Burton Rd Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Burton Rd Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Colwick Loop Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Colwick Loop Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Colwick Loop Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 4: 'PM 2028 Design Test C' (FG4: 'PM 2028 Design Test C', Plan 1: 'Stage Sequence No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	165	626	791
	B	85	0	358	443
	C	172	278	0	450
	Tot.	257	443	984	1684

Traffic Lane Flows

Lane	Scenario 4: PM 2028 Design Test C
Junction: A6211 CLR / B686 Burton Rd	
1/1	172
1/2	278
2/1	358
2/2	85
3/1	165
3/2 (with short)	626(In) 313(Out)
3/3 (short)	313
4/1	671
4/2	313
5/1	257
6/1	443

Full Input Data And Results

Lane Saturation Flows

Junction: A6211 CLR / B686 Burton 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 (Burton Rd Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Burton Rd Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Colwick Loop Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Colwick Loop Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Colwick Loop Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 5: 'AM 2034 Design Test C' (FG5: 'AM 2034 Design Test C', Plan 1: 'Stage Sequence No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	173	441	614
	B	21	0	107	128
	C	296	299	0	595
	Tot.	317	472	548	1337

Full Input Data And Results

Traffic Lane Flows

Lane	Scenario 5: AM 2034 Design Test C
Junction: A6211 CLR / B686 Burton Rd	
1/1	296
1/2	299
2/1	107
2/2	21
3/1	173
3/2 (with short)	441(In) 220(Out)
3/3 (short)	221
4/1	327
4/2	221
5/1	317
6/1	472

Lane Saturation Flows

Junction: A6211 CLR / B686 Burton 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 (Burton Rd Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Burton Rd Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Colwick Loop Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Colwick Loop Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Colwick Loop Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 6: 'PM 2034 Design Test C' (FG6: 'PM 2034 Design Test C', Plan 1: 'Stage Sequence No. 1')

Traffic Flows, Desired

Desired Flow :

		Destination			
		A	B	C	Tot.
Origin	A	0	172	651	823
	B	88	0	372	460
	C	179	289	0	468
	Tot.	267	461	1023	1751

Traffic Lane Flows

Lane	Scenario 6: PM 2034 Design Test C
Junction: A6211 CLR / B686 Burton Rd	
1/1	179
1/2	289
2/1	372
2/2	88
3/1	172
3/2 (with short)	651(In) 325(Out)
3/3 (short)	326
4/1	697
4/2	326
5/1	267
6/1	461

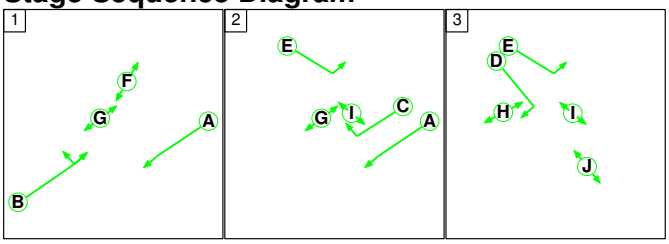
Full Input Data And Results

Lane Saturation Flows

Junction: A6211 CLR / B686 Burton 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 (Burton Rd Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
1/2 (Burton Rd Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
2/1 (Burton Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
2/2 (Burton Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/1 (Colwick Loop Road Lane 1)	This lane uses a directly entered Saturation Flow						1800	1800
3/2 (Colwick Loop Road Lane 2)	This lane uses a directly entered Saturation Flow						1800	1800
3/3 (Colwick Loop Road Lane 3)	This lane uses a directly entered Saturation Flow						1800	1800
4/1	Infinite Saturation Flow						Inf	Inf
4/2	Infinite Saturation Flow						Inf	Inf
5/1	Infinite Saturation Flow						Inf	Inf
6/1	Infinite Saturation Flow						Inf	Inf

Scenario 1: 'AM 2028 Reference Test C' (FG1: 'AM 2028 Reference Test C', Plan 1: 'Stage Sequence No. 1')

Stage Sequence Diagram

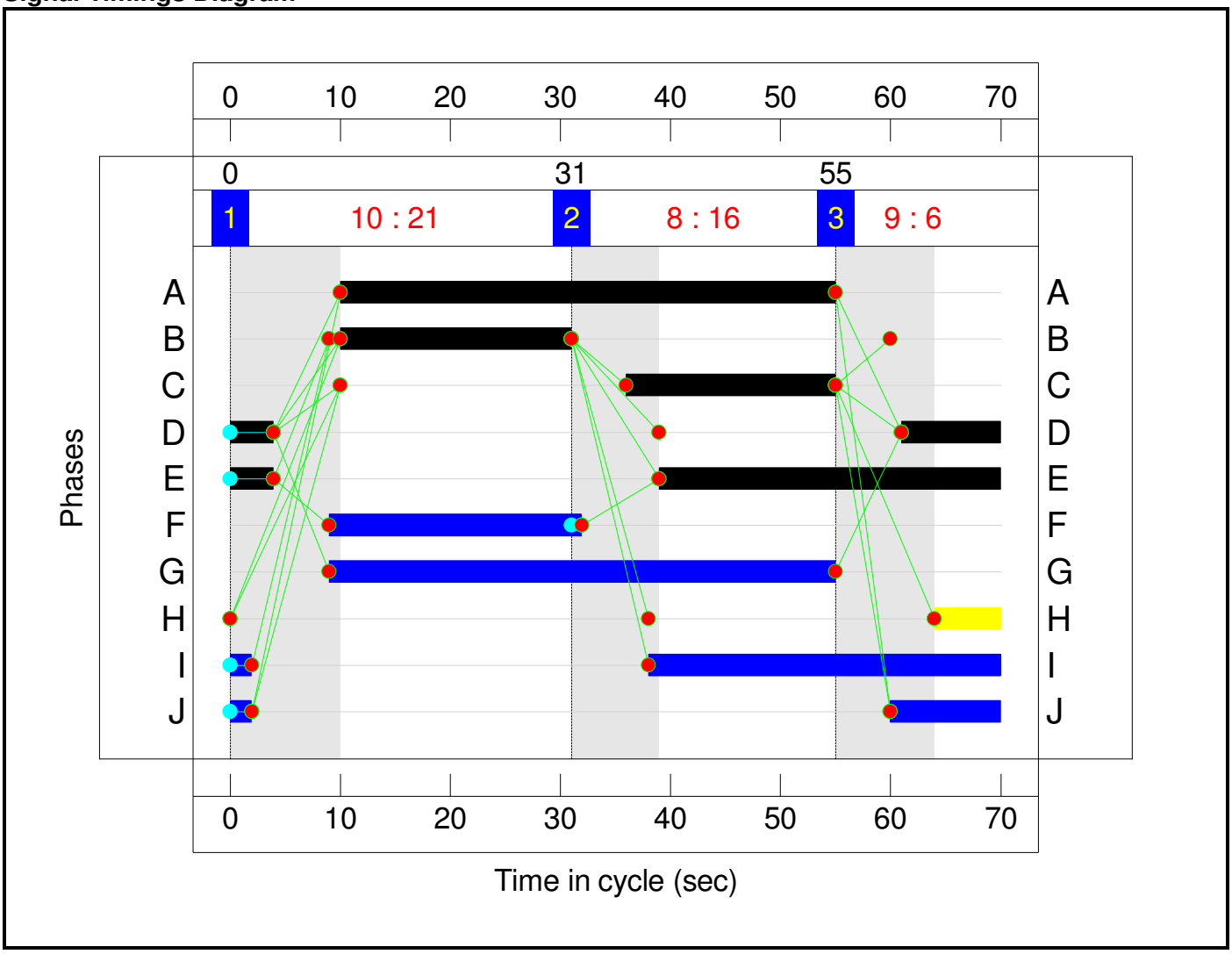


Stage Timings

Stage	1	2	3
Duration	21	16	6
Change Point	0	31	55

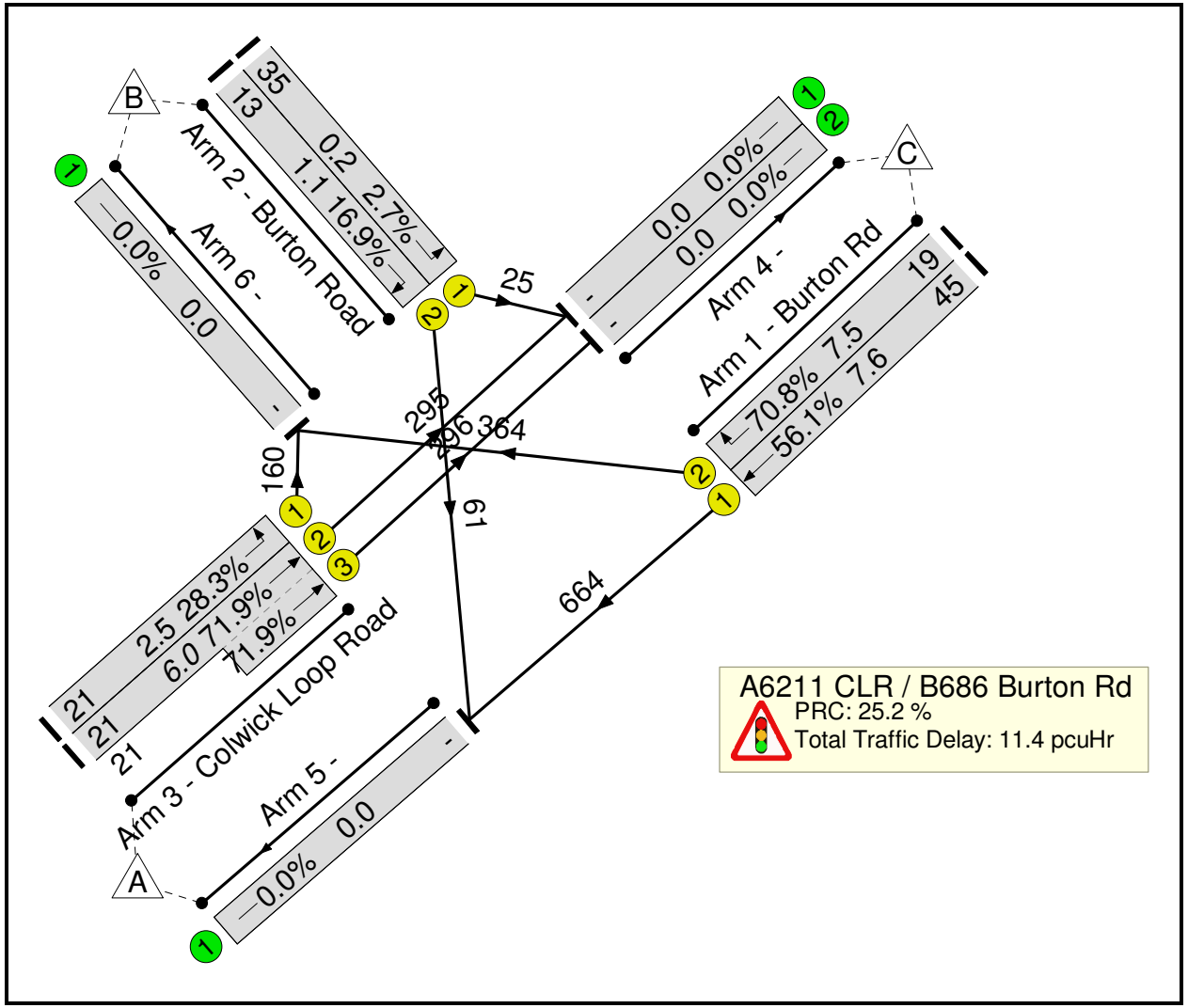
Full Input Data And Results

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.9%**
A6211 CLR / B686 Burton Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**71.9%**
1/1	Burton Rd Ahead	U	N/A	N/A	A		1	45	-	664	1800	1183	56.1%
1/2	Burton Rd Right	U	N/A	N/A	C		1	19	-	364	1800	514	70.8%
2/1	Burton Road Left	U	N/A	N/A	E		1	35	-	25	1800	926	2.7%
2/2	Burton Road Right	U	N/A	N/A	D		1	13	-	61	1800	360	16.9%
3/1	Colwick Loop Road Left	U	N/A	N/A	B		1	21	-	160	1800	566	28.3%
3/2+3/3	Colwick Loop Road Ahead	U	N/A	N/A	B		1	21	-	591	1800:1800	410+412	71.9 : 71.9%
4/1		U	N/A	N/A	-		-	-	-	320	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	296	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	725	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	524	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**0**	**0**	**0**	**8.0**	**3.4**	**0.0**	**11.4**	**-**	**-**	**-**	**-**
A6211 CLR / B686 Burton Rd	**-**	**-**	**0**	**0**	**0**	**8.0**	**3.4**	**0.0**	**11.4**	**-**	**-**	**-**	**-**
1/1	664	664	-	-	-	1.2	0.6	-	1.8	10.0	7.0	0.6	7.6
1/2	364	364	-	-	-	2.3	1.2	-	3.5	34.2	6.3	1.2	7.5
2/1	25	25	-	-	-	0.1	0.0	-	0.1	10.5	0.2	0.0	0.2
2/2	61	61	-	-	-	0.4	0.1	-	0.5	29.2	1.0	0.1	1.1
3/1	160	160	-	-	-	0.8	0.2	-	1.0	22.5	2.3	0.2	2.5
3/2+3/3	591	591	-	-	-	3.2	1.3	-	4.5	27.4	4.7	1.3	6.0
4/1	320	320	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	296	296	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	725	725	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	524	524	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

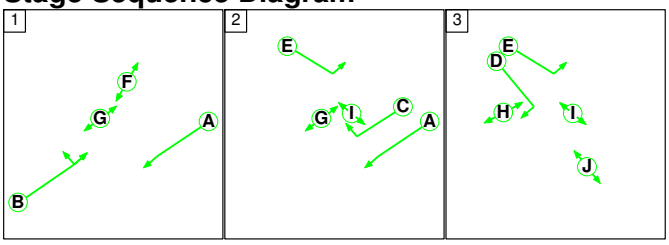
C1 PRC for Signalled Lanes (%): 25.2 Total Delay for Signalled Lanes (pcuHr): 11.36 Cycle Time (s): 70

PRC Over All Lanes (%): 25.2 Total Delay Over All Lanes(pcuHr): 11.36

Full Input Data And Results

Scenario 2: 'PM 2028 Reference Test C' (FG2: 'PM 2028 Reference Test C', Plan 1: 'Stage Sequence No. 1')

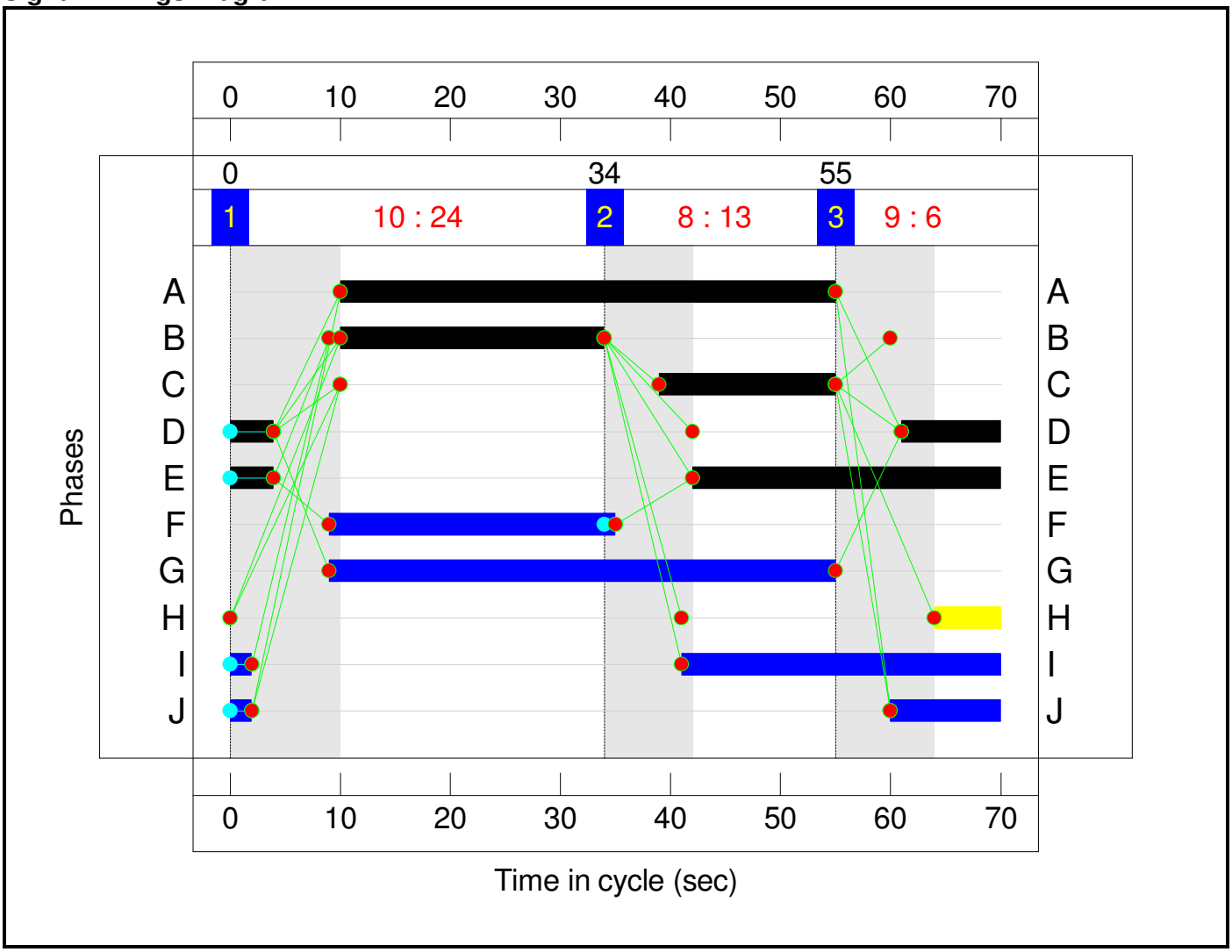
Stage Sequence Diagram



Stage Timings

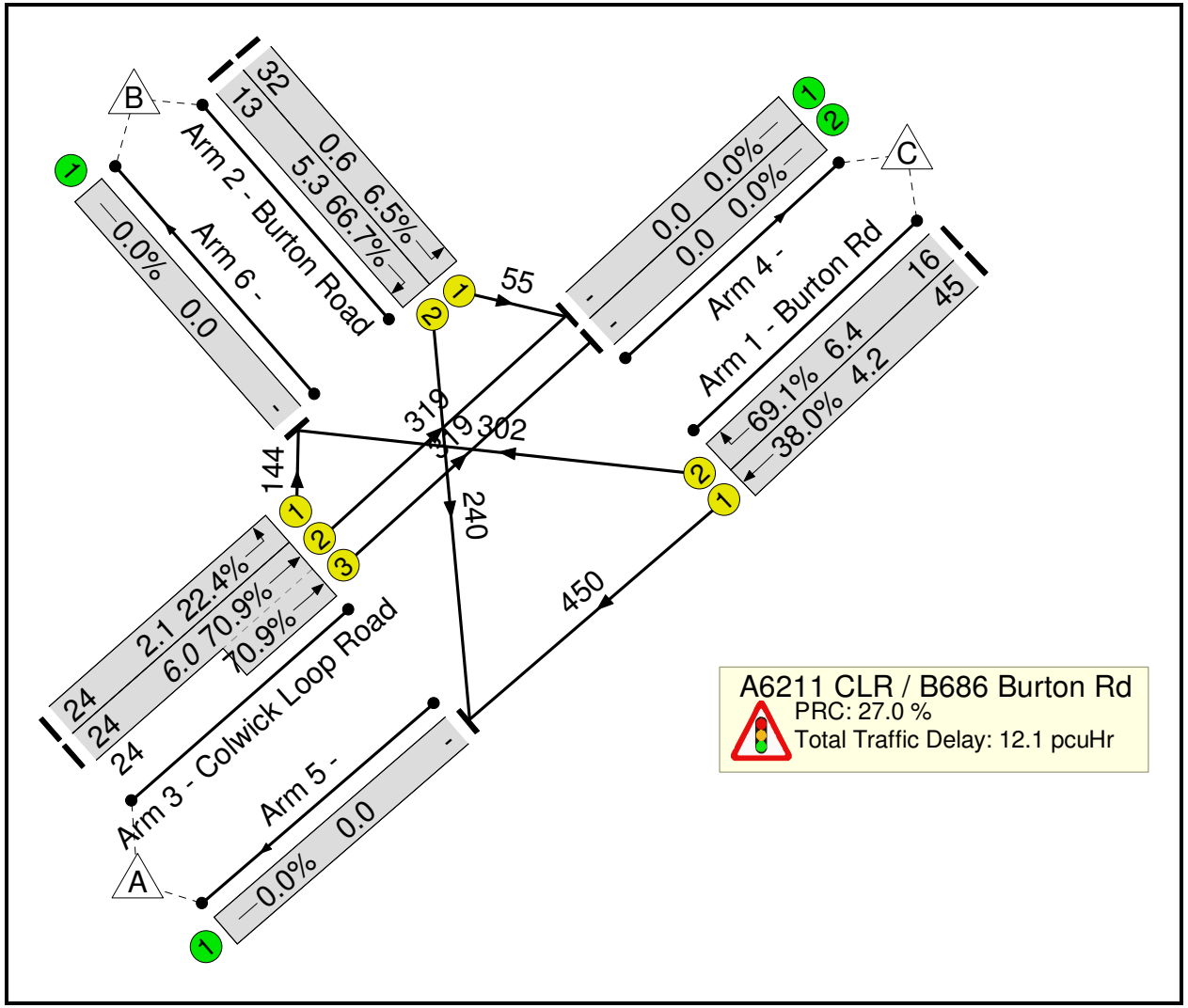
Stage	1	2	3
Duration	24	13	6
Change Point	0	34	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.9%**
A6211 CLR / B686 Burton Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.9%**
1/1	Burton Rd Ahead	U	N/A	N/A	A		1	45	-	450	1800	1183	38.0%
1/2	Burton Rd Right	U	N/A	N/A	C		1	16	-	302	1800	437	69.1%
2/1	Burton Road Left	U	N/A	N/A	E		1	32	-	55	1800	849	6.5%
2/2	Burton Road Right	U	N/A	N/A	D		1	13	-	240	1800	360	66.7%
3/1	Colwick Loop Road Left	U	N/A	N/A	B		1	24	-	144	1800	643	22.4%
3/2+3/3	Colwick Loop Road Ahead	U	N/A	N/A	B		1	24	-	638	1800:1800	450+450	70.9 : 70.9%
4/1		U	N/A	N/A	-		-	-	-	374	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	319	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	690	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	446	Inf	Inf	0.0%

Full Input Data And Results

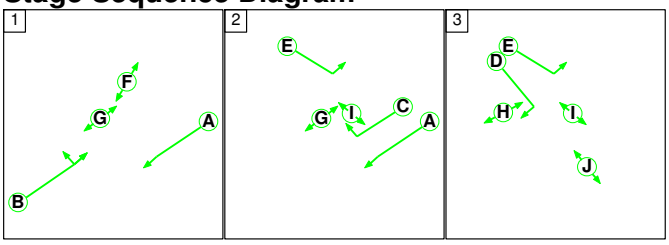
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**0**	**0**	**0**	**8.3**	**3.8**	**0.0**	**12.1**	**-**	**-**	**-**	**-**
A6211 CLR / B686 Burton Rd	**-**	**-**	**0**	**0**	**0**	**8.3**	**3.8**	**0.0**	**12.1**	**-**	**-**	**-**	**-**
1/1	450	450	-	-	-	0.7	0.3	-	1.0	7.9	3.9	0.3	4.2
1/2	302	302	-	-	-	2.0	1.1	-	3.1	37.2	5.3	1.1	6.4
2/1	55	55	-	-	-	0.2	0.0	-	0.2	12.4	0.6	0.0	0.6
2/2	240	240	-	-	-	1.7	1.0	-	2.7	40.6	4.3	1.0	5.3
3/1	144	144	-	-	-	0.6	0.1	-	0.8	19.3	1.9	0.1	2.1
3/2+3/3	638	638	-	-	-	3.1	1.2	-	4.3	24.4	4.8	1.2	6.0
4/1	374	374	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	319	319	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	690	690	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	446	446	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 27.0 Total Delay for Signalled Lanes (pcuHr): 12.11 Cycle Time (s): 70
PRC Over All Lanes (%): 27.0 Total Delay Over All Lanes(pcuHr): 12.11

Full Input Data And Results

Scenario 3: 'AM 2028 Design Test C' (FG3: 'AM 2028 Design Test C', Plan 1: 'Stage Sequence No. 1')

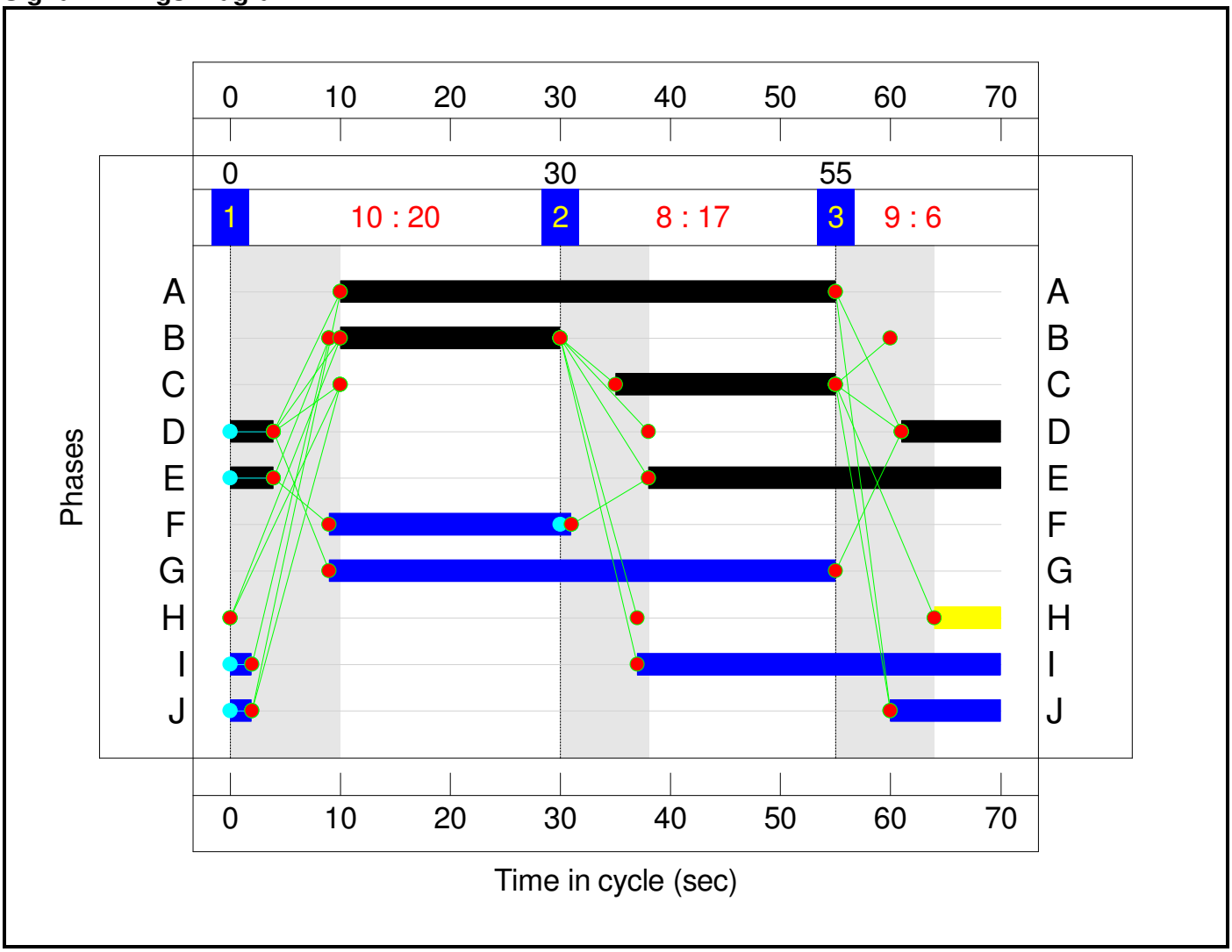
Stage Sequence Diagram



Stage Timings

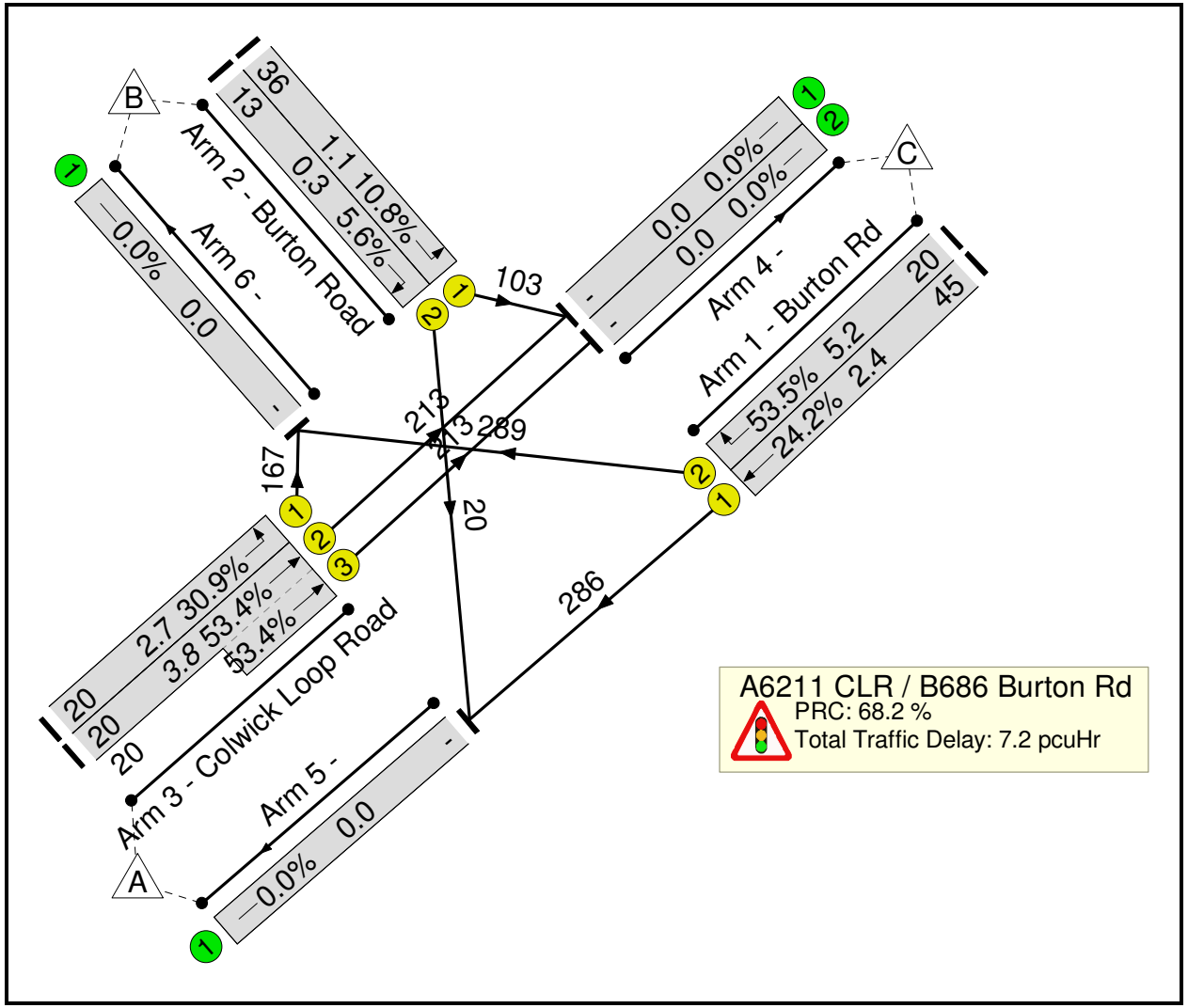
Stage	1	2	3
Duration	20	17	6
Change Point	0	30	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**53.5%**
A6211 CLR / B686 Burton Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**53.5%**
1/1	Burton Rd Ahead	U	N/A	N/A	A		1	45	-	286	1800	1183	24.2%
1/2	Burton Rd Right	U	N/A	N/A	C		1	20	-	289	1800	540	53.5%
2/1	Burton Road Left	U	N/A	N/A	E		1	36	-	103	1800	951	10.8%
2/2	Burton Road Right	U	N/A	N/A	D		1	13	-	20	1800	360	5.6%
3/1	Colwick Loop Road Left	U	N/A	N/A	B		1	20	-	167	1800	540	30.9%
3/2+3/3	Colwick Loop Road Ahead	U	N/A	N/A	B		1	20	-	426	1800:1800	399+399	53.4 : 53.4%
4/1		U	N/A	N/A	-		-	-	-	316	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	213	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	306	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	456	Inf	Inf	0.0%

Full Input Data And Results

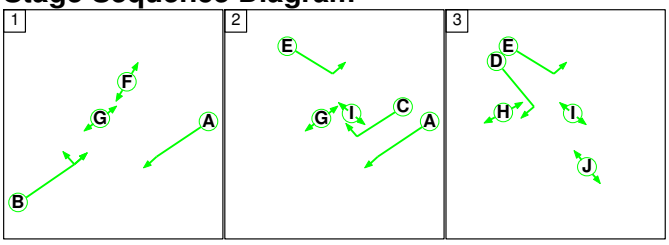
Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**0**	**0**	**0**	**5.6**	**1.6**	**0.0**	**7.2**	**-**	**-**	**-**	**-**
A6211 CLR / B686 Burton Rd	**-**	**-**	**0**	**0**	**0**	**5.6**	**1.6**	**0.0**	**7.2**	**-**	**-**	**-**	**-**
1/1	286	286	-	-	-	0.4	0.2	-	0.5	6.9	2.2	0.2	2.4
1/2	289	289	-	-	-	1.6	0.6	-	2.2	27.6	4.7	0.6	5.2
2/1	103	103	-	-	-	0.2	0.1	-	0.3	10.4	1.0	0.1	1.1
2/2	20	20	-	-	-	0.1	0.0	-	0.2	28.1	0.3	0.0	0.3
3/1	167	167	-	-	-	0.9	0.2	-	1.1	23.7	2.5	0.2	2.7
3/2+3/3	426	426	-	-	-	2.3	0.6	-	2.9	24.3	3.3	0.6	3.8
4/1	316	316	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	213	213	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	306	306	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	456	456	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 68.2 Total Delay for Signalled Lanes (pcuHr): 7.19 Cycle Time (s): 70
PRC Over All Lanes (%): 68.2 Total Delay Over All Lanes(pcuHr): 7.19

Full Input Data And Results

Scenario 4: 'PM 2028 Design Test C' (FG4: 'PM 2028 Design Test C', Plan 1: 'Stage Sequence No. 1')

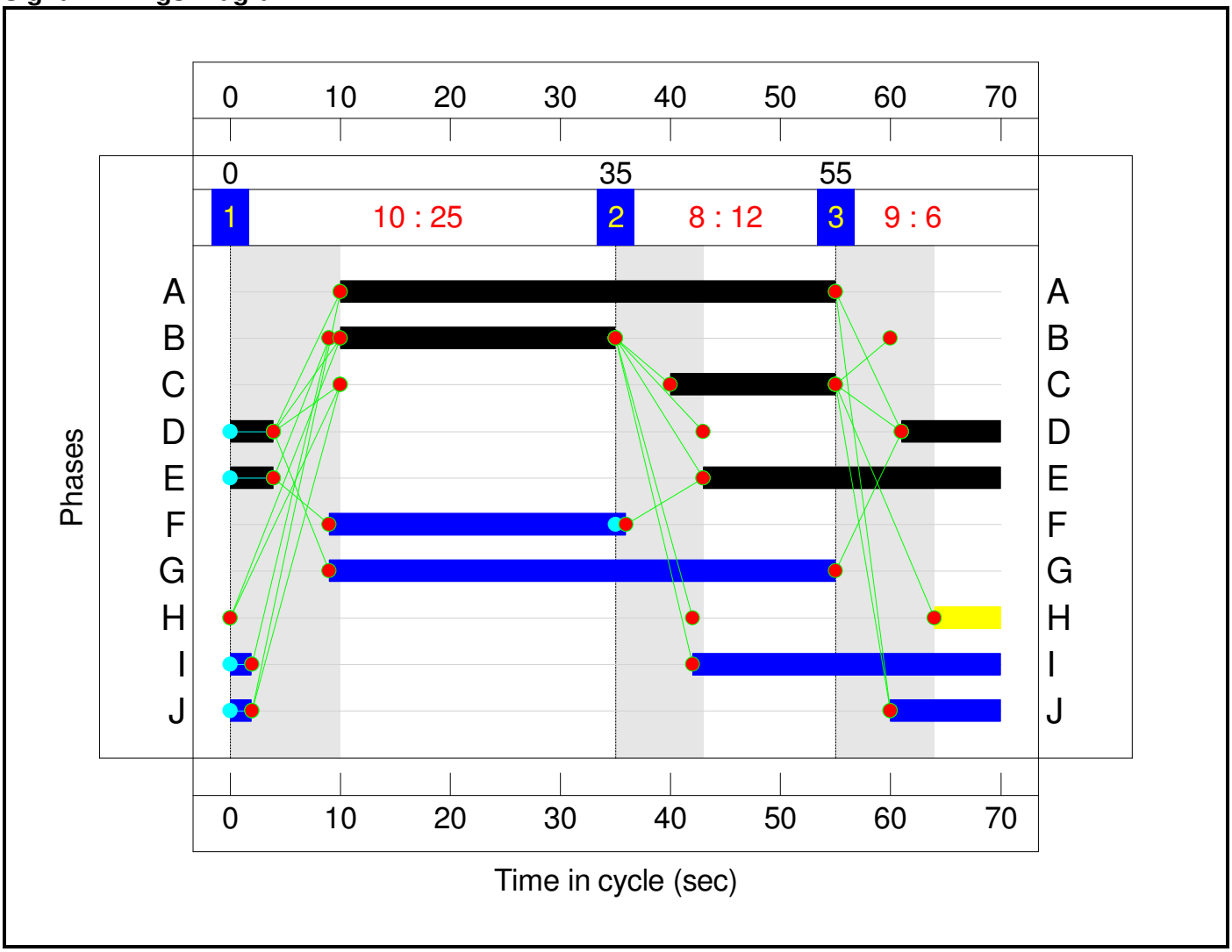
Stage Sequence Diagram



Stage Timings

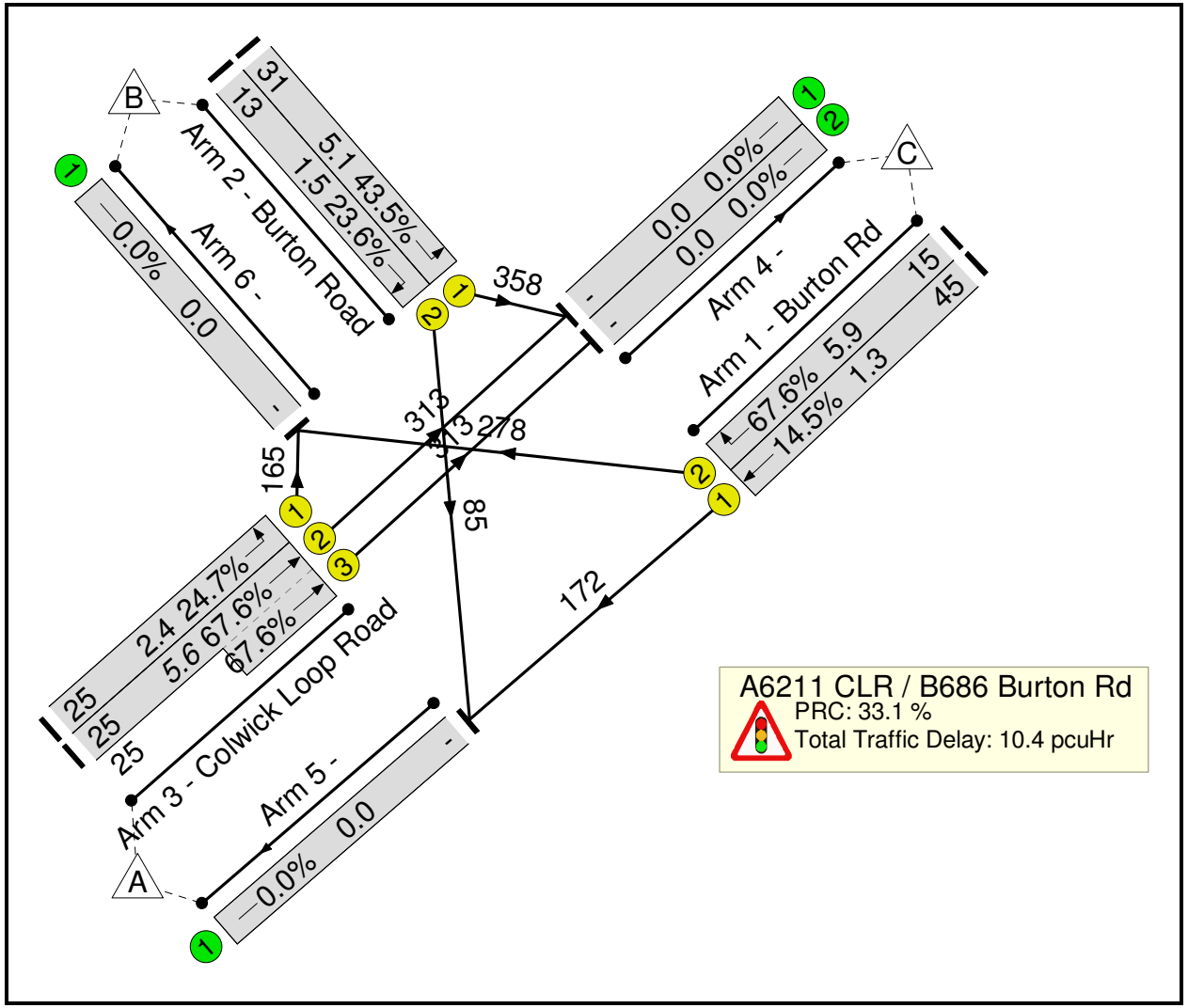
Stage	1	2	3
Duration	25	12	6
Change Point	0	35	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.6%**
A6211 CLR / B686 Burton Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**67.6%**
1/1	Burton Rd Ahead	U	N/A	N/A	A		1	45	-	172	1800	1183	14.5%
1/2	Burton Rd Right	U	N/A	N/A	C		1	15	-	278	1800	411	67.6%
2/1	Burton Road Left	U	N/A	N/A	E		1	31	-	358	1800	823	43.5%
2/2	Burton Road Right	U	N/A	N/A	D		1	13	-	85	1800	360	23.6%
3/1	Colwick Loop Road Left	U	N/A	N/A	B		1	25	-	165	1800	669	24.7%
3/2+3/3	Colwick Loop Road Ahead	U	N/A	N/A	B		1	25	-	626	1800:1800	463+463	67.6 : 67.6%
4/1		U	N/A	N/A	-		-	-	-	671	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	313	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	257	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	443	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**0**	**0**	**0**	**7.6**	**2.9**	**0.0**	**10.4**	**-**	**-**	**-**	**-**
A6211 CLR / B686 Burton Rd	**-**	**-**	**0**	**0**	**0**	**7.6**	**2.9**	**0.0**	**10.4**	**-**	**-**	**-**	**-**
1/1	172	172	-	-	-	0.2	0.1	-	0.3	6.3	1.2	0.1	1.3
1/2	278	278	-	-	-	1.9	1.0	-	2.9	37.9	4.9	1.0	5.9
2/1	358	358	-	-	-	1.3	0.4	-	1.7	16.7	4.7	0.4	5.1
2/2	85	85	-	-	-	0.6	0.2	-	0.7	30.1	1.4	0.2	1.5
3/1	165	165	-	-	-	0.7	0.2	-	0.9	18.8	2.2	0.2	2.4
3/2+3/3	626	626	-	-	-	2.9	1.0	-	3.9	22.7	4.6	1.0	5.6
4/1	671	671	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	313	313	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	257	257	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	443	443	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

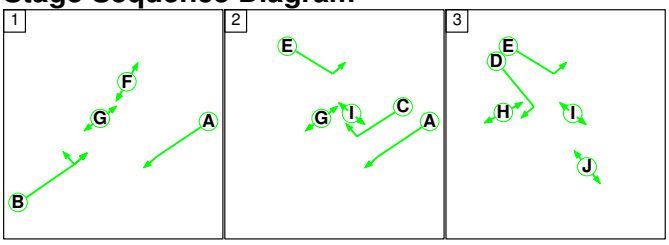
C1 PRC for Signalled Lanes (%): 33.1 Total Delay for Signalled Lanes (pcuHr): 10.42 Cycle Time (s): 70

PRC Over All Lanes (%): 33.1 Total Delay Over All Lanes(pcuHr): 10.42

Full Input Data And Results

Scenario 5: 'AM 2034 Design Test C' (FG5: 'AM 2034 Design Test C', Plan 1: 'Stage Sequence No. 1')

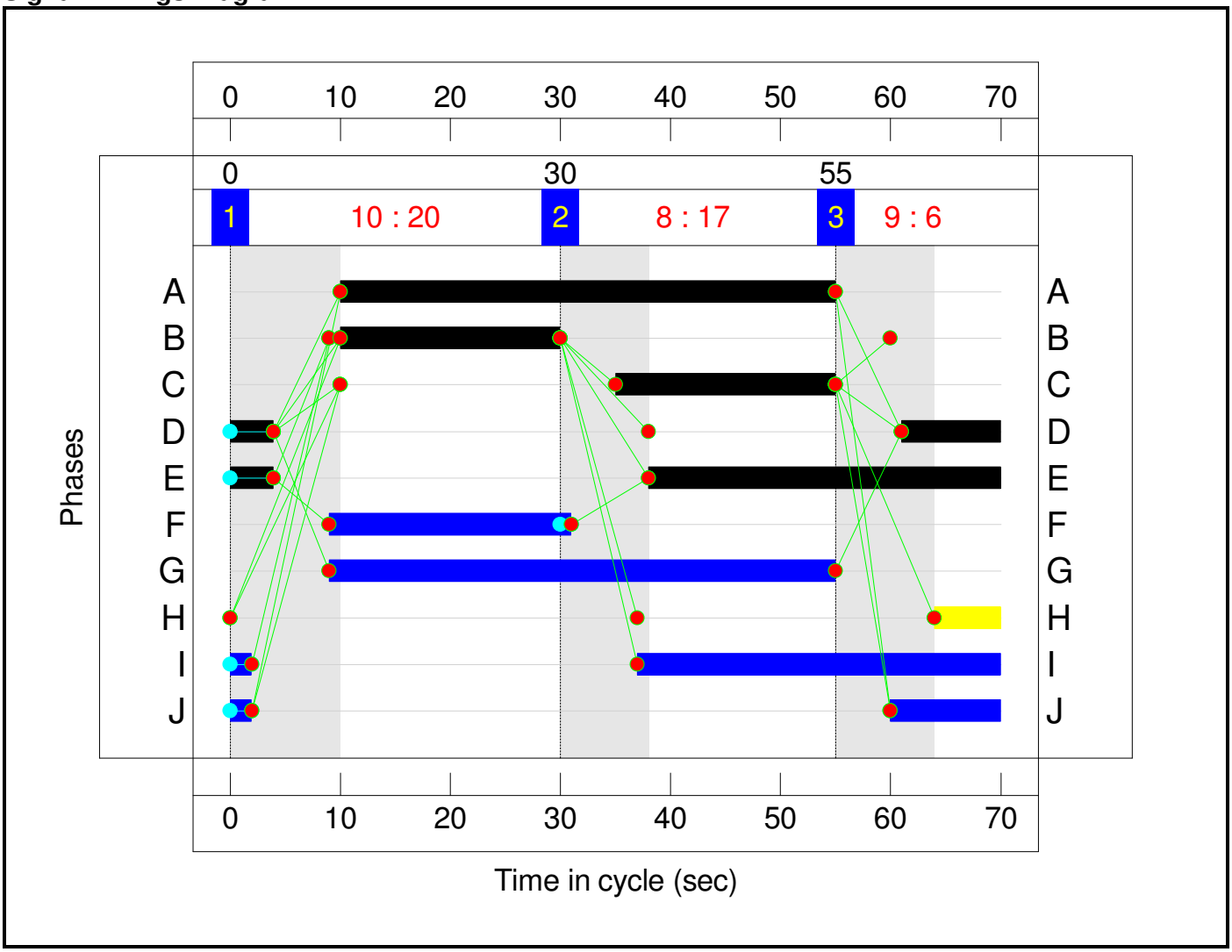
Stage Sequence Diagram



Stage Timings

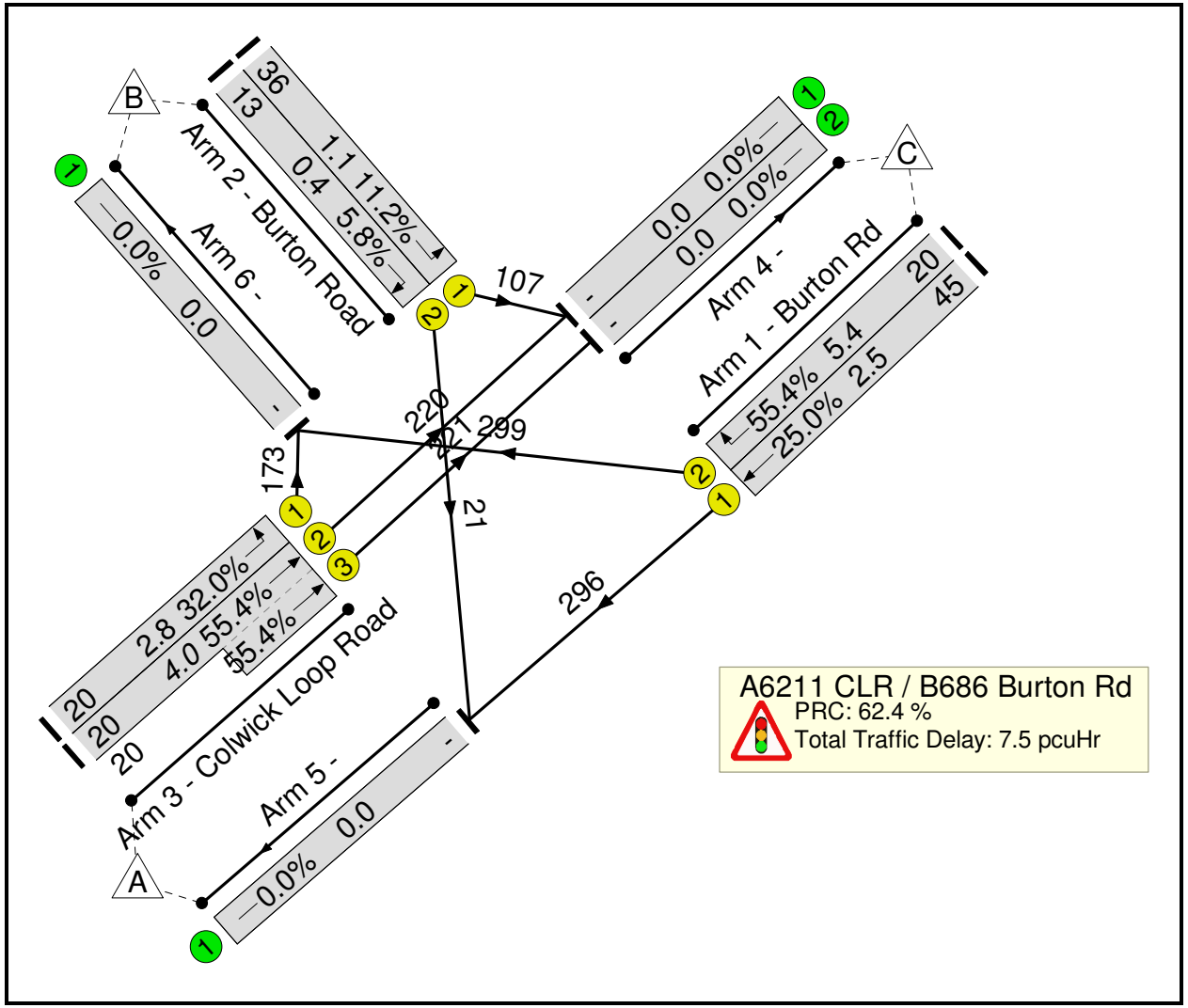
Stage	1	2	3
Duration	20	17	6
Change Point	0	30	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**55.4%**
A6211 CLR / B686 Burton Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**55.4%**
1/1	Burton Rd Ahead	U	N/A	N/A	A		1	45	-	296	1800	1183	25.0%
1/2	Burton Rd Right	U	N/A	N/A	C		1	20	-	299	1800	540	55.4%
2/1	Burton Road Left	U	N/A	N/A	E		1	36	-	107	1800	951	11.2%
2/2	Burton Road Right	U	N/A	N/A	D		1	13	-	21	1800	360	5.8%
3/1	Colwick Loop Road Left	U	N/A	N/A	B		1	20	-	173	1800	540	32.0%
3/2+3/3	Colwick Loop Road Ahead	U	N/A	N/A	B		1	20	-	441	1800:1800	397+399	55.4 : 55.4%
4/1		U	N/A	N/A	-		-	-	-	327	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	221	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	317	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	472	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**0**	**0**	**0**	**5.8**	**1.7**	**0.0**	**7.5**	**-**	**-**	**-**	**-**
A6211 CLR / B686 Burton Rd	**-**	**-**	**0**	**0**	**0**	**5.8**	**1.7**	**0.0**	**7.5**	**-**	**-**	**-**	**-**
1/1	296	296	-	-	-	0.4	0.2	-	0.6	7.0	2.3	0.2	2.5
1/2	299	299	-	-	-	1.7	0.6	-	2.3	28.0	4.8	0.6	5.4
2/1	107	107	-	-	-	0.2	0.1	-	0.3	10.4	1.0	0.1	1.1
2/2	21	21	-	-	-	0.1	0.0	-	0.2	28.1	0.3	0.0	0.4
3/1	173	173	-	-	-	0.9	0.2	-	1.1	23.9	2.6	0.2	2.8
3/2+3/3	441	441	-	-	-	2.4	0.6	-	3.0	24.6	3.4	0.6	4.0
4/1	327	327	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	221	221	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	317	317	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	472	472	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

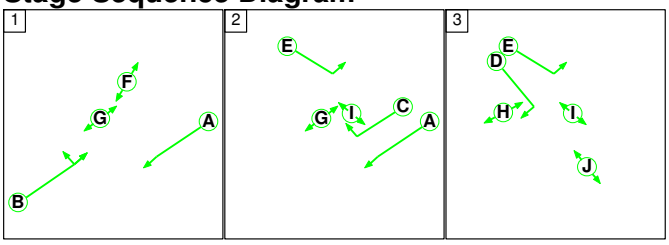
C1 PRC for Signalled Lanes (%): 62.4 Total Delay for Signalled Lanes (pcuHr): 7.53 Cycle Time (s): 70

PRC Over All Lanes (%): 62.4 Total Delay Over All Lanes(pcuHr): 7.53

Full Input Data And Results

Scenario 6: 'PM 2034 Design Test C' (FG6: 'PM 2034 Design Test C', Plan 1: 'Stage Sequence No. 1')

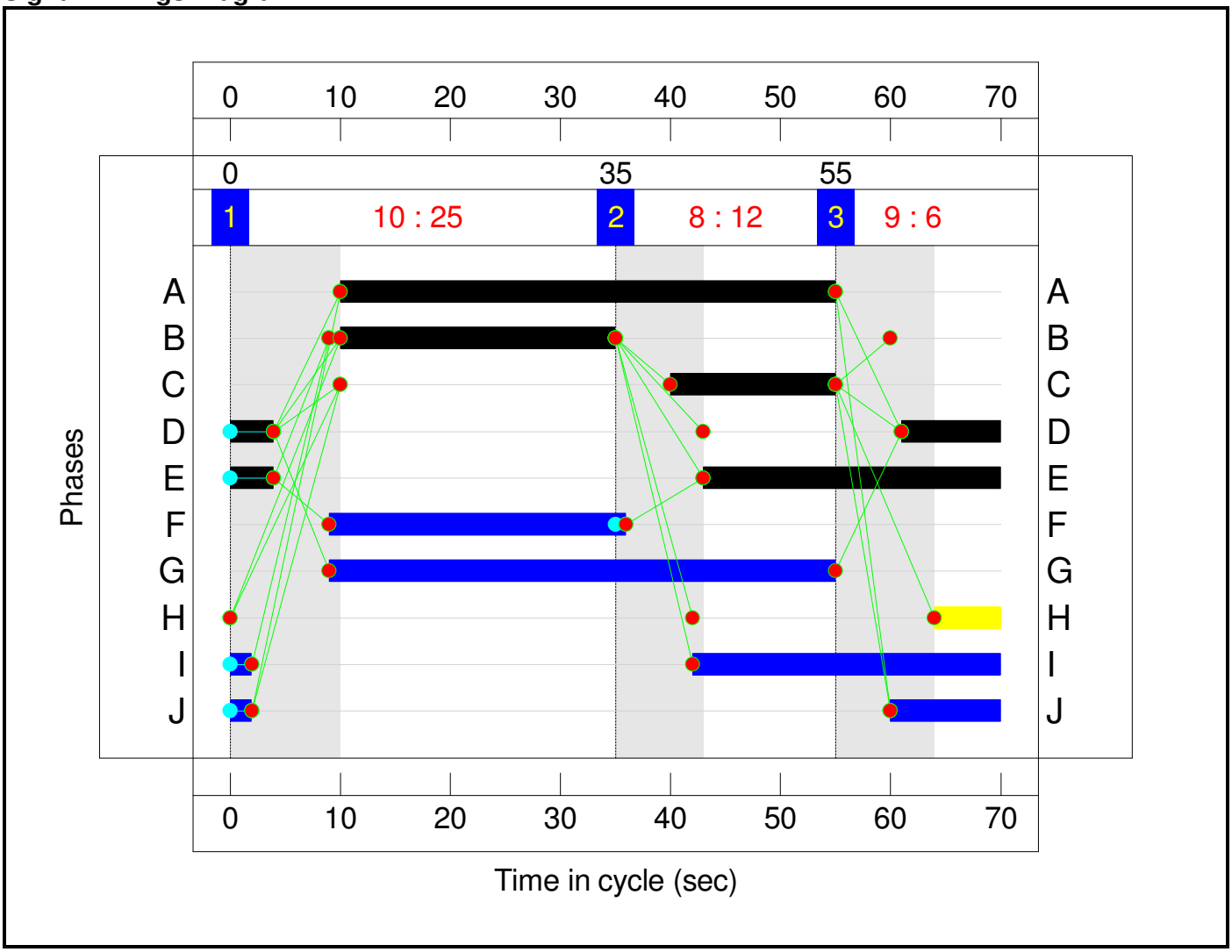
Stage Sequence Diagram



Stage Timings

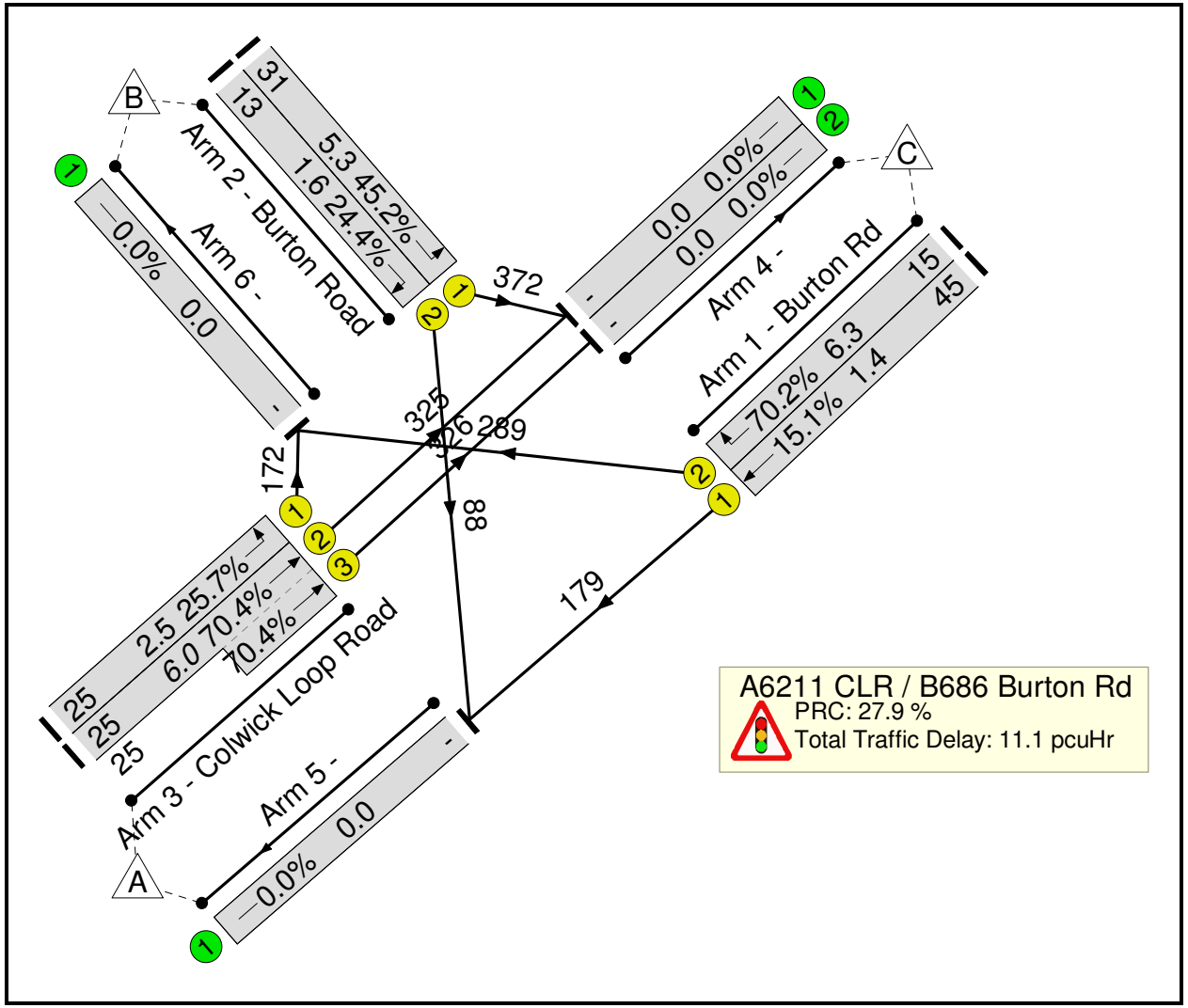
Stage	1	2	3
Duration	25	12	6
Change Point	0	35	55

Signal Timings Diagram



Full Input Data And Results

Network Layout Diagram



Full Input Data And Results

Network Results

Item	Lane Description	Lane Type	Controller Stream	Position In Filtered Route	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.4%**
A6211 CLR / B686 Burton Rd	**-**	**-**	**N/A**	**-**	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**70.4%**
1/1	Burton Rd Ahead	U	N/A	N/A	A		1	45	-	179	1800	1183	15.1%
1/2	Burton Rd Right	U	N/A	N/A	C		1	15	-	289	1800	411	70.2%
2/1	Burton Road Left	U	N/A	N/A	E		1	31	-	372	1800	823	45.2%
2/2	Burton Road Right	U	N/A	N/A	D		1	13	-	88	1800	360	24.4%
3/1	Colwick Loop Road Left	U	N/A	N/A	B		1	25	-	172	1800	669	25.7%
3/2+3/3	Colwick Loop Road Ahead	U	N/A	N/A	B		1	25	-	651	1800:1800	462+463	70.4 : 70.4%
4/1		U	N/A	N/A	-		-	-	-	697	Inf	Inf	0.0%
4/2		U	N/A	N/A	-		-	-	-	326	Inf	Inf	0.0%
5/1		U	N/A	N/A	-		-	-	-	267	Inf	Inf	0.0%
6/1		U	N/A	N/A	-		-	-	-	461	Inf	Inf	0.0%

Full Input Data And Results

Item	Arriving (pcu)	Leaving (pcu)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Uniform Delay (pcuHr)	Rand + Oversat Delay (pcuHr)	Storage Area Uniform Delay (pcuHr)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Max. Back of Uniform Queue (pcu)	Rand + Oversat Queue (pcu)	Mean Max Queue (pcu)
Network: A6211 Colwick Loop Road / B686 Burton Road	**-**	**-**	**0**	**0**	**0**	**7.9**	**3.2**	**0.0**	**11.1**	**-**	**-**	**-**	**-**
A6211 CLR / B686 Burton Rd	**-**	**-**	**0**	**0**	**0**	**7.9**	**3.2**	**0.0**	**11.1**	**-**	**-**	**-**	**-**
1/1	179	179	-	-	-	0.2	0.1	-	0.3	6.4	1.3	0.1	1.4
1/2	289	289	-	-	-	2.0	1.2	-	3.2	39.2	5.1	1.2	6.3
2/1	372	372	-	-	-	1.3	0.4	-	1.8	17.0	4.9	0.4	5.3
2/2	88	88	-	-	-	0.6	0.2	-	0.7	30.2	1.4	0.2	1.6
3/1	172	172	-	-	-	0.7	0.2	-	0.9	18.9	2.3	0.2	2.5
3/2+3/3	651	651	-	-	-	3.1	1.2	-	4.2	23.4	4.8	1.2	6.0
4/1	697	697	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/2	326	326	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	267	267	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	461	461	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): 27.9 Total Delay for Signalled Lanes (pcuHr): 11.10 Cycle Time (s): 70

PRC Over All Lanes (%): 27.9 Total Delay Over All Lanes(pcuHr): 11.10

ARCADY Assessments

ARCADY 7

Version: 7.0.0.99 [10 July 2009]

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File: N:\Projects\A085361 - Gedling Colliery Access Road\calculations\Junction Capacity Assessments\ARCADY\Arnold Lane - GAR - Site roundabout.arc7
Report generation date: 20/05/2014 14:51:10

File summary

File Description

Title	Arnold Lane/GAR/Site
Location	Gedling
Date	12/03/2014
Status	(new file)
Jobnumber	A085361
Enumerator	WYG\robert.holland
Results Upto Date	True

Analysis Options

RFC Threshold	Vehicle Length (m)	Do Queue Variations
0.85	5.75	

Sorting and Display

Show Arm Names	Arm Grouping	Sorting Direction	Sorting Type	Data Matrix Style	Time Style
	Order	Ascending	Numerical	By Destination	Absolute Time

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	min	-Min	perMin

A1 - (Default Analysis Set) - D1 - 2028 Design AM, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2028 Design AM, AM	2028 Design AM	AM			Yes			07:45	09:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3,4,5	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	GAR (east)	
2	Site Access	
3	Arnold Lane (south-east)	
4	Arnold Lane (west)	
5	GAR (west)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	7.50	10.00	20.00	74.00	36.00	
2	3.65	5.50	6.00	20.00	74.00	46.00	
3	3.65	7.00	16.00	20.00	74.00	45.00	
4	3.65	7.00	5.00	20.00	74.00	40.00	
5	3.65	7.00	5.00	20.00	74.00	45.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

5	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.469	1594.690
2		((calculated))	((calculated))	0.418	1311.038
3		((calculated))	((calculated))	0.466	1624.563
4		((calculated))	((calculated))	0.433	1379.224
5		((calculated))	((calculated))	0.425	1354.434

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	151.00	100.000	N/A
2	ONE HOUR	Yes	411.00	100.000	N/A
3	ONE HOUR	Yes	687.00	100.000	N/A
4	ONE HOUR	Yes	482.00	100.000	N/A
5	ONE HOUR	Yes	471.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	113.68	113.68	N/A	N/A
07:45-08:00	2	309.42	309.42	N/A	N/A
07:45-08:00	3	517.21	517.21	N/A	N/A
07:45-08:00	4	362.87	362.87	N/A	N/A
07:45-08:00	5	354.59	354.59	N/A	N/A
08:00-08:15	1	135.75	135.75	N/A	N/A
08:00-08:15	2	369.48	369.48	N/A	N/A
08:00-08:15	3	617.60	617.60	N/A	N/A
08:00-08:15	4	433.31	433.31	N/A	N/A
08:00-08:15	5	423.42	423.42	N/A	N/A
08:15-08:30	1	166.25	166.25	N/A	N/A
08:15-08:30	2	452.52	452.52	N/A	N/A
08:15-08:30	3	756.40	756.40	N/A	N/A
08:15-08:30	4	530.69	530.69	N/A	N/A

08:15-08:30	**5**	518.58	518.58	N/A	N/A
08:30-08:45	**1**	166.25	166.25	N/A	N/A
08:30-08:45	**2**	452.52	452.52	N/A	N/A
08:30-08:45	**3**	756.40	756.40	N/A	N/A
08:30-08:45	**4**	530.69	530.69	N/A	N/A
08:30-08:45	**5**	518.58	518.58	N/A	N/A
08:45-09:00	**1**	135.75	135.75	N/A	N/A
08:45-09:00	**2**	369.48	369.48	N/A	N/A
08:45-09:00	**3**	617.60	617.60	N/A	N/A
08:45-09:00	**4**	433.31	433.31	N/A	N/A
08:45-09:00	**5**	423.42	423.42	N/A	N/A
09:00-09:15	**1**	113.68	113.68	N/A	N/A
09:00-09:15	**2**	309.42	309.42	N/A	N/A
09:00-09:15	**3**	517.21	517.21	N/A	N/A
09:00-09:15	**4**	362.87	362.87	N/A	N/A
09:00-09:15	**5**	354.59	354.59	N/A	N/A

Turning Proportions

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

		To				
		1	**2**	**3**	**4**	**5**
From	**1**	0.00	31.00	0.00	80.00	40.00
	2	130.00	0.00	19.00	146.00	116.00
	3	0.00	5.00	0.00	158.00	524.00
	4	269.00	34.00	179.00	0.00	0.00
	5	265.00	26.00	180.00	0.00	0.00

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

		To				
		1	**2**	**3**	**4**	**5**
From	**1**	0.00	0.21	0.00	0.53	0.26
	2	0.32	0.00	0.05	0.36	0.28
	3	0.00	0.01	0.00	0.23	0.76
	4	0.56	0.07	0.37	0.00	0.00
	5	0.56	0.06	0.38	0.00	0.00

Vehicle Mix

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

		To				
		1	**2**	**3**	**4**	**5**
From	**1**	1.00	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00	1.00
	4	1.00	1.00	1.00	1.00	1.00
	5	1.00	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

	To				
	1	**2**	**3**	**4**	**5**

From	1	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.12	0.05	0.14	A	138.56	207.84	9.82	0.05	0.11	9.82	0.05	0.469	1594.690
2	0.41	0.09	0.71	A	377.14	565.71	46.25	0.08	0.51	46.25	0.08	0.418	1311.038
3	0.56	0.10	1.24	A	630.40	945.60	76.51	0.08	0.85	76.52	0.08	0.466	1624.563
4	0.54	0.13	1.14	A	442.29	663.44	68.55	0.10	0.76	68.56	0.10	0.433	1379.224
5	0.49	0.11	0.94	A	432.20	648.30	59.16	0.09	0.66	59.16	0.09	0.425	1354.434

Main Results

Main results: (07:45-08:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	113.68	28.42	113.34	497.38	317.58	0.00	1445.78	1238.35	0.079	0.00	0.09
2	309.42	77.36	307.98	71.96	358.96	0.00	1161.11	629.81	0.266	0.00	0.36
3	517.21	129.30	515.00	283.13	383.81	0.00	1445.62	885.69	0.358	0.00	0.55
4	362.87	90.72	360.96	287.89	610.92	0.00	1114.79	778.86	0.326	0.00	0.48
5	354.59	88.65	352.84	509.75	462.12	0.00	1158.00	935.95	0.306	0.00	0.44

Main results: (08:00-08:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	135.75	33.94	135.66	595.95	380.51	0.00	1416.28	1238.35	0.096	0.09	0.11
2	369.48	92.37	369.00	86.19	429.99	0.00	1131.45	629.81	0.327	0.36	0.48
3	617.60	154.40	616.72	339.24	459.75	0.00	1410.22	885.69	0.438	0.55	0.77
4	433.31	108.33	432.50	344.79	731.68	0.00	1062.51	778.86	0.408	0.48	0.68
5	423.42	105.85	422.76	610.48	553.70	0.00	1119.07	935.95	0.378	0.44	0.60

Main results: (08:15-08:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	166.25	41.56	166.13	729.05	465.45	0.00	1376.45	1238.35	0.121	0.11	0.14
2	452.52	113.13	451.64	105.46	526.12	0.00	1091.30	629.81	0.415	0.48	0.70
3	756.40	189.10	754.57	414.97	562.78	0.00	1362.18	885.69	0.555	0.77	1.23
4	530.69	132.67	528.89	421.99	895.36	0.00	991.67	778.86	0.535	0.68	1.13
5	518.58	129.65	517.26	747.01	677.24	0.00	1066.56	935.95	0.486	0.60	0.93

Main results: (08:30-08:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	166.25	41.56	166.25	731.03	466.80	0.00	1375.82	1238.35	0.121	0.14	0.14
2	452.52	113.13	452.50	105.69	527.36	0.00	1090.78	629.81	0.415	0.70	0.71

3	756.40	189.10	756.36	416.16	563.71	0.00	1361.75	885.69	0.555	1.23	1.24
4	530.69	132.67	530.65	422.78	897.29	0.00	990.83	778.86	0.536	1.13	1.14
5	518.58	129.65	518.55	748.66	679.28	0.00	1065.69	935.95	0.487	0.93	0.94

Main results: (08:45-09:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	135.75	33.94	135.87	598.92	382.54	0.00	1415.33	1238.35	0.096	0.14	0.11
2	369.48	92.37	370.34	86.54	431.87	0.00	1130.66	629.81	0.327	0.71	0.49
3	617.60	154.40	619.41	341.01	461.20	0.00	1409.54	885.69	0.438	1.24	0.79
4	433.31	108.33	435.09	346.00	734.61	0.00	1061.25	778.86	0.408	1.14	0.70
5	423.42	105.85	424.72	612.97	556.74	0.00	1117.78	935.95	0.379	0.94	0.62

Main results: (09:00-09:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	113.68	28.42	113.76	500.90	319.88	0.00	1444.70	1238.35	0.079	0.11	0.09
2	309.42	77.36	309.91	72.39	361.25	0.00	1160.16	629.81	0.267	0.49	0.37
3	517.21	129.30	518.11	285.17	386.00	0.00	1444.60	885.69	0.358	0.79	0.56
4	362.87	90.72	363.71	289.52	614.59	0.00	1113.20	778.86	0.326	0.70	0.49
5	354.59	88.65	355.27	512.79	465.51	0.00	1156.56	935.95	0.307	0.62	0.45

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.26	0.08	0.045	A	A
2	5.28	0.35	0.070	A	A
3	8.09	0.54	0.064	A	A
4	6.97	0.46	0.079	A	A
5	6.39	0.43	0.074	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.57	0.10	0.047	A	A
2	7.07	0.47	0.079	A	A
3	11.32	0.75	0.076	A	A
4	9.96	0.66	0.095	A	A
5	8.84	0.59	0.086	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.03	0.14	0.050	A	A
2	10.24	0.68	0.094	A	A
3	17.83	1.19	0.098	A	A
4	16.27	1.08	0.129	A	A
5	13.54	0.90	0.109	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.06	0.14	0.050	A	A

2	10.55	0.70	0.094	A	A
3	18.55	1.24	0.099	A	A
4	17.07	1.14	0.130	A	A
5	14.07	0.94	0.110	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.62	0.11	0.047	A	A
2	7.51	0.50	0.079	A	A
3	12.13	0.81	0.076	A	A
4	10.80	0.72	0.096	A	A
5	9.49	0.63	0.087	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.30	0.09	0.045	A	A
2	5.60	0.37	0.071	A	A
3	8.60	0.57	0.065	A	A
4	7.48	0.50	0.080	A	A
5	6.82	0.45	0.075	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
1	3.65	7.50	10.00	20.00	74.00	36.00		0.469	1594.690
2	3.65	5.50	6.00	20.00	74.00	46.00		0.418	1311.038
3	3.65	7.00	16.00	20.00	74.00	45.00		0.466	1624.563
4	3.65	7.00	5.00	20.00	74.00	40.00		0.433	1379.224
5	3.65	7.00	5.00	20.00	74.00	45.00		0.425	1354.434

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
07:45-08:00	**1**	113.68	1445.78	0.079	0.00	0.00	0.09	1.26	(0.00)	0.045
07:45-08:00	**2**	309.42	1161.11	0.266	0.00	0.00	0.36	5.28	(0.00)	0.070
07:45-08:00	**3**	517.21	1445.62	0.358	0.00	0.00	0.55	8.09	(0.00)	0.064
07:45-08:00	**4**	362.87	1114.79	0.326	0.00	0.00	0.48	6.97	(0.00)	0.079
07:45-08:00	**5**	354.59	1158.00	0.306	0.00	0.00	0.44	6.39	(0.00)	0.074
08:00-08:15	**1**	135.75	1416.28	0.096	0.00	0.09	0.11	1.57	(0.00)	0.047
08:00-08:15	**2**	369.48	1131.45	0.327	0.00	0.36	0.48	7.07	(0.00)	0.079
08:00-08:15	**3**	617.60	1410.22	0.438	0.00	0.55	0.77	11.32	(0.00)	0.076
08:00-08:15	**4**	433.31	1062.51	0.408	0.00	0.48	0.68	9.96	(0.00)	0.095
08:00-08:15	**5**	423.42	1119.07	0.378	0.00	0.44	0.60	8.84	(0.00)	0.086
08:15-08:30	**1**	166.25	1376.45	0.121	0.00	0.11	0.14	2.03	(0.00)	0.050
08:15-08:30	**2**	452.52	1091.30	0.415	0.00	0.48	0.70	10.24	(0.00)	0.094
08:15-08:30	**3**	756.40	1362.18	0.555	0.00	0.77	1.23	17.83	(0.00)	0.098

08:15-08:30	4	530.69	991.67	0.535	0.00	0.68	1.13	16.27	(0.00)	0.129
08:15-08:30	5	518.58	1066.56	0.486	0.00	0.60	0.93	13.54	(0.00)	0.109
08:30-08:45	1	166.25	1375.82	0.121	0.00	0.14	0.14	2.06	(0.00)	0.050
08:30-08:45	2	452.52	1090.78	0.415	0.00	0.70	0.71	10.55	(0.00)	0.094
08:30-08:45	3	756.40	1361.75	0.555	0.00	1.23	1.24	18.55	(0.00)	0.099
08:30-08:45	4	530.69	990.83	0.536	0.00	1.13	1.14	17.07	(0.00)	0.130
08:30-08:45	5	518.58	1065.69	0.487	0.00	0.93	0.94	14.07	(0.00)	0.110
08:45-09:00	1	135.75	1415.33	0.096	0.00	0.14	0.11	1.62	(0.00)	0.047
08:45-09:00	2	369.48	1130.66	0.327	0.00	0.71	0.49	7.51	(0.00)	0.079
08:45-09:00	3	617.60	1409.54	0.438	0.00	1.24	0.79	12.13	(0.00)	0.076
08:45-09:00	4	433.31	1061.25	0.408	0.00	1.14	0.70	10.80	(0.00)	0.096
08:45-09:00	5	423.42	1117.78	0.379	0.00	0.94	0.62	9.49	(0.00)	0.087
09:00-09:15	1	113.68	1444.70	0.079	0.00	0.11	0.09	1.30	(0.00)	0.045
09:00-09:15	2	309.42	1160.16	0.267	0.00	0.49	0.37	5.60	(0.00)	0.071
09:00-09:15	3	517.21	1444.60	0.358	0.00	0.79	0.56	8.60	(0.00)	0.065
09:00-09:15	4	362.87	1113.20	0.326	0.00	0.70	0.49	7.48	(0.00)	0.080
09:00-09:15	5	354.59	1156.56	0.307	0.00	0.62	0.45	6.82	(0.00)	0.075

A1 - (Default Analysis Set) - D2 - 2028 Design PM, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2028 Design PM, PM	2028 Design PM	PM			Yes			16:45	18:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3,4,5	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	GAR (east)	
2	Site Access	
3	Arnold Lane (south-east)	
4	Arnold Lane (west)	
5	GAR (west)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	7.50	10.00	20.00	74.00	36.00	
2	3.65	5.50	6.00	20.00	74.00	46.00	
3	3.65	7.00	16.00	20.00	74.00	45.00	
4	3.65	7.00	5.00	20.00	74.00	40.00	
5	3.65	7.00	5.00	20.00	74.00	45.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None
5	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.469	1594.690
2		((calculated))	((calculated))	0.418	1311.038
3		((calculated))	((calculated))	0.466	1624.563
4		((calculated))	((calculated))	0.433	1379.224
5		((calculated))	((calculated))	0.425	1354.434

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	335.00	100.000	N/A
2	ONE HOUR	Yes	170.00	100.000	N/A
3	ONE HOUR	Yes	676.00	100.000	N/A
4	ONE HOUR	Yes	491.00	100.000	N/A
5	ONE HOUR	Yes	228.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	252.21	252.21	N/A	N/A
16:45-17:00	2	127.98	127.98	N/A	N/A
16:45-17:00	3	508.93	508.93	N/A	N/A
16:45-17:00	4	369.65	369.65	N/A	N/A
16:45-17:00	5	171.65	171.65	N/A	N/A
17:00-17:15	1	301.16	301.16	N/A	N/A
17:00-17:15	2	152.83	152.83	N/A	N/A
17:00-17:15	3	607.71	607.71	N/A	N/A
17:00-17:15	4	441.40	441.40	N/A	N/A
17:00-17:15	5	204.97	204.97	N/A	N/A
17:15-17:30	1	368.84	368.84	N/A	N/A
17:15-17:30	2	187.17	187.17	N/A	N/A
17:15-17:30	3	744.29	744.29	N/A	N/A
17:15-17:30	4	540.60	540.60	N/A	N/A
17:15-17:30	5	251.03	251.03	N/A	N/A
17:30-17:45	1	368.84	368.84	N/A	N/A
17:30-17:45	2	187.17	187.17	N/A	N/A
17:30-17:45	3	744.29	744.29	N/A	N/A
17:30-17:45	4	540.60	540.60	N/A	N/A
17:30-17:45	5	251.03	251.03	N/A	N/A
17:45-18:00	1	301.16	301.16	N/A	N/A
17:45-18:00	2	152.83	152.83	N/A	N/A
17:45-18:00	3	607.71	607.71	N/A	N/A
17:45-18:00	4	441.40	441.40	N/A	N/A
17:45-18:00	5	204.97	204.97	N/A	N/A
18:00-18:15	1	252.21	252.21	N/A	N/A
18:00-18:15	2	127.98	127.98	N/A	N/A
18:00-18:15	3	508.93	508.93	N/A	N/A
18:00-18:15	4	369.65	369.65	N/A	N/A
18:00-18:15	5	171.65	171.65	N/A	N/A

Turning Proportions

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

	To

		1	2	3	4	5
From	1	0.00	126.00	0.00	86.00	123.00
	2	58.00	0.00	14.00	42.00	56.00
	3	0.00	17.00	0.00	227.00	432.00
	4	194.00	125.00	172.00	0.00	0.00
	5	16.00	51.00	161.00	0.00	0.00

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

		To				
		1	2	3	4	5
From	1	0.00	0.38	0.00	0.26	0.37
	2	0.34	0.00	0.08	0.25	0.33
	3	0.00	0.03	0.00	0.34	0.64
	4	0.40	0.25	0.35	0.00	0.00
	5	0.07	0.22	0.71	0.00	0.00

Vehicle Mix

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

		To				
		1	2	3	4	5
From	1	1.00	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00	1.00
	4	1.00	1.00	1.00	1.00	1.00
	5	1.00	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.28	0.06	0.39	A	307.40	461.10	26.40	0.06	0.29	26.40	0.06	0.469	1594.690
2	0.18	0.07	0.21	A	155.99	233.99	14.93	0.06	0.17	14.93	0.06	0.418	1311.038
3	0.52	0.09	1.07	A	620.31	930.46	68.01	0.07	0.76	68.01	0.07	0.466	1624.563
4	0.51	0.12	1.05	A	450.55	675.83	64.56	0.10	0.72	64.57	0.10	0.433	1379.224
5	0.23	0.07	0.30	A	209.22	313.83	20.58	0.07	0.23	20.58	0.07	0.425	1354.434

Main Results

Main results: (16:45-17:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	252.21	63.05	251.34	200.81	394.19	0.00	1409.86	968.06	0.179	0.00	0.22
2	127.98	32.00	127.48	239.15	406.37	0.00	1141.31	676.37	0.112	0.00	0.13
3	508.93	127.23	506.88	260.06	273.79	0.00	1496.92	1053.62	0.340	0.00	0.51
4	369.65	92.41	367.79	266.23	514.44	0.00	1156.55	726.13	0.320	0.00	0.47
5	171.65	42.91	170.97	458.20	424.03	0.00	1174.19	936.42	0.146	0.00	0.17

Main results: (17:00-17:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	301.16	75.29	300.91	240.57	472.22	0.00	1373.28	968.06	0.219	0.22	0.28
2	152.83	38.21	152.69	286.43	486.70	0.00	1107.77	676.37	0.138	0.13	0.16
3	607.71	151.93	606.97	311.54	327.85	0.00	1471.71	1053.62	0.413	0.51	0.70
4	441.40	110.35	440.66	318.79	616.02	0.00	1112.58	726.13	0.397	0.47	0.65
5	204.97	51.24	204.78	548.66	508.02	0.00	1138.49	936.42	0.180	0.17	0.22

Main results: (17:15-17:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	368.84	92.21	368.42	294.37	577.87	0.00	1323.74	968.06	0.279	0.28	0.38
2	187.17	46.79	186.96	350.57	595.73	0.00	1062.23	676.37	0.176	0.16	0.21
3	744.29	186.07	742.84	381.27	401.42	0.00	1437.42	1053.62	0.518	0.70	1.06
4	540.60	135.15	539.05	390.21	754.04	0.00	1052.84	726.13	0.513	0.65	1.04
5	251.03	62.76	250.72	671.57	621.52	0.00	1090.25	936.42	0.230	0.22	0.30

Main results: (17:30-17:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	368.84	92.21	368.84	295.06	579.11	0.00	1323.16	968.06	0.279	0.38	0.39
2	187.17	46.79	187.17	351.21	596.73	0.00	1061.81	676.37	0.176	0.21	0.21
3	744.29	186.07	744.26	382.04	401.87	0.00	1437.20	1053.62	0.518	1.06	1.07
4	540.60	135.15	540.57	390.85	755.28	0.00	1052.30	726.13	0.514	1.04	1.05
5	251.03	62.76	251.03	672.70	623.14	0.00	1089.56	936.42	0.230	0.30	0.30

Main results: (17:45-18:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	301.16	75.29	301.57	241.63	474.11	0.00	1372.39	968.06	0.219	0.39	0.28
2	152.83	38.21	153.04	287.42	488.26	0.00	1107.11	676.37	0.138	0.21	0.16
3	607.71	151.93	609.14	312.72	328.58	0.00	1471.37	1053.62	0.413	1.07	0.71
4	441.40	110.35	442.93	319.78	617.94	0.00	1111.75	726.13	0.397	1.05	0.66
5	204.97	51.24	205.28	550.41	510.46	0.00	1137.45	936.42	0.180	0.30	0.22

Main results: (18:00-18:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	252.21	63.05	252.46	202.13	396.66	0.00	1408.70	968.06	0.179	0.28	0.22
2	127.98	32.00	128.12	240.51	408.61	0.00	1140.38	676.37	0.112	0.16	0.13
3	508.93	127.23	509.69	261.66	275.07	0.00	1496.32	1053.62	0.340	0.71	0.52
4	369.65	92.41	370.41	267.62	517.15	0.00	1155.38	726.13	0.320	0.66	0.47
5	171.65	42.91	171.85	460.62	426.94	0.00	1172.95	936.42	0.146	0.22	0.17

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.19	0.21	0.052	A	A
2	1.85	0.12	0.059	A	A
3	7.49	0.50	0.060	A	A
4	6.80	0.45	0.076	A	A
5	2.50	0.17	0.060	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.14	0.28	0.056	A	A
2	2.36	0.16	0.063	A	A
3	10.25	0.68	0.069	A	A
4	9.53	0.64	0.089	A	A
5	3.23	0.22	0.064	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.66	0.38	0.063	A	A
2	3.14	0.21	0.069	A	A
3	15.46	1.03	0.086	A	A
4	15.02	1.00	0.116	A	A
5	4.38	0.29	0.071	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.77	0.38	0.063	A	A
2	3.20	0.21	0.069	A	A
3	15.98	1.07	0.087	A	A
4	15.67	1.04	0.117	A	A
5	4.47	0.30	0.072	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.30	0.29	0.056	A	A
2	2.45	0.16	0.063	A	A
3	10.90	0.73	0.070	A	A
4	10.27	0.68	0.090	A	A
5	3.37	0.22	0.064	A	A

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.33	0.22	0.052	A	A
2	1.93	0.13	0.059	A	A
3	7.93	0.53	0.061	A	A
4	7.27	0.48	0.077	A	A
5	2.62	0.17	0.060	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
1	3.65	7.50	10.00	20.00	74.00	36.00		0.469	1594.690
2	3.65	5.50	6.00	20.00	74.00	46.00		0.418	1311.038
3	3.65	7.00	16.00	20.00	74.00	45.00		0.466	1624.563
4	3.65	7.00	5.00	20.00	74.00	40.00		0.433	1379.224
5	3.65	7.00	5.00	20.00	74.00	45.00		0.425	1354.434

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
16:45-17:00	1	252.21	1409.86	0.179	0.00	0.00	0.22	3.19	(0.00)	0.052
16:45-17:00	2	127.98	1141.31	0.112	0.00	0.00	0.13	1.85	(0.00)	0.059
16:45-17:00	3	508.93	1496.92	0.340	0.00	0.00	0.51	7.49	(0.00)	0.060
16:45-17:00	4	369.65	1156.55	0.320	0.00	0.00	0.47	6.80	(0.00)	0.076
16:45-17:00	5	171.65	1174.19	0.146	0.00	0.00	0.17	2.50	(0.00)	0.060
17:00-17:15	1	301.16	1373.28	0.219	0.00	0.22	0.28	4.14	(0.00)	0.056
17:00-17:15	2	152.83	1107.77	0.138	0.00	0.13	0.16	2.36	(0.00)	0.063
17:00-17:15	3	607.71	1471.71	0.413	0.00	0.51	0.70	10.25	(0.00)	0.069
17:00-17:15	4	441.40	1112.58	0.397	0.00	0.47	0.65	9.53	(0.00)	0.089
17:00-17:15	5	204.97	1138.49	0.180	0.00	0.17	0.22	3.23	(0.00)	0.064
17:15-17:30	1	368.84	1323.74	0.279	0.00	0.28	0.38	5.66	(0.00)	0.063
17:15-17:30	2	187.17	1062.23	0.176	0.00	0.16	0.21	3.14	(0.00)	0.069
17:15-17:30	3	744.29	1437.42	0.518	0.00	0.70	1.06	15.46	(0.00)	0.086
17:15-17:30	4	540.60	1052.84	0.513	0.00	0.65	1.04	15.02	(0.00)	0.116
17:15-17:30	5	251.03	1090.25	0.230	0.00	0.22	0.30	4.38	(0.00)	0.071
17:30-17:45	1	368.84	1323.16	0.279	0.00	0.38	0.39	5.77	(0.00)	0.063
17:30-17:45	2	187.17	1061.81	0.176	0.00	0.21	0.21	3.20	(0.00)	0.069
17:30-17:45	3	744.29	1437.20	0.518	0.00	1.06	1.07	15.98	(0.00)	0.087
17:30-17:45	4	540.60	1052.30	0.514	0.00	1.04	1.05	15.67	(0.00)	0.117
17:30-17:45	5	251.03	1089.56	0.230	0.00	0.30	0.30	4.47	(0.00)	0.072
17:45-18:00	1	301.16	1372.39	0.219	0.00	0.39	0.28	4.30	(0.00)	0.056
17:45-18:00	2	152.83	1107.11	0.138	0.00	0.21	0.16	2.45	(0.00)	0.063
17:45-18:00	3	607.71	1471.37	0.413	0.00	1.07	0.71	10.90	(0.00)	0.070
17:45-18:00	4	441.40	1111.75	0.397	0.00	1.05	0.66	10.27	(0.00)	0.090
17:45-18:00	5	204.97	1137.45	0.180	0.00	0.30	0.22	3.37	(0.00)	0.064
18:00-18:15	1	252.21	1408.70	0.179	0.00	0.28	0.22	3.33	(0.00)	0.052
18:00-18:15	2	127.98	1140.38	0.112	0.00	0.16	0.13	1.93	(0.00)	0.059
18:00-18:15	3	508.93	1496.32	0.340	0.00	0.71	0.52	7.93	(0.00)	0.061
18:00-18:15	4	369.65	1155.38	0.320	0.00	0.66	0.47	7.27	(0.00)	0.077
18:00-18:15	5	171.65	1172.95	0.146	0.00	0.22	0.17	2.62	(0.00)	0.060

A1 - (Default Analysis Set) - D3 - 2034 Design AM, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2034 Design AM, AM	2034 Design AM	AM			Yes			07:45	09:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3,4,5	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	GAR (east)	
2	Site Access	
3	Arnold Lane (south-east)	
4	Arnold Lane (west)	
5	GAR (west)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	7.50	10.00	20.00	74.00	36.00	
2	3.65	5.50	6.00	20.00	74.00	46.00	
3	3.65	7.00	16.00	20.00	74.00	45.00	
4	3.65	7.00	5.00	20.00	74.00	40.00	

5	3.65	7.00	5.00	20.00	74.00	45.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None
5	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.469	1594.690
2		((calculated))	((calculated))	0.418	1311.038
3		((calculated))	((calculated))	0.466	1624.563
4		((calculated))	((calculated))	0.433	1379.224
5		((calculated))	((calculated))	0.425	1354.434

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	156.00	100.000	N/A
2	ONE HOUR	Yes	425.00	100.000	N/A
3	ONE HOUR	Yes	711.00	100.000	N/A
4	ONE HOUR	Yes	498.00	100.000	N/A
5	ONE HOUR	Yes	486.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	**1**	117.44	117.44	N/A	N/A
07:45-08:00	**2**	319.96	319.96	N/A	N/A
07:45-08:00	**3**	535.28	535.28	N/A	N/A
07:45-08:00	**4**	374.92	374.92	N/A	N/A
07:45-08:00	**5**	365.89	365.89	N/A	N/A
08:00-08:15	**1**	140.24	140.24	N/A	N/A

08:00-08:15	2	382.07	382.07	N/A	N/A
08:00-08:15	3	639.17	639.17	N/A	N/A
08:00-08:15	4	447.69	447.69	N/A	N/A
08:00-08:15	5	436.90	436.90	N/A	N/A
08:15-08:30	1	171.76	171.76	N/A	N/A
08:15-08:30	2	467.93	467.93	N/A	N/A
08:15-08:30	3	782.83	782.83	N/A	N/A
08:15-08:30	4	548.31	548.31	N/A	N/A
08:15-08:30	5	535.10	535.10	N/A	N/A
08:30-08:45	1	171.76	171.76	N/A	N/A
08:30-08:45	2	467.93	467.93	N/A	N/A
08:30-08:45	3	782.83	782.83	N/A	N/A
08:30-08:45	4	548.31	548.31	N/A	N/A
08:30-08:45	5	535.10	535.10	N/A	N/A
08:45-09:00	1	140.24	140.24	N/A	N/A
08:45-09:00	2	382.07	382.07	N/A	N/A
08:45-09:00	3	639.17	639.17	N/A	N/A
08:45-09:00	4	447.69	447.69	N/A	N/A
08:45-09:00	5	436.90	436.90	N/A	N/A
09:00-09:15	1	117.44	117.44	N/A	N/A
09:00-09:15	2	319.96	319.96	N/A	N/A
09:00-09:15	3	535.28	535.28	N/A	N/A
09:00-09:15	4	374.92	374.92	N/A	N/A
09:00-09:15	5	365.89	365.89	N/A	N/A

Turning Proportions

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

		To				
		1	2	3	4	5
From	1	0.00	32.00	0.00	83.00	41.00
	2	134.00	0.00	20.00	151.00	120.00
	3	0.00	5.00	0.00	164.00	542.00
	4	278.00	35.00	185.00	0.00	0.00
	5	274.00	26.00	186.00	0.00	0.00

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

		To				
		1	2	3	4	5
From	1	0.00	0.21	0.00	0.53	0.26
	2	0.32	0.00	0.05	0.36	0.28
	3	0.00	0.01	0.00	0.23	0.76
	4	0.56	0.07	0.37	0.00	0.00
	5	0.56	0.05	0.38	0.00	0.00

Vehicle Mix

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

		To				
		1	2	3	4	5
	1	1.00	1.00	1.00	1.00	1.00

From	2	1.00	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00	1.00
	4	1.00	1.00	1.00	1.00	1.00
	5	1.00	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To				
		1	2	3	4	5
From	1	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.13	0.05	0.14	A	143.15	214.72	10.23	0.05	0.11	10.23	0.05	0.469	1594.690
2	0.43	0.10	0.76	A	389.99	584.98	49.18	0.08	0.55	49.18	0.08	0.418	1311.038
3	0.58	0.11	1.36	A	652.43	978.64	82.76	0.08	0.92	82.77	0.08	0.466	1624.563
4	0.56	0.14	1.26	A	456.97	685.46	74.45	0.11	0.83	74.45	0.11	0.433	1379.224
5	0.51	0.12	1.02	A	445.96	668.94	63.29	0.09	0.70	63.30	0.09	0.425	1354.434

Main Results

Main results: (07:45-08:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	117.44	29.36	117.09	513.80	327.27	0.00	1441.24	1238.72	0.081	0.00	0.09
2	319.96	79.99	318.44	73.45	370.92	0.00	1156.12	629.14	0.277	0.00	0.38
3	535.28	133.82	532.93	292.83	396.53	0.00	1439.69	886.00	0.372	0.00	0.59
4	374.92	93.73	372.89	298.36	631.09	0.00	1106.06	780.51	0.339	0.00	0.51
5	365.89	91.47	364.04	526.94	477.04	0.00	1151.66	935.70	0.318	0.00	0.46

Main results: (08:00-08:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	140.24	35.06	140.15	615.63	392.14	0.00	1410.82	1238.72	0.099	0.09	0.11
2	382.07	95.52	381.55	87.97	444.32	0.00	1125.46	629.14	0.339	0.38	0.51
3	639.17	159.79	638.21	350.87	475.00	0.00	1403.11	886.00	0.456	0.59	0.83
4	447.69	111.92	446.80	357.34	755.87	0.00	1052.05	780.51	0.426	0.51	0.73
5	436.90	109.23	436.19	631.08	571.58	0.00	1111.47	935.70	0.393	0.46	0.64

Main results: (08:15-08:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	171.76	42.94	171.63	753.02	479.58	0.00	1369.83	1238.72	0.125	0.11	0.14
2	467.93	116.98	466.97	107.63	543.57	0.00	1084.01	629.14	0.432	0.51	0.75
3	782.83	195.71	780.74	429.12	581.42	0.00	1353.50	886.00	0.578	0.83	1.35

4	548.31	137.08	546.25	437.31	924.84	0.00	978.90	780.51	0.560	0.73	1.25
5	535.10	133.77	533.62	772.12	698.97	0.00	1057.32	935.70	0.506	0.64	1.01

Main results: (08:30-08:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	171.76	42.94	171.76	755.24	481.10	0.00	1369.11	1238.72	0.125	0.14	0.14
2	467.93	116.98	467.92	107.89	544.97	0.00	1083.43	629.14	0.432	0.75	0.76
3	782.83	195.71	782.78	430.46	582.42	0.00	1353.03	886.00	0.579	1.35	1.36
4	548.31	137.08	548.25	438.19	927.01	0.00	977.97	780.51	0.561	1.25	1.26
5	535.10	133.77	535.06	773.98	701.29	0.00	1056.34	935.70	0.507	1.01	1.02

Main results: (08:45-09:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	140.24	35.06	140.37	618.96	394.41	0.00	1409.76	1238.72	0.099	0.14	0.11
2	382.07	95.52	383.01	88.36	446.41	0.00	1124.59	629.14	0.340	0.76	0.52
3	639.17	159.79	641.24	352.86	476.57	0.00	1402.38	886.00	0.456	1.36	0.85
4	447.69	111.92	449.74	358.68	759.13	0.00	1050.63	780.51	0.426	1.26	0.75
5	436.90	109.23	438.36	633.86	575.01	0.00	1110.01	935.70	0.394	1.02	0.66

Main results: (09:00-09:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	117.44	29.36	117.53	517.56	329.74	0.00	1440.08	1238.72	0.082	0.11	0.09
2	319.96	79.99	320.49	73.91	373.36	0.00	1155.10	629.14	0.277	0.52	0.39
3	535.28	133.82	536.27	295.02	398.84	0.00	1438.62	886.00	0.372	0.85	0.60
4	374.92	93.73	375.85	300.10	635.01	0.00	1104.36	780.51	0.339	0.75	0.52
5	365.89	91.47	366.63	530.19	480.67	0.00	1150.11	935.70	0.318	0.66	0.47

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.31	0.09	0.045	A	A
2	5.55	0.37	0.071	A	A
3	8.58	0.57	0.066	A	A
4	7.40	0.49	0.082	A	A
5	6.74	0.45	0.076	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.63	0.11	0.047	A	A
2	7.49	0.50	0.081	A	A
3	12.13	0.81	0.078	A	A
4	10.69	0.71	0.099	A	A
5	9.39	0.63	0.089	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.12	0.14	0.050	A	A

2	10.95	0.73	0.097	A	A
3	19.49	1.30	0.104	A	A
4	17.89	1.19	0.138	A	A
5	14.61	0.97	0.114	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.15	0.14	0.050	A	A
2	11.31	0.75	0.097	A	A
3	20.36	1.36	0.105	A	A
4	18.85	1.26	0.140	A	A
5	15.22	1.01	0.115	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.68	0.11	0.047	A	A
2	7.97	0.53	0.081	A	A
3	13.06	0.87	0.079	A	A
4	11.66	0.78	0.100	A	A
5	10.12	0.67	0.090	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.35	0.09	0.045	A	A
2	5.90	0.39	0.072	A	A
3	9.14	0.61	0.067	A	A
4	7.97	0.53	0.082	A	A
5	7.21	0.48	0.077	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
1	3.65	7.50	10.00	20.00	74.00	36.00		0.469	1594.690
2	3.65	5.50	6.00	20.00	74.00	46.00		0.418	1311.038
3	3.65	7.00	16.00	20.00	74.00	45.00		0.466	1624.563
4	3.65	7.00	5.00	20.00	74.00	40.00		0.433	1379.224
5	3.65	7.00	5.00	20.00	74.00	45.00		0.425	1354.434

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
07:45-08:00	**1**	117.44	1441.24	0.081	0.00	0.00	0.09	1.31	(0.00)	0.045
07:45-08:00	**2**	319.96	1156.12	0.277	0.00	0.00	0.38	5.55	(0.00)	0.071
07:45-08:00	**3**	535.28	1439.69	0.372	0.00	0.00	0.59	8.58	(0.00)	0.066
07:45-08:00	**4**	374.92	1106.06	0.339	0.00	0.00	0.51	7.40	(0.00)	0.082
07:45-08:00	**5**	365.89	1151.66	0.318	0.00	0.00	0.46	6.74	(0.00)	0.076

08:00-08:15	**1**	140.24	1410.82	0.099	0.00	0.09	0.11	1.63	(0.00)	0.047
08:00-08:15	**2**	382.07	1125.46	0.339	0.00	0.38	0.51	7.49	(0.00)	0.081
08:00-08:15	**3**	639.17	1403.11	0.456	0.00	0.59	0.83	12.13	(0.00)	0.078
08:00-08:15	**4**	447.69	1052.05	0.426	0.00	0.51	0.73	10.69	(0.00)	0.099
08:00-08:15	**5**	436.90	1111.47	0.393	0.00	0.46	0.64	9.39	(0.00)	0.089
08:15-08:30	**1**	171.76	1369.83	0.125	0.00	0.11	0.14	2.12	(0.00)	0.050
08:15-08:30	**2**	467.93	1084.01	0.432	0.00	0.51	0.75	10.95	(0.00)	0.097
08:15-08:30	**3**	782.83	1353.50	0.578	0.00	0.83	1.35	19.49	(0.00)	0.104
08:15-08:30	**4**	548.31	978.90	0.560	0.00	0.73	1.25	17.89	(0.00)	0.138
08:15-08:30	**5**	535.10	1057.32	0.506	0.00	0.64	1.01	14.61	(0.00)	0.114
08:30-08:45	**1**	171.76	1369.11	0.125	0.00	0.14	0.14	2.15	(0.00)	0.050
08:30-08:45	**2**	467.93	1083.43	0.432	0.00	0.75	0.76	11.31	(0.00)	0.097
08:30-08:45	**3**	782.83	1353.03	0.579	0.00	1.35	1.36	20.36	(0.00)	0.105
08:30-08:45	**4**	548.31	977.97	0.561	0.00	1.25	1.26	18.85	(0.00)	0.140
08:30-08:45	**5**	535.10	1056.34	0.507	0.00	1.01	1.02	15.22	(0.00)	0.115
08:45-09:00	**1**	140.24	1409.76	0.099	0.00	0.14	0.11	1.68	(0.00)	0.047
08:45-09:00	**2**	382.07	1124.59	0.340	0.00	0.76	0.52	7.97	(0.00)	0.081
08:45-09:00	**3**	639.17	1402.38	0.456	0.00	1.36	0.85	13.06	(0.00)	0.079
08:45-09:00	**4**	447.69	1050.63	0.426	0.00	1.26	0.75	11.66	(0.00)	0.100
08:45-09:00	**5**	436.90	1110.01	0.394	0.00	1.02	0.66	10.12	(0.00)	0.090
09:00-09:15	**1**	117.44	1440.08	0.082	0.00	0.11	0.09	1.35	(0.00)	0.045
09:00-09:15	**2**	319.96	1155.10	0.277	0.00	0.52	0.39	5.90	(0.00)	0.072
09:00-09:15	**3**	535.28	1438.62	0.372	0.00	0.85	0.60	9.14	(0.00)	0.067
09:00-09:15	**4**	374.92	1104.36	0.339	0.00	0.75	0.52	7.97	(0.00)	0.082
09:00-09:15	**5**	365.89	1150.11	0.318	0.00	0.66	0.47	7.21	(0.00)	0.077

A1 - (Default Analysis Set) - D4 - 2034 Design PM, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2034 Design PM, PM	2034 Design PM	PM			Yes			16:45	18:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3,4,5	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	GAR (east)	
2	Site Access	
3	Arnold Lane (south-east)	
4	Arnold Lane (west)	
5	GAR (west)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00
5	0.00	99999.00		0.00

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	7.50	10.00	20.00	74.00	36.00	
2	3.65	5.50	6.00	20.00	74.00	46.00	
3	3.65	7.00	16.00	20.00	74.00	45.00	
4	3.65	7.00	5.00	20.00	74.00	40.00	
5	3.65	7.00	5.00	20.00	74.00	45.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None
5	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.469	1594.690
2		((calculated))	((calculated))	0.418	1311.038
3		((calculated))	((calculated))	0.466	1624.563
4		((calculated))	((calculated))	0.433	1379.224
5		((calculated))	((calculated))	0.425	1354.434

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	348.00	100.000	N/A
2	ONE HOUR	Yes	177.00	100.000	N/A
3	ONE HOUR	Yes	703.00	100.000	N/A
4	ONE HOUR	Yes	511.00	100.000	N/A
5	ONE HOUR	Yes	237.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	261.99	261.99	N/A	N/A
16:45-17:00	2	133.25	133.25	N/A	N/A
16:45-17:00	3	529.26	529.26	N/A	N/A
16:45-17:00	4	384.71	384.71	N/A	N/A
16:45-17:00	5	178.43	178.43	N/A	N/A
17:00-17:15	1	312.84	312.84	N/A	N/A
17:00-17:15	2	159.12	159.12	N/A	N/A
17:00-17:15	3	631.98	631.98	N/A	N/A
17:00-17:15	4	459.38	459.38	N/A	N/A
17:00-17:15	5	213.06	213.06	N/A	N/A
17:15-17:30	1	383.16	383.16	N/A	N/A
17:15-17:30	2	194.88	194.88	N/A	N/A
17:15-17:30	3	774.02	774.02	N/A	N/A
17:15-17:30	4	562.62	562.62	N/A	N/A
17:15-17:30	5	260.94	260.94	N/A	N/A
17:30-17:45	1	383.16	383.16	N/A	N/A
17:30-17:45	2	194.88	194.88	N/A	N/A
17:30-17:45	3	774.02	774.02	N/A	N/A
17:30-17:45	4	562.62	562.62	N/A	N/A
17:30-17:45	5	260.94	260.94	N/A	N/A
17:45-18:00	1	312.84	312.84	N/A	N/A
17:45-18:00	2	159.12	159.12	N/A	N/A
17:45-18:00	3	631.98	631.98	N/A	N/A
17:45-18:00	4	459.38	459.38	N/A	N/A
17:45-18:00	5	213.06	213.06	N/A	N/A
18:00-18:15	1	261.99	261.99	N/A	N/A
18:00-18:15	2	133.25	133.25	N/A	N/A
18:00-18:15	3	529.26	529.26	N/A	N/A
18:00-18:15	4	384.71	384.71	N/A	N/A

18:00-18:15	**5**	178.43	178.43	N/A	N/A

Turning Proportions

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

		To				
		1	**2**	**3**	**4**	**5**
From	**1**	0.00	131.00	0.00	89.00	128.00
	2	60.00	0.00	15.00	44.00	58.00
	3	0.00	18.00	0.00	236.00	449.00
	4	202.00	130.00	179.00	0.00	0.00
	5	17.00	53.00	167.00	0.00	0.00

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

		To				
		1	**2**	**3**	**4**	**5**
From	**1**	0.00	0.38	0.00	0.26	0.37
	2	0.34	0.00	0.08	0.25	0.33
	3	0.00	0.03	0.00	0.34	0.64
	4	0.40	0.25	0.35	0.00	0.00
	5	0.07	0.22	0.70	0.00	0.00

Vehicle Mix

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

		To				
		1	**2**	**3**	**4**	**5**
From	**1**	1.00	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00	1.00
	4	1.00	1.00	1.00	1.00	1.00
	5	1.00	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To				
		1	**2**	**3**	**4**	**5**
From	**1**	0.00	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00	0.00
	5	0.00	0.00	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.29	0.06	0.41	A	319.33	479.00	28.01	0.06	0.31	28.01	0.06	0.469	1594.690
2	0.19	0.07	0.23	A	162.42	243.63	15.79	0.06	0.18	15.79	0.06	0.418	1311.038

3	0.54	0.09	1.17	A	645.09	967.63	73.71	0.08	0.82	73.71	0.08	0.466	1624.563
4	0.54	0.13	1.17	A	468.90	703.35	70.78	0.10	0.79	70.79	0.10	0.433	1379.224
5	0.24	0.07	0.32	A	217.48	326.21	21.82	0.07	0.24	21.82	0.07	0.425	1354.434

Main Results

Main results: (16:45-17:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	261.99	65.50	261.08	209.02	409.88	0.00	1402.51	968.38	0.187	0.00	0.23
2	133.25	33.31	132.73	248.88	422.08	0.00	1134.75	676.90	0.117	0.00	0.13
3	529.26	132.31	527.07	270.53	284.28	0.00	1492.03	1054.20	0.355	0.00	0.55
4	384.71	96.18	382.71	276.70	534.64	0.00	1147.80	726.59	0.335	0.00	0.50
5	178.43	44.61	177.71	476.16	441.19	0.00	1166.90	936.57	0.153	0.00	0.18

Main results: (17:00-17:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	312.84	78.21	312.58	250.42	491.03	0.00	1364.46	968.38	0.229	0.23	0.30
2	159.12	39.78	158.98	298.08	505.52	0.00	1099.90	676.90	0.145	0.13	0.17
3	631.98	158.00	631.16	324.08	340.41	0.00	1465.86	1054.20	0.431	0.55	0.75
4	459.38	114.84	458.55	331.34	640.23	0.00	1102.10	726.59	0.417	0.50	0.71
5	213.06	53.26	212.85	570.18	528.60	0.00	1129.74	936.57	0.189	0.18	0.23

Main results: (17:15-17:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	383.16	95.79	382.70	306.37	600.81	0.00	1312.98	968.38	0.292	0.30	0.41
2	194.88	48.72	194.65	364.79	618.72	0.00	1052.62	676.90	0.185	0.17	0.23
3	774.02	193.50	772.37	396.58	416.79	0.00	1430.25	1054.20	0.541	0.75	1.16
4	562.62	140.66	560.82	405.55	783.61	0.00	1040.04	726.59	0.541	0.71	1.16
5	260.94	65.24	260.60	697.85	646.58	0.00	1079.59	936.57	0.242	0.23	0.32

Main results: (17:30-17:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	383.16	95.79	383.15	307.17	602.23	0.00	1312.32	968.38	0.292	0.41	0.41
2	194.88	48.72	194.88	365.52	619.85	0.00	1052.15	676.90	0.185	0.23	0.23
3	774.02	193.50	773.99	397.45	417.28	0.00	1430.02	1054.20	0.541	1.16	1.17
4	562.62	140.66	562.58	406.26	785.00	0.00	1039.43	726.59	0.541	1.16	1.17
5	260.94	65.24	260.94	699.13	648.45	0.00	1078.80	936.57	0.242	0.32	0.32

Main results: (17:45-18:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	312.84	78.21	313.29	251.62	493.17	0.00	1363.45	968.38	0.229	0.41	0.30
2	159.12	39.78	159.35	299.20	507.27	0.00	1099.17	676.90	0.145	0.23	0.17
3	631.98	158.00	633.61	325.41	341.20	0.00	1465.49	1054.20	0.431	1.17	0.76
4	459.38	114.84	461.16	332.44	642.37	0.00	1101.17	726.59	0.417	1.17	0.72
5	213.06	53.26	213.39	572.13	531.40	0.00	1128.55	936.57	0.189	0.32	0.23

Main results: (18:00-18:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	261.99	65.50	262.27	210.45	412.54	0.00	1401.26	968.38	0.187	0.30	0.23
2	133.25	33.31	133.40	250.34	424.47	0.00	1133.75	676.90	0.118	0.17	0.13
3	529.26	132.31	530.10	272.24	285.63	0.00	1491.39	1054.20	0.355	0.76	0.55
4	384.71	96.18	385.57	278.19	537.54	0.00	1146.55	726.59	0.336	0.72	0.51
5	178.43	44.61	178.64	478.75	444.36	0.00	1165.55	936.57	0.153	0.23	0.18

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.37	0.22	0.053	A	A
2	1.95	0.13	0.060	A	A
3	7.99	0.53	0.062	A	A
4	7.28	0.49	0.078	A	A
5	2.64	0.18	0.061	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.38	0.29	0.057	A	A
2	2.49	0.17	0.064	A	A
3	11.03	0.74	0.072	A	A
4	10.34	0.69	0.093	A	A
5	3.42	0.23	0.065	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.04	0.40	0.064	A	A
2	3.33	0.22	0.070	A	A
3	16.91	1.13	0.091	A	A
4	16.68	1.11	0.125	A	A
5	4.67	0.31	0.073	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.16	0.41	0.065	A	A
2	3.40	0.23	0.070	A	A
3	17.54	1.17	0.091	A	A
4	17.47	1.16	0.126	A	A
5	4.76	0.32	0.073	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.56	0.30	0.057	A	A
2	2.59	0.17	0.064	A	A
3	11.77	0.78	0.072	A	A
4	11.20	0.75	0.094	A	A
5	3.57	0.24	0.066	A	A

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.51	0.23	0.053	A	A
2	2.04	0.14	0.060	A	A
3	8.47	0.56	0.063	A	A
4	7.81	0.52	0.079	A	A
5	2.76	0.18	0.061	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
1	3.65	7.50	10.00	20.00	74.00	36.00		0.469	1594.690
2	3.65	5.50	6.00	20.00	74.00	46.00		0.418	1311.038
3	3.65	7.00	16.00	20.00	74.00	45.00		0.466	1624.563
4	3.65	7.00	5.00	20.00	74.00	40.00		0.433	1379.224
5	3.65	7.00	5.00	20.00	74.00	45.00		0.425	1354.434

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
16:45-17:00	1	261.99	1402.51	0.187	0.00	0.00	0.23	3.37	(0.00)	0.053
16:45-17:00	2	133.25	1134.75	0.117	0.00	0.00	0.13	1.95	(0.00)	0.060
16:45-17:00	3	529.26	1492.03	0.355	0.00	0.00	0.55	7.99	(0.00)	0.062
16:45-17:00	4	384.71	1147.80	0.335	0.00	0.00	0.50	7.28	(0.00)	0.078
16:45-17:00	5	178.43	1166.90	0.153	0.00	0.00	0.18	2.64	(0.00)	0.061
17:00-17:15	1	312.84	1364.46	0.229	0.00	0.23	0.30	4.38	(0.00)	0.057
17:00-17:15	2	159.12	1099.90	0.145	0.00	0.13	0.17	2.49	(0.00)	0.064
17:00-17:15	3	631.98	1465.86	0.431	0.00	0.55	0.75	11.03	(0.00)	0.072
17:00-17:15	4	459.38	1102.10	0.417	0.00	0.50	0.71	10.34	(0.00)	0.093
17:00-17:15	5	213.06	1129.74	0.189	0.00	0.18	0.23	3.42	(0.00)	0.065
17:15-17:30	1	383.16	1312.98	0.292	0.00	0.30	0.41	6.04	(0.00)	0.064
17:15-17:30	2	194.88	1052.62	0.185	0.00	0.17	0.23	3.33	(0.00)	0.070
17:15-17:30	3	774.02	1430.25	0.541	0.00	0.75	1.16	16.91	(0.00)	0.091
17:15-17:30	4	562.62	1040.04	0.541	0.00	0.71	1.16	16.68	(0.00)	0.125
17:15-17:30	5	260.94	1079.59	0.242	0.00	0.23	0.32	4.67	(0.00)	0.073
17:30-17:45	1	383.16	1312.32	0.292	0.00	0.41	0.41	6.16	(0.00)	0.065
17:30-17:45	2	194.88	1052.15	0.185	0.00	0.23	0.23	3.40	(0.00)	0.070
17:30-17:45	3	774.02	1430.02	0.541	0.00	1.16	1.17	17.54	(0.00)	0.091
17:30-17:45	4	562.62	1039.43	0.541	0.00	1.16	1.17	17.47	(0.00)	0.126
17:30-17:45	5	260.94	1078.80	0.242	0.00	0.32	0.32	4.76	(0.00)	0.073
17:45-18:00	1	312.84	1363.45	0.229	0.00	0.41	0.30	4.56	(0.00)	0.057
17:45-18:00	2	159.12	1099.17	0.145	0.00	0.23	0.17	2.59	(0.00)	0.064
17:45-18:00	3	631.98	1465.49	0.431	0.00	1.17	0.76	11.77	(0.00)	0.072
17:45-18:00	4	459.38	1101.17	0.417	0.00	1.17	0.72	11.20	(0.00)	0.094
17:45-18:00	5	213.06	1128.55	0.189	0.00	0.32	0.23	3.57	(0.00)	0.066
18:00-18:15	1	261.99	1401.26	0.187	0.00	0.30	0.23	3.51	(0.00)	0.053

18:00-18:15	**2**	133.25	1133.75	0.118	0.00	0.17	0.13	2.04	(0.00)	0.060
18:00-18:15	**3**	529.26	1491.39	0.355	0.00	0.76	0.55	8.47	(0.00)	0.063
18:00-18:15	**4**	384.71	1146.55	0.336	0.00	0.72	0.51	7.81	(0.00)	0.079
18:00-18:15	**5**	178.43	1165.55	0.153	0.00	0.23	0.18	2.76	(0.00)	0.061

ARCADY 7

Version: 7.0.0.99 [10 July 2009]

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File: N:\Projects\A085361 - Gedling Colliery Access Road\calculations\Junction Capacity Assessments\ARCADY\GAR - Site Access roundabout.arc7
Report generation date: 20/05/2014 14:55:26

File summary

File Description

Title	GAR / Site Access Roundabout
Location	Gedling
Date	12/03/2014
Status	(new file)
Jobnumber	A085361
Enumerator	WYG\robert.holland
Results Upto Date	True

Analysis Options

RFC Threshold	Vehicle Length (m)	Do Queue Variations
0.85	5.75	

Sorting and Display

Show Arm Names	Arm Grouping	Sorting Direction	Sorting Type	Data Matrix Style	Time Style
	Order	Ascending	Numerical	By Destination	Absolute Time

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	min	-Min	perMin

A1 - (Default Analysis Set) - D1 - 2028 Design AM, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2028 Design AM, AM	2028 Design AM	AM			Yes			07:45	09:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3,4	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Site Access (north)	
2	GAR (south)	
3	Site Access (south)	
4	GAR (north)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	6.50	18.00	20.00	60.00	34.00	
2	3.65	7.00	8.00	20.00	60.00	53.00	
3	3.65	6.00	8.00	20.00	60.00	41.00	
4	3.65	7.00	6.00	10.00	60.00	35.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.546	1655.797
2		((calculated))	((calculated))	0.487	1416.846
3		((calculated))	((calculated))	0.498	1416.762
4		((calculated))	((calculated))	0.483	1372.801

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	36.00	100.000	N/A
2	ONE HOUR	Yes	196.00	100.000	N/A
3	ONE HOUR	Yes	258.00	100.000	N/A
4	ONE HOUR	Yes	550.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	27.10	27.10	N/A	N/A
07:45-08:00	2	147.56	147.56	N/A	N/A
07:45-08:00	3	194.24	194.24	N/A	N/A
07:45-08:00	4	414.07	414.07	N/A	N/A
08:00-08:15	1	32.36	32.36	N/A	N/A
08:00-08:15	2	176.20	176.20	N/A	N/A
08:00-08:15	3	231.94	231.94	N/A	N/A
08:00-08:15	4	494.44	494.44	N/A	N/A
08:15-08:30	1	39.64	39.64	N/A	N/A
08:15-08:30	2	215.80	215.80	N/A	N/A
08:15-08:30	3	284.06	284.06	N/A	N/A
08:15-08:30	4	605.56	605.56	N/A	N/A
08:30-08:45	1	39.64	39.64	N/A	N/A
08:30-08:45	2	215.80	215.80	N/A	N/A
08:30-08:45	3	284.06	284.06	N/A	N/A
08:30-08:45	4	605.56	605.56	N/A	N/A
08:45-09:00	1	32.36	32.36	N/A	N/A
08:45-09:00	2	176.20	176.20	N/A	N/A
08:45-09:00	3	231.94	231.94	N/A	N/A
08:45-09:00	4	494.44	494.44	N/A	N/A

09:00-09:15	**1**	27.10	27.10	N/A	N/A
09:00-09:15	**2**	147.56	147.56	N/A	N/A
09:00-09:15	**3**	194.24	194.24	N/A	N/A
09:00-09:15	**4**	414.07	414.07	N/A	N/A

Turning Proportions

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

		To			
		1	**2**	**3**	**4**
From	**1**	0.00	14.00	1.00	21.00
	2	66.00	0.00	31.00	99.00
	3	12.00	130.00	0.00	116.00
	4	94.00	430.00	26.00	0.00

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

		To			
		1	**2**	**3**	**4**
From	**1**	0.00	0.39	0.03	0.58
	2	0.34	0.00	0.16	0.51
	3	0.05	0.50	0.00	0.45
	4	0.17	0.78	0.05	0.00

Vehicle Mix

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

		To			
		1	**2**	**3**	**4**
From	**1**	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00
	4	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To			
		1	**2**	**3**	**4**
From	**1**	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.03	0.05	0.03	A	33.03	49.55	2.24	0.05	0.02	2.24	0.05	0.546	1655.797
2	0.16	0.05	0.18	A	179.85	269.78	13.32	0.05	0.15	13.32	0.05	0.487	1416.846
3	0.22	0.06	0.27	A	236.75	355.12	19.54	0.06	0.22	19.54	0.06	0.498	1416.762

4	0.48	0.09	0.92	A	504.69	757.03	59.90	0.08	0.67	59.91	0.08	0.483	1372.801

Main Results

Main results: (07:45-08:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	27.10	6.78	27.02	128.98	439.29	0.00	1416.05	1012.13	0.019	0.00	0.02
2	147.56	36.89	147.09	430.31	36.00	0.00	1399.31	1092.15	0.105	0.00	0.12
3	194.24	48.56	193.56	43.50	139.59	0.00	1347.25	664.93	0.144	0.00	0.17
4	414.07	103.52	412.21	177.09	156.07	0.00	1297.43	1018.43	0.319	0.00	0.47

Main results: (08:00-08:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	32.36	8.09	32.34	154.47	526.20	0.00	1368.62	1012.13	0.024	0.02	0.02
2	176.20	44.05	176.09	515.43	43.11	0.00	1395.85	1092.15	0.126	0.12	0.14
3	231.94	57.98	231.77	52.09	167.11	0.00	1333.55	664.93	0.174	0.17	0.21
4	494.44	123.61	493.81	212.02	186.86	0.00	1282.55	1018.43	0.386	0.47	0.62

Main results: (08:15-08:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	39.64	9.91	39.61	189.11	644.11	0.00	1304.27	1012.13	0.030	0.02	0.03
2	215.80	53.95	215.64	630.94	52.78	0.00	1391.14	1092.15	0.155	0.14	0.18
3	284.06	71.02	283.80	63.78	204.64	0.00	1314.86	664.93	0.216	0.21	0.27
4	605.56	151.39	604.40	259.63	228.82	0.00	1262.29	1018.43	0.480	0.62	0.91

Main results: (08:30-08:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	39.64	9.91	39.64	189.37	645.18	0.00	1303.69	1012.13	0.030	0.03	0.03
2	215.80	53.95	215.80	631.97	52.85	0.00	1391.11	1092.15	0.155	0.18	0.18
3	284.06	71.02	284.06	63.86	204.79	0.00	1314.79	664.93	0.216	0.27	0.27
4	605.56	151.39	605.54	259.84	229.01	0.00	1262.20	1018.43	0.480	0.91	0.92

Main results: (08:45-09:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	32.36	8.09	32.39	154.88	527.87	0.00	1367.71	1012.13	0.024	0.03	0.02
2	176.20	44.05	176.35	517.04	43.22	0.00	1395.80	1092.15	0.126	0.18	0.15
3	231.94	57.98	232.19	52.22	167.36	0.00	1333.43	664.93	0.174	0.27	0.21
4	494.44	123.61	495.58	212.37	187.18	0.00	1282.40	1018.43	0.386	0.92	0.63

Main results: (09:00-09:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	27.10	6.78	27.12	129.64	441.79	0.00	1414.69	1012.13	0.019	0.02	0.02
2	147.56	36.89	147.67	432.73	36.18	0.00	1399.23	1092.15	0.105	0.15	0.12
3	194.24	48.56	194.41	43.71	140.13	0.00	1346.98	664.93	0.144	0.21	0.17
4	414.07	103.52	414.71	177.81	156.72	0.00	1297.11	1018.43	0.319	0.63	0.47

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.29	0.02	0.043	A	A
2	1.73	0.12	0.048	A	A
3	2.47	0.16	0.052	A	A
4	6.80	0.45	0.068	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.36	0.02	0.045	A	A
2	2.14	0.14	0.049	A	A
3	3.10	0.21	0.054	A	A
4	9.14	0.61	0.076	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.46	0.03	0.047	A	A
2	2.71	0.18	0.051	A	A
3	4.05	0.27	0.058	A	A
4	13.29	0.89	0.091	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.47	0.03	0.047	A	A
2	2.75	0.18	0.051	A	A
3	4.12	0.27	0.058	A	A
4	13.72	0.91	0.091	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.37	0.02	0.045	A	A
2	2.20	0.15	0.049	A	A
3	3.22	0.21	0.055	A	A
4	9.72	0.65	0.076	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.30	0.02	0.043	A	A
2	1.79	0.12	0.048	A	A
3	2.57	0.17	0.052	A	A
4	7.22	0.48	0.068	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)

1	3.65	6.50	18.00	20.00	60.00	34.00		0.546	1655.797
2	3.65	7.00	8.00	20.00	60.00	53.00		0.487	1416.846
3	3.65	6.00	8.00	20.00	60.00	41.00		0.498	1416.762
4	3.65	7.00	6.00	10.00	60.00	35.00		0.483	1372.801

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
07:45-08:00	1	27.10	1416.05	0.019	0.00	0.00	0.02	0.29	(0.00)	0.043
07:45-08:00	2	147.56	1399.31	0.105	0.00	0.00	0.12	1.73	(0.00)	0.048
07:45-08:00	3	194.24	1347.25	0.144	0.00	0.00	0.17	2.47	(0.00)	0.052
07:45-08:00	4	414.07	1297.43	0.319	0.00	0.00	0.47	6.80	(0.00)	0.068
08:00-08:15	1	32.36	1368.62	0.024	0.00	0.02	0.02	0.36	(0.00)	0.045
08:00-08:15	2	176.20	1395.85	0.126	0.00	0.12	0.14	2.14	(0.00)	0.049
08:00-08:15	3	231.94	1333.55	0.174	0.00	0.17	0.21	3.10	(0.00)	0.054
08:00-08:15	4	494.44	1282.55	0.386	0.00	0.47	0.62	9.14	(0.00)	0.076
08:15-08:30	1	39.64	1304.27	0.030	0.00	0.02	0.03	0.46	(0.00)	0.047
08:15-08:30	2	215.80	1391.14	0.155	0.00	0.14	0.18	2.71	(0.00)	0.051
08:15-08:30	3	284.06	1314.86	0.216	0.00	0.21	0.27	4.05	(0.00)	0.058
08:15-08:30	4	605.56	1262.29	0.480	0.00	0.62	0.91	13.29	(0.00)	0.091
08:30-08:45	1	39.64	1303.69	0.030	0.00	0.03	0.03	0.47	(0.00)	0.047
08:30-08:45	2	215.80	1391.11	0.155	0.00	0.18	0.18	2.75	(0.00)	0.051
08:30-08:45	3	284.06	1314.79	0.216	0.00	0.27	0.27	4.12	(0.00)	0.058
08:30-08:45	4	605.56	1262.20	0.480	0.00	0.91	0.92	13.72	(0.00)	0.091
08:45-09:00	1	32.36	1367.71	0.024	0.00	0.03	0.02	0.37	(0.00)	0.045
08:45-09:00	2	176.20	1395.80	0.126	0.00	0.18	0.15	2.20	(0.00)	0.049
08:45-09:00	3	231.94	1333.43	0.174	0.00	0.27	0.21	3.22	(0.00)	0.055
08:45-09:00	4	494.44	1282.40	0.386	0.00	0.92	0.63	9.72	(0.00)	0.076
09:00-09:15	1	27.10	1414.69	0.019	0.00	0.02	0.02	0.30	(0.00)	0.043
09:00-09:15	2	147.56	1399.23	0.105	0.00	0.15	0.12	1.79	(0.00)	0.048
09:00-09:15	3	194.24	1346.98	0.144	0.00	0.21	0.17	2.57	(0.00)	0.052
09:00-09:15	4	414.07	1297.11	0.319	0.00	0.63	0.47	7.22	(0.00)	0.068

A1 - (Default Analysis Set) - D2 - 2028 Design PM, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type

2028 Design PM, PM	2028 Design PM	PM			Yes			16:45	18:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3,4	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Site Access (north)	
2	GAR (south)	
3	Site Access (south)	
4	GAR (north)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	6.50	18.00	20.00	60.00	34.00	
2	3.65	7.00	8.00	20.00	60.00	53.00	
3	3.65	6.00	8.00	20.00	60.00	41.00	
4	3.65	7.00	6.00	10.00	60.00	35.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.546	1655.797
2		((calculated))	((calculated))	0.487	1416.846
3		((calculated))	((calculated))	0.498	1416.762

4		((calculated))	((calculated))	0.483	1372.801

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	164.00	100.000	N/A
2	ONE HOUR	Yes	250.00	100.000	N/A
3	ONE HOUR	Yes	115.00	100.000	N/A
4	ONE HOUR	Yes	256.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	123.47	123.47	N/A	N/A
16:45-17:00	2	188.21	188.21	N/A	N/A
16:45-17:00	3	86.58	86.58	N/A	N/A
16:45-17:00	4	192.73	192.73	N/A	N/A
17:00-17:15	1	147.43	147.43	N/A	N/A
17:00-17:15	2	224.74	224.74	N/A	N/A
17:00-17:15	3	103.38	103.38	N/A	N/A
17:00-17:15	4	230.14	230.14	N/A	N/A
17:15-17:30	1	180.57	180.57	N/A	N/A
17:15-17:30	2	275.26	275.26	N/A	N/A
17:15-17:30	3	126.62	126.62	N/A	N/A
17:15-17:30	4	281.86	281.86	N/A	N/A
17:30-17:45	1	180.57	180.57	N/A	N/A
17:30-17:45	2	275.26	275.26	N/A	N/A
17:30-17:45	3	126.62	126.62	N/A	N/A
17:30-17:45	4	281.86	281.86	N/A	N/A
17:45-18:00	1	147.43	147.43	N/A	N/A
17:45-18:00	2	224.74	224.74	N/A	N/A
17:45-18:00	3	103.38	103.38	N/A	N/A
17:45-18:00	4	230.14	230.14	N/A	N/A
18:00-18:15	1	123.47	123.47	N/A	N/A
18:00-18:15	2	188.21	188.21	N/A	N/A
18:00-18:15	3	86.58	86.58	N/A	N/A
18:00-18:15	4	192.73	192.73	N/A	N/A

Turning Proportions

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

		To			
		1	2	3	4
From	1	0.00	69.00	15.00	80.00
	2	6.00	0.00	126.00	118.00
	3	1.00	58.00	0.00	56.00
	4	7.00	198.00	51.00	0.00

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

		To			
		1	2	3	4
From	1	0.00	0.42	0.09	0.49
	2	0.02	0.00	0.50	0.47
	3	0.01	0.50	0.00	0.49
	4	0.03	0.77	0.20	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00
	4	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.12	0.05	0.14	A	150.49	225.73	10.05	0.04	0.11	10.05	0.04	0.546	1655.797
2	0.21	0.06	0.26	A	229.40	344.11	18.45	0.05	0.21	18.46	0.05	0.487	1416.846
3	0.10	0.05	0.11	A	105.53	158.29	7.80	0.05	0.09	7.80	0.05	0.498	1416.762
4	0.21	0.06	0.27	A	234.91	352.37	19.10	0.05	0.21	19.10	0.05	0.483	1372.801

Main Results

Main results: (16:45-17:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	123.47	30.87	123.12	10.50	230.34	0.00	1530.09	796.38	0.081	0.00	0.09
2	188.21	47.05	187.58	243.88	109.58	0.00	1363.48	1083.16	0.138	0.00	0.16
3	86.58	21.64	86.30	144.06	153.09	0.00	1340.53	955.79	0.065	0.00	0.07
4	192.73	48.18	192.07	190.62	48.78	0.00	1349.24	1123.42	0.143	0.00	0.17

Main results: (17:00-17:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	147.43	36.86	147.35	12.58	275.80	0.00	1505.28	796.38	0.098	0.09	0.11
2	224.74	56.19	224.59	291.98	131.17	0.00	1352.96	1083.16	0.166	0.16	0.20
3	103.38	25.85	103.32	172.49	183.27	0.00	1325.50	955.79	0.078	0.07	0.08
4	230.14	57.53	229.98	228.20	58.40	0.00	1344.60	1123.42	0.171	0.17	0.21

Main results: (17:15-17:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	180.57	45.14	180.44	15.40	337.73	0.00	1471.48	796.38	0.123	0.11	0.14
2	275.26	68.81	275.02	357.55	160.63	0.00	1338.61	1083.16	0.206	0.20	0.26
3	126.62	31.65	126.53	211.22	224.43	0.00	1305.01	955.79	0.097	0.08	0.11
4	281.86	70.47	281.62	279.44	71.51	0.00	1338.26	1123.42	0.211	0.21	0.27

Main results: (17:30-17:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	180.57	45.14	180.57	15.41	338.01	0.00	1471.33	796.38	0.123	0.14	0.14
2	275.26	68.81	275.25	357.83	160.75	0.00	1338.56	1083.16	0.206	0.26	0.26
3	126.62	31.65	126.62	211.39	224.61	0.00	1304.92	955.79	0.097	0.11	0.11
4	281.86	70.47	281.86	279.66	71.57	0.00	1338.24	1123.42	0.211	0.27	0.27

Main results: (17:45-18:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	147.43	36.86	147.56	12.60	276.26	0.00	1505.03	796.38	0.098	0.14	0.11
2	224.74	56.19	224.98	292.45	131.37	0.00	1352.86	1083.16	0.166	0.26	0.20
3	103.38	25.85	103.47	172.78	183.57	0.00	1325.35	955.79	0.078	0.11	0.08
4	230.14	57.53	230.37	228.55	58.49	0.00	1344.55	1123.42	0.171	0.27	0.21

Main results: (18:00-18:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	123.47	30.87	123.55	10.55	231.31	0.00	1529.56	796.38	0.081	0.11	0.09
2	188.21	47.05	188.37	244.87	110.00	0.00	1363.27	1083.16	0.138	0.20	0.16
3	86.58	21.64	86.64	144.67	153.70	0.00	1340.23	955.79	0.065	0.08	0.07
4	192.73	48.18	192.89	191.37	48.97	0.00	1349.15	1123.42	0.143	0.21	0.17

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.29	0.09	0.043	A	A

2	2.35	0.16	0.051	A	A
3	1.02	0.07	0.048	A	A
4	2.44	0.16	0.052	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.61	0.11	0.044	A	A
2	2.94	0.20	0.053	A	A
3	1.25	0.08	0.049	A	A
4	3.05	0.20	0.054	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.07	0.14	0.046	A	A
2	3.81	0.25	0.056	A	A
3	1.59	0.11	0.051	A	A
4	3.93	0.26	0.057	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.09	0.14	0.046	A	A
2	3.87	0.26	0.056	A	A
3	1.61	0.11	0.051	A	A
4	3.99	0.27	0.057	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.65	0.11	0.044	A	A
2	3.04	0.20	0.053	A	A
3	1.29	0.09	0.049	A	A
4	3.15	0.21	0.054	A	A

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.33	0.09	0.043	A	A
2	2.44	0.16	0.051	A	A
3	1.05	0.07	0.048	A	A
4	2.54	0.17	0.052	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
1	3.65	6.50	18.00	20.00	60.00	34.00		0.546	1655.797
2	3.65	7.00	8.00	20.00	60.00	53.00		0.487	1416.846
3	3.65	6.00	8.00	20.00	60.00	41.00		0.498	1416.762
4	3.65	7.00	6.00	10.00	60.00	35.00		0.483	1372.801

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
16:45-17:00	**1**	123.47	1530.09	0.081	0.00	0.00	0.09	1.29	(0.00)	0.043
16:45-17:00	**2**	188.21	1363.48	0.138	0.00	0.00	0.16	2.35	(0.00)	0.051
16:45-17:00	**3**	86.58	1340.53	0.065	0.00	0.00	0.07	1.02	(0.00)	0.048
16:45-17:00	**4**	192.73	1349.24	0.143	0.00	0.00	0.17	2.44	(0.00)	0.052
17:00-17:15	**1**	147.43	1505.28	0.098	0.00	0.09	0.11	1.61	(0.00)	0.044
17:00-17:15	**2**	224.74	1352.96	0.166	0.00	0.16	0.20	2.94	(0.00)	0.053
17:00-17:15	**3**	103.38	1325.50	0.078	0.00	0.07	0.08	1.25	(0.00)	0.049
17:00-17:15	**4**	230.14	1344.60	0.171	0.00	0.17	0.21	3.05	(0.00)	0.054
17:15-17:30	**1**	180.57	1471.48	0.123	0.00	0.11	0.14	2.07	(0.00)	0.046
17:15-17:30	**2**	275.26	1338.61	0.206	0.00	0.20	0.26	3.81	(0.00)	0.056
17:15-17:30	**3**	126.62	1305.01	0.097	0.00	0.08	0.11	1.59	(0.00)	0.051
17:15-17:30	**4**	281.86	1338.26	0.211	0.00	0.21	0.27	3.93	(0.00)	0.057
17:30-17:45	**1**	180.57	1471.33	0.123	0.00	0.14	0.14	2.09	(0.00)	0.046
17:30-17:45	**2**	275.26	1338.56	0.206	0.00	0.26	0.26	3.87	(0.00)	0.056
17:30-17:45	**3**	126.62	1304.92	0.097	0.00	0.11	0.11	1.61	(0.00)	0.051
17:30-17:45	**4**	281.86	1338.24	0.211	0.00	0.27	0.27	3.99	(0.00)	0.057
17:45-18:00	**1**	147.43	1505.03	0.098	0.00	0.14	0.11	1.65	(0.00)	0.044
17:45-18:00	**2**	224.74	1352.86	0.166	0.00	0.26	0.20	3.04	(0.00)	0.053
17:45-18:00	**3**	103.38	1325.35	0.078	0.00	0.11	0.08	1.29	(0.00)	0.049
17:45-18:00	**4**	230.14	1344.55	0.171	0.00	0.27	0.21	3.15	(0.00)	0.054
18:00-18:15	**1**	123.47	1529.56	0.081	0.00	0.11	0.09	1.33	(0.00)	0.043
18:00-18:15	**2**	188.21	1363.27	0.138	0.00	0.20	0.16	2.44	(0.00)	0.051
18:00-18:15	**3**	86.58	1340.23	0.065	0.00	0.08	0.07	1.05	(0.00)	0.048
18:00-18:15	**4**	192.73	1349.15	0.143	0.00	0.21	0.17	2.54	(0.00)	0.052

A1 - (Default Analysis Set) - D3 - 2034 Design AM, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2034 Design AM, AM	2034 Design AM	AM			Yes			07:45	09:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3,4	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Site Access (north)	
2	GAR (south)	
3	Site Access (south)	
4	GAR (north)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	6.50	18.00	20.00	60.00	34.00	
2	3.65	7.00	8.00	20.00	60.00	53.00	
3	3.65	6.00	8.00	20.00	60.00	41.00	
4	3.65	7.00	6.00	10.00	60.00	35.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.546	1655.797
2		((calculated))	((calculated))	0.487	1416.846
3		((calculated))	((calculated))	0.498	1416.762
4		((calculated))	((calculated))	0.483	1372.801

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	37.00	100.000	N/A
2	ONE HOUR	Yes	202.00	100.000	N/A
3	ONE HOUR	Yes	266.00	100.000	N/A
4	ONE HOUR	Yes	568.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	27.86	27.86	N/A	N/A
07:45-08:00	2	152.08	152.08	N/A	N/A
07:45-08:00	3	200.26	200.26	N/A	N/A
07:45-08:00	4	427.62	427.62	N/A	N/A
08:00-08:15	1	33.26	33.26	N/A	N/A
08:00-08:15	2	181.59	181.59	N/A	N/A
08:00-08:15	3	239.13	239.13	N/A	N/A
08:00-08:15	4	510.62	510.62	N/A	N/A
08:15-08:30	1	40.74	40.74	N/A	N/A
08:15-08:30	2	222.41	222.41	N/A	N/A
08:15-08:30	3	292.87	292.87	N/A	N/A
08:15-08:30	4	625.38	625.38	N/A	N/A
08:30-08:45	1	40.74	40.74	N/A	N/A
08:30-08:45	2	222.41	222.41	N/A	N/A
08:30-08:45	3	292.87	292.87	N/A	N/A
08:30-08:45	4	625.38	625.38	N/A	N/A
08:45-09:00	1	33.26	33.26	N/A	N/A
08:45-09:00	2	181.59	181.59	N/A	N/A
08:45-09:00	3	239.13	239.13	N/A	N/A
08:45-09:00	4	510.62	510.62	N/A	N/A
09:00-09:15	1	27.86	27.86	N/A	N/A
09:00-09:15	2	152.08	152.08	N/A	N/A
09:00-09:15	3	200.26	200.26	N/A	N/A
09:00-09:15	4	427.62	427.62	N/A	N/A

Turning Proportions

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

		To			
		1	2	3	4
From	1	0.00	14.00	1.00	22.00
	2	68.00	0.00	32.00	102.00
	3	12.00	134.00	0.00	120.00
	4	97.00	445.00	26.00	0.00

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

		To			
		1	2	3	4
From	1	0.00	0.38	0.03	0.59
	2	0.34	0.00	0.16	0.50
	3	0.05	0.50	0.00	0.45
	4	0.17	0.78	0.05	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00
	4	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.03	0.05	0.03	A	33.95	50.93	2.33	0.05	0.03	2.33	0.05	0.546	1655.797
2	0.16	0.05	0.19	A	185.36	278.04	13.80	0.05	0.15	13.80	0.05	0.487	1416.846
3	0.22	0.06	0.29	A	244.09	366.13	20.34	0.06	0.23	20.34	0.06	0.498	1416.762
4	0.50	0.09	0.98	A	521.21	781.81	63.58	0.08	0.71	63.58	0.08	0.483	1372.801

Main Results

Main results: (07:45-08:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	27.86	6.96	27.78	132.73	453.50	0.00	1408.30	1012.09	0.020	0.00	0.02

2	152.08	38.02	151.59	444.53	36.75	0.00	1398.95	1087.68	0.109	0.00	0.12
3	200.26	50.06	199.56	44.25	144.09	0.00	1345.01	661.28	0.149	0.00	0.17
4	427.62	106.91	425.66	183.09	160.56	0.00	1295.25	1020.66	0.330	0.00	0.49

Main results: (08:00-08:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	33.26	8.32	33.24	158.96	543.23	0.00	1359.33	1012.09	0.024	0.02	0.03
2	181.59	45.40	181.48	532.47	44.01	0.00	1395.41	1087.68	0.130	0.12	0.15
3	239.13	59.78	238.95	52.99	172.50	0.00	1330.86	661.28	0.180	0.17	0.22
4	510.62	127.66	509.95	219.20	192.25	0.00	1279.95	1020.66	0.399	0.49	0.66

Main results: (08:15-08:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	40.74	10.18	40.71	194.60	664.93	0.00	1292.91	1012.09	0.032	0.03	0.03
2	222.41	55.60	222.24	651.76	53.87	0.00	1390.61	1087.68	0.160	0.15	0.19
3	292.87	73.22	292.60	64.88	211.24	0.00	1311.57	661.28	0.223	0.22	0.29
4	625.38	156.34	624.11	268.43	235.41	0.00	1259.10	1020.67	0.497	0.66	0.97

Main results: (08:30-08:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	40.74	10.18	40.74	194.88	666.10	0.00	1292.27	1012.09	0.032	0.03	0.03
2	222.41	55.60	222.40	652.88	53.95	0.00	1390.57	1087.68	0.160	0.19	0.19
3	292.87	73.22	292.87	64.96	211.39	0.00	1311.50	661.28	0.223	0.29	0.29
4	625.38	156.34	625.36	268.65	235.62	0.00	1259.01	1020.67	0.497	0.97	0.98

Main results: (08:45-09:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	33.26	8.32	33.29	159.40	545.05	0.00	1358.34	1012.09	0.024	0.03	0.03
2	181.59	45.40	181.75	534.22	44.13	0.00	1395.36	1087.68	0.130	0.19	0.15
3	239.13	59.78	239.40	53.12	172.76	0.00	1330.74	661.28	0.180	0.29	0.22
4	510.62	127.66	511.87	219.57	192.58	0.00	1279.79	1020.66	0.399	0.98	0.67

Main results: (09:00-09:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	27.86	6.96	27.88	133.42	456.14	0.00	1406.86	1012.09	0.020	0.03	0.02
2	152.08	38.02	152.19	447.08	36.93	0.00	1398.86	1087.68	0.109	0.15	0.12
3	200.26	50.06	200.44	44.47	144.65	0.00	1344.73	661.28	0.149	0.22	0.18
4	427.62	106.91	428.31	183.84	161.25	0.00	1294.92	1020.66	0.330	0.67	0.50

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.30	0.02	0.043	A	A
2	1.79	0.12	0.048	A	A
3	2.57	0.17	0.052	A	A
4	7.15	0.48	0.069	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.37	0.02	0.045	A	A
2	2.21	0.15	0.049	A	A
3	3.23	0.22	0.055	A	A
4	9.66	0.64	0.078	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.48	0.03	0.048	A	A
2	2.81	0.19	0.051	A	A
3	4.23	0.28	0.059	A	A
4	14.19	0.95	0.094	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.49	0.03	0.048	A	A
2	2.85	0.19	0.051	A	A
3	4.30	0.29	0.059	A	A
4	14.68	0.98	0.095	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.38	0.03	0.045	A	A
2	2.28	0.15	0.049	A	A
3	3.35	0.22	0.055	A	A
4	10.30	0.69	0.078	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.31	0.02	0.044	A	A
2	1.86	0.12	0.048	A	A
3	2.67	0.18	0.052	A	A
4	7.60	0.51	0.069	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
1	3.65	6.50	18.00	20.00	60.00	34.00		0.546	1655.797
2	3.65	7.00	8.00	20.00	60.00	53.00		0.487	1416.846
3	3.65	6.00	8.00	20.00	60.00	41.00		0.498	1416.762
4	3.65	7.00	6.00	10.00	60.00	35.00		0.483	1372.801

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
07:45-08:00	1	27.86	1408.30	0.020	0.00	0.00	0.02	0.30	(0.00)	0.043
07:45-08:00	2	152.08	1398.95	0.109	0.00	0.00	0.12	1.79	(0.00)	0.048
07:45-08:00	3	200.26	1345.01	0.149	0.00	0.00	0.17	2.57	(0.00)	0.052
07:45-08:00	4	427.62	1295.25	0.330	0.00	0.00	0.49	7.15	(0.00)	0.069
08:00-08:15	1	33.26	1359.33	0.024	0.00	0.02	0.03	0.37	(0.00)	0.045
08:00-08:15	2	181.59	1395.41	0.130	0.00	0.12	0.15	2.21	(0.00)	0.049
08:00-08:15	3	239.13	1330.86	0.180	0.00	0.17	0.22	3.23	(0.00)	0.055
08:00-08:15	4	510.62	1279.95	0.399	0.00	0.49	0.66	9.66	(0.00)	0.078
08:15-08:30	1	40.74	1292.91	0.032	0.00	0.03	0.03	0.48	(0.00)	0.048
08:15-08:30	2	222.41	1390.61	0.160	0.00	0.15	0.19	2.81	(0.00)	0.051
08:15-08:30	3	292.87	1311.57	0.223	0.00	0.22	0.29	4.23	(0.00)	0.059
08:15-08:30	4	625.38	1259.10	0.497	0.00	0.66	0.97	14.19	(0.00)	0.094
08:30-08:45	1	40.74	1292.27	0.032	0.00	0.03	0.03	0.49	(0.00)	0.048
08:30-08:45	2	222.41	1390.57	0.160	0.00	0.19	0.19	2.85	(0.00)	0.051
08:30-08:45	3	292.87	1311.50	0.223	0.00	0.29	0.29	4.30	(0.00)	0.059
08:30-08:45	4	625.38	1259.01	0.497	0.00	0.97	0.98	14.68	(0.00)	0.095
08:45-09:00	1	33.26	1358.34	0.024	0.00	0.03	0.03	0.38	(0.00)	0.045
08:45-09:00	2	181.59	1395.36	0.130	0.00	0.19	0.15	2.28	(0.00)	0.049
08:45-09:00	3	239.13	1330.74	0.180	0.00	0.29	0.22	3.35	(0.00)	0.055
08:45-09:00	4	510.62	1279.79	0.399	0.00	0.98	0.67	10.30	(0.00)	0.078
09:00-09:15	1	27.86	1406.86	0.020	0.00	0.03	0.02	0.31	(0.00)	0.044
09:00-09:15	2	152.08	1398.86	0.109	0.00	0.15	0.12	1.86	(0.00)	0.048
09:00-09:15	3	200.26	1344.73	0.149	0.00	0.22	0.18	2.67	(0.00)	0.052
09:00-09:15	4	427.62	1294.92	0.330	0.00	0.67	0.50	7.60	(0.00)	0.069

A1 - (Default Analysis Set) - D4 - 2034 Design PM, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2034 Design PM, PM	2034 Design PM	PM			Yes			16:45	18:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay

1	(untitled)	1,2,3,4	Standard			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	((Mini-roundabouts only))	

Arms

Arms

ID	Name	Description
1	Site Access (north)	
2	GAR (south)	
3	Site Access (south)	
4	GAR (north)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.65	6.50	18.00	20.00	60.00	34.00	
2	3.65	7.00	8.00	20.00	60.00	53.00	
3	3.65	6.00	8.00	20.00	60.00	41.00	
4	3.65	7.00	6.00	10.00	60.00	35.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None
4	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	0.546	1655.797
2		((calculated))	((calculated))	0.487	1416.846
3		((calculated))	((calculated))	0.498	1416.762
4		((calculated))	((calculated))	0.483	1372.801

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	171.00	100.000	N/A
2	ONE HOUR	Yes	260.00	100.000	N/A
3	ONE HOUR	Yes	119.00	100.000	N/A
4	ONE HOUR	Yes	266.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	128.74	128.74	N/A	N/A
16:45-17:00	2	195.74	195.74	N/A	N/A
16:45-17:00	3	89.59	89.59	N/A	N/A
16:45-17:00	4	200.26	200.26	N/A	N/A
17:00-17:15	1	153.73	153.73	N/A	N/A
17:00-17:15	2	233.73	233.73	N/A	N/A
17:00-17:15	3	106.98	106.98	N/A	N/A
17:00-17:15	4	239.13	239.13	N/A	N/A
17:15-17:30	1	188.27	188.27	N/A	N/A
17:15-17:30	2	286.27	286.27	N/A	N/A
17:15-17:30	3	131.02	131.02	N/A	N/A
17:15-17:30	4	292.87	292.87	N/A	N/A
17:30-17:45	1	188.27	188.27	N/A	N/A
17:30-17:45	2	286.27	286.27	N/A	N/A
17:30-17:45	3	131.02	131.02	N/A	N/A
17:30-17:45	4	292.87	292.87	N/A	N/A
17:45-18:00	1	153.73	153.73	N/A	N/A
17:45-18:00	2	233.73	233.73	N/A	N/A
17:45-18:00	3	106.98	106.98	N/A	N/A
17:45-18:00	4	239.13	239.13	N/A	N/A
18:00-18:15	1	128.74	128.74	N/A	N/A
18:00-18:15	2	195.74	195.74	N/A	N/A
18:00-18:15	3	89.59	89.59	N/A	N/A
18:00-18:15	4	200.26	200.26	N/A	N/A

Turning Proportions

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

		To			
		1	2	3	4
	1	0.00	72.00	16.00	83.00

From	2	6.00	0.00	131.00	123.00
	3	1.00	60.00	0.00	58.00
	4	7.00	206.00	53.00	0.00

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

		To			
		1	2	3	4
From	1	0.00	0.42	0.09	0.49
	2	0.02	0.00	0.50	0.47
	3	0.01	0.50	0.00	0.49
	4	0.03	0.77	0.20	0.00

Vehicle Mix

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

		To			
		1	2	3	4
From	1	1.00	1.00	1.00	1.00
	2	1.00	1.00	1.00	1.00
	3	1.00	1.00	1.00	1.00
	4	1.00	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.00	0.00	0.00
	2	0.00	0.00	0.00	0.00
	3	0.00	0.00	0.00	0.00
	4	0.00	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.13	0.05	0.15	A	156.91	235.37	10.58	0.04	0.12	10.58	0.04	0.546	1655.797
2	0.21	0.06	0.27	A	238.58	357.87	19.41	0.05	0.22	19.41	0.05	0.487	1416.846
3	0.10	0.05	0.11	A	109.20	163.79	8.12	0.05	0.09	8.12	0.05	0.498	1416.762
4	0.22	0.06	0.28	A	244.09	366.13	20.04	0.05	0.22	20.04	0.05	0.483	1372.801

Main Results

Main results: (16:45-17:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	128.74	32.18	128.37	10.50	239.34	0.00	1525.18	795.31	0.084	0.00	0.09
2	195.74	48.94	195.07	253.63	114.08	0.00	1361.28	1083.53	0.144	0.00	0.17
3	89.59	22.40	89.30	150.06	159.09	0.00	1337.54	956.83	0.067	0.00	0.07
4	200.26	50.06	199.56	198.12	50.28	0.00	1348.52	1123.84	0.149	0.00	0.17

Main results: (17:00-17:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	153.73	38.43	153.64	12.58	286.58	0.00	1499.40	795.31	0.103	0.09	0.11
2	233.73	58.43	233.57	303.66	136.56	0.00	1350.34	1083.53	0.173	0.17	0.21
3	106.98	26.74	106.91	179.67	190.46	0.00	1321.92	956.83	0.081	0.07	0.09
4	239.13	59.78	238.96	237.18	60.19	0.00	1343.73	1123.84	0.178	0.17	0.22

Main results: (17:15-17:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	188.27	47.07	188.14	15.40	350.93	0.00	1464.28	795.31	0.129	0.11	0.15
2	286.27	71.57	286.01	371.84	167.23	0.00	1335.40	1083.53	0.214	0.21	0.27
3	131.02	32.76	130.93	220.01	233.23	0.00	1300.62	956.83	0.101	0.09	0.11
4	292.87	73.22	292.62	290.44	73.71	0.00	1337.20	1123.84	0.219	0.22	0.28

Main results: (17:30-17:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	188.27	47.07	188.27	15.41	351.22	0.00	1464.12	795.31	0.129	0.15	0.15
2	286.27	71.57	286.26	372.14	167.35	0.00	1335.34	1083.53	0.214	0.27	0.27
3	131.02	32.76	131.02	220.20	233.41	0.00	1300.53	956.83	0.101	0.11	0.11
4	292.87	73.22	292.87	290.67	73.77	0.00	1337.17	1123.84	0.219	0.28	0.28

Main results: (17:45-18:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	153.73	38.43	153.86	12.60	287.06	0.00	1499.13	795.31	0.103	0.15	0.11
2	233.73	58.43	233.98	304.15	136.77	0.00	1350.23	1083.53	0.173	0.27	0.21
3	106.98	26.74	107.07	179.98	190.77	0.00	1321.77	956.83	0.081	0.11	0.09
4	239.13	59.78	239.38	237.56	60.29	0.00	1343.69	1123.84	0.178	0.28	0.22

Main results: (18:00-18:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	128.74	32.18	128.83	10.55	240.36	0.00	1524.62	795.31	0.084	0.11	0.09
2	195.74	48.94	195.91	254.67	114.52	0.00	1361.07	1083.53	0.144	0.21	0.17
3	89.59	22.40	89.65	150.70	159.73	0.00	1337.22	956.83	0.067	0.09	0.07
4	200.26	50.06	200.43	198.91	50.48	0.00	1348.42	1123.84	0.149	0.22	0.18

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.36	0.09	0.043	A	A
2	2.46	0.16	0.051	A	A
3	1.06	0.07	0.048	A	A
4	2.56	0.17	0.052	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service

1	1.69	0.11	0.045	A	A
2	3.09	0.21	0.054	A	A
3	1.30	0.09	0.049	A	A
4	3.19	0.21	0.054	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.18	0.15	0.047	A	A
2	4.02	0.27	0.057	A	A
3	1.65	0.11	0.051	A	A
4	4.13	0.28	0.057	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	2.21	0.15	0.047	A	A
2	4.08	0.27	0.057	A	A
3	1.68	0.11	0.051	A	A
4	4.19	0.28	0.057	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.74	0.12	0.045	A	A
2	3.20	0.21	0.054	A	A
3	1.34	0.09	0.049	A	A
4	3.31	0.22	0.054	A	A

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.40	0.09	0.043	A	A
2	2.56	0.17	0.052	A	A
3	1.09	0.07	0.048	A	A
4	2.66	0.18	0.052	A	A

Overview: Standard Roundabout Geometry

Standard Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only	Final Slope	Final Intercept (PCU/hr)
1	3.65	6.50	18.00	20.00	60.00	34.00		0.546	1655.797
2	3.65	7.00	8.00	20.00	60.00	53.00		0.487	1416.846
3	3.65	6.00	8.00	20.00	60.00	41.00		0.498	1416.762
4	3.65	7.00	6.00	10.00	60.00	35.00		0.483	1372.801

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
16:45-17:00	**1**	128.74	1525.18	0.084	0.00	0.00	0.09	1.36	(0.00)	0.043

16:45-17:00	**2**	195.74	1361.28	0.144	0.00	0.00	0.17	2.46	(0.00)	0.051
16:45-17:00	**3**	89.59	1337.54	0.067	0.00	0.00	0.07	1.06	(0.00)	0.048
16:45-17:00	**4**	200.26	1348.52	0.149	0.00	0.00	0.17	2.56	(0.00)	0.052
17:00-17:15	**1**	153.73	1499.40	0.103	0.00	0.09	0.11	1.69	(0.00)	0.045
17:00-17:15	**2**	233.73	1350.34	0.173	0.00	0.17	0.21	3.09	(0.00)	0.054
17:00-17:15	**3**	106.98	1321.92	0.081	0.00	0.07	0.09	1.30	(0.00)	0.049
17:00-17:15	**4**	239.13	1343.73	0.178	0.00	0.17	0.22	3.19	(0.00)	0.054
17:15-17:30	**1**	188.27	1464.28	0.129	0.00	0.11	0.15	2.18	(0.00)	0.047
17:15-17:30	**2**	286.27	1335.40	0.214	0.00	0.21	0.27	4.02	(0.00)	0.057
17:15-17:30	**3**	131.02	1300.62	0.101	0.00	0.09	0.11	1.65	(0.00)	0.051
17:15-17:30	**4**	292.87	1337.20	0.219	0.00	0.22	0.28	4.13	(0.00)	0.057
17:30-17:45	**1**	188.27	1464.12	0.129	0.00	0.15	0.15	2.21	(0.00)	0.047
17:30-17:45	**2**	286.27	1335.34	0.214	0.00	0.27	0.27	4.08	(0.00)	0.057
17:30-17:45	**3**	131.02	1300.53	0.101	0.00	0.11	0.11	1.68	(0.00)	0.051
17:30-17:45	**4**	292.87	1337.17	0.219	0.00	0.28	0.28	4.19	(0.00)	0.057
17:45-18:00	**1**	153.73	1499.13	0.103	0.00	0.15	0.11	1.74	(0.00)	0.045
17:45-18:00	**2**	233.73	1350.23	0.173	0.00	0.27	0.21	3.20	(0.00)	0.054
17:45-18:00	**3**	106.98	1321.77	0.081	0.00	0.11	0.09	1.34	(0.00)	0.049
17:45-18:00	**4**	239.13	1343.69	0.178	0.00	0.28	0.22	3.31	(0.00)	0.054
18:00-18:15	**1**	128.74	1524.62	0.084	0.00	0.11	0.09	1.40	(0.00)	0.043
18:00-18:15	**2**	195.74	1361.07	0.144	0.00	0.21	0.17	2.56	(0.00)	0.052
18:00-18:15	**3**	89.59	1337.22	0.067	0.00	0.09	0.07	1.09	(0.00)	0.048
18:00-18:15	**4**	200.26	1348.42	0.149	0.00	0.22	0.18	2.66	(0.00)	0.052

ARCADY 7

Version: 7.0.0.99 [10 July 2009]

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File: N:\Projects\A085361 - Gedling Colliery Access Road\calculations\Junction Capacity Assessments\ARCADY\GAR - Lambley Lane mini rbout.arc7
Report generation date: 20/05/2014 14:53:20

File summary

File Description

Title	GAR / Lambley Lane mini rbout
Location	Gedling
Date	12/03/2014
Status	(new file)
Jobnumber	A085361
Enumerator	WYG\robert.holland
Results Upto Date	True

Analysis Options

RFC Threshold	Vehicle Length (m)	Do Queue Variations
0.85	5.75	

Sorting and Display

Show Arm Names	Arm Grouping	Sorting Direction	Sorting Type	Data Matrix Style	Time Style
	Order	Ascending	Numerical	By Destination	Absolute Time

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	min	-Min	perMin

A1 - (Default Analysis Set) - D1 - 2028 Design AM, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2028 Design AM, AM	2028 Design AM	AM			Yes			07:45	09:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Mini-roundabout			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

ID	Name	Description
1	Lambley Lane (north-east)	
2	Lambley Lane (south-west)	
3	New Link to GAR	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	2.50	2.50	3.00	3.00	20.00	20.00	0.00	
2	2.75	2.75	4.50	4.00	13.00	3.00	0.00	
3	3.65	3.65	4.00	2.00	10.00	2.00	0.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	1.072	1302.404
2		((calculated))	((calculated))	0.528	869.829

3		((calculated))	((calculated))	0.548	670.326

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	53.00	100.000	N/A
2	ONE HOUR	Yes	160.00	100.000	N/A
3	ONE HOUR	Yes	271.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
07:45-08:00	1	39.90	39.90	N/A	N/A
07:45-08:00	2	120.46	120.46	N/A	N/A
07:45-08:00	3	204.02	204.02	N/A	N/A
08:00-08:15	1	47.65	47.65	N/A	N/A
08:00-08:15	2	143.84	143.84	N/A	N/A
08:00-08:15	3	243.62	243.62	N/A	N/A
08:15-08:30	1	58.35	58.35	N/A	N/A
08:15-08:30	2	176.16	176.16	N/A	N/A
08:15-08:30	3	298.38	298.38	N/A	N/A
08:30-08:45	1	58.35	58.35	N/A	N/A
08:30-08:45	2	176.16	176.16	N/A	N/A
08:30-08:45	3	298.38	298.38	N/A	N/A
08:45-09:00	1	47.65	47.65	N/A	N/A
08:45-09:00	2	143.84	143.84	N/A	N/A
08:45-09:00	3	243.62	243.62	N/A	N/A
09:00-09:15	1	39.90	39.90	N/A	N/A
09:00-09:15	2	120.46	120.46	N/A	N/A
09:00-09:15	3	204.02	204.02	N/A	N/A

Turning Proportions

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

	To			
		1	2	3

From	1	0.00	34.00	19.00
	2	23.00	0.00	137.00
	3	21.00	250.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.64	0.36
	2	0.14	0.00	0.86
	3	0.08	0.92	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.06	0.06	0.06	A	48.63	72.95	4.36	0.06	0.05	4.36	0.06	1.072	1302.404
2	0.21	0.09	0.26	A	146.82	220.23	18.50	0.08	0.21	18.50	0.08	0.528	869.829
3	0.45	0.17	0.83	B	248.67	373.01	55.10	0.15	0.61	55.11	0.15	0.548	670.326

Main Results

Main results: (07:45-08:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	39.90	9.98	39.75	32.90	186.59	0.00	1102.33	696.79	0.036	0.00	0.04
2	120.46	30.11	119.81	212.09	14.25	0.00	862.30	737.92	0.140	0.00	0.16
3	204.02	51.01	202.26	116.84	17.22	0.00	660.89	612.22	0.309	0.00	0.44

Main results: (08:00-08:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	47.65	11.91	47.61	39.49	224.24	0.00	1061.95	696.79	0.045	0.04	0.05
2	143.84	35.96	143.68	254.78	17.07	0.00	860.82	737.92	0.167	0.16	0.20

3	243.62	60.91	243.08	140.10	20.65	0.00	659.01	612.22	0.370	0.44	0.58

Main results: (08:15-08:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	58.35	14.59	58.30	48.34	274.37	0.00	1008.19	696.79	0.058	0.05	0.06
2	176.16	44.04	175.94	311.77	20.90	0.00	858.79	737.92	0.205	0.20	0.26
3	298.38	74.59	297.42	171.54	25.29	0.00	656.47	612.22	0.455	0.58	0.82

Main results: (08:30-08:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	58.35	14.59	58.35	48.44	275.23	0.00	1007.28	696.79	0.058	0.06	0.06
2	176.16	44.04	176.16	312.66	20.92	0.00	858.78	737.92	0.205	0.26	0.26
3	298.38	74.59	298.35	171.76	25.32	0.00	656.45	612.22	0.455	0.82	0.83

Main results: (08:45-09:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	47.65	11.91	47.70	39.66	225.59	0.00	1060.50	696.79	0.045	0.06	0.05
2	143.84	35.96	144.06	256.19	17.10	0.00	860.80	737.92	0.167	0.26	0.20
3	243.62	60.91	244.54	140.45	20.71	0.00	658.98	612.22	0.370	0.83	0.60

Main results: (09:00-09:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	39.90	9.98	39.94	33.19	188.74	0.00	1100.02	696.79	0.036	0.05	0.04
2	120.46	30.11	120.61	214.36	14.32	0.00	862.27	737.92	0.140	0.20	0.16
3	204.02	51.01	204.60	117.59	17.34	0.00	660.83	612.22	0.309	0.60	0.45

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.55	0.04	0.056	A	A
2	2.36	0.16	0.081	A	A
3	6.34	0.42	0.130	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.69	0.05	0.059	A	A
2	2.94	0.20	0.084	A	A
3	8.42	0.56	0.144	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.91	0.06	0.063	A	A
2	3.77	0.25	0.088	A	A
3	11.79	0.79	0.167	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.92	0.06	0.063	A	A
2	3.85	0.26	0.088	A	A
3	12.33	0.82	0.168	B	B

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.72	0.05	0.059	A	A
2	3.09	0.21	0.084	A	A
3	9.24	0.62	0.145	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.57	0.04	0.057	A	A
2	2.49	0.17	0.081	A	A
3	6.98	0.47	0.132	A	A

Overview: Mini-roundabout Geometry

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Entry width (m)	Effective flare length (m)	Minimum approach road half-width (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island	Final Slope	Final Intercept (PCU/hr)
1	2.50	3.00	3.00	2.50	20.00	20.00	0.00		1.072	1302.404
2	2.75	4.50	4.00	2.75	13.00	3.00	0.00		0.528	869.829
3	3.65	4.00	2.00	3.65	10.00	2.00	0.00		0.548	670.326

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
07:45-08:00	1	39.90	1102.33	0.036	0.00	0.00	0.04	0.55	(0.00)	0.056
07:45-08:00	2	120.46	862.30	0.140	0.00	0.00	0.16	2.36	(0.00)	0.081
07:45-08:00	3	204.02	660.89	0.309	0.00	0.00	0.44	6.34	(0.00)	0.130
08:00-08:15	1	47.65	1061.95	0.045	0.00	0.04	0.05	0.69	(0.00)	0.059
08:00-08:15	2	143.84	860.82	0.167	0.00	0.16	0.20	2.94	(0.00)	0.084
08:00-08:15	3	243.62	659.01	0.370	0.00	0.44	0.58	8.42	(0.00)	0.144
08:15-08:30	1	58.35	1008.19	0.058	0.00	0.05	0.06	0.91	(0.00)	0.063
08:15-08:30	2	176.16	858.79	0.205	0.00	0.20	0.26	3.77	(0.00)	0.088
08:15-08:30	3	298.38	656.47	0.455	0.00	0.58	0.82	11.79	(0.00)	0.167
08:30-08:45	1	58.35	1007.28	0.058	0.00	0.06	0.06	0.92	(0.00)	0.063
08:30-08:45	2	176.16	858.78	0.205	0.00	0.26	0.26	3.85	(0.00)	0.088
08:30-08:45	3	298.38	656.45	0.455	0.00	0.82	0.83	12.33	(0.00)	0.168
08:45-09:00	1	47.65	1060.50	0.045	0.00	0.06	0.05	0.72	(0.00)	0.059
08:45-09:00	2	143.84	860.80	0.167	0.00	0.26	0.20	3.09	(0.00)	0.084
08:45-09:00	3	243.62	658.98	0.370	0.00	0.83	0.60	9.24	(0.00)	0.145
09:00-09:15	1	39.90	1100.02	0.036	0.00	0.05	0.04	0.57	(0.00)	0.057
09:00-09:15	2	120.46	862.27	0.140	0.00	0.20	0.16	2.49	(0.00)	0.081
09:00-09:15	3	204.02	660.83	0.309	0.00	0.60	0.45	6.98	(0.00)	0.132

A1 - (Default Analysis Set) - D2 - 2028 Design PM, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2028 Design PM, PM	2028 Design PM	PM			Yes			16:45	18:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Mini-roundabout			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

ID	Name	Description
1	Lambley Lane (north-east)	
2	Lambley Lane (south-west)	
3	New Link to GAR	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	2.50	2.50	3.00	3.00	20.00	20.00	0.00	
2	2.75	2.75	4.50	4.00	13.00	3.00	0.00	
3	3.65	3.65	4.00	2.00	10.00	2.00	0.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	1.072	1302.404
2		((calculated))	((calculated))	0.528	869.829
3		((calculated))	((calculated))	0.548	670.326

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	58.00	100.000	N/A
2	ONE HOUR	Yes	379.00	100.000	N/A
3	ONE HOUR	Yes	155.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	43.67	43.67	N/A	N/A
16:45-17:00	2	285.33	285.33	N/A	N/A
16:45-17:00	3	116.69	116.69	N/A	N/A
17:00-17:15	1	52.14	52.14	N/A	N/A
17:00-17:15	2	340.71	340.71	N/A	N/A
17:00-17:15	3	139.34	139.34	N/A	N/A
17:15-17:30	1	63.86	63.86	N/A	N/A
17:15-17:30	2	417.29	417.29	N/A	N/A
17:15-17:30	3	170.66	170.66	N/A	N/A
17:30-17:45	1	63.86	63.86	N/A	N/A
17:30-17:45	2	417.29	417.29	N/A	N/A
17:30-17:45	3	170.66	170.66	N/A	N/A
17:45-18:00	1	52.14	52.14	N/A	N/A

17:45-18:00	**2**	340.71	340.71	N/A	N/A
17:45-18:00	**3**	139.34	139.34	N/A	N/A
18:00-18:15	**1**	43.67	43.67	N/A	N/A
18:00-18:15	**2**	285.33	285.33	N/A	N/A
18:00-18:15	**3**	116.69	116.69	N/A	N/A

Turning Proportions

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

		To		
		1	**2**	**3**
From	**1**	0.00	16.00	42.00
	2	37.00	0.00	342.00
	3	12.00	143.00	0.00

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

		To		
		1	**2**	**3**
From	**1**	0.00	0.28	0.72
	2	0.10	0.00	0.90
	3	0.08	0.92	0.00

Vehicle Mix

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

		To		
		1	**2**	**3**
From	**1**	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	**2**	**3**
From	**1**	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.06	0.06	0.06	A	53.22	79.83	4.32	0.05	0.05	4.32	0.05	1.072	1302.404
2	0.49	0.14	0.97	A	347.78	521.67	63.42	0.12	0.70	63.43	0.12	0.528	869.829
3	0.26	0.13	0.36	A	142.23	213.35	25.13	0.12	0.28	25.13	0.12	0.548	670.326

Main Results

Main results: (16:45-17:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	43.67	10.92	43.51	36.63	106.87	0.00	1187.81	671.69	0.037	0.00	0.04
2	285.33	71.33	283.34	118.87	31.51	0.00	853.19	612.97	0.334	0.00	0.50
3	116.69	29.17	115.83	287.19	27.66	0.00	655.17	637.55	0.178	0.00	0.21

Main results: (17:00-17:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	52.14	13.04	52.11	43.97	128.35	0.00	1164.77	671.69	0.045	0.04	0.05
2	340.71	85.18	340.06	142.73	37.73	0.00	849.90	612.97	0.401	0.50	0.66
3	139.34	34.84	139.12	344.59	33.20	0.00	652.14	637.55	0.214	0.21	0.27

Main results: (17:15-17:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	63.86	15.96	63.81	53.81	157.13	0.00	1133.91	671.69	0.056	0.05	0.06
2	417.29	104.32	416.10	174.74	46.21	0.00	845.43	612.97	0.494	0.66	0.96
3	170.66	42.66	170.32	421.68	40.62	0.00	648.07	637.55	0.263	0.27	0.35

Main results: (17:30-17:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	63.86	15.96	63.86	53.95	157.44	0.00	1133.58	671.69	0.056	0.06	0.06
2	417.29	104.32	417.25	175.05	46.24	0.00	845.41	612.97	0.494	0.96	0.97
3	170.66	42.66	170.65	422.76	40.73	0.00	648.01	637.55	0.263	0.35	0.36

Main results: (17:45-18:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	52.14	13.04	52.19	44.19	128.85	0.00	1164.23	671.69	0.045	0.06	0.05
2	340.71	85.18	341.87	143.25	37.79	0.00	849.87	612.97	0.401	0.97	0.68
3	139.34	34.84	139.67	346.28	33.37	0.00	652.04	637.55	0.214	0.36	0.27

Main results: (18:00-18:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	43.67	10.92	43.70	36.97	107.86	0.00	1186.74	671.69	0.037	0.05	0.04
2	285.33	71.33	286.01	119.92	31.65	0.00	853.12	612.97	0.334	0.68	0.51
3	116.69	29.17	116.92	289.73	27.92	0.00	655.03	637.55	0.178	0.27	0.22

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.56	0.04	0.052	A	A
2	7.19	0.48	0.105	A	A
3	3.11	0.21	0.111	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.69	0.05	0.054	A	A
2	9.64	0.64	0.118	A	A
3	3.95	0.26	0.117	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.88	0.06	0.056	A	A
2	13.84	0.92	0.139	A	A
3	5.17	0.34	0.126	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.89	0.06	0.056	A	A
2	14.44	0.96	0.140	A	A
3	5.32	0.35	0.126	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.71	0.05	0.054	A	A
2	10.50	0.70	0.118	A	A
3	4.22	0.28	0.117	A	A

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.58	0.04	0.052	A	A
2	7.82	0.52	0.106	A	A
3	3.35	0.22	0.112	A	A

Overview: Mini-roundabout Geometry

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Entry width (m)	Effective flare length (m)	Minimum approach road half-width (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island	Final Slope	Final Intercept (PCU/hr)
1	2.50	3.00	3.00	2.50	20.00	20.00	0.00		1.072	1302.404
2	2.75	4.50	4.00	2.75	13.00	3.00	0.00		0.528	869.829
3	3.65	4.00	2.00	3.65	10.00	2.00	0.00		0.548	670.326

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
16:45-17:00	**1**	43.67	1187.81	0.037	0.00	0.00	0.04	0.56	(0.00)	0.052
16:45-17:00	**2**	285.33	853.19	0.334	0.00	0.00	0.50	7.19	(0.00)	0.105
16:45-17:00	**3**	116.69	655.17	0.178	0.00	0.00	0.21	3.11	(0.00)	0.111
17:00-17:15	**1**	52.14	1164.77	0.045	0.00	0.04	0.05	0.69	(0.00)	0.054
17:00-17:15	**2**	340.71	849.90	0.401	0.00	0.50	0.66	9.64	(0.00)	0.118

17:00-17:15	**3**	139.34	652.14	0.214	0.00	0.21	0.27	3.95	(0.00)	0.117
17:15-17:30	**1**	63.86	1133.91	0.056	0.00	0.05	0.06	0.88	(0.00)	0.056
17:15-17:30	**2**	417.29	845.43	0.494	0.00	0.66	0.96	13.84	(0.00)	0.139
17:15-17:30	**3**	170.66	648.07	0.263	0.00	0.27	0.35	5.17	(0.00)	0.126
17:30-17:45	**1**	63.86	1133.58	0.056	0.00	0.06	0.06	0.89	(0.00)	0.056
17:30-17:45	**2**	417.29	845.41	0.494	0.00	0.96	0.97	14.44	(0.00)	0.140
17:30-17:45	**3**	170.66	648.01	0.263	0.00	0.35	0.36	5.32	(0.00)	0.126
17:45-18:00	**1**	52.14	1164.23	0.045	0.00	0.06	0.05	0.71	(0.00)	0.054
17:45-18:00	**2**	340.71	849.87	0.401	0.00	0.97	0.68	10.50	(0.00)	0.118
17:45-18:00	**3**	139.34	652.04	0.214	0.00	0.36	0.27	4.22	(0.00)	0.117
18:00-18:15	**1**	43.67	1186.74	0.037	0.00	0.05	0.04	0.58	(0.00)	0.052
18:00-18:15	**2**	285.33	853.12	0.334	0.00	0.68	0.51	7.82	(0.00)	0.106
18:00-18:15	**3**	116.69	655.03	0.178	0.00	0.27	0.22	3.35	(0.00)	0.112

A1 - (Default Analysis Set) - D3 - 2034 Design AM, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2034 Design AM, AM	2034 Design AM	AM			Yes			07:45	09:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Mini-roundabout			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

ID	Name	Description
1	Lambley Lane (north-east)	
2	Lambley Lane (south-west)	
3	New Link to GAR	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	2.50	2.50	3.00	3.00	20.00	20.00	0.00	
2	2.75	2.75	4.50	4.00	13.00	3.00	0.00	
3	3.65	3.65	4.00	2.00	10.00	2.00	0.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	1.072	1302.404
2		((calculated))	((calculated))	0.528	869.829
3		((calculated))	((calculated))	0.548	670.326

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	55.00	100.000	N/A
2	ONE HOUR	Yes	166.00	100.000	N/A
3	ONE HOUR	Yes	281.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)

07:45-08:00	**1**	41.41	41.41	N/A	N/A
07:45-08:00	**2**	124.97	124.97	N/A	N/A
07:45-08:00	**3**	211.55	211.55	N/A	N/A
08:00-08:15	**1**	49.44	49.44	N/A	N/A
08:00-08:15	**2**	149.23	149.23	N/A	N/A
08:00-08:15	**3**	252.61	252.61	N/A	N/A
08:15-08:30	**1**	60.56	60.56	N/A	N/A
08:15-08:30	**2**	182.77	182.77	N/A	N/A
08:15-08:30	**3**	309.39	309.39	N/A	N/A
08:30-08:45	**1**	60.56	60.56	N/A	N/A
08:30-08:45	**2**	182.77	182.77	N/A	N/A
08:30-08:45	**3**	309.39	309.39	N/A	N/A
08:45-09:00	**1**	49.44	49.44	N/A	N/A
08:45-09:00	**2**	149.23	149.23	N/A	N/A
08:45-09:00	**3**	252.61	252.61	N/A	N/A
09:00-09:15	**1**	41.41	41.41	N/A	N/A
09:00-09:15	**2**	124.97	124.97	N/A	N/A
09:00-09:15	**3**	211.55	211.55	N/A	N/A

Turning Proportions

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

		To		
		1	**2**	**3**
From	**1**	0.00	35.00	20.00
	2	24.00	0.00	142.00
	3	22.00	259.00	0.00

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

		To		
		1	**2**	**3**
From	**1**	0.00	0.64	0.36
	2	0.14	0.00	0.86
	3	0.08	0.92	0.00

Vehicle Mix

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

		To		
		1	**2**	**3**
From	**1**	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	**2**	**3**
From	**1**	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.06	0.06	0.06	A	50.47	75.70	4.58	0.06	0.05	4.58	0.06	1.072	1302.404
2	0.21	0.09	0.27	A	152.32	228.49	19.36	0.08	0.22	19.36	0.08	0.528	869.829
3	0.47	0.17	0.88	B	257.85	386.78	58.60	0.15	0.65	58.61	0.15	0.548	670.326

Main Results

Main results: (07:45-08:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	41.41	10.35	41.25	34.39	193.27	0.00	1095.16	697.49	0.038	0.00	0.04
2	124.97	31.24	124.30	219.52	15.00	0.00	861.91	735.89	0.145	0.00	0.17
3	211.55	52.89	209.69	121.33	17.97	0.00	660.48	612.04	0.320	0.00	0.47

Main results: (08:00-08:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	49.44	12.36	49.40	41.28	232.29	0.00	1053.32	697.49	0.047	0.04	0.05
2	149.23	37.31	149.07	263.73	17.97	0.00	860.34	735.89	0.173	0.17	0.21
3	252.61	63.15	252.02	145.48	21.55	0.00	658.52	612.04	0.384	0.47	0.61

Main results: (08:15-08:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	60.56	15.14	60.50	50.53	284.20	0.00	997.66	697.49	0.061	0.05	0.06
2	182.77	45.69	182.53	322.70	22.00	0.00	858.21	735.89	0.213	0.21	0.27
3	309.39	77.35	308.34	178.14	26.39	0.00	655.87	612.04	0.472	0.61	0.87

Main results: (08:30-08:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	60.56	15.14	60.56	50.64	285.13	0.00	996.66	697.49	0.061	0.06	0.06
2	182.77	45.69	182.77	323.67	22.02	0.00	858.20	735.89	0.213	0.27	0.27
3	309.39	77.35	309.35	178.36	26.42	0.00	655.85	612.04	0.472	0.87	0.88

Main results: (08:45-09:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	49.44	12.36	49.50	41.47	233.76	0.00	1051.74	697.49	0.047	0.06	0.05
2	149.23	37.31	149.46	265.27	18.00	0.00	860.32	735.89	0.173	0.27	0.21
3	252.61	63.15	253.62	145.86	21.61	0.00	658.49	612.04	0.384	0.88	0.63

Main results: (09:00-09:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	41.41	10.35	41.45	34.70	195.56	0.00	1092.71	697.49	0.038	0.05	0.04

2	124.97	31.24	125.14	221.93	15.07	0.00	861.87	735.89	0.145	0.21	0.17
3	211.55	52.89	212.17	122.12	18.09	0.00	660.42	612.04	0.320	0.63	0.48

Queueing Delay Results

Queueing Delay results: (07:45-08:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.58	0.04	0.057	A	A
2	2.46	0.16	0.081	A	A
3	6.68	0.45	0.133	A	A

Queueing Delay results: (08:00-08:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.73	0.05	0.060	A	A
2	3.08	0.21	0.084	A	A
3	8.92	0.59	0.147	A	A

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.95	0.06	0.064	A	A
2	3.95	0.26	0.089	A	A
3	12.60	0.84	0.172	B	B

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.97	0.06	0.064	A	A
2	4.04	0.27	0.089	A	A
3	13.20	0.88	0.173	B	B

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.75	0.05	0.060	A	A
2	3.23	0.22	0.084	A	A
3	9.82	0.65	0.149	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.60	0.04	0.057	A	A
2	2.60	0.17	0.081	A	A
3	7.37	0.49	0.134	A	A

Overview: Mini-roundabout Geometry

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Entry width (m)	Effective flare length (m)	Minimum approach road half-width (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island	Final Slope	Final Intercept (PCU/hr)
1	2.50	3.00	3.00	2.50	20.00	20.00	0.00		1.072	1302.404
2	2.75	4.50	4.00	2.75	13.00	3.00	0.00		0.528	869.829
3	3.65	4.00	2.00	3.65	10.00	2.00	0.00		0.548	670.326

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
07:45-08:00	1	41.41	1095.16	0.038	0.00	0.00	0.04	0.58	(0.00)	0.057
07:45-08:00	2	124.97	861.91	0.145	0.00	0.00	0.17	2.46	(0.00)	0.081
07:45-08:00	3	211.55	660.48	0.320	0.00	0.00	0.47	6.68	(0.00)	0.133
08:00-08:15	1	49.44	1053.32	0.047	0.00	0.04	0.05	0.73	(0.00)	0.060
08:00-08:15	2	149.23	860.34	0.173	0.00	0.17	0.21	3.08	(0.00)	0.084
08:00-08:15	3	252.61	658.52	0.384	0.00	0.47	0.61	8.92	(0.00)	0.147
08:15-08:30	1	60.56	997.66	0.061	0.00	0.05	0.06	0.95	(0.00)	0.064
08:15-08:30	2	182.77	858.21	0.213	0.00	0.21	0.27	3.95	(0.00)	0.089
08:15-08:30	3	309.39	655.87	0.472	0.00	0.61	0.87	12.60	(0.00)	0.172
08:30-08:45	1	60.56	996.66	0.061	0.00	0.06	0.06	0.97	(0.00)	0.064
08:30-08:45	2	182.77	858.20	0.213	0.00	0.27	0.27	4.04	(0.00)	0.089
08:30-08:45	3	309.39	655.85	0.472	0.00	0.87	0.88	13.20	(0.00)	0.173
08:45-09:00	1	49.44	1051.74	0.047	0.00	0.06	0.05	0.75	(0.00)	0.060
08:45-09:00	2	149.23	860.32	0.173	0.00	0.27	0.21	3.23	(0.00)	0.084
08:45-09:00	3	252.61	658.49	0.384	0.00	0.88	0.63	9.82	(0.00)	0.149
09:00-09:15	1	41.41	1092.71	0.038	0.00	0.05	0.04	0.60	(0.00)	0.057
09:00-09:15	2	124.97	861.87	0.145	0.00	0.21	0.17	2.60	(0.00)	0.081
09:00-09:15	3	211.55	660.42	0.320	0.00	0.63	0.48	7.37	(0.00)	0.134

A1 - (Default Analysis Set) - D4 - 2034 Design PM, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Description	Include In Report	Use Specific Demand Set	Demand Set	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)		Yes		(D1)		100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Locked	Run Automatically	Use Relationship	Relationship	Start Time (HH:mm)	Finish Time (HH:mm)	Time Period Length (min)	Time Segment Length (min)	Traffic Profile Type
2034 Design PM, PM	2034 Design PM	PM			Yes			16:45	18:15	90	15	ONE HOUR

Roundabout Network

Roundabout Type(s)

ID	Name	Arm Order	Roundabout Type	Grade Separated	Large Roundabout	Do Geometric Delay
1	(untitled)	1,2,3	Mini-roundabout			

Roundabout Network Options

Driving Side	Lighting	Road Surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

ID	Name	Description
1	Lambley Lane (north-east)	
2	Lambley Lane (south-west)	
3	New Link to GAR	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	2.50	2.50	3.00	3.00	20.00	20.00	0.00	
2	2.75	2.75	4.50	4.00	13.00	3.00	0.00	
3	3.65	3.65	4.00	2.00	10.00	2.00	0.00	

Pedestrian Crossings

Arm	Crossing Type
1	None
2	None
3	None

Arm Slope/ Intercept and Capacity

Slope and Intercept used in model

Arm	Enter Directly	Slope	Intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		((calculated))	((calculated))	1.072	1302.404
2		((calculated))	((calculated))	0.528	869.829
3		((calculated))	((calculated))	0.548	670.326

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		Yes	Yes	HV Percentages	2.00				Yes	Yes

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)	PHF
1	ONE HOUR	Yes	61.00	100.000	N/A
2	ONE HOUR	Yes	394.00	100.000	N/A
3	ONE HOUR	Yes	161.00	100.000	N/A

Direct/Resultant Flows

Direct Flows Data

Time Segment	Arm	Direct Demand Entry Flow (PCU/hr)	DirectDemandEntryFlowInPCU (PCU/hr)	Direct Demand Exit Flow (PCU/hr)	Direct Demand Pedestrian Flow (Ped/hr)
16:45-17:00	1	45.92	45.92	N/A	N/A
16:45-17:00	2	296.62	296.62	N/A	N/A
16:45-17:00	3	121.21	121.21	N/A	N/A
17:00-17:15	1	54.84	54.84	N/A	N/A
17:00-17:15	2	354.20	354.20	N/A	N/A
17:00-17:15	3	144.74	144.74	N/A	N/A
17:15-17:30	1	67.16	67.16	N/A	N/A
17:15-17:30	2	433.80	433.80	N/A	N/A
17:15-17:30	3	177.26	177.26	N/A	N/A
17:30-17:45	1	67.16	67.16	N/A	N/A
17:30-17:45	2	433.80	433.80	N/A	N/A
17:30-17:45	3	177.26	177.26	N/A	N/A
17:45-18:00	1	54.84	54.84	N/A	N/A
17:45-18:00	2	354.20	354.20	N/A	N/A
17:45-18:00	3	144.74	144.74	N/A	N/A
18:00-18:15	1	45.92	45.92	N/A	N/A
18:00-18:15	2	296.62	296.62	N/A	N/A
18:00-18:15	3	121.21	121.21	N/A	N/A

Turning Proportions

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

		To		
		1	2	3
From	1	0.00	17.00	44.00
	2	38.00	0.00	356.00
	3	12.00	149.00	0.00

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

		To		
		1	2	3
From	1	0.00	0.28	0.72
	2	0.10	0.00	0.90
	3	0.07	0.93	0.00

Vehicle Mix

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

		To		
		1	2	3
From	1	1.00	1.00	1.00
	2	1.00	1.00	1.00
	3	1.00	1.00	1.00

Heavy Vehicle Percentages - Roundabout 1 (for whole period)

		To		
		1	2	3
From	1	0.00	0.00	0.00
	2	0.00	0.00	0.00
	3	0.00	0.00	0.00

Results

Results Summary

Arm	Max RFC	Max Delay (min)	Max Queue (PCU)	Max LOS	Total Demand (PCU/hr)	Total Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (min)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Queueing Total Delay (PCU-min)	Inclusive Queueing Average Delay (min)	Slope	Intercept (PCU/hr)
1	0.06	0.06	0.06	A	55.97	83.96	4.58	0.05	0.05	4.58	0.05	1.072	1302.404
2	0.51	0.15	1.05	A	361.54	542.31	68.08	0.13	0.76	68.09	0.13	0.528	869.829
3	0.27	0.13	0.37	A	147.74	221.60	26.42	0.12	0.29	26.42	0.12	0.548	670.326

Main Results

Main results: (16:45-17:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	45.92	11.48	45.76	37.37	111.34	0.00	1183.01	669.42	0.039	0.00	0.04
2	296.62	74.16	294.51	124.10	33.01	0.00	852.40	614.84	0.348	0.00	0.53
3	121.21	30.30	120.31	299.12	28.40	0.00	654.77	637.84	0.185	0.00	0.23

Main results: (17:00-17:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	54.84	13.71	54.80	44.86	133.73	0.00	1159.00	669.42	0.047	0.04	0.05
2	354.20	88.55	353.48	149.01	39.53	0.00	848.96	614.84	0.417	0.53	0.71
3	144.74	36.18	144.51	358.92	34.09	0.00	651.65	637.84	0.222	0.23	0.28

Main results: (17:15-17:30)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	67.16	16.79	67.11	54.90	163.72	0.00	1126.85	669.42	0.060	0.05	0.06
2	433.80	108.45	432.48	182.42	48.41	0.00	844.27	614.84	0.514	0.71	1.04
3	177.26	44.32	176.90	439.17	41.71	0.00	647.48	637.84	0.274	0.28	0.37

Main results: (17:30-17:45)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	67.16	16.79	67.16	55.05	164.04	0.00	1126.50	669.42	0.060	0.06	0.06
2	433.80	108.45	433.76	182.76	48.44	0.00	844.25	614.84	0.514	1.04	1.05
3	177.26	44.32	177.26	440.37	41.84	0.00	647.41	637.84	0.274	0.37	0.37

Main results: (17:45-18:00)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	54.84	13.71	54.89	45.10	134.27	0.00	1158.43	669.42	0.047	0.06	0.05
2	354.20	88.55	355.48	149.57	39.59	0.00	848.92	614.84	0.417	1.05	0.73
3	144.74	36.18	145.08	360.79	34.29	0.00	651.54	637.84	0.222	0.37	0.29

Main results: (18:00-18:15)

Arm	Demand (PCU/hr)	Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)
1	45.92	11.48	45.96	37.73	112.39	0.00	1181.88	669.42	0.039	0.05	0.04
2	296.62	74.16	297.37	125.20	33.15	0.00	852.32	614.84	0.348	0.73	0.54
3	121.21	30.30	121.45	301.84	28.68	0.00	654.61	637.84	0.185	0.29	0.23

Queueing Delay Results

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.59	0.04	0.053	A	A
2	7.62	0.51	0.107	A	A
3	3.26	0.22	0.112	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.73	0.05	0.054	A	A
2	10.29	0.69	0.121	A	A
3	4.15	0.28	0.118	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.94	0.06	0.057	A	A
2	14.95	1.00	0.145	A	A
3	5.45	0.36	0.127	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.95	0.06	0.057	A	A
2	15.64	1.04	0.146	A	A
3	5.61	0.37	0.128	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.76	0.05	0.054	A	A
2	11.26	0.75	0.122	A	A
3	4.43	0.30	0.119	A	A

Queueing Delay results: (18:00-18:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (min)	Unsignalised Level Of Service	Signalised Level Of Service

1	0.62	0.04	0.053	A	A
2	8.32	0.55	0.108	A	A
3	3.52	0.23	0.113	A	A

Overview: Mini-roundabout Geometry

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Entry width (m)	Effective flare length (m)	Minimum approach road half-width (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island	Final Slope	Final Intercept (PCU/hr)
1	2.50	3.00	3.00	2.50	20.00	20.00	0.00		1.072	1302.404
2	2.75	4.50	4.00	2.75	13.00	3.00	0.00		0.528	869.829
3	3.65	4.00	2.00	3.65	10.00	2.00	0.00		0.548	670.326

Overview: Time Segment Results

Time Segment Results

Time Segment	Arm	Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Pedestrian Demand (Ped/hr)	Start Queue (PCU)	End Queue (PCU)	Queueing Total Delay (PCU-min)	Geometric Total Delay (PCU-min)	Average Delay Per Arriving Vehicle (min)
16:45-17:00	**1**	45.92	1183.01	0.039	0.00	0.00	0.04	0.59	(0.00)	0.053
16:45-17:00	**2**	296.62	852.40	0.348	0.00	0.00	0.53	7.62	(0.00)	0.107
16:45-17:00	**3**	121.21	654.77	0.185	0.00	0.00	0.23	3.26	(0.00)	0.112
17:00-17:15	**1**	54.84	1159.00	0.047	0.00	0.04	0.05	0.73	(0.00)	0.054
17:00-17:15	**2**	354.20	848.96	0.417	0.00	0.53	0.71	10.29	(0.00)	0.121
17:00-17:15	**3**	144.74	651.65	0.222	0.00	0.23	0.28	4.15	(0.00)	0.118
17:15-17:30	**1**	67.16	1126.85	0.060	0.00	0.05	0.06	0.94	(0.00)	0.057
17:15-17:30	**2**	433.80	844.27	0.514	0.00	0.71	1.04	14.95	(0.00)	0.145
17:15-17:30	**3**	177.26	647.48	0.274	0.00	0.28	0.37	5.45	(0.00)	0.127
17:30-17:45	**1**	67.16	1126.50	0.060	0.00	0.06	0.06	0.95	(0.00)	0.057
17:30-17:45	**2**	433.80	844.25	0.514	0.00	1.04	1.05	15.64	(0.00)	0.146
17:30-17:45	**3**	177.26	647.41	0.274	0.00	0.37	0.37	5.61	(0.00)	0.128
17:45-18:00	**1**	54.84	1158.43	0.047	0.00	0.06	0.05	0.76	(0.00)	0.054
17:45-18:00	**2**	354.20	848.92	0.417	0.00	1.05	0.73	11.26	(0.00)	0.122
17:45-18:00	**3**	144.74	651.54	0.222	0.00	0.37	0.29	4.43	(0.00)	0.119
18:00-18:15	**1**	45.92	1181.88	0.039	0.00	0.05	0.04	0.62	(0.00)	0.053
18:00-18:15	**2**	296.62	852.32	0.348	0.00	0.73	0.54	8.32	(0.00)	0.108
18:00-18:15	**3**	121.21	654.61	0.185	0.00	0.29	0.23	3.52	(0.00)	0.113

PICADY Assessments

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 4.0 (SEPT 2008)

FOR SALES AND DISTRIBUTION INFORMATION,
PROGRAM ADVICE AND MAINTENANCE CONTACT:
TRL SOFTWARE BUREAU
TEL: CROWTHORNE (01344) 770758, FAX: 770356
EMAIL: Software@trl.co.uk

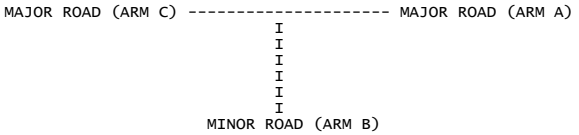
Run with file:-
"N:\Projects\AO85361 - Gedling Colliery Access Road\calculations\Junction Capacity Assessments\PICADY\
Arnold Lane - Lambley Lane.vpi"
(drive-on-the-left) at 15:03:36 on Tuesday, 20 May 2014

.RUN INFORMATION

RUN TITLE	: Arnold Lane / Lambley Lane
LOCATION	: Gedling
DATE	: 12/03/14
CLIENT	:
ENUMERATOR	: robert.holland [1918LT]
JOB NUMBER	: AO85361
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS Arnold Lane (north)
ARM B IS Lambley Lane
ARM C IS Arnold Lane (south)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

DATA ITEM		MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W)	6.25 M.
CENTRAL RESERVE WIDTH	(WCR)	0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B)	2.20 M.
- VISIBILITY	(VC-B)	0.00 M.
- BLOCKS TRAFFIC		YES
MINOR ROAD - VISIBILITY TO LEFT	(VB-C)	10.0 M.
- VISIBILITY TO RIGHT	(VB-A)	15.0 M.
- LANE 1 WIDTH	(WB-C)	3.20 M.
- LANE 2 WIDTH	(WB-A)	0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
646.06	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
498.06	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
573.96	0.22	0.22

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2028 Reference AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.82	14.74	9.82
ARM B	15.00	45.00	75.00	3.41	5.12	3.41
ARM C	15.00	45.00	75.00	13.76	20.64	13.76

.Demand set: 2028 Reference AM

TIME	FROM/TO	TURNING PROPORTIONS TURNING COUNTS (PERCENTAGE OF H.V.S) ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.127	0.873
		0.0	100.0	686.0
		(0.0)%	(0.0)%	(0.0)%
	ARM B	0.081	0.000	0.919
		22.0	0.0	251.0
		(0.0)%	(0.0)%	(0.0)%
	ARM C	0.703	0.297	0.000
		774.0	327.0	0.0
		(0.0)%	(0.0)%	(0.0)%

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2028 Reference AM
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	3.43	7.64	0.448		0.00	0.79	11.0		0.23
C-AB	4.10	7.40	0.555		0.00	2.02	28.9		0.29
A-B	1.25								
A-C	8.61								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	4.09	6.88	0.595		0.79	1.39	19.3		0.35
C-AB	4.90	6.98	0.702		2.02	4.56	65.9		0.47
A-B	1.50								
A-C	10.28								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	5.01	5.28	0.950		1.39	6.65	71.2		1.23
C-AB	6.00	6.39	0.939		4.56	19.76	231.4		1.31
A-B	1.84								
A-C	12.59								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	5.01	4.67	1.073		6.65	14.25	159.6		2.66
C-AB	6.00	6.39	0.939		19.76	25.39	373.8		3.14
A-B	1.84								
A-C	12.59								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									

B-AC	4.09	6.53	0.627	14.25	1.84	67.6	0.87	
C-AB	4.90	6.98	0.702	25.39	5.79	118.6	2.07	
A-B	1.50							
A-C	10.28							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	3.43	7.59	0.451		1.84	0.85	13.7		0.25
C-AB	4.10	7.40	0.555		5.79	2.29	36.1		0.36
A-B	1.25								
A-C	8.61								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.4	*
08.30	6.7	*******
08.45	14.3	**************
09.00	1.8	**
09.15	0.8	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	2.0	**
08.15	4.6	*****
08.30	19.8	********************
08.45	25.4	*************************
09.00	5.8	******
09.15	2.3	**

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	375.8	250.5	342.3	0.91	342.4	0.91
C-AB	450.1	300.1	854.7	1.90	855.0	1.90
A-B	137.6	91.8				
A-C	944.2	629.5				
ALL	2973.1	1982.1	1197.0	0.40	1197.4	0.40

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
646.06	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
498.06	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
573.96	0.22	0.22

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2028 Reference PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.31	13.97	9.31
ARM B	15.00	45.00	75.00	2.70	4.05	2.70
ARM C	15.00	45.00	75.00	12.19	18.28	12.19

.Demand set: 2028 Reference PM

TIME	TURNING PROPORTIONS / TURNING COUNTS / (PERCENTAGE OF H.V.S) FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.138	0.862
		0.0	103.0	642.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.282	0.000	0.718
		61.0	0.0	155.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.450	0.550	0.000
		439.0	536.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2028 Reference PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	2.71	6.02	0.451		0.00	0.79	10.9		0.29
C-AB	6.73	7.51	0.896		0.00	8.88	105.5		0.73
A-B	1.29								
A-C	8.06								
17.00-17.15									
B-AC	3.24	4.70	0.688		0.79	1.96	25.4		0.62
C-AB	8.03	7.11	1.129		8.88	38.65	377.3		2.78
A-B	1.54								
A-C	9.62								
17.15-17.30									
B-AC	3.96	0.93	4.251		1.96	47.54	371.9		27.85
C-AB	9.84	6.56	1.500		38.65	128.38	1256.1		9.91
A-B	1.89								
A-C	11.78								
17.30-17.45									
B-AC	3.96	0.00	***		47.54	107.00	1159.0		-999.00
C-AB	9.84	6.56	1.500		128.38	217.86	2598.5		23.52
A-B	1.89								
A-C	11.78								
17.45-18.00									
B-AC	3.24	0.00	***		107.00	155.54	1969.0		-999.00
C-AB	8.03	7.11	1.129		217.86	243.06	3466.0		30.89
A-B	1.54								
A-C	9.62								
18.00-18.15									
B-AC	2.71	0.00	***		155.54	196.19	2638.0		-999.00
C-AB	6.73	7.51	0.896		243.06	221.66	3485.5		31.75
A-B	1.29								
A-C	8.06								

WARNING THE ENTRY CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.
(AG23 REF. 8.4.2(i)).
WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

.
QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.8	*
17.15	2.0	**
17.30	47.5	**********
17.45	107.0	**********
18.00	155.5	**********
18.15	196.2	**********

.
QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	8.9	*********
17.15	38.6	**********
17.30	128.4	**********
17.45	217.9	**********
18.00	243.1	**********
18.15	221.7	**********

.
QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	297.3	198.2	6174.3	20.77	********	********
C-AB	737.8	491.8	11288.8	15.30	14560.2	19.74
A-B	141.8	94.5				
A-C	883.7	589.1				
ALL	2664.8	1776.5	17463.1	6.55	**********	********

WARNING THE CAPACITY OF AT LEAST ONE STREAM HAS BECOME ZERO DURING THE PERIOD MODELLED.
* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT
(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
646.06	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
498.06	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
573.96	0.22	0.22

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2028 Design AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	5.85	8.77	5.85
ARM B	15.00	45.00	75.00	3.55	5.32	3.55
ARM C	15.00	45.00	75.00	9.65	14.47	9.65

.Demand set: 2028 Design AM

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00				
	ARM A	0.000	0.111	0.889
		0.0	52.0	416.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.102	0.000	0.898
		29.0	0.0	255.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.860	0.140	0.000
		664.0	108.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2028 Design AM
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	3.56	8.76	0.407		0.00	0.67	9.5		0.19
C-AB	1.36	8.27	0.164		0.00	0.22	3.3		0.14
A-B	0.65								
A-C	5.22								
08.00-08.15									
B-AC	4.26	8.39	0.507		0.67	1.00	14.2		0.24
C-AB	1.62	8.02	0.202		0.22	0.31	4.6		0.16
A-B	0.78								
A-C	6.23								
08.15-08.30									
B-AC	5.21	7.87	0.663		1.00	1.84	25.1		0.36
C-AB	1.98	7.68	0.258		0.31	0.48	7.1		0.18
A-B	0.95								
A-C	7.63								
08.30-08.45									
B-AC	5.21	7.86	0.663		1.84	1.90	28.1		0.38
C-AB	1.98	7.68	0.258		0.48	0.48	7.3		0.18
A-B	0.95								
A-C	7.63								
08.45-09.00									
B-AC	4.26	8.39	0.507		1.90	1.06	17.0		0.25
C-AB	1.62	8.02	0.202		0.48	0.32	4.9		0.16
A-B	0.78								
A-C	6.23								
09.00-09.15									
B-AC	3.56	8.75	0.407		1.06	0.70	11.0		0.19
C-AB	1.36	8.27	0.164		0.32	0.23	3.5		0.14
A-B	0.65								
A-C	5.22								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.0	*
08.30	1.8	**
08.45	1.9	**
09.00	1.1	*
09.15	0.7	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.2
08.15	0.3
08.30	0.5
08.45	0.5
09.00	0.3
09.15	0.2

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	390.9	260.6	104.9	0.27	105.0	0.27
C-AB	148.7	99.1	30.8	0.21	30.8	0.21
A-B	71.6	47.7				
A-C	572.6	381.7				
ALL	2097.7	1398.4	135.7	0.06	135.7	0.06

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
646.06	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
498.06	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
573.96	0.22	0.22

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2034 Design AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
A	15.00	45.00	75.00	6.06	9.09	6.06
B	15.00	45.00	75.00	3.67	5.51	3.67
C	15.00	45.00	75.00	9.99	14.98	9.99

.Demand set: 2034 Design AM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 08.00	ARM A	0.000	0.111	0.889
		0.0	54.0	431.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.102	0.000	0.898
		30.0	0.0	264.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.860	0.140	0.000
		687.0	112.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2034 Design AM
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	3.69	8.69	0.424		0.00	0.72	10.1		0.20
C-AB	1.41	8.23	0.171		0.00	0.24	3.5		0.15
A-B	0.68								
A-C	5.41								
08.00-08.15									
B-AC	4.40	8.31	0.530		0.72	1.09	15.5		0.25
C-AB	1.68	7.97	0.211		0.24	0.33	5.0		0.16
A-B	0.81								
A-C	6.46								
08.15-08.30									
B-AC	5.39	7.76	0.696		1.09	2.11	28.5		0.40
C-AB	2.06	7.61	0.270		0.33	0.52	7.7		0.18
A-B	0.99								
A-C	7.91								
08.30-08.45									
B-AC	5.39	7.75	0.696		2.11	2.19	32.4		0.42
C-AB	2.06	7.61	0.270		0.52	0.53	8.0		0.18
A-B	0.99								
A-C	7.91								
08.45-09.00									
B-AC	4.40	8.31	0.530		2.19	1.17	18.8		0.26
C-AB	1.68	7.97	0.211		0.53	0.35	5.3		0.16
A-B	0.81								
A-C	6.46								
09.00-09.15									
B-AC	3.69	8.69	0.425		1.17	0.75	11.9		0.20
C-AB	1.41	8.23	0.171		0.35	0.25	3.7		0.15
A-B	0.68								
A-C	5.41								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.1	**
08.45	2.2	**
09.00	1.2	*
09.15	0.8	*

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.2	
08.15	0.3	
08.30	0.5	*
08.45	0.5	*
09.00	0.3	
09.15	0.2	

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN) (MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	404.7	269.8	117.1 0.29	117.2	0.29

I	C-AB	I	154.2	I	102.8	I	33.2	I	0.22	I
I	A-B	I	74.3	I	49.6	I		I		I
I	A-C	I	593.2	I	395.5	I		I		I
I	ALL	I	2172.0	I	1448.0	I	150.3	I	0.07	I

I	C-AB	I	33.2	I	0.22	I				
I	A-B	I		I		I				
I	A-C	I		I		I				
I	ALL	I	150.4	I	0.07	I				

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
646.06	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
498.06	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
573.96	0.22	0.22

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2028 Design PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	4.30	6.45	4.30
ARM B	15.00	45.00	75.00	1.99	2.98	1.99
ARM C	15.00	45.00	75.00	13.20	19.80	13.20

.Demand set: 2028 Design PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00				
	ARM A	0.000	0.137	0.863
		0.0	47.0	297.0
		(0.0)I	(0.0)I	(0.0)I
	ARM B	0.302	0.000	0.698
		48.0	0.0	111.0
		(0.0)I	(0.0)I	(0.0)I
	ARM C	0.687	0.313	0.000
		725.0	331.0	0.0
		(0.0)I	(0.0)I	(0.0)I

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2028 Design PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	2.00	7.42	0.269		0.00	0.36	5.1		0.18
C-AB	4.15	8.62	0.482		0.00	1.34	19.5		0.22
A-B	0.59								
A-C	3.73								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	2.38	6.78	0.351		0.36	0.53	7.6		0.23
C-AB	4.96	8.43	0.588		1.34	2.37	35.4		0.29
A-B	0.70								
A-C	4.45								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	2.92	5.78	0.505		0.53	0.98	13.6		0.34
C-AB	6.07	8.18	0.743		2.37	5.64	80.5		0.46
A-B	0.86								
A-C	5.45								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	2.92	5.70	0.512		0.98	1.02	15.1		0.36
C-AB	6.07	8.18	0.743		5.64	5.96	92.8		0.55
A-B	0.86								
A-C	5.45								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	2.38	6.70	0.356		1.02	0.56	9.0		0.23
C-AB	4.96	8.43	0.588		5.96	2.66	41.8		0.34
A-B	0.70								
A-C	4.45								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	2.00	7.38	0.270		0.56	0.38	5.9		0.19
C-AB	4.15	8.62	0.482		2.66	1.47	22.5		0.24
A-B	0.59								
A-C	3.73								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.5	*
17.30	1.0	*
17.45	1.0	*
18.00	0.6	*
18.15	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.3	*
17.15	2.4	**
17.30	5.6	******
17.45	6.0	******
18.00	2.7	***
18.15	1.5	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	218.9	145.9	56.3	0.26	56.3	0.26
C-AB	455.6	303.7	292.6	0.64	292.7	0.64
A-B	64.7	43.1				
A-C	408.8	272.5				
ALL	2145.8	1430.6	348.9	0.16	349.0	0.16

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
646.06	0.25	0.10

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
498.06	0.23	0.09	0.14	0.32

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
573.96	0.22	0.22

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2034 Design PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
ARM A	15.00	45.00	75.00	4.47	6.71	4.47
ARM B	15.00	45.00	75.00	2.06	3.09	2.06
ARM C	15.00	45.00	75.00	13.73	20.59	13.73

.Demand set: 2034 Design PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 17.00	ARM A	0.000	0.137	0.863
		0.0	49.0	309.0
		(0.0)%	(0.0)%	(0.0)%
	ARM B	0.303	0.000	0.697
		50.0	0.0	115.0
		(0.0)%	(0.0)%	(0.0)%
	ARM C	0.687	0.313	0.000
		754.0	344.0	0.0
		(0.0)%	(0.0)%	(0.0)%

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2034 Design PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	2.07	7.29	0.284		0.00	0.39	5.5		0.19
C-AB	4.32	8.58	0.503		0.00	1.50	21.8		0.23
A-B	0.61								
A-C	3.88								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	2.47	6.61	0.374		0.39	0.58	8.3		0.24
C-AB	5.15	8.39	0.615		1.50	2.73	40.7		0.31
A-B	0.73								
A-C	4.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	3.03	5.52	0.549		0.58	1.15	15.8		0.39

C-AB	6.31	8.12	0.777	2.73	6.95	97.6		0.53
A-B	0.90							
A-C	5.67							

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	3.03	5.41	0.559		1.15	1.22	18.0		0.42
C-AB	6.31	8.12	0.777		6.95	7.45	116.2		0.67
A-B	0.90								
A-C	5.67								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	2.47	6.50	0.381		1.22	0.63	10.1		0.25
C-AB	5.15	8.39	0.615		7.45	3.11	49.4		0.39
A-B	0.73								
A-C	4.63								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	2.07	7.24	0.286		0.63	0.41	6.4		0.19
C-AB	4.32	8.58	0.503		3.11	1.65	25.5		0.25
A-B	0.61								
A-C	3.88								

WARNING NO MARGINAL ANALYSIS OF CAPACITIES AS MAJOR ROAD BLOCKING MAY OCCUR

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.4	
17.15	0.6	*
17.30	1.2	*
17.45	1.2	*
18.00	0.6	*
18.15	0.4	

QUEUE FOR STREAM C-AB

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.5	**
17.15	2.7	***
17.30	7.0	*******
17.45	7.4	*******
18.00	3.1	***
18.15	1.6	**

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND (VEH)	TOTAL DEMAND (VEH/H)	* QUEUEING * DELAY * (MIN)	* QUEUEING * DELAY * (MIN/VEH)	* INCLUSIVE QUEUEING * DELAY * (MIN)	* INCLUSIVE QUEUEING * DELAY * (MIN/VEH)
B-AC	227.1	151.4	64.1	0.28	64.1	0.28
C-AB	473.5	315.7	351.0	0.74	351.2	0.74
A-B	67.4	45.0				
A-C	425.3	283.5				
ALL	2231.2	1487.5	415.1	0.19	415.3	0.19

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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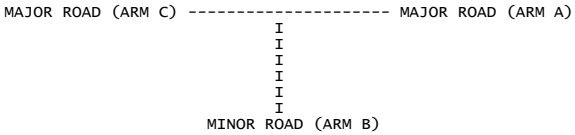
Run with file:-
"N:\Projects\A085361 - Gedling Colliery Access Road\calculations\Junction Capacity Assessments\PICADY\
GAR-Lambley Lane north.vpi"
(drive-on-the-left) at 15:50:57 on Friday, 28 March 2014

.RUN INFORMATION

RUN TITLE	: GAR/Lambley Lane (north)
LOCATION	: Gedling
DATE	: 12/03/14
CLIENT	:
ENUMERATOR	: robert.holland [1918LT]
JOB NUMBER	: A085361
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS GAR (west)
ARM B IS Lambley Lane
ARM C IS GAR (east)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.00 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.50 M.
- VISIBILITY	(VC-B)100.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 44.0 M.
- VISIBILITY TO RIGHT	(VB-A) 39.0 M.
- LANE 1 WIDTH	(WB-C) 4.70 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
758.86	0.28	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
598.05	0.26	0.10	0.17	0.38

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
721.27	0.27	0.27

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2028 Design AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	9.04	13.56	9.04
ARM B	15.00	45.00	75.00	3.36	5.04	3.36
ARM C	15.00	45.00	75.00	6.31	9.47	6.31

.Demand set: 2028 Design AM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.266	0.734
		0.0	192.0	531.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.610	0.000	0.390
		164.0	0.0	105.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.388	0.612	0.000
		196.0	309.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2028 Design AM
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	3.38	7.29	0.463		0.00	0.84	11.6		0.25
C-A	2.46								
C-B	3.88	9.60	0.404		0.00	0.67	9.4		0.17
A-B	2.41								
A-C	6.66								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	4.03	6.53	0.617		0.84	1.52	20.8		0.39
C-A	2.94								
C-B	4.63	9.13	0.507		0.67	1.00	14.3		0.22
A-B	2.88								
A-C	7.96								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	4.94	5.45	0.906		1.52	5.39	61.2		1.06
C-A	3.60								
C-B	5.67	8.47	0.669		1.00	1.90	25.9		0.34
A-B	3.52								
A-C	9.74								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	4.94	5.43	0.909		5.39	6.62	91.2		1.45
C-A	3.60								
C-B	5.67	8.47	0.669		1.90	1.95	29.0		0.35
A-B	3.52								
A-C	9.74								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	4.03	6.50	0.620		6.62	1.75	35.4		0.52
C-A	2.94								
C-B	4.63	9.13	0.507		1.95	1.06	17.0		0.23
A-B	2.88								
A-C	7.96								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	3.38	7.27	0.464		1.75	0.89	14.4		0.26
C-A	2.46								
C-B	3.88	9.60	0.404		1.06	0.69	10.8		0.18
A-B	2.41								
A-C	6.66								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.8	*
08.15	1.5	**
08.30	5.4	*****
08.45	6.6	*******
09.00	1.8	**
09.15	0.9	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.0	*
08.30	1.9	**
08.45	2.0	**
09.00	1.1	*
09.15	0.7	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	370.3	246.8	234.4	0.63	234.5	0.63
C-A	269.8	179.9				
C-B	425.3	283.5	106.4	0.25	106.4	0.25
A-B	264.3	176.2				
A-C	730.9	487.3				
ALL	2060.5	1373.7	340.8	0.17	340.9	0.17

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
758.86	0.28	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
598.05	0.26	0.10	0.17	0.38

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
721.27	0.27	0.27

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2028 Design PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	7.63	11.44	7.63
ARM B	15.00	45.00	75.00	4.15	6.23	4.15
ARM C	15.00	45.00	75.00	8.49	12.73	8.49

.Demand set: 2028 Design PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.480	0.520
		0.0	293.0	317.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.361	0.000	0.639
		120.0	0.0	212.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.377	0.623	0.000
		256.0	423.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2028 Design PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	4.17	8.50	0.490		0.00	0.93	13.0		0.22
C-A	3.21								
C-B	5.31	9.98	0.532		0.00	1.10	15.4		0.21
A-B	3.68								
A-C	3.98								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	4.97	7.79	0.638		0.93	1.67	22.9		0.34
C-A	3.84								
C-B	6.34	9.58	0.662		1.10	1.85	25.7		0.30
A-B	4.39								
A-C	4.75								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	6.09	6.72	0.907		1.67	5.78	66.3		0.92
C-A	4.70								
C-B	7.76	9.03	0.860		1.85	4.77	58.9		0.62
A-B	5.38								
A-C	5.82								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	6.09	6.65	0.916		5.78	7.22	98.9		1.27
C-A	4.70								
C-B	7.76	9.03	0.860		4.77	5.28	76.0		0.73
A-B	5.38								
A-C	5.82								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	4.97	7.71	0.646		7.22	1.95	38.9		0.47
C-A	3.84								
C-B	6.34	9.58	0.662		5.28	2.07	35.9		0.35
A-B	4.39								
A-C	4.75								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	4.17	8.47	0.492		1.95	1.00	16.0		0.24
C-A	3.21								
C-B	5.31	9.98	0.532		2.07	1.17	18.7		0.22
A-B	3.68								
A-C	3.98								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	0.9	*
17.15	1.7	**
17.30	5.8	******
17.45	7.2	*******
18.00	1.9	**
18.15	1.0	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	1.9	**
17.30	4.8	*****
17.45	5.3	*****
18.00	2.1	**
18.15	1.2	*

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	457.0	304.6	255.9	0.56	256.0	0.56
C-A	352.4	234.9				
C-B	582.2	388.2	230.5	0.40	230.6	0.40
A-B	403.3	268.9				
A-C	436.3	290.9				
ALL	2231.2	1487.5	486.5	0.22	486.6	0.22

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
758.86	0.28	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
598.05	0.26	0.10	0.17	0.38

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
721.27	0.27	0.27

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2034 Design AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK

ARM A	15.00	45.00	75.00	9.36	14.04	9.36	
ARM B	15.00	45.00	75.00	3.49	5.23	3.49	
ARM C	15.00	45.00	75.00	6.54	9.81	6.54	

Demand set: 2034 Design AM

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.266	0.734
		0.0	199.0	550.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.609	0.000	0.391
		170.0	0.0	109.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.388	0.612	0.000
		203.0	320.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2034 Design AM
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	3.50	7.16	0.489		0.00	0.93	12.8		0.26
C-A	2.55								
C-B	4.02	9.51	0.422		0.00	0.72	10.1		0.18
A-B	2.50								
A-C	6.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	4.18	6.36	0.657		0.93	1.77	24.0		0.44
C-A	3.04								
C-B	4.79	9.02	0.531		0.72	1.10	15.6		0.23
A-B	2.98								
A-C	8.24								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	5.12	5.23	0.978		1.77	7.75	81.4		1.39
C-A	3.73								
C-B	5.87	8.35	0.703		1.10	2.19	29.6		0.38
A-B	3.65								
A-C	10.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	5.12	5.21	0.983		7.75	10.76	140.3		2.17
C-A	3.73								
C-B	5.87	8.35	0.703		2.19	2.27	33.6		0.40
A-B	3.65								
A-C	10.09								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	4.18	6.33	0.661		10.76	2.15	57.3		0.80
C-A	3.04								
C-B	4.79	9.02	0.531		2.27	1.17	18.8		0.24
A-B	2.98								
A-C	8.24								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	3.50	7.13	0.491		2.15	1.00	16.3		0.29
C-A	2.55								
C-B	4.02	9.51	0.422		1.17	0.75	11.7		0.18
A-B	2.50								
A-C	6.90								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.9	*
08.15	1.8	**
08.30	7.7	********
08.45	10.8	***********
09.00	2.2	**
09.15	1.0	*

.

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.7	*
08.15	1.1	*
08.30	2.2	**
08.45	2.3	**
09.00	1.2	*
09.15	0.7	*

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	384.0	256.0	332.0	0.86	332.1	0.86
C-A	279.4	186.3				
C-B	440.5	293.6	119.5	0.27	119.5	0.27
A-B	273.9	182.6				
A-C	757.0	504.7				
ALL	2134.8	1423.2	451.5	0.21	451.6	0.21

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
758.86	0.28	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
598.05	0.26	0.10	0.17	0.38

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
721.27	0.27	0.27

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2034 Design PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
A	15.00	45.00	75.00	7.94	11.91	7.94
B	15.00	45.00	75.00	4.31	6.47	4.31
C	15.00	45.00	75.00	8.82	13.24	8.82

.Demand set: 2034 Design PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.480	0.520
		0.0	305.0	330.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.362	0.000	0.638
		125.0	0.0	220.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.377	0.623	0.000
		266.0	440.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2034 Design PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	4.33	8.36	0.518		0.00	1.04	14.4		0.24
C-A	3.34								
C-B	5.52	9.89	0.558		0.00	1.22	16.9		0.22
A-B	3.83								
A-C	4.14								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	5.17	7.60	0.680		1.04	1.97	26.7		0.39
C-A	3.99								
C-B	6.59	9.48	0.696		1.22	2.14	29.3		0.33
A-B	4.57								
A-C	4.94								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	6.33	6.45	0.981		1.97	8.67	91.2		1.25
C-A	4.88								
C-B	8.07	8.91	0.907		2.14	6.28	73.9		0.76
A-B	5.60								
A-C	6.06								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	6.33	6.35	0.997		8.67	12.71	162.3		2.05
C-A	4.88								
C-B	8.07	8.91	0.907		6.28	7.34	103.2		0.98
A-B	5.60								
A-C	6.06								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	5.17	7.47	0.692		12.71	2.49	69.2		0.79
C-A	3.99								
C-B	6.59	9.48	0.696		7.34	2.45	45.9		0.43
A-B	4.57								
A-C	4.94								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	4.33	8.31	0.521		2.49	1.12	18.3		0.26
C-A	3.34								
C-B	5.52	9.89	0.558		2.45	1.30	21.0		0.24
A-B	3.83								
A-C	4.14								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.0	*
17.15	2.0	**
17.30	8.7	*********
17.45	12.7	*************
18.00	2.5	**
18.15	1.1	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	2.1	**
17.30	6.3	******
17.45	7.3	*******
18.00	2.5	**
18.15	1.3	*

.

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	474.9	316.6	382.0	0.80	382.1	0.80
C-A	366.1	244.1				
C-B	605.6	403.8	290.1	0.48	290.2	0.48
A-B	419.8	279.9				
A-C	454.2	302.8				
ALL	2320.7	1547.1	672.2	0.29	672.3	0.29

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

CAPACITIES, QUEUES, AND DELAYS AT 3 OR 4-ARM MAJOR/MINOR PRIORITY JUNCTIONS

PICADY 5.1 ANALYSIS PROGRAM
RELEASE 5.0 (JUNE 2010)

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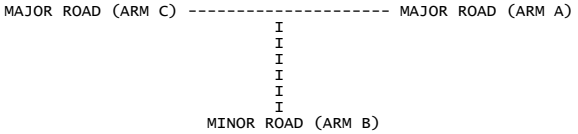
Run with file:-
"N:\Projects\A085361 - Gedling Colliery Access Road\calculations\Junction Capacity Assessments\PICADY\
GAR-Lambley Lane south.vpi"
(drive-on-the-left) at 15:54:37 on Friday, 28 March 2014

.RUN INFORMATION

RUN TITLE	: GAR / Lambley Lane
LOCATION	: Gedling
DATE	: 12/03/14
CLIENT	:
ENUMERATOR	: robert.holland [1918LT]
JOB NUMBER	: A085361
STATUS	:
DESCRIPTION	:

.MAJOR/MINOR JUNCTION CAPACITY AND DELAY

INPUT DATA



ARM A IS GAR (east)
ARM B IS Lambley Lane
ARM C IS GAR (west)

.STREAM LABELLING CONVENTION

STREAM A-B CONTAINS TRAFFIC GOING FROM ARM A TO ARM B
STREAM B-AC CONTAINS TRAFFIC GOING FROM ARM B TO ARM A AND TO ARM C
ETC.

.GEOMETRIC DATA

DATA ITEM	MINOR ROAD B
TOTAL MAJOR ROAD CARRIAGEWAY WIDTH	(W) 7.30 M.
CENTRAL RESERVE WIDTH	(WCR) 0.00 M.
MAJOR ROAD RIGHT TURN - WIDTH	(WC-B) 3.50 M.
- VISIBILITY	(VC-B)100.00 M.
- BLOCKS TRAFFIC (SPACES)	NO (0)
MINOR ROAD - VISIBILITY TO LEFT	(VB-C) 43.0 M.
- VISIBILITY TO RIGHT	(VB-A) 32.0 M.
- LANE 1 WIDTH	(WB-C) 4.78 M.
- LANE 2 WIDTH	(WB-A) 0.00 M.

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
758.86	0.28	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
597.66	0.26	0.10	0.16	0.37

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
721.27	0.26	0.26

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2028 Design AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	4.50	6.75	4.50
ARM B	15.00	45.00	75.00	1.95	2.93	1.95
ARM C	15.00	45.00	75.00	8.79	13.18	8.79

.Demand set: 2028 Design AM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15	ARM A	0.000	0.486	0.514
		0.0	175.0	185.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.737	0.000	0.263
		115.0	0.0	41.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.863	0.137	0.000
		607.0	96.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2028 Design AM
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	1.96	8.24	0.238		0.00	0.31	4.4		0.16
C-A	7.62								
C-B	1.20	10.83	0.111		0.00	0.12	1.8		0.10
A-B	2.20								
A-C	2.32								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.00-08.15									
B-AC	2.34	7.77	0.301		0.31	0.42	6.1		0.18
C-A	9.09								
C-B	1.44	10.60	0.136		0.12	0.16	2.3		0.11
A-B	2.62								
A-C	2.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.15-08.30									
B-AC	2.86	7.11	0.403		0.42	0.66	9.4		0.23
C-A	11.14								
C-B	1.76	10.28	0.171		0.16	0.20	3.0		0.12
A-B	3.21								
A-C	3.39								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.30-08.45									
B-AC	2.86	7.11	0.403		0.66	0.67	9.9		0.24
C-A	11.14								
C-B	1.76	10.28	0.171		0.20	0.21	3.1		0.12
A-B	3.21								
A-C	3.39								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
08.45-09.00									
B-AC	2.34	7.77	0.301		0.67	0.44	6.8		0.19
C-A	9.09								
C-B	1.44	10.60	0.136		0.21	0.16	2.4		0.11
A-B	2.62								
A-C	2.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
09.00-09.15									
B-AC	1.96	8.23	0.238		0.44	0.32	4.9		0.16
C-A	7.62								
C-B	1.20	10.83	0.111		0.16	0.13	1.9		0.10
A-B	2.20								
A-C	2.32								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.4	
08.30	0.7	*
08.45	0.7	*
09.00	0.4	
09.15	0.3	

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	214.7	143.1	41.6	0.19	41.6	0.19
C-A	835.5	557.0				
C-B	132.1	88.1	14.5	0.11	14.5	0.11
A-B	240.9	160.6				
A-C	254.6	169.8				
ALL	1677.9	1118.6	56.2	0.03	56.2	0.03

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
758.86	0.28	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
597.66	0.26	0.10	0.16	0.37

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
721.27	0.26	0.26

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2028 Design PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	NUMBER OF MINUTES FROM START WHEN TOP OF PEAK IS REACHED	NUMBER OF MINUTES FROM START WHEN FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	RATE OF FLOW (VEH/MIN) AT TOP OF PEAK	RATE OF FLOW (VEH/MIN) AFTER PEAK
ARM A	15.00	45.00	75.00	4.69	7.03	4.69
ARM B	15.00	45.00	75.00	4.80	7.20	4.80
ARM C	15.00	45.00	75.00	4.78	7.16	4.78

.Demand set: 2028 Design PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.333	0.667
		0.0	125.0	250.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.674	0.000	0.326
		259.0	0.0	125.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.919	0.081	0.000
		351.0	31.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

. QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2028 Design PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	4.82	9.00	0.535		0.00	1.11	15.4		0.23
C-A	4.40								
C-B	0.39	10.78	0.036		0.00	0.04	0.5		0.10
A-B	1.57								
A-C	3.14								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	5.75	8.66	0.664		1.11	1.86	25.7		0.33
C-A	5.26								
C-B	0.46	10.54	0.044		0.04	0.05	0.7		0.10
A-B	1.87								
A-C	3.75								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	7.05	8.19	0.860		1.86	4.69	57.7		0.67
C-A	6.44								
C-B	0.57	10.21	0.056		0.05	0.06	0.9		0.10
A-B	2.29								
A-C	4.59								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	7.05	8.19	0.860		4.69	5.23	75.0		0.80
C-A	6.44								
C-B	0.57	10.21	0.056		0.06	0.06	0.9		0.10
A-B	2.29								
A-C	4.59								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	5.75	8.66	0.664		5.23	2.10	36.7		0.39
C-A	5.26								
C-B	0.46	10.54	0.044		0.06	0.05	0.7		0.10
A-B	1.87								
A-C	3.75								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	4.82	9.00	0.535		2.10	1.19	19.1		0.25
C-A	4.40								
C-B	0.39	10.78	0.036		0.05	0.04	0.6		0.10
A-B	1.57								
A-C	3.14								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.1	*
17.15	1.9	**
17.30	4.7	*****
17.45	5.2	*****
18.00	2.1	**
18.15	1.2	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	528.5	352.4	229.7	0.43	229.7	0.43
C-A	483.1	322.1				
C-B	42.7	28.4	4.2	0.10	4.2	0.10
A-B	172.1	114.7				
A-C	344.1	229.4				
ALL	1570.5	1047.0	233.9	0.15	234.0	0.15

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
758.86	0.28	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
597.66	0.26	0.10	0.16	0.37

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
721.27	0.26	0.26

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2034 Design AM

TIME PERIOD BEGINS 07.45 AND ENDS 09.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK

ARM A	15.00	45.00	75.00	4.65	6.98	4.65	
ARM B	15.00	45.00	75.00	2.01	3.02	2.01	
ARM C	15.00	45.00	75.00	9.09	13.63	9.09	

Demand set: 2034 Design AM

TIME	FROM/TO	ARM A	ARM B	ARM C
07.45 - 09.15				
	ARM A	0.000	0.487	0.513
		0.0	181.0	191.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.739	0.000	0.261
		119.0	0.0	42.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.864	0.136	0.000
		628.0	99.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2034 Design AM
AND FOR TIME PERIOD 1

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
07.45-08.00									
B-AC	2.02	8.15	0.248		0.00	0.32	4.6		0.16
C-A	7.88								
C-B	1.24	10.79	0.115		0.00	0.13	1.9		0.10
A-B	2.27								
A-C	2.40								
08.00-08.15									
B-AC	2.41	7.66	0.315		0.32	0.45	6.5		0.19
C-A	9.41								
C-B	1.48	10.55	0.141		0.13	0.16	2.4		0.11
A-B	2.71								
A-C	2.86								
08.15-08.30									
B-AC	2.95	6.98	0.423		0.45	0.71	10.2		0.25
C-A	11.52								
C-B	1.82	10.22	0.178		0.16	0.21	3.1		0.12
A-B	3.32								
A-C	3.50								
08.30-08.45									
B-AC	2.95	6.98	0.423		0.71	0.72	10.8		0.25
C-A	11.52								
C-B	1.82	10.22	0.178		0.21	0.22	3.2		0.12
A-B	3.32								
A-C	3.50								
08.45-09.00									
B-AC	2.41	7.66	0.315		0.72	0.47	7.3		0.19
C-A	9.41								
C-B	1.48	10.55	0.141		0.22	0.16	2.5		0.11
A-B	2.71								
A-C	2.86								
09.00-09.15									
B-AC	2.02	8.15	0.248		0.47	0.33	5.2		0.16
C-A	7.88								
C-B	1.24	10.79	0.115		0.16	0.13	2.0		0.10
A-B	2.27								
A-C	2.40								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
08.00	0.3	
08.15	0.5	
08.30	0.7	*
08.45	0.7	*
09.00	0.5	
09.15	0.3	

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QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
08.00	0.1
08.15	0.2
08.30	0.2
08.45	0.2
09.00	0.2
09.15	0.1

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND	* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	221.6	147.7	44.7	0.20	44.7	0.20
C-A	864.4	576.3				
C-B	136.3	90.8	15.2	0.11	15.2	0.11
A-B	249.1	166.1				
A-C	262.9	175.3				
ALL	1734.3	1156.2	59.8	0.03	59.8	0.03

* DELAY IS THAT OCCURRING ONLY WITHIN THE TIME PERIOD
* INCLUSIVE DELAY INCLUDES DELAY SUFFERED BY VEHICLES
WHICH ARE STILL QUEUEING AFTER THE END OF THE TIME PERIOD
* THESE WILL ONLY BE SIGNIFICANTLY DIFFERENT IF THERE IS
A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******

.SLOPES AND INTERCEPT

(NB:Streams may be combined, in which case capacity will be adjusted)

Intercept For STREAM B-C	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
758.86	0.28	0.11

Intercept For STREAM B-A	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B	Slope For Opposing STREAM C-A	Slope For Opposing STREAM C-B
597.66	0.26	0.10	0.16	0.37

Intercept For STREAM C-B	Slope For Opposing STREAM A-C	Slope For Opposing STREAM A-B
721.27	0.26	0.26

(NB These values do not allow for any site specific corrections)

.TRAFFIC DEMAND DATA

ARM	FLOW SCALE(%)
A	100
B	100
C	100

.Demand set: 2034 Design PM

TIME PERIOD BEGINS 16.45 AND ENDS 18.15

LENGTH OF TIME PERIOD - 90 MIN.
LENGTH OF TIME SEGMENT - 15 MIN.

.DEMAND FLOW PROFILES ARE SYNTHESISED FROM TURNING COUNT DATA

ARM	NUMBER OF MINUTES FROM START WHEN FLOW STARTS TO RISE	TOP OF PEAK IS REACHED	FLOW STOPS FALLING	RATE OF FLOW (VEH/MIN) BEFORE PEAK	AT TOP OF PEAK	AFTER PEAK
A	15.00	45.00	75.00	4.88	7.31	4.88
B	15.00	45.00	75.00	4.99	7.48	4.99
C	15.00	45.00	75.00	4.96	7.44	4.96

.Demand set: 2034 Design PM

TURNING PROPORTIONS
TURNING COUNTS
(PERCENTAGE OF H.V.S)

TIME	FROM/TO	ARM A	ARM B	ARM C
16.45 - 18.15				
	ARM A	0.000	0.333	0.667
		0.0	130.0	260.0
		(0.0)	(0.0)	(0.0)
	ARM B	0.674	0.000	0.326
		269.0	0.0	130.0
		(0.0)	(0.0)	(0.0)
	ARM C	0.919	0.081	0.000
		365.0	32.0	0.0
		(0.0)	(0.0)	(0.0)

TURNING PROPORTIONS ARE CALCULATED FROM TURNING COUNT DATA

QUEUE AND DELAY INFORMATION FOR EACH 15 MIN TIME SEGMENT

FOR DEMAND SET 2034 Design PM
AND FOR TIME PERIOD 2

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
16.45-17.00									
B-AC	5.01	8.93	0.560		0.00	1.23	16.9		0.24
C-A	4.58								
C-B	0.40	10.73	0.037		0.00	0.04	0.6		0.10
A-B	1.63								
A-C	3.26								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.00-17.15									
B-AC	5.98	8.58	0.696		1.23	2.13	29.1		0.37
C-A	5.47								
C-B	0.48	10.48	0.046		0.04	0.05	0.7		0.10
A-B	1.95								
A-C	3.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.15-17.30									
B-AC	7.32	8.09	0.905		2.13	6.06	71.3		0.81
C-A	6.70								
C-B	0.59	10.13	0.058		0.05	0.06	0.9		0.10
A-B	2.39								
A-C	4.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.30-17.45									
B-AC	7.32	8.09	0.905		6.06	7.10	99.7		1.05
C-A	6.70								
C-B	0.59	10.13	0.058		0.06	0.06	0.9		0.10
A-B	2.39								
A-C	4.77								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
17.45-18.00									
B-AC	5.98	8.58	0.697		7.10	2.48	46.4		0.48
C-A	5.47								
C-B	0.48	10.48	0.046		0.06	0.05	0.7		0.10
A-B	1.95								
A-C	3.90								

TIME	DEMAND (VEH/MIN)	CAPACITY (VEH/MIN)	DEMAND/ CAPACITY (RFC)	PEDESTRIAN FLOW (PEDS/MIN)	START QUEUE (VEHS)	END QUEUE (VEHS)	DELAY (VEH.MIN/ TIME SEGMENT)	GEOMETRIC DELAY (VEH.MIN/ TIME SEGMENT)	AVERAGE DELAY PER ARRIVING VEHICLE (MIN)
18.00-18.15									
B-AC	5.01	8.93	0.560		2.48	1.32	21.3		0.26
C-A	4.58								
C-B	0.40	10.73	0.037		0.05	0.04	0.6		0.10
A-B	1.63								
A-C	3.26								

QUEUE FOR STREAM B-AC

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE	
17.00	1.2	*
17.15	2.1	**
17.30	6.1	******
17.45	7.1	*******
18.00	2.5	**
18.15	1.3	*

QUEUE FOR STREAM C-B

TIME SEGMENT ENDING	NO. OF VEHICLES IN QUEUE
17.00	0.0
17.15	0.0
17.30	0.1
17.45	0.1
18.00	0.0
18.15	0.0

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QUEUEING DELAY INFORMATION OVER WHOLE PERIOD

STREAM	TOTAL DEMAND		* QUEUEING * DELAY *		* INCLUSIVE QUEUEING * DELAY *	
	(VEH)	(VEH/H)	(MIN)	(MIN/VEH)	(MIN)	(MIN/VEH)
B-AC	549.2	366.1	284.8	0.52	284.9	0.52
C-A	502.4	334.9				
C-B	44.0	29.4	4.4	0.10	4.4	0.10
A-B	178.9	119.3				
A-C	357.9	238.6				
ALL	1632.4	1088.3	289.2	0.18	289.3	0.18

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A LARGE QUEUE REMAINING AT THE END OF THE TIME PERIOD.

*******END OF RUN*******