



PROPOSED INDUSTRIAL
DEVELOPMENT,
FALLOWS WAY, PRESCOT

TRANSPORT ASSESSMENT

FEBRUARY 2023

PROPOSED INDUSTRIAL DEVELOPMENT, FALLOWS WAY, PRESCOT

TRANSPORT ASSESSMENT

Allied Properties

Draft Issue

Project no: 21686

Date: February 2023

Andrew Moseley Associates

15 St Paul's Street

Leeds

LS1 2JG

www.amatp.co.uk

info@amatp.co.uk

QUALITY MANAGEMENT

	First Issue	Revision 1	Revision 2	Revision 3
Remarks	Draft Issue			
Date	17.02.23			
Prepared	MHT			
Checked	JF			
Authorised	SK			

PRODUCTION TEAM

AMA	
Technical Director	Shazad Khan
Principal Transport Planner	Jacky Fitzpatrick
Transport Planner	Matthew Taylor

TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	OVERVIEW.....	1
1.2	REPORT STRUCTURE.....	2
2	POLICY BACKGROUND.....	3
2.1	NATIONAL POLICY.....	3
2.2	LOCAL POLICY.....	4
3	EXISTING CONDITIONS.....	6
3.1	SITE LOCATION.....	6
3.2	LOCAL HIGHWAY NETWORK.....	6
3.3	TRAFFIC BASE FLOWS.....	7
3.4	EXISTING JUNCTION CAPACITY ANALYSIS.....	7
3.5	PERSONAL INJURY COLLISION DATA.....	9
4	EXISTING SUSTAINABLE TRANSPORT PROVISION.....	10
4.1	INTRODUCTION.....	10
4.2	PEDESTRIAN ACCESSIBILITY.....	10
4.3	CYCLING ACCESSIBILITY.....	11
4.4	PUBLIC TRANSPORT.....	11
4.5	SUMMARY.....	12
5	DEVELOPMENT PROPOSALS.....	13
5.1	DEVELOPMENT PROPOSAL AND SITE LAYOUT.....	13
5.2	SITTE ACCESS DESIGN AND SERVICING ARRANGEMENTS.....	13
5.3	PARKING.....	14
6	ASSESSMENT PARAMETERS.....	15
6.1	INTRODUCTION.....	15
6.2	ASSESSMENT YEARS.....	15

6.3	TRAFFIC GROWTH.....	15
6.4	DEVELOPMENT TRAFFIC GENERATION	15
6.5	DEVELOPMENT TRAFFIC DISTRIBUTION AND ASSIGNMENT	16
7	FUTURE DEVELOPMENT IMPACTS.....	18
7.1	INTRODUCTION.....	18
7.2	JUNCTION MODELLING RESULTS.....	18
7.3	SUMMARY	22
8	SUMMARY.....	23
	APPENDICES	25

TABLES

Table 7-1 – Windy Arbor Road / Fallows Way T-junction – 2023 Scenario Results.....	7
Table 7-3 – Tarbock Roundabout – 2023 Scenario Results	8
Table 4-1 - Local Bus Services	11
Table 6-1 – Knowsley 017 Traffic Growth Factors.....	15
Table 6-2 – Predicted Vehicular Trip Rates and Trip Generation.....	16
Table 6-3 – Windy Arbor Road Development Traffic Distribution.....	16
Table 6-4 – Tarbock Roundabout Development Traffic Distribution	17
Table 7-1 – Windy Arbor Road / Fallows Way T-junction – 2028 Scenario Results.....	19
Table 7-2 – Tarbock Roundabout – 2028 Scenario Results	19
Table 7-3 – Tarbock Roundabout – 2033 Scenario Results	21

FIGURES

Figure 1 – Site Location Plan

Figure 2 – 2023 Surveyed Traffic Flow Diagram

Figure 3 – Personal Injury Collision Data Plot

Figure 4 – 2km Walking Isochrone

Figure 5 – Public Rights of Way Map

Figure 6 – 5km Cycling Isochrone

Figure 7 – Local Cycle Network Map

Figure 8 – Bus Stop Location Plan

Figure 9 – 2028 Base Traffic Flows

Figure 10 – 2033 Base Traffic Flows

Figure 11 – Predicted Development Traffic Distribution

Figure 12 – Predicted Development Traffic Generation

Figure 13 – 2028 Base + Predicted Development Traffic Flows

Figure 14 – 2033 Base + Predicted Development Traffic Flows

APPENDICES

Appendix A – Site Layout Plan

Appendix B – Windy Arbor Road / Fallows Way Junctions⁹ Modelling

Appendix C – Tarbock Roundabout LinSig Modelling

Appendix D - Proposed Site Access Design

Appendix E – Proposed Site Access Visibility Splays

Appendix F – Max Legal Articulated Vehicle Swept Path Analysis

Appendix G – B2 TRICS Data

Appendix H – Office TRICS Data

1 INTRODUCTION

1.1 OVERVIEW

- 1.1.1 Andrew Moseley Associates (AMA) has been commissioned by Allied Properties to prepare a Transport Assessment (TA) and Travel Plan (TP) in support of a full planning application for a proposed new industrial development consisting of up to 4,631m² flexible B2 / B8 use plus 185m² office space located on land to the north-east of Fallows Way, Prescott.
- 1.1.2 The site will consist of five Blocks which are divided into thirteen smaller units. The site layout plan is attached at **Appendix A**.
- 1.1.3 The Local Planning Authority (LPA) and the Local Highway Authority (LHA) is Knowsley Council (KC).
- 1.1.4 The site currently consists of previously undeveloped land and is located on land to the south of Fallows Way which terminates to the north of the site and provides access to a number of existing industrial uses.
- 1.1.5 The site is bound to north and east by undeveloped land as well as a Public Right of Way that runs in an approximate north-west to south-east alignment alongside Tushingham's Lake which forms part of the wider Stadt Moers Park. The site is also bound to the south by an industrial unit and to the west by Fallows Way. The location of the site is illustrated in **Figure 1**.
- 1.1.6 Vehicular, pedestrian and cycling access is proposed west of the application boundary onto Fallows Way via two new simple priority-controlled T-junctions. Pedestrian access will be provided via footways either side of each access which are maintained throughout the site, providing direct access to each unit. The access proposals are illustrated in the site layout plan at **Appendix A**.
- 1.1.7 This TA has been prepared with reference to the Department for Communities and Local Government National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG).
- 1.1.8 This TA will demonstrate that the site is well served by existing transport provision and is accessible to a range of key services and facilities. The report will also demonstrate that the traffic generated by the proposals will not result in a detrimental impact on the surrounding road network.
- 1.1.9 A TP has also been prepared which sets out measures to encourage sustainable travel patterns and reduce the reliance on private car use.

1.2 REPORT STRUCTURE

1.2.1 The structure of the report is set out as follows:

- ▶ **Section 2** – outlines the policy background at a national and local level;
- ▶ **Section 3** – provides a description of the highway network surrounding the site, details of the existing traffic flows, a review of the personal injury collision records and the results of the baseline junction capacity assessments;
- ▶ **Section 4** – examines the accessibility of the site by sustainable modes of travel and also considers the accessibility of a range of key services and facilities;
- ▶ **Section 5** – describes the development proposals with regard to the proposed quantum of development, means of access and parking provision;
- ▶ **Section 6** – summarises the assessment parameters and trips rates that have been adopted within this TA;
- ▶ **Section 7** – examines the impact of development traffic on the local highway network and presents the results of the future year junction assessments to determine the potential impact of the proposals; and
- ▶ **Section 8** – provides a summary of the TA.

2 POLICY BACKGROUND

2.1 NATIONAL POLICY

2.1.1 The National Planning Policy Framework (NPPF) came into effect in 2012. The document was designed to supersede and simplify previous national planning documents and their policies. A revised version of the NPPF was published in July 2018. The revision implements around 85 reforms announced previously through the Housing White Paper, the planning for the right homes in the right places consultation and the draft revised NPPF consultation. A further update was made in July 2021.

2.1.2 The preparation of this TA is consistent with national transport policy guidance set out in the NPPF which advocates the submission of such documents to support applications for new developments which generate traffic movements.

2.1.3 The NPPF states under the subheading 'Considering development proposals' that:

'In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

b) safe and suitable access to the site can be achieved for all users;

c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and

c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree (Paragraph 110).

Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe (Paragraph 111).

Within this context, applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations (Paragraph 112).

All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed Paragraph 113).'

2.1.4 **Section 3** of this report highlights the existing sustainable travel modes within the vicinity of the site and demonstrates that the development will be well suited to this location.

2.1.5 **Section 7** of this report assesses the traffic associated with the development on the surrounding road network and will identify mitigation measures where necessary to ensure that the impact of the development is not severe.

2.1.6 The Government's objectives set out in the revised NPPF are to ensure that new developments are provided in sustainable locations, where the need to travel is minimised and the use of sustainable modes can be maximised.

2.2 LOCAL POLICY

Knowsley Local Plan Core Strategy 2016

2.2.1 The Knowsley Local Plan Core Strategy was adopted in January 2016 and sets out the councils vision and strategies for the local area, focusing on growth and development and how these can be achieved sustainably.

2.2.2 Overall, the strategy aims to ensure:

- ▶ Attractive, sustainable neighbourhoods with a wide choice of housing and excellent community facilities;
- ▶ Vibrant and welcoming town centres;
- ▶ Residents and local communities who are able to make positive lifestyle choices;
- ▶ High quality employment areas which help to drive economic growth in the Liverpool City Region; and
- ▶ Narrowed the gap in deprivation levels both between different parts of the borough and between Knowsley and elsewhere.

2.2.3 With specific regard to sustainability, the core strategy sets out three key guidelines under Policy SD1 as set out below:

- ▶ 1) When considering development proposals, a positive approach will be taken, which reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. Work will be undertaken proactively with applicants jointly to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.
- ▶ 2) Planning applications that accord with the policies in this Local Plan (and any relevant policies in Neighbourhood Plans) will be approved without delay, unless material considerations indicate otherwise.
- ▶ 3) Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision then permission will be granted unless material considerations indicate otherwise – taking into account whether:

- o a) Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or
- o b) Specific policies in that Framework indicate that development should be restricted.

Third Local Transport Plan for Merseyside

2.2.4 The Local Transport Plan (LTP) provides the statutory framework for the policies and plans that will guide the future provision of transport in the Merseyside area. The plan has been developed for the wider Merseyside region in conjunction with the nearby local authorities and is therefore a more holistic document that brings together the regions overall approach to sustainable transport.

2.2.5 The LTP sets out six key goals to achieve the vision:

- ▶ 1. Help create the right conditions for sustainable economic growth by supporting the priorities of the Liverpool City Region, the Local Enterprise Partnership and the Local Strategic Partnerships.
- ▶ 2. Provide and promote a clean, low emission transport system which is resilient to changes to climate and oil availability.
- ▶ 3. Ensure the transport system promotes and enables improved health and wellbeing and road safety.
- ▶ 4. Ensure equality of travel opportunity for all, through a transport system that allows people to connect easily with employment, education, healthcare, other essential services and leisure and recreational opportunities.
- ▶ 5. Ensure the transport network supports the economic success of the city region by the efficient movement of people and goods.
- ▶ 6. Maintain our assets to a high standard.

3 EXISTING CONDITIONS

3.1 SITE LOCATION

- 3.1.1 The site currently consists of previously undeveloped land and is located on land to the south of Fallows Way which terminates to the north of the site and provides access to a number of existing industrial uses.
- 3.1.2 The site is bound to north and east by undeveloped land as well as a Public Right of Way that runs in an approximate north-west to south-east alignment alongside Tushingham's Lake which forms part of the wider Stadt Moers Park. The site is also bound to the south by an industrial unit and to the west by Fallows Way. The location of the site is illustrated in **Figure 1**.

3.2 LOCAL HIGHWAY NETWORK

- 3.2.1 The site would be accessed via two new access points from the north-eastern extent of Fallows Way. Fallows Way is a single carriageway two-way road that serves existing industrial developments to the south of the proposed site. The carriageway is subject to a 30mph speed restriction, is bound by pedestrian footways on either side of the carriageway and is street-lit. To the north, Fallows Way forms a dead-end; therefore there would be no through traffic.
- 3.2.2 To the south, Fallows Way continues for approximately 420m before meeting with Windy Arbor Road via a priority-controlled T-junction. Windy Arbor Road is a single carriageway two-way road that is subject to a 30mph speed restriction. The carriageway is bound on either side by pedestrian footways and is street-lit. The carriageway runs in an approximate north-south alignment and provides access to a number of smaller residential roads. The carriageway becomes Dragon Lane before continuing through the centre of Whiston where the carriageway then meets with A57 Warrington Road. From here, A57 Warrington Road provides vehicular travel north-west towards the centre of Prescott as well as south-east towards Rainhill before meeting with the M62 J7.
- 3.2.3 To the south of the Windy Arbor Road / Fallows Way T-junction, Windy Arbor Road continues for approximately 340m before meeting with the M62 / A5080 Cronton Road / M57 via a seven-arm traffic signal controlled grade separated roundabout known as the Tarbock Roundabout.
- 3.2.4 Forming the eastern and western arms of the roundabout, the M62 is a dual carriageway road that provides vehicular travel west towards the centre of Liverpool and east towards Manchester.
- 3.2.5 Forming the south-eastern and north-western arms of the roundabout, the A5080 Cronton Road continues south-east towards the residential area of Widness and further east towards Warrington. To the north-east, the carriageway continues into the eastern suburbs of Liverpool, providing access to a large industrial estate as well as a number of smaller residential roads.
- 3.2.6 Forming the northern and southern arms of the roundabout, the M57 continues north around the eastern extents of Liverpool towards Knowsley where it connects with the A580 as well as the A59 and M58. To the south of Tarbock Roundabout, the M57 becomes the A5300 Expressway which then connects with the A562 to the west of the residential area of Widness whereby the A562 then provides travel east into Widness and west towards Liverpool.
- 3.2.7 The site has been shown to be well located for access to the local and regional highway networks. The site is well located in terms of its proximity to nearby suburbs and towns and is within an existing industrial area that is close to the Strategic Road Network.

3.3 TRAFFIC BASE FLOWS

- 3.3.1 To understand the vehicle flow at the junctions predicted to experience an increase of more than 30 two-way trips in the network peak periods, fully classified junction turning count surveys were carried out between the hours of 07:00 – 10:00 and 16:00 – 19:00 on Wednesday 18th January 2023. The junctions surveyed are:
- ▶ Fallows Way / Windy Arbor Road T-junction; and
 - ▶ Tarbock Roundabout.
- 3.3.2 To calculate the AM and PM network peak hours, the peaks with the highest overall flows were selected, ensuring a robust assessment.
- 3.3.3 For the AM peak, this was found to occur between 07:30 – 08:30. For the PM peak, this was found to be occur between 16:45 – 17:45.
- 3.3.4 The resultant 2023 Surveyed Flows are illustrated at **Figure 2**.

3.4 EXISTING JUNCTION CAPACITY ANALYSIS

- 3.4.1 To determine existing highway capacities at the local junctions upon which the development generated flows are predicted to increase by more than 30 two-way trips, models of the existing junctions identified above have been prepared to assess the baseline traffic flow scenario.
- 3.4.2 JUNCTIONS 9 software has been used to assess the capacity of the priority junctions. This analyses the maximum Ratio of Flow to Capacity (RFC) values for the peak periods and the maximum queue length in passenger car units (PCUs).
- 3.4.3 For the signal controlled junctions, LinSig has been used. This analyses the junctions overall practical reserve capacity (PRC) as well as each arms Degree of Saturation (DoS) and the Mean Max Queue (MMQ) in PCU.
- 3.4.4 The complete model outputs are provided in **Appendix B-C** and the findings are set out in this section.

Windy Arbor Road / Fallows Way T-junction – Junctions9 Results

- 3.4.5 **Table 7-1** sets out the operational capacity at the Windy Arbor Road / Fallows Way priority-controlled T-junction.

Table 3-1 – Windy Arbor Road / Fallows Way T-junction – 2023 Scenario Results

Arm	AM Peak		PM Peak	
	Max RFC	Queue (PCU's)	Max RFC	Queue (PCU's)
Fallows Way left to Windy Arbor Road	0.04	0	0.12	0
Fallows Way right to Windy Arbor Road	0.14	0	0.19	0
Windy Arbor Road right to Fallows Way	0.10	0	0.10	0

- 3.4.6 The modelling results of the 2023 Base situation shows that the Windy Arbor Road / Fallows Way priority-controlled T-junction currently operates well within its theoretical capacity. Queue lengths are shown to occur in accordance with those surveyed on site during the peak hours.

Tarbock Roundabout – LinSig Results

- 3.4.7 **Table 7-1** sets out the operational capacity at the Tarbock Roundabout.

Table 3-2 – Tarbock Roundabout – 2023 Scenario Results

Arm	AM Peak		PM Peak	
	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
Windy Arbor Road	104.8	35	73.2	3.1
M62 (E)	80.0	10.8	61.0	6.9
A5080 Cronton Road (SE)	78.9	3.5	52.4	2.1
M57 (S)	64.0	8.4	61.8	7.5
M62 (W)	78.1	10	61.9	7.3
A5080 Cronton Road (NW)	109.9	36.8	106.0	32.0
M57 (N)	63.5	8.2	82.7	13.1
	PRC (%)	Delay (pcuHr)	PRC (%)	Delay (pcuHr)
Junction Total	-22.1	132.25	-17.8	96.03

- 3.4.8 The modelling results of the 2023 Base situation shows that the Tarbock Roundabout currently operates over capacity within both the AM and PM network peak scenarios. Whilst this is the case, it is not considered that the recorded PRC and delay is at a level that has an adverse effect on the operation of the roundabout and is to be expected for a junction of this size and the volume of traffic that negotiates it during the peak periods.
- 3.4.9 Additionally, the recorded DoS for the majority of arms shows that individually, all arms apart from Windy Arbor Road and A5080 Cronton Road (NW) are operating below their theoretical capacity. Modelling results also show that overall, the level of queueing at the junction is minimal, with the majority of arms operating with queues of up to 10 PCU's. Whilst Windy Arbor Road and the A5080 Cronton Road (NW) arms of the junction experience high levels of queueing in the network peak periods, the level of queueing is not considered to be significant and is expected at a junction of this size.
- 3.4.10 Queue lengths are shown to occur in accordance with those surveyed on site during the peak hours.

3.5 PERSONAL INJURY COLLISION DATA

3.5.1 To consider the last five years of Personal Injury Collision (PIC) data within the vicinity of the site, an initial study of the CrashMap database has been conducted. The study area includes the most recent five-year period of available data for the following junctions.

- ▶ Fallows Way;
- ▶ Windy Arbor Road / Fallows Way;
- ▶ Windy Arbor Road; and
- ▶ Tarbock Roundabout.

3.5.2 The collision plot is set out in **Figure 3** which sets out that within the study area, a total of 11 collisions occurred, 10 of which were described as 'slight' in severity and one described as 'serious'. The collisions are set out in further detail below.

Fallows Way

3.5.3 The collision data sets out that there have been no PICs recorded within the vicinity of the site and within the study area.

Windy Arbor Road / Fallows Way

3.5.4 One 'slight' collision was recorded at the Windy Arbor Road / Fallows Way priority-controlled T-junction in August 2021. The collision involved two vehicles and resulted in one casualty.

Windy Arbor Road

3.5.5 One 'slight' collision was recorded at the Windy Arbor Road / Juniper Avenue priority-controlled T-junction in May 2021. The collision involved two vehicles and resulted in three casualties. The collision was also detailed as having involved a young driver.

3.5.6 One 'serious' collision was recorded on the Windy Arbor Road carriageway approximately 60m to the north of the Juniper Avenue T-junction in December 2018. The collision involved three vehicles and resulted in seven casualties.

Tarbock Roundabout

3.5.7 Eight 'slight' collisions were recorded at the Tarbock Roundabout, with a maximum of two recorded at any arm joining the roundabouts circulatory carriageway. The collisions were recorded between March 2018 and December 2021 and show that no clusters of collisions have occurred.

3.5.8 Two collisions were recorded at the Windy Arbor Road approach to the junction; one on the M62 eastern approach; one at the A5080 Cronton Road (SE) approach; one on the M62 western approach; and three distributed around the circulatory carriageway of the roundabout.

Summary

3.5.9 The PIC data identifies no accident hotspots at the junctions considered as well as a singular serious collision. It is therefore considered there are no existing highways safety concerns. Therefore, it is considered that full collision data is not required to be requested from KC and no further analysis of collision data is required.

4 EXISTING SUSTAINABLE TRANSPORT PROVISION

4.1 INTRODUCTION

- 4.1.1 The Government's objectives set out in the NPPF are to ensure that new developments are provided in sustainable locations, where the need to travel is minimised and the use of sustainable modes can be maximised.
- 4.1.2 The site is located within an existing industrial location that is situated within a wider residential location to the east of Liverpool. The site is therefore located in an established location for industrial use as well as being well located in terms of its proximity to residential areas and access to sustainable modes of transport. The following section sets out that there are good quality facilities which will help to encourage the use of alternative modes of travel to the private car.
- 4.1.3 This section outlines the existing walking, cycling and public transport facilities within the vicinity of the development site and describes the accessibility of the site in terms of its proximity to key services and destinations.

4.2 PEDESTRIAN ACCESSIBILITY

- 4.2.1 Whilst superseded by the NPPF, the transport policies in the former PPG13 set out specific guidance related to walking:

"Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 kilometres" (Para 74)

- 4.2.2 Walking is recognised as the most important mode of travel at a local level and it offers the greatest potential to replace short car trips, particularly under two kilometres. **Figure 4** shows a 2km walking catchment area from the centre of the site.
- 4.2.3 As shown, the site is located within a suitable walking distance of a wide residential area including Halsnead Park, Whiston Cross and Huyton that form parts of the eastern residential suburbs of Liverpool.
- 4.2.4 The site will also benefit from the pedestrian connectivity that is proposed as part of the development, with both footways provided throughout the site.
- 4.2.5 There are also a number of Public Rights of Way (PRoW) within the vicinity of the site that provide traffic-free walking facilities, details of which are provided in **Figure 5**.
- 4.2.6 The map shows that PRoW's are located to the north of the site and connect to the local residential areas. In addition to the PRoW's, there are also a number of footpaths that run through the parks to the north of the site that further facilitate traffic-free walking routes to the site.
- 4.2.7 The development is therefore considered to be located within a sustainable location to a range of walkable destinations.

4.3 CYCLING ACCESSIBILITY

4.3.1 Whilst superseded by the NPPF, the transport policies in the former PPG13 set out specific guidance related to cycling:

“Cycling also has potential to substitute for short car trips, particularly those under 5 kilometres, and to form part of a longer journey by public transport” (Para 77).

4.3.2 Cycling has the potential to substitute for short car trips, particularly less than five kilometres. As such, all areas and facilities within a reasonable walking distance can also be considered to be within a reasonable cycling distance.

4.3.3 **Figure 6** shows a 5km cycling catchment area from the centre of the site. In addition to what is accessible by foot, the catchment area includes Prescott, Rainhill, Huyton, Fincham and Belle Vale.

4.3.4 The site is also well located in terms of its proximity to the local cycle network which is set out in **Figure 7**. Fallows Way forms part of the ‘suggested cycle’ network which consists of a number of roads that run through the nearby residential areas. Within the local cycle network, there are also dedicated ‘on-road signed cycle routes’ and ‘on-road cycle routes’. The site is therefore well placed for travel by bicycle with the local road network conducive to cycling.

4.4 PUBLIC TRANSPORT

Bus Services

4.4.1 In line with current local and national transport objectives, particularly of encouraging modal shift away from the private car and increasing accessibility through sustainable travel, public transport has a major role to play. The IHT’s ‘Guidelines for Planning for Public Transport in Developments’ (IHT 1999) recommend that the maximum walking distance to bus routes should not exceed 400 metres. Measures to facilitate the use of public transport are therefore an integral part of good land use and transport planning.

4.4.2 There are two bus stops located either side of the carriageway at the Windy Arbor Road / Fallows Way priority-controlled T-junction that are accessible 400m from the proposed site access. The stops are accessible via the existing pedestrian facilities that bound Fallows Way and Windy Arbor Road.

4.4.3 The bus stops are provided as simple flag and post stops that are equipped with timetable information as well as raised boarding kerbs. The stops detailed are set out on the attached plan at **Figure 8**.

4.4.4 Details of the mentioned bus services were obtained from recent timetables produced online. **Table 4-1** summarises local bus service details and route information.

Table 4-1 - Local Bus Services

Service	Route	Weekday	Saturday	Sunday
61	Liverpool Bus Station – Prescott Bus Station – Runcorn Bus Station	Every 60 mins 05:43 – 19:45	Every 60 mins 05:44 – 19:46	Every 60 mins 09:01 – 19:30

4.4.5 **Table 4-1** sets out that the local bus stops provide access to a regular service that provides travel towards a number of key local destinations, linking multiple local bus stations as well as local residential areas.

4.5 SUMMARY

- 4.5.1 A review of the existing facilities for access to the site by a range of non-car modes has been carried out. It is considered that the existing pedestrian facilities within the vicinity of the site are of a good quality given the semi-rural location of the site. There are also good quality public transport links within the vicinity of the site.
- 4.5.2 Given the sites location on the outskirts of a village, it is considered that the sustainable transport links are of good quality. The site is therefore considered to be in a sustainable location for access by non-car modes and in line with local and national planning policy.

5 DEVELOPMENT PROPOSALS

5.1 DEVELOPMENT PROPOSAL AND SITE LAYOUT

- 5.1.1 The application is for full planning application for a proposed new industrial development consisting of up to 4,631m² flexible B2 / B8 use plus 185m² office space located on land to the north-east of Fallows Way, Prescott.
- 5.1.2 The site will consist of five Blocks which are divided into thirteen smaller units. The site layout plan is attached at **Appendix A**.
- 5.1.3 A breakdown of the proposed industrial units is provided below:
- ▶ Block A
 - o Unit 01 – 87.5m²;
 - o Unit 02 – 87.5m²;
 - o Unit 03 – 87.5m²;
 - ▶ Block B
 - o Unit 04 – 81.5m²;
 - o Unit 05 – 140m²;
 - o Unit 06 – 140m²;
 - ▶ Block C
 - o Unit 07 – 140m²;
 - o Unit 08 – 140m²;
 - o Unit 09 – 140m²;
 - o Unit 10 – 140m²;
 - o Unit 11 – 140m²;
 - ▶ Block D
 - o Unit 12 – 232m²;
 - ▶ Block E
 - o Unit 13 – 3,075m²;
 - o Offices – 185m².

5.2 SITE ACCESS DESIGN AND SERVICING ARRANGEMENTS

- 5.2.1 Vehicular, walking and cycling access is proposed via a two new simple priority-controlled T-junctions to the west of the proposed site via Fallows Way.
- 5.2.2 The southern access is proposed to be provided with a 12m corner radii to the south and 8m corner radii to the north. The carriageway width is to be provided at 7.5m which is maintained throughout the site. The secondary site access to the north of the site is proposed to be provided with corner radii's of 6m. Given the proposed corner radii's, the southernmost site access is proposed to be provide the main point of access for HGV's. The two site accesses are set out in drawing no. AMA-21686-SK-001 and are attached at **Appendix D**.
- 5.2.3 Based on the 30mph speed limit of the road and in accordance with Manual for Streets (MfS) standards, 2.4m x 43m visibility splays are provided at each site access point. The visibility splays are set out within drawing no. AMA-21686-SK-002 as attached at **Appendix E** and demonstrate that the required visibility envelope is fully achievable within the highway boundary and the site boundary.

- 5.2.4 The site would be accessed by articulated vehicles, therefore two 26m turning circles are proposed at either end of the site to facilitate the turning manoeuvres. Each turning circle has been tracked using a max-legal articulated vehicle, with the resultant swept path analysis set out in drawings no. AMA-21686-ATR-001/2 as attached at **Appendix F**. As set out within the drawings, the vehicle can access and egress the site in a forward gear.

5.3 PARKING

- 5.3.1 In accordance with the operational requirements for the site, it is proposed that a total of eighty-seven parking spaces will be provided.
- 5.3.2 As set out within the KC Supplementary Planning Document, B2 developments should have a maximum of one space per 45m²; whilst B8 should have a maximum of one space per 100m². The proposals for eighty-seven parking spaces therefore provide a balance between the two standards at one space per 56m².
- 5.3.3 Of the eighty-seven spaces, it is proposed that 6 disabled parking spaces will be provided across the site totalling approximately 7% of parking provision. This is therefore in line with the SPD requirements for 5% disabled parking provision.
- 5.3.4 Eight spaces are proposed to be equipped with electric vehicle charging facilities, totalling approximately 10% of the total parking provision.
- 5.3.5 Six motorcycle parking bays are proposed which is in line with the SPD's minimum parking standards which require one space per 1000m².
- 5.3.6 The standards also set out that a minimum of one secure cycle parking space per 450m². The proposals will provide nine 'Sheffield' style cycle hoops across the site, split into banks of three. This would therefore equate to eighteen cycle parking spaces. In addition to the cycle hoops, eight sheltered cycle parking spaces are proposed, taking the total provision to twenty-six spaces.

6 ASSESSMENT PARAMETERS

6.1 INTRODUCTION

- 6.1.1 This section sets out the methodology and parameters used in assessing the proposed development and its potential impacts on the highway network.

6.2 ASSESSMENT YEARS

- 6.2.1 A horizon period of five years has been assessed after the lodging of the planning application to create a future year scenario of 2028. For the junctions under the control of Highways England, a horizon period of 10 years has been assessed, creating a future year scenario of 2033.

6.3 TRAFFIC GROWTH

- 6.3.1 The National Traffic Model (NTM) within the TEMPRO software package has been interrogated to provide local growth factors for Middle Super Output Area (MSOA) area 'Knowsley 017', the area best suited to the location of the development site.
- 6.3.2 The resultant growth factors are set out in **Table 6-1**.

Table 6-1 – Knowsley 017 Traffic Growth Factors

Period	AM Peak	PM Peak
2023 – 2028	1.028	1.027
2023 – 2033	1.054	1.052

- 6.3.3 These growth factors have been applied to the 2023 base flows. The resultant 2028 Base Flows are illustrated at **Figure 9** and the 2033 Base Flows at the Tarbock Roundabout are set out at **Figure 10**.

6.4 DEVELOPMENT TRAFFIC GENERATION

- 6.4.1 The TRICS database has been interrogated to obtain the vehicle-based trip rates of the proposed office and industrial uses of the proposed development. For both uses, sites within a 'suburban' and 'edge of town' location were selected for the assessment as well as filtering out sites with floor areas that were not alike the floor areas on site. The full TRICS trip rates are provided in **Appendix G-H**.
- 6.4.2 For the B2 TRICS output, the time period of 07:00 to 08:00 has been selected for the AM peak period and 16:00 – 17:00 for the PM peak period. For the office TRICS output, the time period of 08:00 – 09:00 has been selected for the AM peak period and 17:00 – 18:00 for the PM peak period. Whilst these do not directly align with the peak hours observed on the local highway network or themselves, this ensures the worst-case peak periods have been selected which ensures a robust approach.
- 6.4.3 The vehicle trip rates derived are summarised in **Table 6-2** and have been factored against the relevant floor areas.

Table 6-2 – Predicted Vehicular Trip Rates and Trip Generation

	AM Peak		PM Peak	
	Arrivals	Departures	Arrivals	Departures
TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT				
Trip Rates	0.512	0.075	0.069	0.408
Trip Generation	24	3	3	19
TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE				
Trip Rates	2.994	0.276	0.394	2.600
Trip Generation	6	1	1	5

6.4.4 **Table 6-2** demonstrates that the development proposals are forecast to generate the following vehicular trips during the highway network peak hours:

- ▶ AM Peak – 30 arrivals and 4 departures – 34 Two-Way Trips; and
- ▶ PM Peak – 4 arrivals and 24 departures – 28 Two-Way Trips.

6.4.5 On this basis, the trip generation of the proposed scheme will result in approximately one additional trip to the local highway network every two minutes during the peak hours. The impact of these trips at the site access is set out in **Section 7.2**.

6.5 DEVELOPMENT TRAFFIC DISTRIBUTION AND ASSIGNMENT

6.5.1 Development traffic distribution has been undertaken based upon existing (2011) Nomis 'Journey to Work Data' for the 'Knowsley 014 MSOA, in which the site is situated. This method uses Office of National Statistics data and can be considered a robust approach.

6.5.2 The traffic distribution has been applied to the forecast trip generation to estimate the change in traffic flows on the highway network as a result of the development at the site.

6.5.3 The distribution exercise is summarised in **Table 6-3** which considers traffic distribution at the site access junction. A copy of the 2011 Journey to Work Census data and a plan detailing the location of each MSOA is available upon request.

Table 6-3 – Windy Arbor Road Development Traffic Distribution

Route	Distribution
Windy Arbor Road (NE)	8%
Windy Arbor Road (SW)	92%

6.5.4 Of the vehicles that head travel south-west on Windy Arbor Road, all will travel through the Tarbock Roundabout. The distribution of vehicles through the roundabout is set out below in **Table 6-4**.

Table 6-4 – Tarbock Roundabout Development Traffic Distribution

Route	Distribution
M62 (E)	14%
A5080 Cronton Road (SE)	6%
M57 (S)	9%
M62 (W)	24%
A5080 Cronton Road (NW)	9%
M57 (N)	30%

- 6.5.5 The AM and PM peak traffic distributions are shown on the network diagram attached at **Figure 11**. These proportions have been applied to the total development traffic generation set out in **Table 6-2** and the resultant development traffic generation is shown in **Figure 12**.

7 FUTURE DEVELOPMENT IMPACTS

7.1 INTRODUCTION

7.1.1 This TA assesses the capacity of the following junctions:

- ▶ Proposed Site Access / Fallows Way T-junction;
- ▶ Windy Arbor Road / Fallows Way T-junction; and
- ▶ Tarbock Roundabout.

7.1.2 The following scenarios have been tested:

- ▶ 2028 Base (attached at **Figure 9**);
- ▶ 2028 Base + Development (attached at **Figure 13**);
- ▶ 2033 Base (attached at **Figure 10**); and
- ▶ 2033 Base + Development (attached at **Figure 14**).

7.1.3 JUNCTIONS 9 software has been used to assess the capacity of the priority junctions. This analyses the maximum Ratio of Flow to Capacity (RFC) values for the peak periods and the maximum queue length in passenger car units (PCUs).

7.1.4 For the signal controlled junctions, LinSig has been used. This analyses the junctions overall practical reserve capacity (PRC) as well as each arms Degree of Saturation (DoS) and the Mean Max Queue (MMQ) in PCU.

7.1.5 The complete model outputs are provided in **Appendix X-X** and the findings are set out in this section.

7.2 JUNCTION MODELLING RESULTS

Proposed Site Accesses / Fallows Way T-junction

7.2.1 As there are two proposed site access points, neither sight access is predicted to experience more than 30 two-way trips in the network peak periods. The site access is also situated at the top of Fallows Way where there would be a negligible amount of traffic due to the dead end immediately west of the site.

7.2.2 The site accesses have therefore not been modelled as there are no capacity concerns.

Windy Arbor Road/ Fallows Way T-junction – Junctions9 Results

- 7.2.3 **Table 7-1** sets out the operational capacity at the Windy Arbor Road / Fallows Way priority-controlled T-junction.

Table 7-1 – Windy Arbor Road / Fallows Way T-junction – 2028 Scenario Results

Arm	AM Peak		PM Peak	
	Max RFC	Queue (PCU's)	Max RFC	Queue (PCU's)
2028 Base				
Fallows Way left to Windy Arbor Road	0.04	0	0.12	0
Fallows Way right to Windy Arbor Road	0.14	0	0.20	0
Windy Arbor Road right to Fallows Way	0.10	0	0.11	0
2028 Base + Development				
Fallows Way left to Windy Arbor Road	0.04	0	0.13	0
Fallows Way right to Windy Arbor Road	0.15	0	0.25	0
Windy Arbor Road right to Fallows Way	0.11	0	0.11	0

- 7.2.4 The modelling results of the 2028 Base and 2028 Base + Development situation shows that the Windy Arbor Road / Fallows Way priority-controlled T-junction is predicted to operate with minimal queuing and delays with negligible impact as a result of the development generated traffic.

Tarbock Roundabout – LinSig Results

- 7.2.5 **Table 7-2** sets out the operational capacity at the Tarbock Roundabout for the future year 2028 scenarios.

Table 7-2 – Tarbock Roundabout – 2028 Scenario Results

Arm	AM Peak		PM Peak	
	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
2028 Base				
Windy Arbor Road	93.6	53.9	80.5	3.8
M62 (E)	82.3	11.5	62.8	7.3

Arm	AM Peak		PM Peak	
	DoS (%)	MMQ (PCU)	DoS (%)	MMQ (PCU)
A5080 Cronton Road (SE)	83.4	5.7	57.0	2.2
M57 (S)	65.7	8.7	63.5	7.7
M62 (W)	80.4	10.5	63.5	7.5
A5080 Cronton Road (NW)	112.7	43.0	108.8	38.8
M57 (N)	65.3	8.6	84.9	14.0
	PRC (%)	Delay (pcuHr)	PRC (%)	Delay (pcuHr)
Junction Total	-27.1	166.41	-20.9	107.25
2028 Base + Development				
Windy Arbor Road	120.9	66.1	87.2	7.2
M62 (E)	82.3	11.5	62.8	7.3
A5080 Cronton Road (SE)	84.4	5.9	57.0	2.2
M57 (S)	66.1	8.7	63.5	7.7
M62 (W)	80.4	10.5	63.6	7.6
A5080 Cronton Road (NW)	122.1	60.4	108.8	38.8
M57 (N)	65.3	8.6	84.9	14.0
	PRC (%)	Delay (pcuHr)	PRC (%)	Delay (pcuHr)
Junction Total	-35.6	197.26	-20.9	108.82

- 7.2.6 The modelling results of the 2028 Base and 2028 Base + Development situation shows that the Tarbock Roundabout is predicted to operate over capacity within both the AM and PM network peak scenarios. Whilst this is the case, it is not considered that the recorded PRC and delay is at a level that has an adverse effect on the operation of the roundabout and is to be expected for a junction of this size and the volume of traffic that negotiates it during the peak periods.
- 7.2.7 Additionally, the recorded DoS for the majority of arms shows that individually, all arms apart from Windy Arbor Road and A5080 Cronton Road (NW) are operating below their theoretical capacity. Modelling results also show that overall, the level of queueing at the junction is minimal, with the majority of arms operating with queues of up to 10 PCU's. Whilst Windy Arbor Road and the A5080 Cronton Road (NW) arms of the junction experience high levels of queueing in the network peak periods, the level of queueing is not considered to be significant.
- 7.2.8 When considering the difference between the two scenarios, it is also evident that the impact that the development generated traffic will have on the junction is minimal and results in a negligible increase to each arms DoS and MMQ.

7.2.9 **Table 7-3** sets out the operational capacity at the Tarbock Roundabout for the future year 2033 scenarios.

Table 7-3 – Tarbock Roundabout – 2033 Scenario Results

Arm	AM Peak		PM Peak	
	DoS (%)	MMQ	DoS (%)	MMQ
2033 Base				
Windy Arbor Road	125.4	75.3	87.9	7.1
M62 (E)	84.4	12.3	64.2	7.5
A5080 Cronton Road (SE)	88.1	6.7	61.3	2.4
M57 (S)	67.3	8.9	65.0	8.1
M62 (W)	82.4	11.2	64.9	7.7
A5080 Cronton Road (NW)	115.7	49.9	111.3	45.0
M57 (N)	66.9	8.9	86.9	14.7
	PRC (%)	Delay (pcuHr)	PRC (%)	Delay (pcuHr)
Junction Total	-39.4	206.97	-23.6	119.55
2033 Base + Development				
Windy Arbor Road	126.1	76.8	95.4	10.7
M62 (E)	84.4	12.3	64.2	7.5
A5080 Cronton Road (SE)	89.4	7.1	61.8	2.4
M57 (S)	67.7	9.0	65.0	8.1
M62 (W)	82.4	11.2	65.2	7.8
A5080 Cronton Road (NW)	116.4	51.4	111.5	45.4
M57 (N)	66.9	8.9	86.9	14.7
	PRC (%)	Delay (pcuHr)	PRC (%)	Delay (pcuHr)
Junction Total	-40.1	213.27	-23.8	123.79

7.2.10 The modelling results of the 2033 Base and 2033 Base + Development situation shows that the Tarbock Roundabout is predicted to operate at a similar level of capacity shown in the 2028 scenarios. As per the 2028 scenario, the junction is also predicted to experience a negligible increase in DoS and queuing across all arms as well as PRC as a result of the development generated traffic.

- 7.2.11 It is therefore considered that whilst the junction is technically operating over capacity, as per the existing situation, the impact the development generated traffic has on the junction will have no impact on the operation of the junction.

7.3 SUMMARY

- 7.3.1 The impact of the development generated traffic on the surrounding area has been shown to be negligible and it is therefore concluded that the proposals could be accommodated without resulting in a detrimental or severe impact upon the network.

8 SUMMARY

- 8.1.1 Andrew Moseley Associates (AMA) has been commissioned by Allied Properties to prepare a Transport Assessment (TA) and Travel Plan (TP) in support of a full planning application for a proposed new industrial development consisting of up to 4,631m² flexible B2 / B8 use plus 185m² office space located on land to the north-east of Fallows Way, Prescott.
- 8.1.2 The site will consist of five Blocks which are divided into thirteen smaller units.
- 8.1.3 The Local Planning Authority (LPA) and the Local Highway Authority (LHA) is Knowsley Council (KC).
- 8.1.4 The site currently consists of previously undeveloped land and is located on land to the south of Fallows Way which terminates to the north of the site and provides access to a number of existing industrial uses.
- 8.1.5 The site is bound to north and east by undeveloped land as well as a Public Right of Way that runs in an approximate north-west to south-east alignment alongside Tushingham's Lake which forms part of the wider Stadt Moers Park. The site is also bound to the south by an industrial unit and to the west by Fallows Way.
- 8.1.6 Vehicular, pedestrian and cycling access is proposed west of the application boundary onto Fallows Way via two new simple priority-controlled T-junctions. Pedestrian access will be provided via footways either side of each access which are maintained throughout the site, providing direct access to each unit. The access proposals are illustrated in the site layout plan at Appendix A.
- 8.1.7 The report has shown that the development proposals will be accessible by a range of travel modes and have been developed to accord with current national and local transport policies, including those set out within the Knowsley Local Plan, the Third Local Transport Plan for Merseyside and the NPPF.
- 8.1.8 The development proposals, based on 73 private dwellings, are forecast to generate some 34 and 28 two-way vehicle trips during the AM and PM peak hours respectively.
- 8.1.9 A Travel Plan has also been prepared which sets out measures to encourage sustainable travel patterns and reduce the reliance on private car use.
- 8.1.10 The impact of the development-generated traffic on the surrounding area has been shown to be of a negligible impact on queuing and delay and it is therefore concluded that the development proposals could be accommodated without resulting in a detrimental impact upon the local highway network in relation to highway capacity or road safety. This is in line with the severe impact test within the NPPF.
- 8.1.11 Overall, it is considered that the site is in a suitable location for the proposed residential development and that there are no overriding highways or transport reasons that should prevent the granting of planning consent for the proposals.

FIGURES

Figure 1 – Site Location Plan

Figure 2 – 2023 Surveyed Traffic Flow Diagram

Figure 3 – Personal Injury Collision Data Plot

Figure 4 – 2km Walking Isochrone

Figure 5 – Public Rights of Way Map

Figure 6 – 5km Cycling Isochrone

Figure 7 – Local Cycle Network Map

Figure 8 – Bus Stop Location Plan

Figure 9 – 2028 Base Traffic Flows

Figure 10 – 2033 Base Traffic Flows

Figure 11 – Predicted Development Traffic Distribution

Figure 12 – Predicted Development Traffic Generation

Figure 13 – 2028 Base + Predicted Development Traffic Flows

Figure 14 – 2033 Base + Predicted Development Traffic Flows

Key:
Site Location



Title:

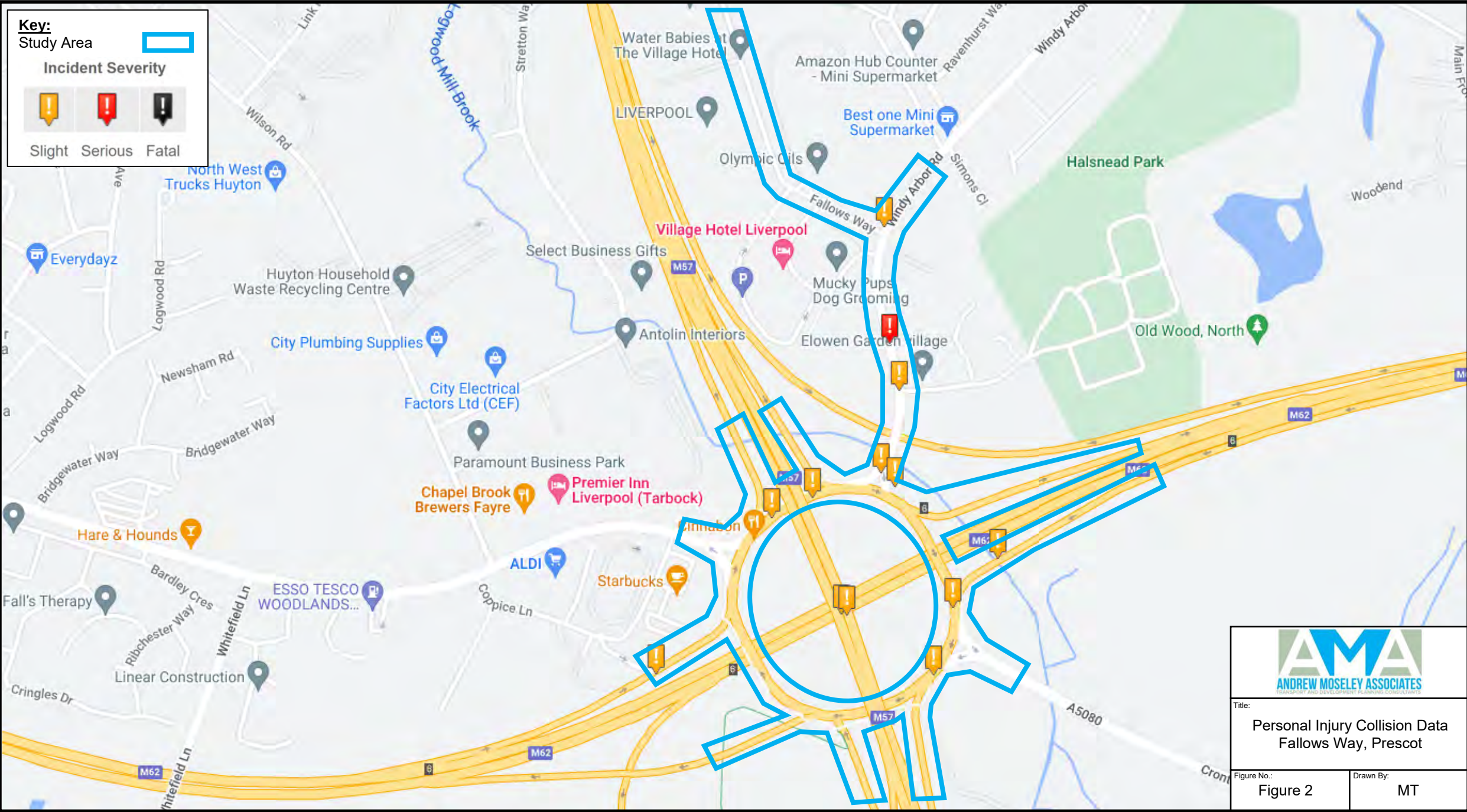
Indicative Site location Plan
Fallows Way, Prescot

Figure No.:

Figure 1

Drawn By:

MT



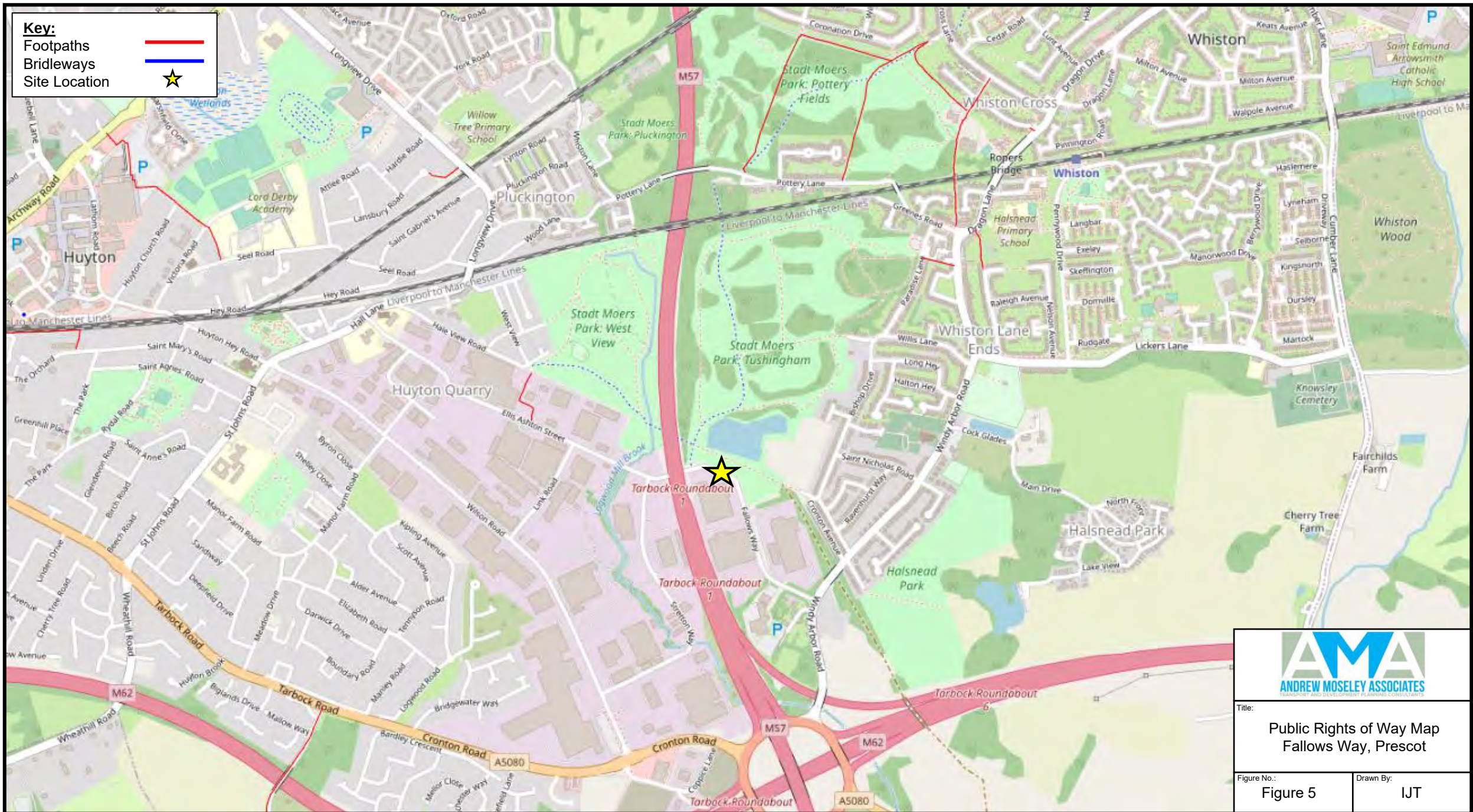
Title:
Personal Injury Collision Data
Fallsows Way, Prescot

Figure No.:
Figure 2

Drawn By:
MT

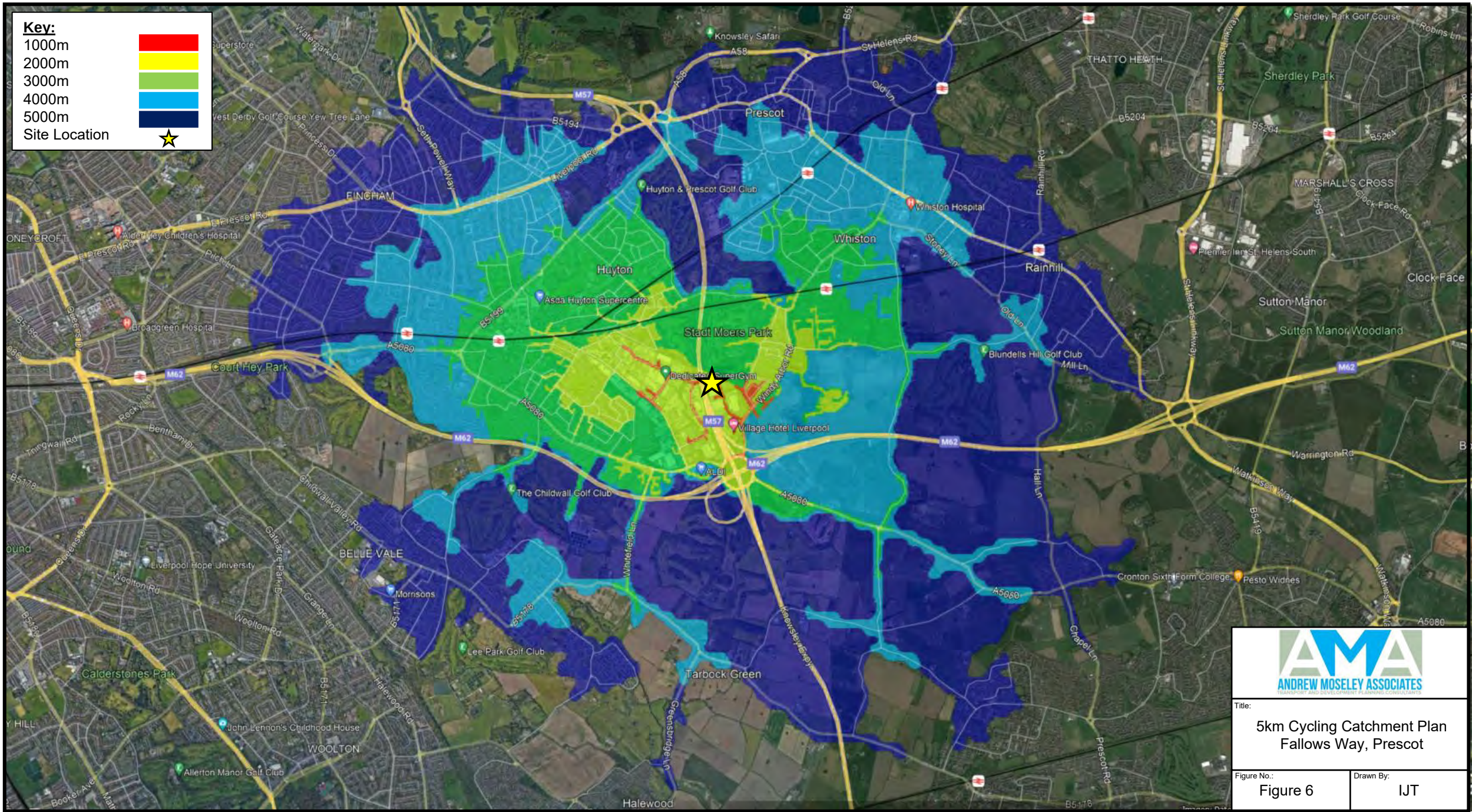


Key:
Footpaths ———
Bridleways ———
Site Location ★

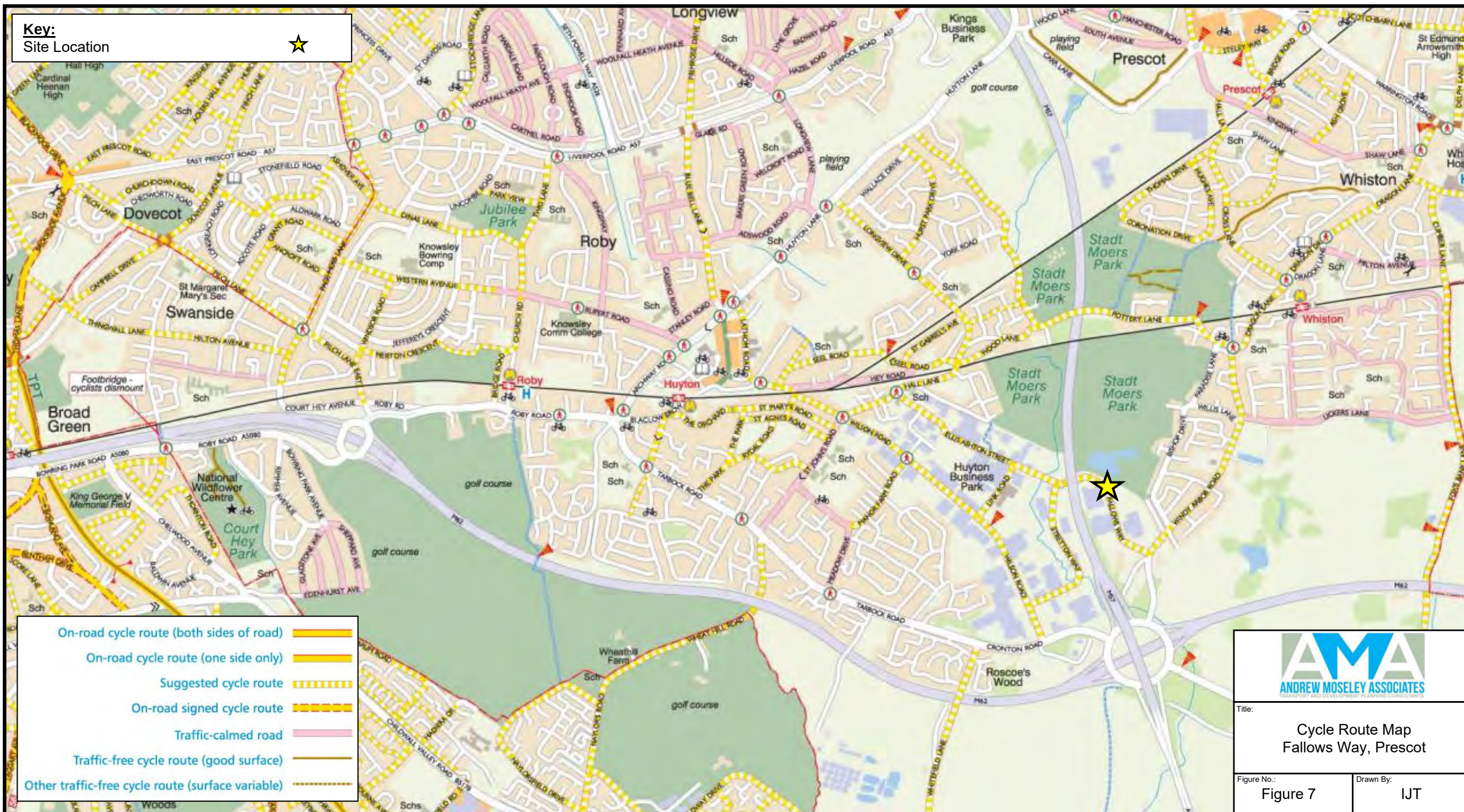


Title:
**Public Rights of Way Map
Fallows Way, Prescot**

Figure No.: **Figure 5** Drawn By: **IJT**



Key:
Site Location



Title:

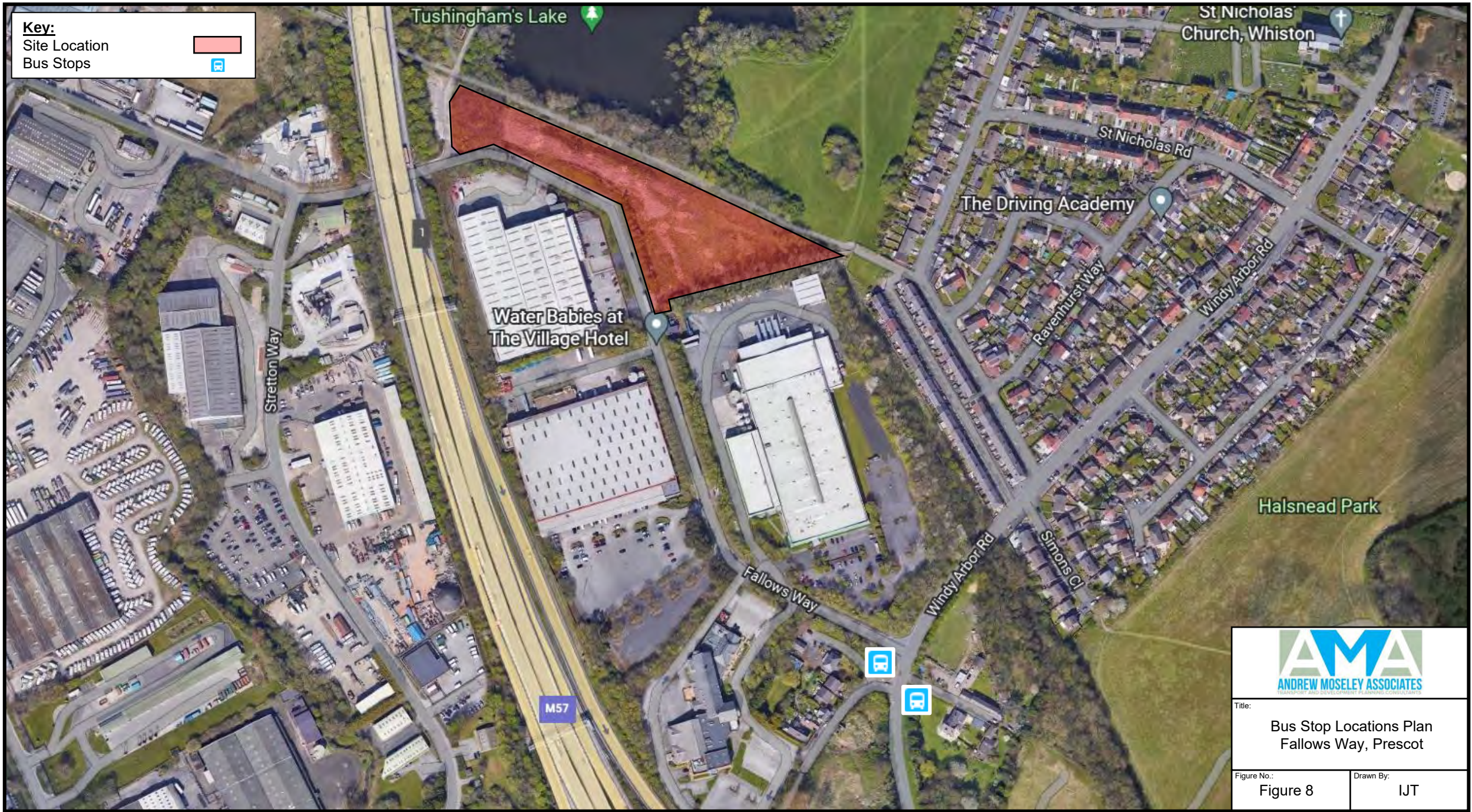
Cycle Route Map
Fallows Way, Prescot

Figure No.:

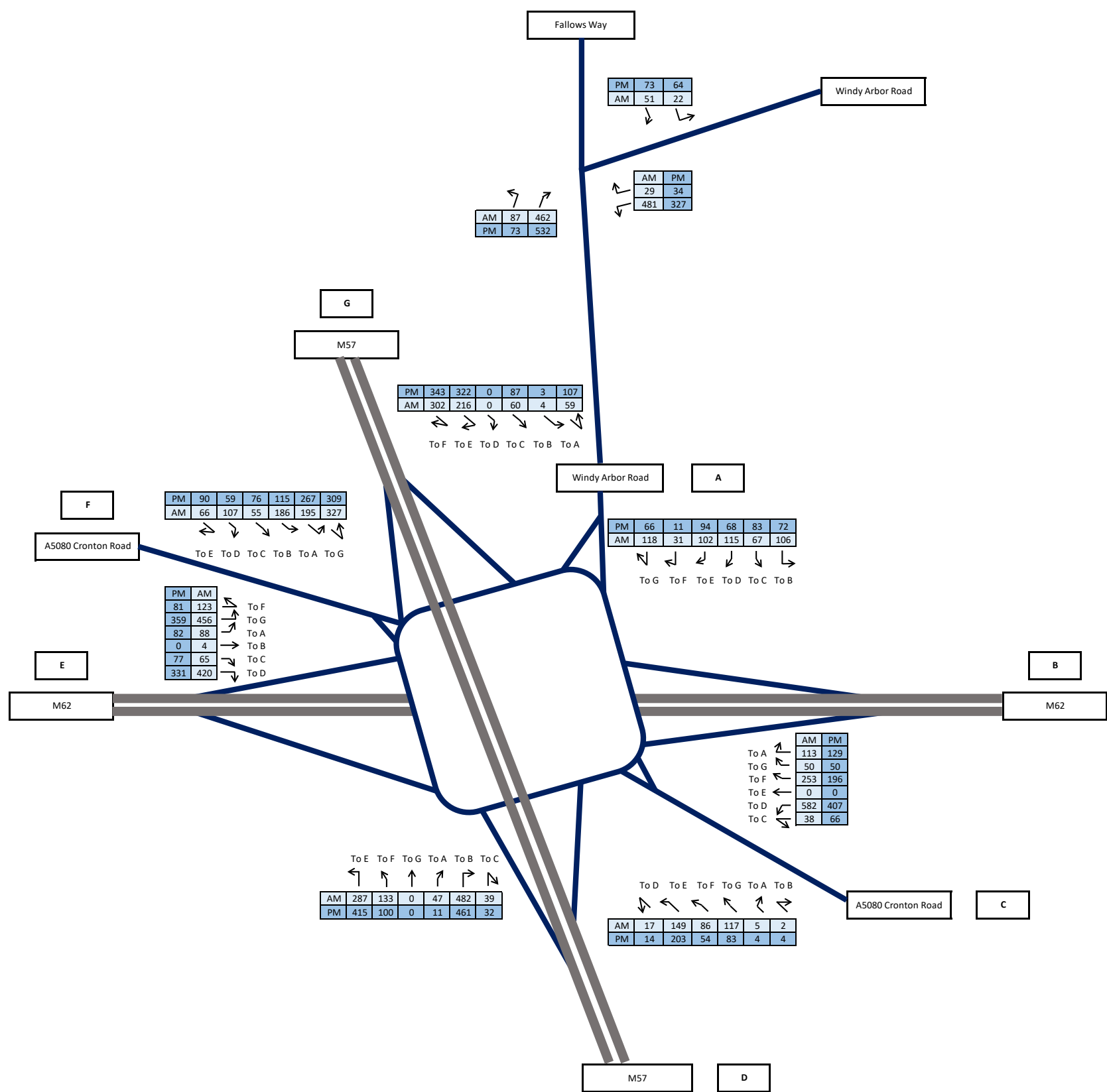
Figure 7

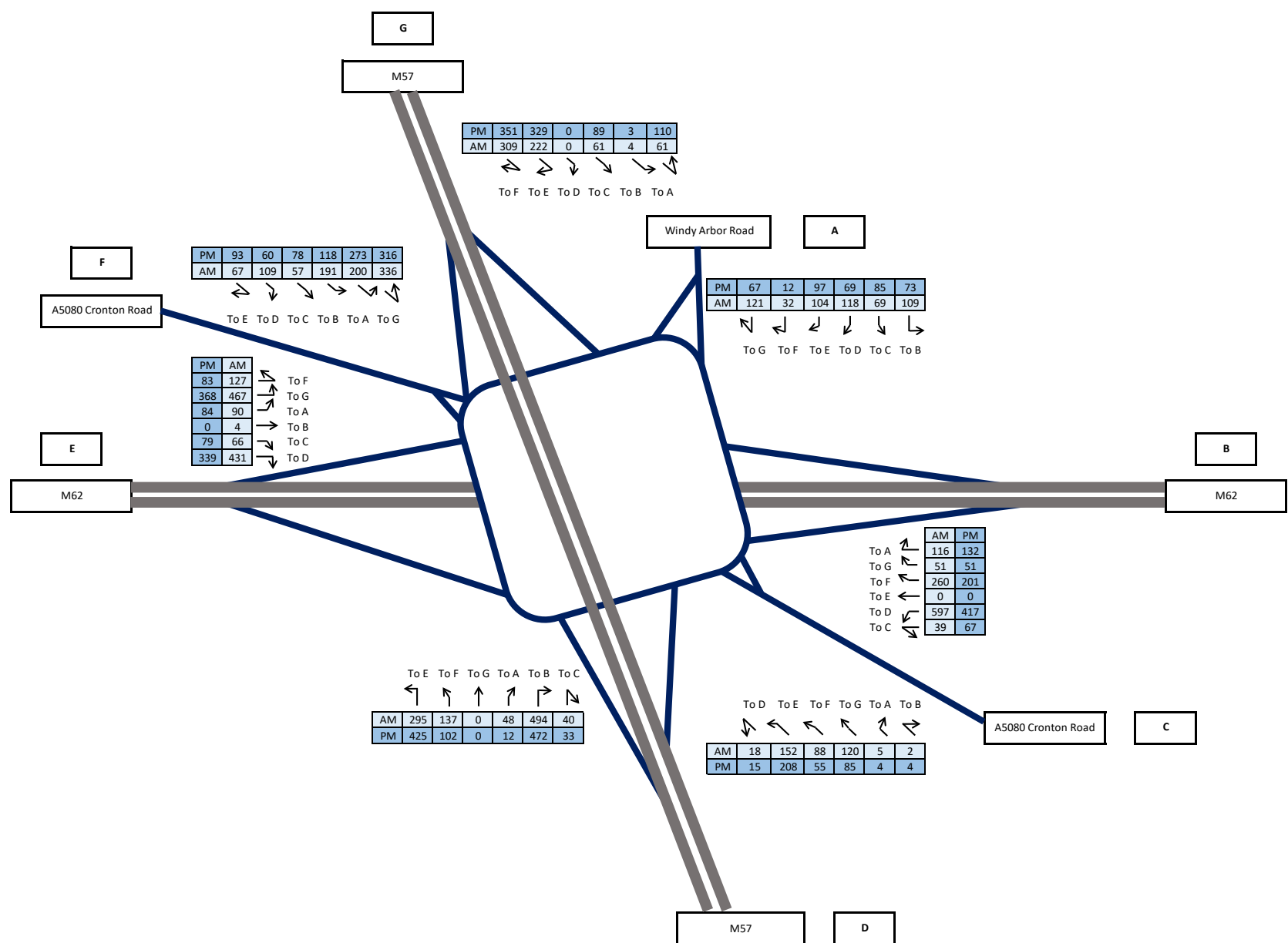
Drawn By:

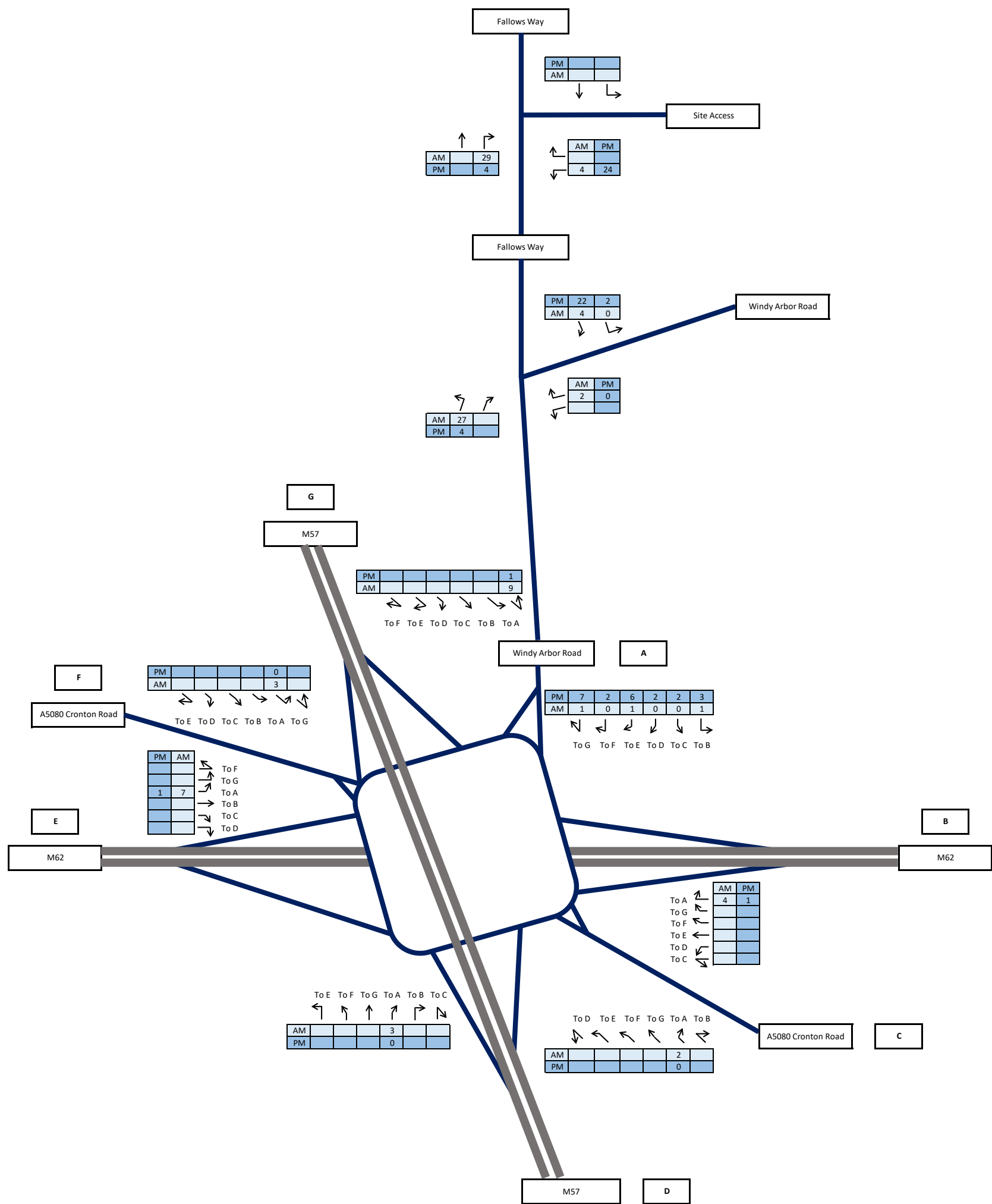
IJT

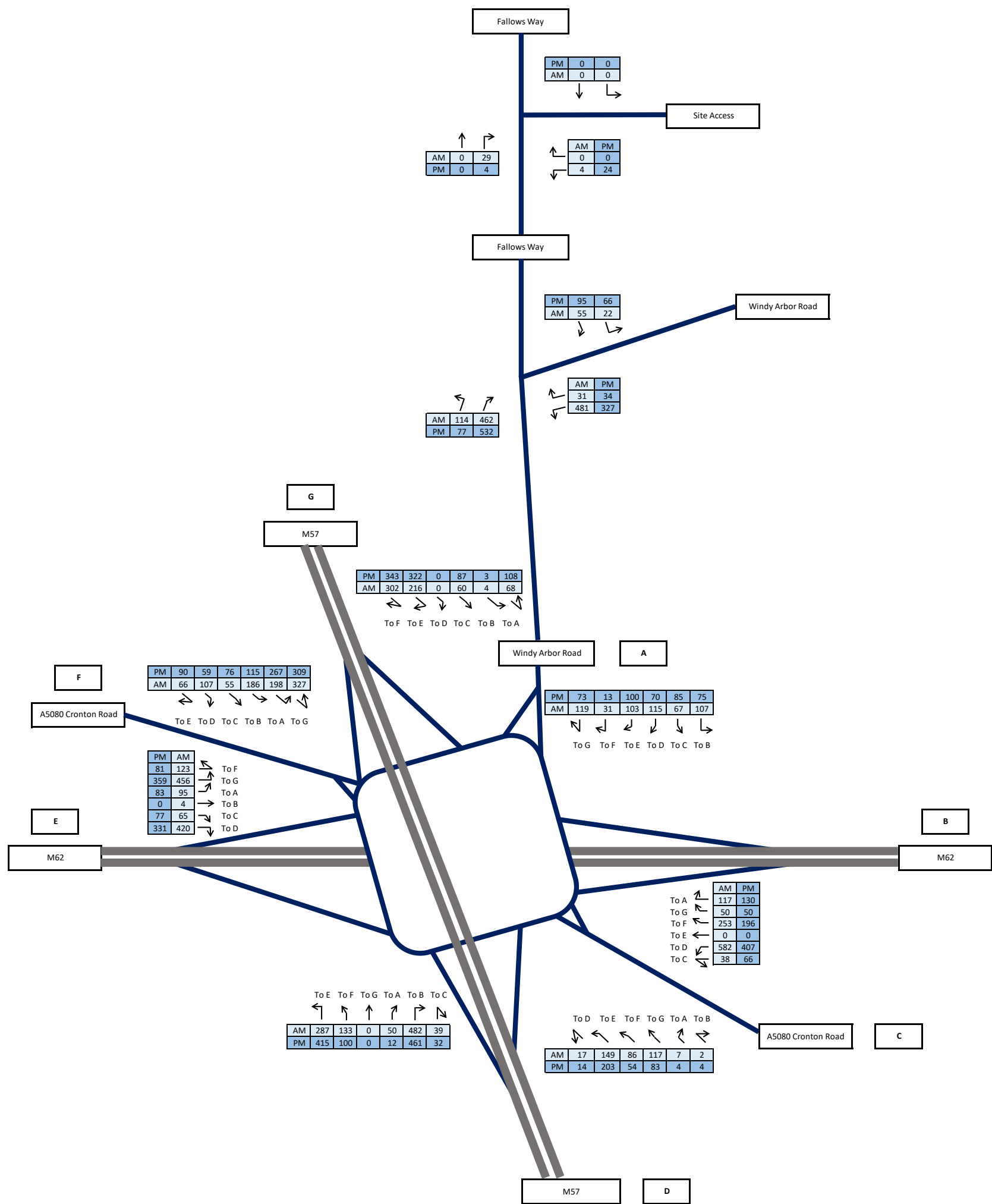


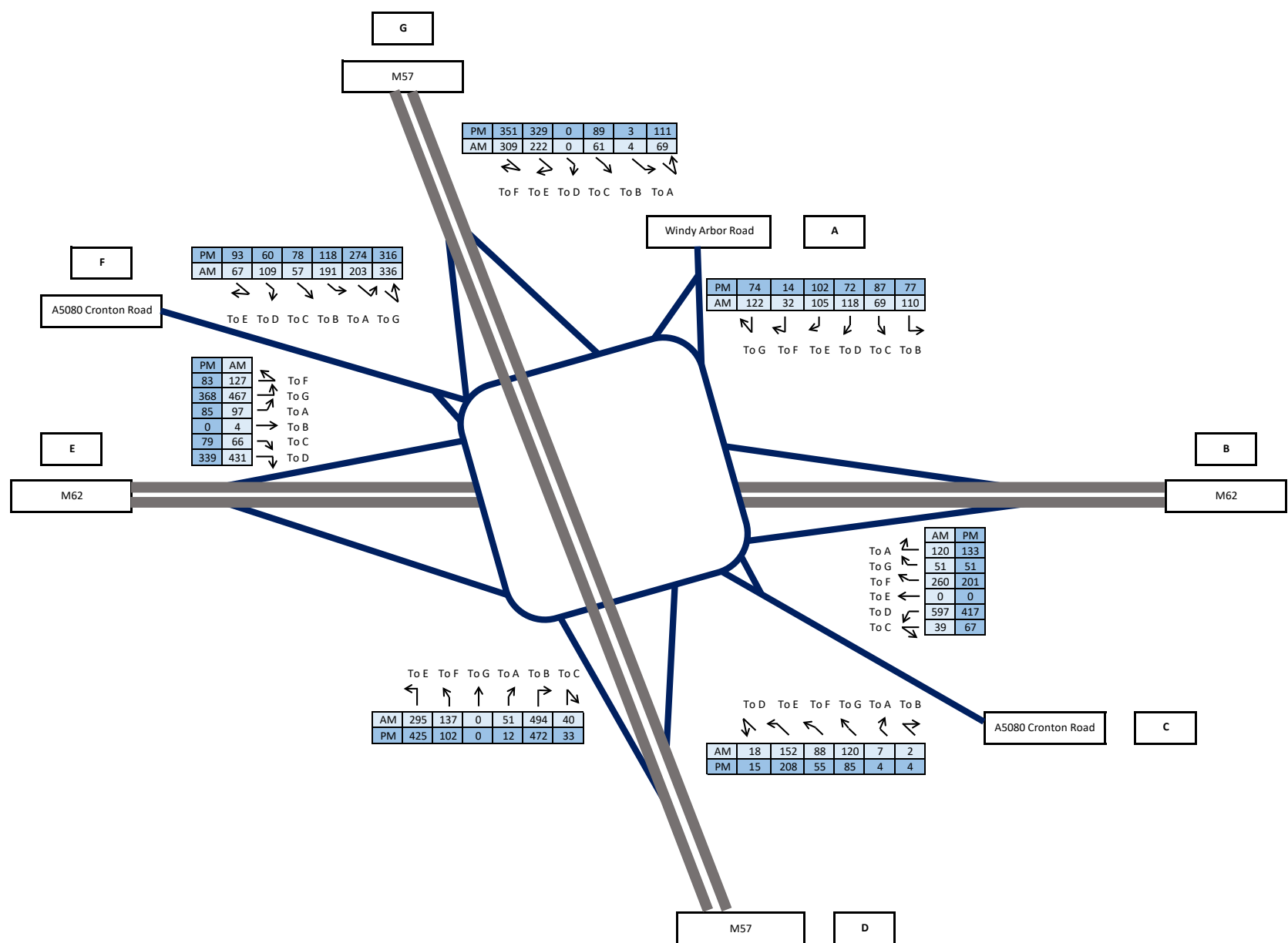
Title: Bus Stop Locations Plan Fallsows Way, Prescot	
Figure No.: Figure 8	Drawn By: IJT











APPENDICES

Appendix A – Site Layout Plan

Appendix B – Windy Arbor Road / Fallows Way Junctions⁹ Modelling

Appendix C – Tarbock Roundabout LinSig Modelling

Appendix D - Proposed Site Access Design

Appendix E – Proposed Site Access Visibility Splays

Appendix F – Max Legal Articulated Vehicle Swept Path Analysis

Appendix G – B2 TRICS Data

Appendix H – Office TRICS Data

Appendix A

SITE LAYOUT PLAN

Appendix B

WINDY ARBOR ROAD / FALLOWS WAY JUNCTIONS9 MODELLING

Junctions 9									
PICADY 9 - Priority Intersection Module									
Version: 9.5.1.7462 © Copyright TRL Limited, 2019									
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk									
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution									

Filename: Windy Arbor Road - Fallows Way.j9

Path: C:\AMA\AMA\AMA - Documents\001 - Projects\21686 - Allied Properties Fallows Way Prescott\D Models and Drawings\JUNCTION MODELLING

Report generation date: 09/02/2023 13:26:20

- »Windy Arbor Road / Fallows Way - 2023, AM
- »Windy Arbor Road / Fallows Way - 2023, PM
- »Windy Arbor Road / Fallows Way - 2028, AM
- »Windy Arbor Road / Fallows Way - 2028, PM
- »Windy Arbor Road / Fallows Way - 2028 + Dev, AM
- »Windy Arbor Road / Fallows Way - 2028 + Dev, PM

Summary of junction performance

	AM					PM				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Windy Arbor Road / Fallows Way - 2023									
Stream B-C	D1	0.0	6.43	0.04	A	D2	0.1	7.01	0.12	A
Stream B-A		0.2	10.24	0.14	B		0.2	10.73	0.19	B
Stream C-AB		0.2	5.11	0.10	A		0.2	5.85	0.10	A
	Windy Arbor Road / Fallows Way - 2028									
Stream B-C	D3	0.0	6.49	0.04	A	D4	0.1	7.12	0.12	A
Stream B-A		0.2	10.50	0.14	B		0.2	11.03	0.20	B
Stream C-AB		0.2	5.09	0.10	A		0.2	5.84	0.11	A
	Windy Arbor Road / Fallows Way - 2028 + Dev									
Stream B-C	D5	0.0	6.58	0.04	A	D6	0.2	7.49	0.13	A
Stream B-A		0.2	10.76	0.15	B		0.3	11.71	0.25	B
Stream C-AB		0.2	5.14	0.11	A		0.2	5.85	0.11	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Windy Arbor Road / Fallows Way
Location	Prescot
Site number	
Date	09/02/2023
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\Modellinglaptop
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:15	08:45	15
D2	2023	PM	ONE HOUR	16:30	18:00	15
D3	2028	AM	ONE HOUR	07:15	08:45	15
D4	2028	PM	ONE HOUR	16:30	18:00	15
D5	2028 + Dev	AM	ONE HOUR	07:15	08:45	15
D6	2028 + Dev	PM	ONE HOUR	16:30	18:00	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Windy Arbor Road / Fallows Way	100.000

Windy Arbor Road / Fallows Way - 2023, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Windy Arbor Road / Fallows Way	T-Junction	Two-way		0.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Windy Arbor Road (S)		Major
B	Fallows Way		Minor
C	Windy Arbor Road (N)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Windy Arbor Road (N)	6.95			0.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B - Fallows Way	One lane plus flare	10.00	6.16	3.94	3.70	3.70	✓	1.00	140	160

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	675	0.118	0.298	0.187	0.426
B-C	754	0.111	0.280	-	-
C-B	574	0.213	0.213	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2023	AM	ONE HOUR	07:15	08:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Windy Arbor Road (S)		✓	535	100.000
B - Fallows Way		✓	71	100.000
C - Windy Arbor Road (N)		✓	496	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	85	450
	B - Fallows Way	50	0	21
	C - Windy Arbor Road (N)	468	28	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	0	0
	B - Fallows Way	0	0	0
	C - Windy Arbor Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.43	0.0	A
B-A	0.14	10.24	0.2	B
C-AB	0.10	5.11	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	640	0.025	16	0.0	5.769	A
B-A	38	492	0.077	37	0.1	7.918	A
C-AB	40	745	0.054	40	0.1	5.104	A
C-A	333			333			
A-B	64			64			
A-C	339			339			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	616	0.031	19	0.0	6.024	A
B-A	45	456	0.099	45	0.1	8.756	A
C-AB	55	782	0.070	55	0.1	4.951	A
C-A	391			391			
A-B	76			76			
A-C	405			405			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	583	0.040	23	0.0	6.426	A
B-A	55	407	0.135	55	0.2	10.230	B
C-AB	81	836	0.097	81	0.2	4.772	A
C-A	465			465			
A-B	94			94			
A-C	495			495			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	23	583	0.040	23	0.0	6.428	A
B-A	55	407	0.135	55	0.2	10.242	B
C-AB	81	836	0.097	81	0.2	4.776	A
C-A	465			465			
A-B	94			94			
A-C	495			495			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	19	616	0.031	19	0.0	6.030	A
B-A	45	456	0.099	45	0.1	8.769	A
C-AB	55	782	0.070	55	0.1	4.956	A
C-A	391			391			
A-B	76			76			
A-C	405			405			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	16	639	0.025	16	0.0	5.772	A
B-A	38	492	0.077	38	0.1	7.935	A
C-AB	40	745	0.054	40	0.1	5.110	A
C-A	333			333			
A-B	64			64			
A-C	339			339			

Windy Arbor Road / Fallows Way - 2023, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Windy Arbor Road / Fallows Way	T-Junction	Two-way		1.44	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2023	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Windy Arbor Road (S)		✓	590	100.000
B - Fallows Way		✓	133	100.000
C - Windy Arbor Road (N)		✓	351	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	71	519
	B - Fallows Way	71	0	62
	C - Windy Arbor Road (N)	318	33	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	0	0
	B - Fallows Way	0	0	0
	C - Windy Arbor Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	7.01	0.1	A
B-A	0.19	10.73	0.2	B
C-AB	0.10	5.85	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	47	652	0.072	46	0.1	5.937	A
B-A	53	497	0.108	53	0.1	8.098	A
C-AB	39	655	0.060	39	0.1	5.841	A
C-A	225			225			
A-B	53			53			
A-C	391			391			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	56	624	0.089	56	0.1	6.339	A
B-A	64	462	0.138	64	0.2	9.029	A
C-AB	52	674	0.077	52	0.1	5.788	A
C-A	264			264			
A-B	64			64			
A-C	467			467			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	68	582	0.117	68	0.1	7.002	A
B-A	78	414	0.189	78	0.2	10.710	B
C-AB	73	701	0.104	73	0.2	5.732	A
C-A	314			314			
A-B	78			78			
A-C	571			571			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	68	582	0.117	68	0.1	7.007	A
B-A	78	414	0.189	78	0.2	10.728	B
C-AB	73	701	0.104	73	0.2	5.740	A
C-A	313			313			
A-B	78			78			
A-C	571			571			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	56	623	0.089	56	0.1	6.348	A
B-A	64	462	0.138	64	0.2	9.052	A
C-AB	52	674	0.077	52	0.1	5.797	A
C-A	264			264			
A-B	64			64			
A-C	467			467			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	47	652	0.072	47	0.1	5.947	A
B-A	53	497	0.108	54	0.1	8.121	A
C-AB	39	655	0.060	40	0.1	5.851	A
C-A	225			225			
A-B	53			53			
A-C	391			391			

Windy Arbor Road / Fallows Way - 2028, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Windy Arbor Road / Fallows Way	T-Junction	Two-way		0.90	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028	AM	ONE HOUR	07:15	08:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Windy Arbor Road (S)		✓	549	100.000
B - Fallows Way		✓	73	100.000
C - Windy Arbor Road (N)		✓	510	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	87	462
	B - Fallows Way	51	0	22
	C - Windy Arbor Road (N)	481	29	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	0	0
	B - Fallows Way	0	0	0
	C - Windy Arbor Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.49	0.0	A
B-A	0.14	10.50	0.2	B
C-AB	0.10	5.09	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	638	0.026	16	0.0	5.795	A
B-A	38	486	0.079	38	0.1	8.026	A
C-AB	42	750	0.056	42	0.1	5.082	A
C-A	342			342			
A-B	65			65			
A-C	348			348			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	614	0.032	20	0.0	6.061	A
B-A	46	450	0.102	46	0.1	8.912	A
C-AB	58	789	0.073	58	0.1	4.928	A
C-A	401			401			
A-B	78			78			
A-C	415			415			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	579	0.042	24	0.0	6.483	A
B-A	56	399	0.141	56	0.2	10.491	B
C-AB	86	844	0.102	86	0.2	4.751	A
C-A	475			475			
A-B	96			96			
A-C	509			509			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	579	0.042	24	0.0	6.485	A
B-A	56	399	0.141	56	0.2	10.503	B
C-AB	86	844	0.102	86	0.2	4.755	A
C-A	475			475			
A-B	96			96			
A-C	509			509			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	613	0.032	20	0.0	6.065	A
B-A	46	450	0.102	46	0.1	8.928	A
C-AB	58	789	0.074	58	0.1	4.932	A
C-A	400			400			
A-B	78			78			
A-C	415			415			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	637	0.026	17	0.0	5.798	A
B-A	38	486	0.079	39	0.1	8.045	A
C-AB	42	750	0.057	43	0.1	5.090	A
C-A	342			342			
A-B	65			65			
A-C	348			348			

Windy Arbor Road / Fallows Way - 2028, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Windy Arbor Road / Fallows Way	T-Junction	Two-way		1.47	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Windy Arbor Road (S)		✓	605	100.000
B - Fallows Way		✓	137	100.000
C - Windy Arbor Road (N)		✓	361	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	73	532
	B - Fallows Way	73	0	64
	C - Windy Arbor Road (N)	327	34	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	0	0
	B - Fallows Way	0	0	0
	C - Windy Arbor Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	7.12	0.1	A
B-A	0.20	11.03	0.2	B
C-AB	0.11	5.84	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	48	649	0.074	48	0.1	5.987	A
B-A	55	492	0.112	54	0.1	8.214	A
C-AB	41	658	0.062	40	0.1	5.830	A
C-A	231			231			
A-B	55			55			
A-C	401			401			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	58	619	0.093	57	0.1	6.409	A
B-A	66	456	0.144	65	0.2	9.205	A
C-AB	54	677	0.080	54	0.1	5.778	A
C-A	270			270			
A-B	66			66			
A-C	478			478			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	576	0.122	70	0.1	7.114	A
B-A	80	407	0.198	80	0.2	11.013	B
C-AB	77	706	0.109	76	0.2	5.724	A
C-A	321			321			
A-B	80			80			
A-C	586			586			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	576	0.122	70	0.1	7.121	A
B-A	80	407	0.198	80	0.2	11.034	B
C-AB	77	706	0.109	77	0.2	5.730	A
C-A	321			321			
A-B	80			80			
A-C	586			586			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	58	619	0.093	58	0.1	6.417	A
B-A	66	456	0.144	66	0.2	9.229	A
C-AB	54	678	0.080	55	0.2	5.789	A
C-A	270			270			
A-B	66			66			
A-C	478			478			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	48	648	0.074	48	0.1	6.000	A
B-A	55	492	0.112	55	0.1	8.240	A
C-AB	41	658	0.062	41	0.1	5.843	A
C-A	231			231			
A-B	55			55			
A-C	401			401			

Windy Arbor Road / Fallows Way - 2028 + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Windy Arbor Road / Fallows Way	T-Junction	Two-way		0.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2028 + Dev	AM	ONE HOUR	07:15	08:45	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Windy Arbor Road (S)		✓	576	100.000
B - Fallows Way		✓	77	100.000
C - Windy Arbor Road (N)		✓	512	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	114	462
	B - Fallows Way	55	0	22
	C - Windy Arbor Road (N)	481	31	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	0	0
	B - Fallows Way	0	0	0
	C - Windy Arbor Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.04	6.58	0.0	A
B-A	0.15	10.76	0.2	B
C-AB	0.11	5.14	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

07:15 - 07:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	631	0.026	16	0.0	5.854	A
B-A	41	484	0.086	41	0.1	8.119	A
C-AB	45	747	0.061	45	0.1	5.129	A
C-A	340			340			
A-B	86			86			
A-C	348			348			

07:30 - 07:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	607	0.033	20	0.0	6.133	A
B-A	49	447	0.111	49	0.1	9.055	A
C-AB	62	785	0.079	62	0.1	4.985	A
C-A	398			398			
A-B	102			102			
A-C	415			415			

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	571	0.042	24	0.0	6.580	A
B-A	61	395	0.153	60	0.2	10.745	B
C-AB	93	840	0.111	93	0.2	4.822	A
C-A	471			471			
A-B	126			126			
A-C	509			509			

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	24	571	0.042	24	0.0	6.582	A
B-A	61	395	0.153	61	0.2	10.760	B
C-AB	93	840	0.111	93	0.2	4.827	A
C-A	471			471			
A-B	126			126			
A-C	509			509			

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	20	606	0.033	20	0.0	6.137	A
B-A	49	447	0.111	50	0.1	9.073	A
C-AB	63	785	0.080	63	0.2	4.992	A
C-A	398			398			
A-B	102			102			
A-C	415			415			

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	17	631	0.026	17	0.0	5.860	A
B-A	41	484	0.086	42	0.1	8.140	A
C-AB	46	747	0.061	46	0.1	5.136	A
C-A	340			340			
A-B	86			86			
A-C	348			348			

Windy Arbor Road / Fallows Way - 2028 + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Windy Arbor Road / Fallows Way	T-Junction	Two-way		1.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 + Dev	PM	ONE HOUR	16:30	18:00	15

Vehicle mix source	PCU Factor for a HV (PCU)
HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - Windy Arbor Road (S)		✓	609	100.000
B - Fallows Way		✓	161	100.000
C - Windy Arbor Road (N)		✓	361	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	77	532
	B - Fallows Way	95	0	66
	C - Windy Arbor Road (N)	327	34	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A - Windy Arbor Road (S)	B - Fallows Way	C - Windy Arbor Road (N)
From	A - Windy Arbor Road (S)	0	0	0
	B - Fallows Way	0	0	0
	C - Windy Arbor Road (N)	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
B-C	0.13	7.49	0.2	A
B-A	0.25	11.71	0.3	B
C-AB	0.11	5.85	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	632	0.079	49	0.1	6.175	A
B-A	72	500	0.143	71	0.2	8.385	A
C-AB	41	657	0.062	41	0.1	5.835	A
C-A	231			231			
A-B	58			58			
A-C	401			401			

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	600	0.099	59	0.1	6.651	A
B-A	85	463	0.184	85	0.2	9.523	A
C-AB	54	677	0.080	54	0.1	5.786	A
C-A	270			270			
A-B	69			69			
A-C	478			478			

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	73	554	0.131	73	0.1	7.479	A
B-A	105	412	0.254	104	0.3	11.674	B
C-AB	77	705	0.109	77	0.2	5.732	A
C-A	321			321			
A-B	85			85			
A-C	586			586			

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	73	553	0.131	73	0.2	7.488	A
B-A	105	412	0.254	105	0.3	11.708	B
C-AB	77	705	0.109	77	0.2	5.738	A
C-A	320			320			
A-B	85			85			
A-C	586			586			

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	600	0.099	59	0.1	6.661	A
B-A	85	463	0.184	86	0.2	9.557	A
C-AB	54	677	0.080	55	0.2	5.796	A
C-A	270			270			
A-B	69			69			
A-C	478			478			

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	50	632	0.079	50	0.1	6.190	A
B-A	72	499	0.143	72	0.2	8.421	A
C-AB	41	657	0.063	41	0.1	5.849	A
C-A	231			231			
A-B	58			58			
A-C	401			401			

Appendix C

TARBOCK ROUNDABOUT LINSIG MODELLING

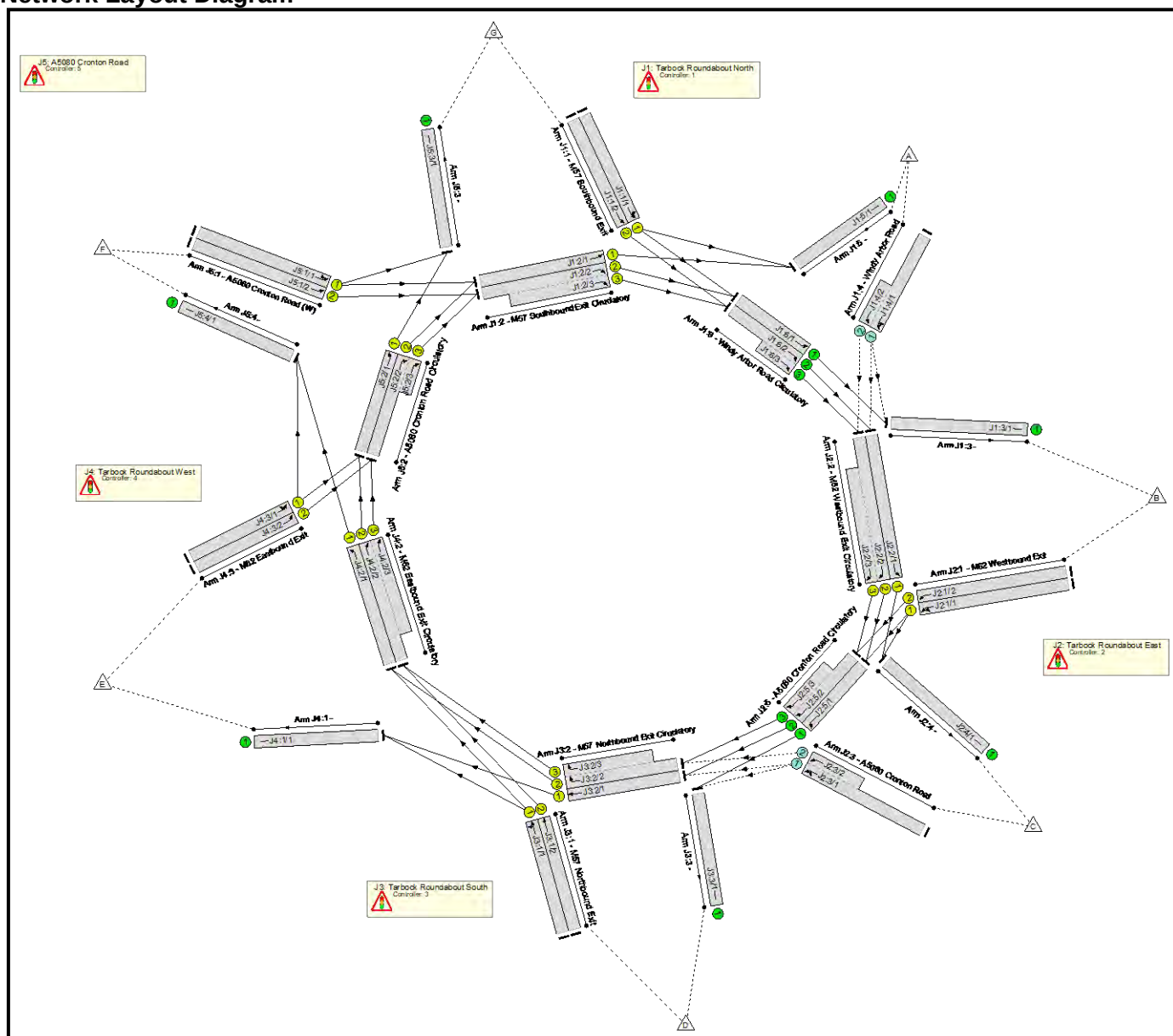
Full Input Data And Results

Full Input Data And Results

User and Project Details

Project:	Fallows Way, Prescott
Title:	Tarbock Roundabout
Location:	Prescot
Additional detail:	
File name:	Tarbock Roundabout.lsg3x
Author:	
Company:	
Address:	

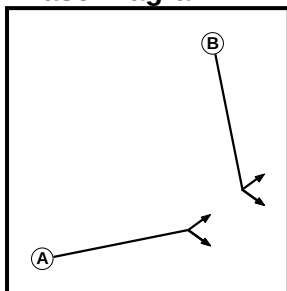
Network Layout Diagram



Full Input Data And Results

C1 - Tarbock Roundabout North

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7

Phase Intergreens Matrix

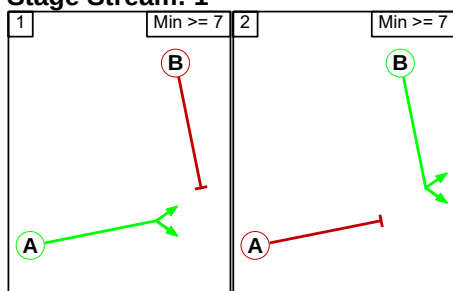
Terminating Phase	Starting Phase	
	A	B
A		6
B	6	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B

Stage Diagram

Stage Stream: 1



Phase Delays

Stage Stream: 1

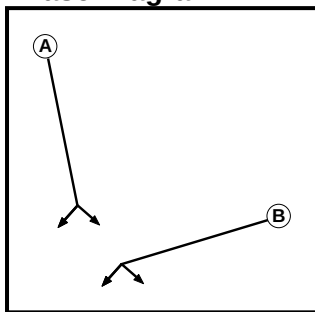
Term. Stage	Start Stage	Phase	Type	Value	Cont value
There are no Phase Delays defined					

Prohibited Stage Change

Stage Stream: 1

From Stage	To Stage	
	1	2
1		6
2	6	

Full Input Data And Results
C2 - Tarbock Roundabout East
Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7

Phase Intergreens Matrix

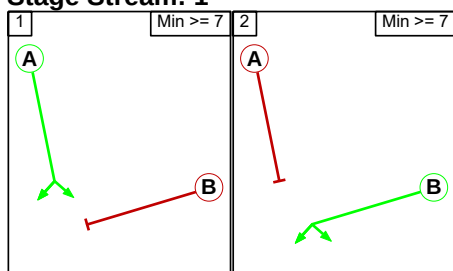
Terminating Phase	Starting Phase	
	A	B
	A	6
	B	6

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B

Stage Diagram

Stage Stream: 1



Phase Delays

Stage Stream: 1

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

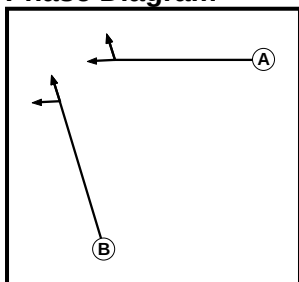
Prohibited Stage Change

Stage Stream: 1

From Stage	To Stage	
	1	2
	1	6
	2	6

Full Input Data And Results

C3 - Tarbock Roundabout South Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7

Phase Intergreens Matrix

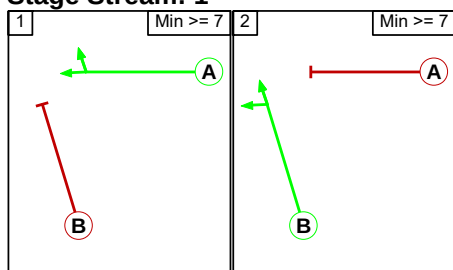
Terminating Phase	Starting Phase		
	A	B	
	A	6	
	B	6	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B

Stage Diagram

Stage Stream: 1



Phase Delays

Stage Stream: 1

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

Prohibited Stage Change

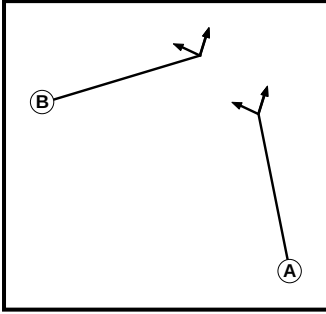
Stage Stream: 1

From Stage	To Stage		
	1	2	
	1	6	
	2	6	

Full Input Data And Results

C4 - Tarbock Roundabout West

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7

Phase Intergreens Matrix

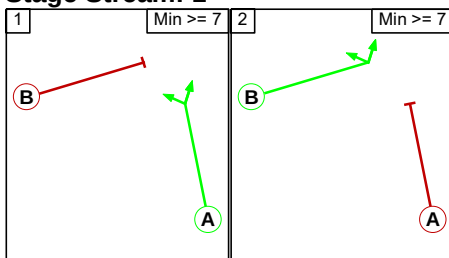
	Starting Phase		
Terminating Phase		A	B
	A		6
	B	6	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B

Stage Diagram

Stage Stream: 1



Phase Delays

Stage Stream: 1

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

Prohibited Stage Change

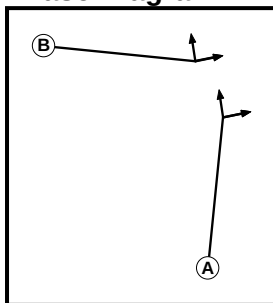
Stage Stream: 1

	To Stage		
From Stage		1	2
	1		6
	2	6	

Full Input Data And Results

C5 - A5080 Cronton Road

Phase Diagram



Phase Input Data

Phase Name	Phase Type	Stage Stream	Assoc. Phase	Street Min	Cont Min
A	Traffic	1		7	7
B	Traffic	1		7	7

Phase Intergreens Matrix

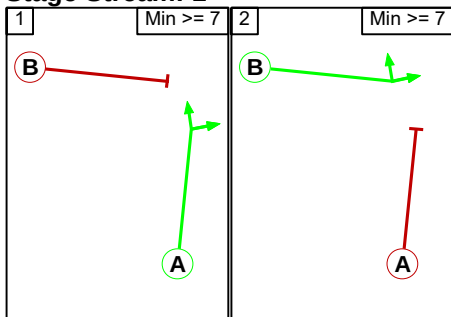
Terminating Phase	Starting Phase	
	A	B
	A	6
B	6	

Phases in Stage

Stream	Stage No.	Phases in Stage
1	1	A
1	2	B

Stage Diagram

Stage Stream: 1



Phase Delays

Stage Stream: 1

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

Prohibited Stage Change

Stage Stream: 1

From Stage	To Stage	
	1	2
	1	6
2	6	

Give-Way Lane Input Data

Junction: J1: Tarbock Roundabout North											
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)
J1:4/1 (Windy Arbor Road)	J2:2/1 (Ahead)	1439	0	J1:6/1	1.09	All	-	-	-	-	-
				J1:6/2	1.09	All					
	J1:3/1 (Left)	1439	0	J1:6/1	1.09	All					
J1:4/2 (Windy Arbor Road)	J2:2/2 (Ahead)	1439	0	J1:6/1	1.09	All	-	-	-	-	-
				J1:6/2	1.09	All					
				J1:6/3	1.09	All					

Junction: J2: Tarbock Roundabout East											
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)
J2:3/1 (A5080 Cronton Road)	J3:2/1 (Ahead)	1439	0	J2:5/1	1.09	All	-	-	-	-	-
				J2:5/2	1.09	All					
	J3:3/1 (Left)	1439	0	J2:5/1	1.09	All					
J2:3/2 (A5080 Cronton Road)	J3:2/2 (Ahead)	1439	0	J2:5/1	1.09	All	-	-	-	-	-
				J2:5/2	1.09	All					
				J2:5/3	1.09	All					

Junction: J3: Tarbock Roundabout South

There are no Opposed Lanes in this Junction

Junction: J4: Tarbock Roundabout West

There are no Opposed Lanes in this Junction

Junction: J5: A5080 Cronton Road

There are no Opposed Lanes in this Junction

Full Input Data And Results

Lane Input Data

Junction: J1: Tarbock Roundabout North												
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 (M57 Southbound Exit)	U	B	2	3	60.0	Geom	-	3.70	0.00	Y	Arm J1:5 Left	Inf
											Arm J1:6 Ahead	Inf
J1:1/2 (M57 Southbound Exit)	U	B	2	3	60.0	Geom	-	3.70	0.00	N	Arm J1:6 Ahead	Inf
J1:2/1 (M57 Southbound Exit Circulatory)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:5 Ahead	Inf
J1:2/2 (M57 Southbound Exit Circulatory)	U	A	2	3	60.0	Geom	-	3.25	0.00	N	Arm J1:6 Right	Inf
J1:2/3 (M57 Southbound Exit Circulatory)	U	A	2	3	12.2	Geom	-	3.25	0.00	N	Arm J1:6 Right	Inf
J1:3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:4/1 (Windy Arbor Road)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm J2:2 Ahead	Inf
J1:4/2 (Windy Arbor Road)	O		2	3	5.6	Geom	-	3.50	0.00	N	Arm J2:2 Ahead	Inf
J1:5/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J1:6/1 (Windy Arbor Road Circulatory)	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm J1:3 Ahead	Inf
J1:6/2 (Windy Arbor Road Circulatory)	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:2 Ahead	Inf
J1:6/3 (Windy Arbor Road Circulatory)	U		2	3	5.0	Geom	-	3.25	0.00	N	Arm J2:2 Ahead	Inf

Full Input Data And Results

Junction: J2: Tarbock Roundabout East												
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 (M62 Westbound Exit)	U	B	2	3	60.0	Geom	-	4.40	0.00	Y	Arm J2:4 Left	Inf
											Arm J2:5 Ahead	Inf
J2:1/2 (M62 Westbound Exit)	U	B	2	3	60.0	Geom	-	4.40	0.00	N	Arm J2:5 Ahead	Inf
J2:2/1 (M62 Westbound Exit Circulatory)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J2:4 Ahead	Inf
J2:2/2 (M62 Westbound Exit Circulatory)	U	A	2	3	60.0	Geom	-	3.25	0.00	N	Arm J2:5 Right	Inf
J2:2/3 (M62 Westbound Exit Circulatory)	U	A	2	3	16.5	Geom	-	3.25	0.00	N	Arm J2:5 Right	Inf
J2:3/1 (A5080 Cronton Road)	O		2	3	60.0	Geom	-	3.50	0.00	Y	Arm J3:2 Ahead Arm J3:3 Left	Inf Inf
J2:3/2 (A5080 Cronton Road)	O		2	3	7.0	Geom	-	3.50	0.00	N	Arm J3:2 Ahead	Inf
J2:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J2:5/1 (A5080 Cronton Road Circulatory)	U		2	3	60.0	Geom	-	3.25	0.00	Y	Arm J3:3 Left	Inf
J2:5/2 (A5080 Cronton Road Circulatory)	U		2	3	60.0	Geom	-	3.25	0.00	N	Arm J3:2 Ahead	Inf
J2:5/3 (A5080 Cronton Road Circulatory)	U		2	3	7.3	Geom	-	3.25	0.00	N	Arm J3:2 Ahead	Inf

Full Input Data And Results

Junction: J3: Tarbock Roundabout South												
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)
J3:1/1 (M57 Northbound Exit)	U	B	2	3	60.0	Geom	-	5.00	0.00	Y	Arm J4:1 Left	Inf
											Arm J4:2 Ahead	Inf
J3:1/2 (M57 Northbound Exit)	U	B	2	3	60.0	Geom	-	5.00	0.00	N	Arm J4:2 Ahead	Inf
J3:2/1 (M57 Northbound Exit Ciruclatory)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J4:1 Ahead	Inf
J3:2/2 (M57 Northbound Exit Ciruclatory)	U	A	2	3	60.0	Geom	-	3.25	0.00	N	Arm J4:2 Right	Inf
J3:2/3 (M57 Northbound Exit Ciruclatory)	U	A	2	3	16.5	Geom	-	3.25	0.00	N	Arm J4:2 Right	Inf
J3:3/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Junction: J4: Tarbock Roundabout West												
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)
J4:1/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J4:2/1 (M62 Eastbound Exit Circulatory)	U	A	2	3	60.0	Geom	-	3.25	0.00	Y	Arm J5:4 Left	Inf
J4:2/2 (M62 Eastbound Exit Circulatory)	U	A	2	3	60.0	Geom	-	3.25	0.00	N	Arm J5:2 Ahead	Inf
J4:2/3 (M62 Eastbound Exit Circulatory)	U	A	2	3	16.5	Geom	-	3.25	0.00	N	Arm J5:2 Ahead	Inf
J4:3/1 (M62 Eastbound Exit)	U	B	2	3	60.0	Geom	-	3.50	0.00	Y	Arm J5:2 Left	Inf
											Arm J5:4 Left	Inf

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	U	B	2	3	60.0	Geom	-	3.50	0.00	N	Arm J5:2 Left	Inf
--------------------------------------	---	---	---	---	------	------	---	------	------	---	---------------------	-----

Junction: J5: A5080 Cronton Road												
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)
J5:1/1 (A5080 Cronton Road (W))	U	B	2	3	60.0	Geom	-	3.70	0.00	Y	Arm J1:2 Ahead	Inf
											Arm J5:3 Left	Inf
J5:1/2 (A5080 Cronton Road (W))	U	B	2	3	60.0	Geom	-	3.70	0.00	N	Arm J1:2 Ahead	Inf
J5:2/1 (A5080 Cronton Road Circulatory)	U	A	2	3	60.0	Geom	-	3.40	0.00	Y	Arm J5:3 Ahead	Inf
J5:2/2 (A5080 Cronton Road Circulatory)	U	A	2	3	60.0	Geom	-	3.40	0.00	N	Arm J1:2 Right	Inf
J5:2/3 (A5080 Cronton Road Circulatory)	U	A	2	3	4.3	Geom	-	3.40	0.00	N	Arm J1:2 Right	Inf
J5:3/1	U		2	3	60.0	Inf	-	-	-	-	-	-
J5:4/1	U		2	3	60.0	Inf	-	-	-	-	-	-

Traffic Flow Groups

Flow Group	Start Time	End Time	Duration	Formula
1: '2023 AM'	08:00	09:00	01:00	
2: '2023 PM'	16:00	17:00	01:00	
3: '2028 AM'	08:00	09:00	01:00	
4: '2028 PM'	16:00	17:00	01:00	
5: '2033 AM'	08:00	09:00	01:00	
6: '2033 PM'	16:00	17:00	01:00	
7: '2028 + Development AM'	08:00	09:00	01:00	
8: '2028 + Development PM'	16:00	17:00	01:00	
9: '2033 + Development AM'	08:00	09:00	01:00	
10: '2033 + Development PM'	16:00	17:00	01:00	

Full Input Data And Results

Scenario 1: '2023 AM' (FG1: '2023 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

		Destination							
Origin		A	B	C	D	E	F	G	Tot.
	A	0	103	65	112	99	30	115	524
	B	110	0	37	566	0	246	49	1008
	C	5	2	0	17	145	84	114	367
	D	46	469	38	0	280	130	0	963
	E	85	4	63	409	0	120	443	1124
	F	190	181	54	104	64	0	319	912
	G	58	4	58	0	210	294	0	624
	Tot.	494	763	315	1208	798	904	1040	5522

Traffic Lane Flows

Lane	Scenario 1: 2023 AM
Junction: J1: Tarbock Roundabout North	
J1:1/1	62
J1:1/2	562
J1:2/1	436
J1:2/2 (with short)	1388(In) 656(Out)
J1:2/3 (short)	732
J1:3/1	763
J1:4/1 (with short)	524(In) 168(Out)
J1:4/2 (short)	356
J1:5/1	494
J1:6/1	660
J1:6/2 (with short)	1294(In) 213(Out)
J1:6/3 (short)	1081
Junction: J2: Tarbock Roundabout East	
J2:1/1	603
J2:1/2	405
J2:2/1	278
J2:2/2 (with short)	1437(In) 625(Out)
J2:2/3 (short)	812
J2:3/1 (with short)	367(In) 162(Out)
J2:3/2 (short)	205
J2:4/1	315
J2:5/1	1191

Full Input Data And Results

Lane	Scenario 1: 2023 AM
J2:5/2 (with short)	1217(In) 373(Out)
J2:5/3 (short)	844
Junction: J3: Tarbock Roundabout South	
J3:1/1	410
J3:1/2	553
J3:2/1	518
J3:2/2 (with short)	1049(In) 654(Out)
J3:2/3 (short)	395
J3:3/1	1208
Junction: J4: Tarbock Roundabout West	
J4:1/1	798
J4:2/1	784
J4:2/2 (with short)	948(In) 278(Out)
J4:2/3 (short)	670
J4:3/1	563
J4:3/2	561
Junction: J5: A5080 Cronton Road	
J5:1/1	509
J5:1/2	403
J5:2/1	721
J5:2/2 (with short)	1231(In) 246(Out)
J5:2/3 (short)	985
J5:3/1	1040
J5:4/1	904

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left	Inf	93.5 %	1985	1985
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	6.5 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	38.7 %	1965	1965
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J1:3 Left	Inf	61.3 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left	Inf	6.1 %	2055	2055
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	93.9 %		
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/4 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	89.5 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	10.5 %	2105	2105
J2:4/1	Infinite Saturation Flow						Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	68.3 %	2115	2115
				Arm J4:2 Ahead	Inf	31.7 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Ciruclatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Ciruclatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Ciruclatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1	Infinite Saturation Flow						Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left Arm J5:4 Left	Inf Inf	78.7 % 21.3 %	1965	1965
J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead	Inf	37.3 %	1985	1985
				Arm J5:3 Left	Inf	62.7 %		
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1	Infinite Saturation Flow						Inf	Inf
J5:4/1	Infinite Saturation Flow						Inf	Inf

Full Input Data And Results

Scenario 2: '2023 PM' (FG2: '2023 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	70	81	65	92	11	64	383
	B	126	0	64	396	0	191	48	825
	C	4	4	0	14	198	53	81	354
	D	11	449	31	0	404	97	0	992
	E	80	0	75	323	0	79	350	907
	F	260	112	74	57	88	0	301	892
	G	105	3	85	0	313	334	0	840
	Tot.	586	638	410	855	1095	765	844	5193

Traffic Lane Flows

Lane	Scenario 2: 2023 PM
Junction: J1: Tarbock Roundabout North	
J1:1/1	108
J1:1/2	732
J1:2/1	481
J1:2/2 (with short)	1213(In) 565(Out)
J1:2/3 (short)	648
J1:3/1	638
J1:4/1 (with short)	383(In) 151(Out)
J1:4/2 (short)	232
J1:5/1	586
J1:6/1	568
J1:6/2 (with short)	1380(In) 265(Out)
J1:6/3 (short)	1115
Junction: J2: Tarbock Roundabout East	
J2:1/1	460
J2:1/2	365
J2:2/1	346
J2:2/2 (with short)	1347(In) 445(Out)
J2:2/3 (short)	902
J2:3/1 (with short)	354(In) 212(Out)
J2:3/2 (short)	142
J2:4/1	410
J2:5/1	841

Full Input Data And Results

Lane	Scenario 2: 2023 PM
J2:5/2 (with short)	1267(In) 493(Out)
J2:5/3 (short)	774
Junction: J3: Tarbock Roundabout South	
J3:1/1	501
J3:1/2	491
J3:2/1	691
J3:2/2 (with short)	916(In) 589(Out)
J3:2/3 (short)	327
J3:3/1	855
Junction: J4: Tarbock Roundabout West	
J4:1/1	1095
J4:2/1	686
J4:2/2 (with short)	818(In) 193(Out)
J4:2/3 (short)	625
J4:3/1	429
J4:3/2	478
Junction: J5: A5080 Cronton Road	
J5:1/1	561
J5:1/2	331
J5:2/1	543
J5:2/2 (with short)	1103(In) 221(Out)
J5:2/3 (short)	882
J5:3/1	844
J5:4/1	765

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left	Inf	97.2 %	1985	1985
				Arm J1:6 Ahead	Inf	2.8 %		
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	100.0 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	53.6 %	1965	1965
				Arm J1:3 Left	Inf	46.4 %		
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left	Inf	13.9 %	2055	2055
				Arm J2:5 Ahead	Inf	86.1 %		
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	93.4 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	6.6 %	2105	2105
J2:4/1				Infinite Saturation Flow			Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	80.6 %	2115	2115
				Arm J4:2 Ahead	Inf	19.4 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	81.6 %	1965	1965
				Arm J5:4 Left	Inf	18.4 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	46.3 % 53.7 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 3: '2028 AM' (FG3: '2028 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	106	67	115	102	31	118	539
	B	113	0	38	582	0	253	50	1036
	C	5	2	0	17	149	86	117	376
	D	47	482	39	0	287	133	0	988
	E	88	4	65	420	0	123	456	1156
	F	195	186	55	107	66	0	327	936
	G	59	4	60	0	216	302	0	641
	Tot.	507	784	324	1241	820	928	1068	5672

Traffic Lane Flows

Lane	Scenario 3: 2028 AM
Junction: J1: Tarbock Roundabout North	
J1:1/1	63
J1:1/2	578
J1:2/1	448
J1:2/2 (with short)	1426(In) 674(Out)
J1:2/3 (short)	752
J1:3/1	784
J1:4/1 (with short)	539(In) 173(Out)
J1:4/2 (short)	366
J1:5/1	507
J1:6/1	678
J1:6/2 (with short)	1330(In) 219(Out)
J1:6/3 (short)	1111
Junction: J2: Tarbock Roundabout East	
J2:1/1	620
J2:1/2	416
J2:2/1	286
J2:2/2 (with short)	1477(In) 642(Out)
J2:2/3 (short)	835
J2:3/1 (with short)	376(In) 166(Out)
J2:3/2 (short)	210
J2:4/1	324
J2:5/1	1224

Full Input Data And Results

Lane	Scenario 3: 2028 AM
J2:5/2 (with short)	1251(In) 384(Out)
J2:5/3 (short)	867
Junction: J3: Tarbock Roundabout South	
J3:1/1	420
J3:1/2	568
J3:2/1	533
J3:2/2 (with short)	1077(In) 672(Out)
J3:2/3 (short)	405
J3:3/1	1241
Junction: J4: Tarbock Roundabout West	
J4:1/1	820
J4:2/1	805
J4:2/2 (with short)	973(In) 285(Out)
J4:2/3 (short)	688
J4:3/1	579
J4:3/2	577
Junction: J5: A5080 Cronton Road	
J5:1/1	522
J5:1/2	414
J5:2/1	741
J5:2/2 (with short)	1265(In) 253(Out)
J5:2/3 (short)	1012
J5:3/1	1068
J5:4/1	928

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left	Inf	93.7 %	1985	1985
				Arm J1:6 Ahead	Inf	6.3 %		
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	100.0 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	38.7 %	1965	1965
				Arm J1:3 Left	Inf	61.3 %		
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left	Inf	6.1 %	2055	2055
				Arm J2:5 Ahead	Inf	93.9 %		
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	89.8 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	10.2 %	2105	2105
J2:4/1				Infinite Saturation Flow			Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	68.3 %	2115	2115
				Arm J4:2 Ahead	Inf	31.7 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	78.8 %	1965	1965
				Arm J5:4 Left	Inf	21.2 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	37.4 % 62.6 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 4: '2028 PM' (FG4: '2028 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	72	83	68	94	11	66	394
	B	129	0	66	407	0	196	50	848
	C	4	4	0	14	203	54	83	362
	D	11	461	32	0	415	100	0	1019
	E	82	0	77	331	0	81	359	930
	F	267	115	76	59	90	0	309	916
	G	107	3	87	0	322	343	0	862
	Tot.	600	655	421	879	1124	785	867	5331

Traffic Lane Flows

Lane	Scenario 4: 2028 PM
Junction: J1: Tarbock Roundabout North	
J1:1/1	110
J1:1/2	752
J1:2/1	493
J1:2/2 (with short)	1245(In) 580(Out)
J1:2/3 (short)	665
J1:3/1	655
J1:4/1 (with short)	394(In) 155(Out)
J1:4/2 (short)	239
J1:5/1	600
J1:6/1	583
J1:6/2 (with short)	1417(In) 272(Out)
J1:6/3 (short)	1145
Junction: J2: Tarbock Roundabout East	
J2:1/1	473
J2:1/2	375
J2:2/1	355
J2:2/2 (with short)	1384(In) 458(Out)
J2:2/3 (short)	926
J2:3/1 (with short)	362(In) 217(Out)
J2:3/2 (short)	145
J2:4/1	421
J2:5/1	865

Full Input Data And Results

Lane	Scenario 4: 2028 PM
J2:5/2 (with short)	1301(In) 506(Out)
J2:5/3 (short)	795
Junction: J3: Tarbock Roundabout South	
J3:1/1	515
J3:1/2	504
J3:2/1	709
J3:2/2 (with short)	940(In) 604(Out)
J3:2/3 (short)	336
J3:3/1	879
Junction: J4: Tarbock Roundabout West	
J4:1/1	1124
J4:2/1	704
J4:2/2 (with short)	840(In) 199(Out)
J4:2/3 (short)	641
J4:3/1	440
J4:3/2	490
Junction: J5: A5080 Cronton Road	
J5:1/1	576
J5:1/2	340
J5:2/1	558
J5:2/2 (with short)	1131(In) 226(Out)
J5:2/3 (short)	905
J5:3/1	867
J5:4/1	785

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left Arm J1:6 Ahead	Inf Inf	97.3 % 2.7 %	1985	1985
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	100.0 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead Arm J1:3 Left	Inf Inf	53.5 % 46.5 %	1965	1965
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left Arm J2:5 Ahead	Inf Inf	14.0 % 86.0 %	2055	2055
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	93.5 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	6.5 %	2105	2105
J2:4/1				Infinite Saturation Flow			Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	80.6 %	2115	2115
				Arm J4:2 Ahead	Inf	19.4 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	81.6 %	1965	1965
				Arm J5:4 Left	Inf	18.4 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	46.4 % 53.6 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 5: '2033 AM' (FG5: '2033 AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	109	69	118	104	32	121	553
	B	116	0	39	597	0	260	51	1063
	C	5	2	0	18	152	88	120	385
	D	48	494	40	0	295	137	0	1014
	E	90	4	66	431	0	127	467	1185
	F	200	191	57	109	67	0	336	960
	G	61	4	61	0	222	309	0	657
	Tot.	520	804	332	1273	840	953	1095	5817

Traffic Lane Flows

Lane	Scenario 5: 2033 AM
Junction: J1: Tarbock Roundabout North	
J1:1/1	65
J1:1/2	592
J1:2/1	459
J1:2/2 (with short)	1461(In) 691(Out)
J1:2/3 (short)	770
J1:3/1	804
J1:4/1 (with short)	553(In) 178(Out)
J1:4/2 (short)	375
J1:5/1	520
J1:6/1	695
J1:6/2 (with short)	1362(In) 224(Out)
J1:6/3 (short)	1138
Junction: J2: Tarbock Roundabout East	
J2:1/1	636
J2:1/2	427
J2:2/1	293
J2:2/2 (with short)	1513(In) 658(Out)
J2:2/3 (short)	855
J2:3/1 (with short)	385(In) 170(Out)
J2:3/2 (short)	215
J2:4/1	332
J2:5/1	1255

Full Input Data And Results

Lane	Scenario 5: 2033 AM
J2:5/2 (with short)	1282(In) 393(Out)
J2:5/3 (short)	889
Junction: J3: Tarbock Roundabout South	
J3:1/1	432
J3:1/2	582
J3:2/1	545
J3:2/2 (with short)	1104(In) 689(Out)
J3:2/3 (short)	415
J3:3/1	1273
Junction: J4: Tarbock Roundabout West	
J4:1/1	840
J4:2/1	826
J4:2/2 (with short)	997(In) 292(Out)
J4:2/3 (short)	705
J4:3/1	594
J4:3/2	591
Junction: J5: A5080 Cronton Road	
J5:1/1	536
J5:1/2	424
J5:2/1	759
J5:2/2 (with short)	1296(In) 259(Out)
J5:2/3 (short)	1037
J5:3/1	1095
J5:4/1	953

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left	Inf	93.8 %	1985	1985
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	6.2 %	2125	2125
J1:2/1 (M57 Southbound Exit Circular)	3.25	0.00	Y	Arm J1:6 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circular)	3.25	0.00	N	Arm J1:5 Ahead	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circular)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	38.8 %	1965	1965
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J1:3 Left	Inf	61.2 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circular)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circular)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circular)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left	Inf	6.1 %	2055	2055
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	93.9 %	2195	2195
J2:2/1 (M62 Westbound Exit Circular)	3.25	0.00	Y	Arm J2:5 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circular)	3.25	0.00	N	Arm J2:4 Ahead	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circular)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	89.4 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	10.6 %	2105	2105
J2:4/1				Infinite Saturation Flow			Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	68.3 %	2115	2115
				Arm J4:2 Ahead	Inf	31.7 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	78.6 %	1965	1965
				Arm J5:4 Left	Inf	21.4 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	37.3 % 62.7 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 6: '2033 PM' (FG6: '2033 PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	73	85	69	97	12	67	403
	B	132	0	67	417	0	201	51	868
	C	4	4	0	15	208	55	85	371
	D	12	472	33	0	425	102	0	1044
	E	83	0	79	339	0	83	368	952
	F	273	118	78	60	93	0	316	938
	G	110	3	89	0	329	351	0	882
	Tot.	614	670	431	900	1152	804	887	5458

Traffic Lane Flows

Lane	Scenario 6: 2033 PM
Junction: J1: Tarbock Roundabout North	
J1:1/1	113
J1:1/2	769
J1:2/1	504
J1:2/2 (with short)	1276(In) 594(Out)
J1:2/3 (short)	682
J1:3/1	670
J1:4/1 (with short)	403(In) 158(Out)
J1:4/2 (short)	245
J1:5/1	614
J1:6/1	597
J1:6/2 (with short)	1451(In) 279(Out)
J1:6/3 (short)	1172
Junction: J2: Tarbock Roundabout East	
J2:1/1	484
J2:1/2	384
J2:2/1	364
J2:2/2 (with short)	1417(In) 468(Out)
J2:2/3 (short)	949
J2:3/1 (with short)	371(In) 223(Out)
J2:3/2 (short)	148
J2:4/1	431
J2:5/1	885

Full Input Data And Results

Lane	Scenario 6: 2033 PM
J2:5/2 (with short)	1333(In) 519(Out)
J2:5/3 (short)	814
Junction: J3: Tarbock Roundabout South	
J3:1/1	527
J3:1/2	517
J3:2/1	727
J3:2/2 (with short)	962(In) 619(Out)
J3:2/3 (short)	343
J3:3/1	900
Junction: J4: Tarbock Roundabout West	
J4:1/1	1152
J4:2/1	721
J4:2/2 (with short)	860(In) 203(Out)
J4:2/3 (short)	657
J4:3/1	451
J4:3/2	501
Junction: J5: A5080 Cronton Road	
J5:1/1	589
J5:1/2	349
J5:2/1	571
J5:2/2 (with short)	1158(In) 231(Out)
J5:2/3 (short)	927
J5:3/1	887
J5:4/1	804

Full Input Data And Results
Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left Arm J1:6 Ahead	Inf Inf	97.3 % 2.7 %	1985	1985
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	100.0 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead Arm J1:3 Left	Inf Inf	53.8 % 46.2 %	1965	1965
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left Arm J2:5 Ahead	Inf Inf	13.8 % 86.2 %	2055	2055
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	93.3 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	6.7 %	2105	2105
J2:4/1				Infinite Saturation Flow			Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	80.6 %	2115	2115
				Arm J4:2 Ahead	Inf	19.4 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	81.6 %	1965	1965
				Arm J5:4 Left	Inf	18.4 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	46.3 % 53.7 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 7: '2028 + Development AM' (FG7: '2028 + Development AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	107	67	115	103	31	119	542
	B	118	0	38	582	0	253	50	1041
	C	7	2	0	17	149	86	117	378
	D	50	482	39	0	287	133	0	991
	E	96	4	65	420	0	123	456	1164
	F	198	186	55	107	66	0	327	939
	G	70	4	60	0	216	302	0	652
	Tot.	539	785	324	1241	821	928	1069	5707

Traffic Lane Flows

Lane	Scenario 7: 2028 + Development AM
Junction: J1: Tarbock Roundabout North	
J1:1/1	74
J1:1/2	578
J1:2/1	469
J1:2/2 (with short)	1426(In) 674(Out)
J1:2/3 (short)	752
J1:3/1	785
J1:4/1 (with short)	542(In) 174(Out)
J1:4/2 (short)	368
J1:5/1	539
J1:6/1	678
J1:6/2 (with short)	1330(In) 219(Out)
J1:6/3 (short)	1111
Junction: J2: Tarbock Roundabout East	
J2:1/1	620
J2:1/2	421
J2:2/1	286
J2:2/2 (with short)	1479(In) 642(Out)
J2:2/3 (short)	837
J2:3/1 (with short)	378(In) 166(Out)
J2:3/2 (short)	212
J2:4/1	324
J2:5/1	1224

Full Input Data And Results

Lane	Scenario 7: 2028 + Development AM
J2:5/2 (with short)	1258(In) 385(Out)
J2:5/3 (short)	873
Junction: J3: Tarbock Roundabout South	
J3:1/1	420
J3:1/2	571
J3:2/1	534
J3:2/2 (with short)	1085(In) 672(Out)
J3:2/3 (short)	413
J3:3/1	1241
Junction: J4: Tarbock Roundabout West	
J4:1/1	821
J4:2/1	805
J4:2/2 (with short)	984(In) 286(Out)
J4:2/3 (short)	698
J4:3/1	579
J4:3/2	585
Junction: J5: A5080 Cronton Road	
J5:1/1	525
J5:1/2	414
J5:2/1	742
J5:2/2 (with short)	1283(In) 271(Out)
J5:2/3 (short)	1012
J5:3/1	1069
J5:4/1	928

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left	Inf	94.6 %	1985	1985
				Arm J1:6 Ahead	Inf	5.4 %		
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	100.0 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead	Inf	38.5 %	1965	1965
				Arm J1:3 Left	Inf	61.5 %		
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left	Inf	6.1 %	2055	2055
				Arm J2:5 Ahead	Inf	93.9 %		
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	89.8 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	10.2 %	2105	2105
J2:4/1				Infinite Saturation Flow			Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	68.3 %	2115	2115
				Arm J4:2 Ahead	Inf	31.7 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	78.8 %	1965	1965
				Arm J5:4 Left	Inf	21.2 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	37.7 % 62.3 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 8: '2028 + Development PM' (FG8: '2028 + Development PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	76	85	70	101	14	74	420
	B	130	0	66	407	0	196	50	849
	C	4	4	0	14	203	54	83	362
	D	12	461	32	0	415	100	0	1020
	E	83	0	77	331	0	81	359	931
	F	267	115	76	59	90	0	309	916
	G	109	3	87	0	322	343	0	864
	Tot.	605	659	423	881	1131	788	875	5362

Traffic Lane Flows

Lane	Scenario 8: 2028 + Development PM
Junction: J1: Tarbock Roundabout North	
J1:1/1	112
J1:1/2	752
J1:2/1	496
J1:2/2 (with short)	1245(In) 580(Out)
J1:2/3 (short)	665
J1:3/1	659
J1:4/1 (with short)	420(In) 161(Out)
J1:4/2 (short)	259
J1:5/1	605
J1:6/1	583
J1:6/2 (with short)	1417(In) 272(Out)
J1:6/3 (short)	1145
Junction: J2: Tarbock Roundabout East	
J2:1/1	473
J2:1/2	376
J2:2/1	357
J2:2/2 (with short)	1404(In) 460(Out)
J2:2/3 (short)	944
J2:3/1 (with short)	362(In) 217(Out)
J2:3/2 (short)	145
J2:4/1	423
J2:5/1	867

Full Input Data And Results

Lane	Scenario 8: 2028 + Development PM
J2:5/2 (with short)	1320(In) 513(Out)
J2:5/3 (short)	807
Junction: J3: Tarbock Roundabout South	
J3:1/1	515
J3:1/2	505
J3:2/1	716
J3:2/2 (with short)	952(In) 607(Out)
J3:2/3 (short)	345
J3:3/1	881
Junction: J4: Tarbock Roundabout West	
J4:1/1	1131
J4:2/1	707
J4:2/2 (with short)	850(In) 207(Out)
J4:2/3 (short)	643
J4:3/1	440
J4:3/2	491
Junction: J5: A5080 Cronton Road	
J5:1/1	576
J5:1/2	340
J5:2/1	566
J5:2/2 (with short)	1134(In) 229(Out)
J5:2/3 (short)	905
J5:3/1	875
J5:4/1	788

Full Input Data And Results

Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left Arm J1:6 Ahead	Inf Inf	97.3 % 2.7 %	1985	1985
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	100.0 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead Arm J1:3 Left	Inf Inf	52.8 % 47.2 %	1965	1965
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left Arm J2:5 Ahead	Inf Inf	14.0 % 86.0 %	2055	2055
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	93.5 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	6.5 %	2105	2105
J2:4/1				Infinite Saturation Flow			Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	80.6 %	2115	2115
				Arm J4:2 Ahead	Inf	19.4 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	81.6 %	1965	1965
				Arm J5:4 Left	Inf	18.4 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	46.4 % 53.6 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 9: '2033 + Development AM' (FG9: '2033 + Development AM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	110	69	118	105	32	122	556
	B	121	0	39	597	0	260	51	1068
	C	8	2	0	18	152	88	120	388
	D	51	494	40	0	295	137	0	1017
	E	98	4	66	431	0	127	467	1193
	F	203	191	57	109	67	0	336	963
	G	71	4	61	0	222	309	0	667
	Tot.	552	805	332	1273	841	953	1096	5852

Traffic Lane Flows

Lane	Scenario 9: 2033 + Development AM
Junction: J1: Tarbock Roundabout North	
J1:1/1	75
J1:1/2	592
J1:2/1	481
J1:2/2 (with short)	1461(In) 691(Out)
J1:2/3 (short)	770
J1:3/1	805
J1:4/1 (with short)	556(In) 179(Out)
J1:4/2 (short)	377
J1:5/1	552
J1:6/1	695
J1:6/2 (with short)	1362(In) 224(Out)
J1:6/3 (short)	1138
Junction: J2: Tarbock Roundabout East	
J2:1/1	636
J2:1/2	432
J2:2/1	293
J2:2/2 (with short)	1515(In) 658(Out)
J2:2/3 (short)	857
J2:3/1 (with short)	388(In) 170(Out)
J2:3/2 (short)	218
J2:4/1	332
J2:5/1	1255

Full Input Data And Results

Lane	Scenario 9: 2033 + Development AM
J2:5/2 (with short)	1289(In) 394(Out)
J2:5/3 (short)	895
Junction: J3: Tarbock Roundabout South	
J3:1/1	432
J3:1/2	585
J3:2/1	546
J3:2/2 (with short)	1113(In) 689(Out)
J3:2/3 (short)	424
J3:3/1	1273
Junction: J4: Tarbock Roundabout West	
J4:1/1	841
J4:2/1	826
J4:2/2 (with short)	1009(In) 293(Out)
J4:2/3 (short)	716
J4:3/1	594
J4:3/2	599
Junction: J5: A5080 Cronton Road	
J5:1/1	539
J5:1/2	424
J5:2/1	760
J5:2/2 (with short)	1315(In) 278(Out)
J5:2/3 (short)	1037
J5:3/1	1096
J5:4/1	953

Full Input Data And Results
Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left Arm J1:6 Ahead	Inf Inf	94.7 % 5.3 %	1985	1985
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	100.0 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead Arm J1:3 Left	Inf Inf	38.5 % 61.5 %	1965	1965
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left Arm J2:5 Ahead	Inf Inf	6.1 % 93.9 %	2055	2055
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	89.4 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	10.6 %	2105	2105
J2:4/1				Arm J3:2 Ahead	Inf	100.0 %	Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	68.3 %	2115	2115
				Arm J4:2 Ahead	Inf	31.7 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	78.6 %	1965	1965
				Arm J5:4 Left	Inf	21.4 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	37.7 % 62.3 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

Full Input Data And Results

Scenario 10: '2033 + Development PM' (FG10: '2033 + Development PM', Plan 1: 'Network Control Plan 1')

Traffic Flows, Desired

Desired Flow :

	Destination								
		A	B	C	D	E	F	G	Tot.
Origin	A	0	77	87	72	104	14	76	430
	B	133	0	67	417	0	201	51	869
	C	5	4	0	15	208	55	85	372
	D	12	472	33	0	425	102	0	1044
	E	85	0	79	339	0	83	368	954
	F	274	118	78	60	93	0	316	939
	G	111	3	89	0	329	351	0	883
	Tot.	620	674	433	903	1159	806	896	5491

Traffic Lane Flows

Lane	Scenario 10: 2033 + Development PM
Junction: J1: Tarbock Roundabout North	
J1:1/1	114
J1:1/2	769
J1:2/1	509
J1:2/2 (with short)	1276(In) 594(Out)
J1:2/3 (short)	682
J1:3/1	674
J1:4/1 (with short)	430(In) 164(Out)
J1:4/2 (short)	266
J1:5/1	620
J1:6/1	597
J1:6/2 (with short)	1451(In) 279(Out)
J1:6/3 (short)	1172
Junction: J2: Tarbock Roundabout East	
J2:1/1	484
J2:1/2	385
J2:2/1	366
J2:2/2 (with short)	1438(In) 471(Out)
J2:2/3 (short)	967
J2:3/1 (with short)	372(In) 223(Out)
J2:3/2 (short)	149
J2:4/1	433
J2:5/1	888

Full Input Data And Results

Lane	Scenario 10: 2033 + Development PM
J2:5/2 (with short)	1352(In) 526(Out)
J2:5/3 (short)	826
Junction: J3: Tarbock Roundabout South	
J3:1/1	527
J3:1/2	517
J3:2/1	734
J3:2/2 (with short)	975(In) 621(Out)
J3:2/3 (short)	354
J3:3/1	903
Junction: J4: Tarbock Roundabout West	
J4:1/1	1159
J4:2/1	723
J4:2/2 (with short)	871(In) 212(Out)
J4:2/3 (short)	659
J4:3/1	451
J4:3/2	503
Junction: J5: A5080 Cronton Road	
J5:1/1	590
J5:1/2	349
J5:2/1	580
J5:2/2 (with short)	1162(In) 235(Out)
J5:2/3 (short)	927
J5:3/1	896
J5:4/1	806

Full Input Data And Results
Lane Saturation Flows

Junction: J1: Tarbock Roundabout North								
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 (M57 Southbound Exit)	3.70	0.00	Y	Arm J1:5 Left Arm J1:6 Ahead	Inf Inf	97.4 % 2.6 %	1985	1985
J1:1/2 (M57 Southbound Exit)	3.70	0.00	N	Arm J1:6 Ahead	Inf	100.0 %	2125	2125
J1:2/1 (M57 Southbound Exit Circulatory)	3.25	0.00	Y	Arm J1:5 Ahead	Inf	100.0 %	1940	1940
J1:2/2 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:2/3 (M57 Southbound Exit Circulatory)	3.25	0.00	N	Arm J1:6 Right	Inf	100.0 %	2080	2080
J1:3/1	Infinite Saturation Flow						Inf	Inf
J1:4/1 (Windy Arbor Road)	3.50	0.00	Y	Arm J2:2 Ahead Arm J1:3 Left	Inf Inf	53.0 % 47.0 %	1965	1965
J1:4/2 (Windy Arbor Road)	3.50	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2105	2105
J1:5/1	Infinite Saturation Flow						Inf	Inf
J1:6/1 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J1:3 Ahead	Inf	100.0 %	1940	1940
J1:6/2 (Windy Arbor Road Circulatory)	3.25	0.00	Y	Arm J2:2 Ahead	Inf	100.0 %	1940	1940
J1:6/3 (Windy Arbor Road Circulatory)	3.25	0.00	N	Arm J2:2 Ahead	Inf	100.0 %	2080	2080

Junction: J2: Tarbock Roundabout East								
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 (M62 Westbound Exit)	4.40	0.00	Y	Arm J2:4 Left Arm J2:5 Ahead	Inf Inf	13.8 % 86.2 %	2055	2055
J2:1/2 (M62 Westbound Exit)	4.40	0.00	N	Arm J2:5 Ahead	Inf	100.0 %	2195	2195
J2:2/1 (M62 Westbound Exit Circulatory)	3.25	0.00	Y	Arm J2:4 Ahead	Inf	100.0 %	1940	1940
J2:2/2 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080
J2:2/3 (M62 Westbound Exit Circulatory)	3.25	0.00	N	Arm J2:5 Right	Inf	100.0 %	2080	2080

Full Input Data And Results

J2:3/1 (A5080 Cronton Road)	3.50	0.00	Y	Arm J3:2 Ahead	Inf	93.3 %	1965	1965
J2:3/2 (A5080 Cronton Road)	3.50	0.00	N	Arm J3:3 Left	Inf	6.7 %	2105	2105
J2:4/1				Infinite Saturation Flow			Inf	Inf
J2:5/1 (A5080 Cronton Road Circulatory)	3.25	0.00	Y	Arm J3:3 Left	Inf	100.0 %	1940	1940
J2:5/2 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080
J2:5/3 (A5080 Cronton Road Circulatory)	3.25	0.00	N	Arm J3:2 Ahead	Inf	100.0 %	2080	2080

Junction: J3: Tarbock Roundabout South								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J3:1/1 (M57 Northbound Exit)	5.00	0.00	Y	Arm J4:1 Left	Inf	80.6 %	2115	2115
				Arm J4:2 Ahead	Inf	19.4 %		
J3:1/2 (M57 Northbound Exit)	5.00	0.00	N	Arm J4:2 Ahead	Inf	100.0 %	2255	2255
J3:2/1 (M57 Northbound Exit Circulatory)	3.25	0.00	Y	Arm J4:1 Ahead	Inf	100.0 %	1940	1940
J3:2/2 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:2/3 (M57 Northbound Exit Circulatory)	3.25	0.00	N	Arm J4:2 Right	Inf	100.0 %	2080	2080
J3:3/1				Infinite Saturation Flow			Inf	Inf

Junction: J4: Tarbock Roundabout West								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J4:1/1				Infinite Saturation Flow			Inf	Inf
J4:2/1 (M62 Eastbound Exit Circulatory)	3.25	0.00	Y	Arm J5:4 Left	Inf	100.0 %	1940	1940
J4:2/2 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:2/3 (M62 Eastbound Exit Circulatory)	3.25	0.00	N	Arm J5:2 Ahead	Inf	100.0 %	2080	2080
J4:3/1 (M62 Eastbound Exit)	3.50	0.00	Y	Arm J5:2 Left	Inf	81.6 %	1965	1965
				Arm J5:4 Left	Inf	18.4 %		

Full Input Data And Results

J4:3/2 (M62 Eastbound Exit)	3.50	0.00	N	Arm J5:2 Left	Inf	100.0 %	2105	2105
--------------------------------	------	------	---	---------------	-----	---------	------	------

Junction: J5: A5080 Cronton Road								
Lane	Lane Width (m)	Gradient	Nearside Lane	Allowed Turns	Turning Radius (m)	Turning Prop.	Sat Flow (PCU/Hr)	Flared Sat Flow (PCU/Hr)
J5:1/1 (A5080 Cronton Road (W))	3.70	0.00	Y	Arm J1:2 Ahead Arm J5:3 Left	Inf Inf	46.4 % 53.6 %	1985	1985
J5:1/2 (A5080 Cronton Road (W))	3.70	0.00	N	Arm J1:2 Ahead	Inf	100.0 %	2125	2125
J5:2/1 (A5080 Cronton Road Circulatory)	3.40	0.00	Y	Arm J5:3 Ahead	Inf	100.0 %	1955	1955
J5:2/2 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:2/3 (A5080 Cronton Road Circulatory)	3.40	0.00	N	Arm J1:2 Right	Inf	100.0 %	2095	2095
J5:3/1				Infinite Saturation Flow			Inf	Inf
J5:4/1				Infinite Saturation Flow			Inf	Inf

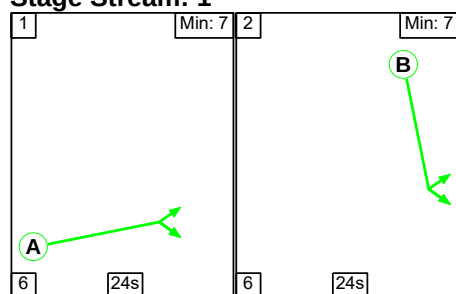
Full Input Data And Results

Scenario 1: '2023 AM' (FG1: '2023 AM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

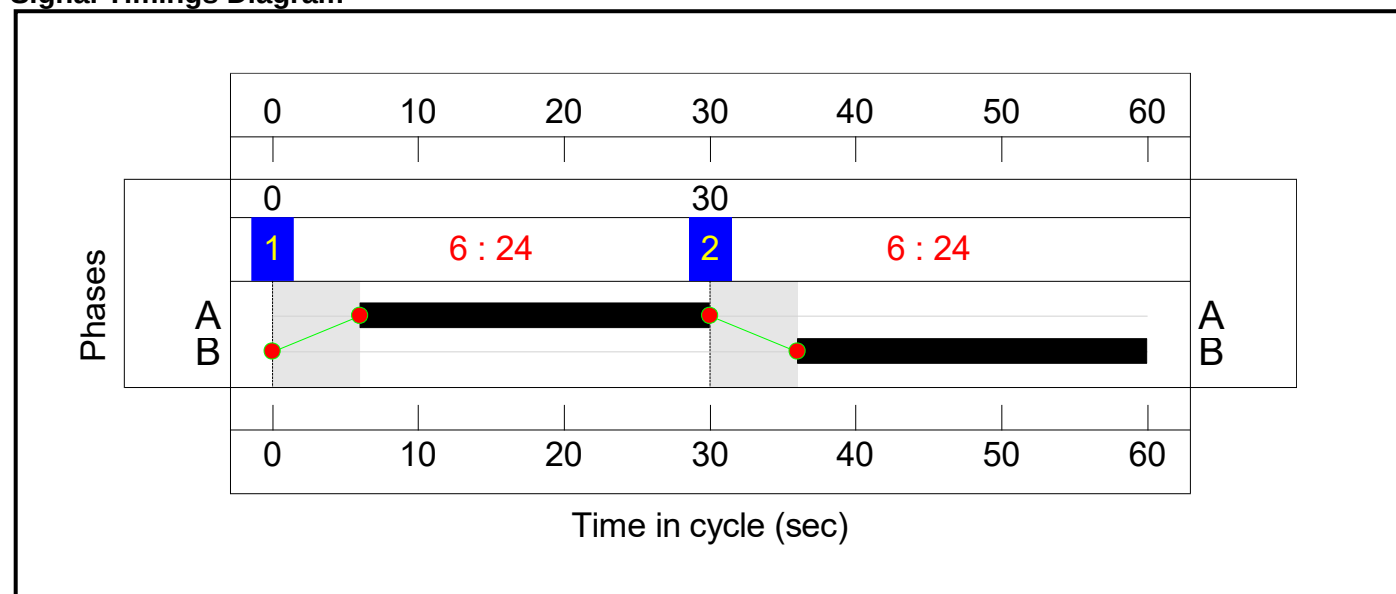


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

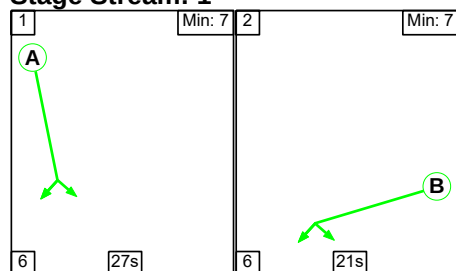
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1



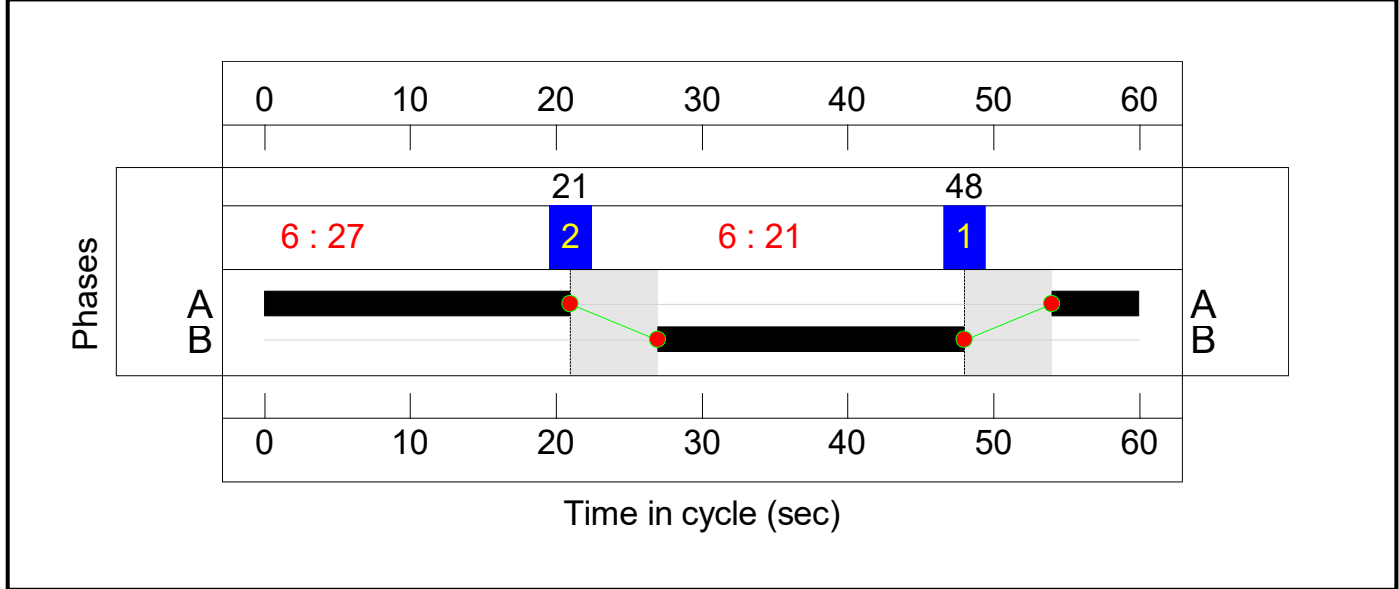
Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results

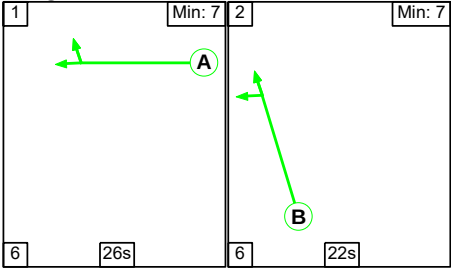
Signal Timings Diagram



C3 - Tarbock Roundabout South

Stage Sequence Diagram

Stage Stream: 1

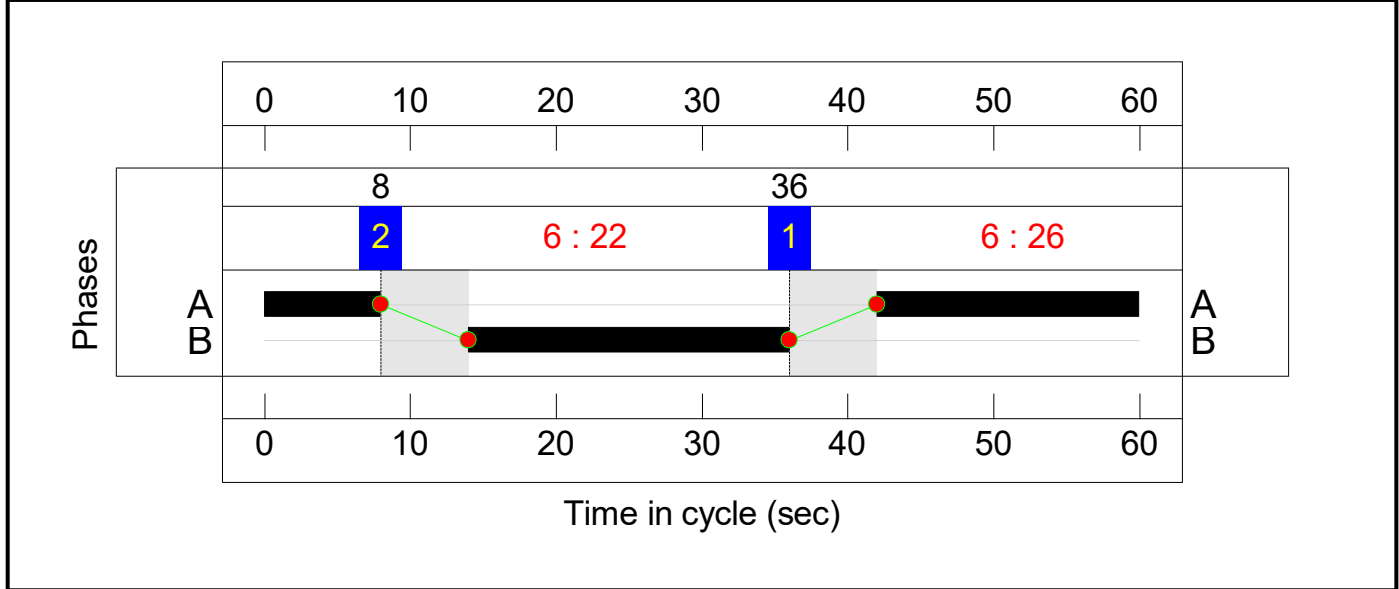


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	36	8

Signal Timings Diagram

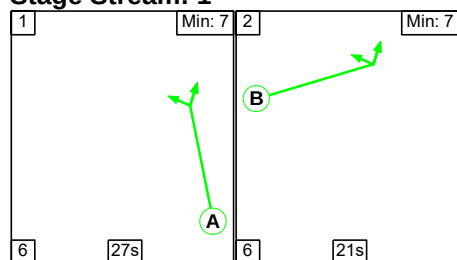


Full Input Data And Results

C4 - Tarbock Roundabout West

Stage Sequence Diagram

Stage Stream: 1

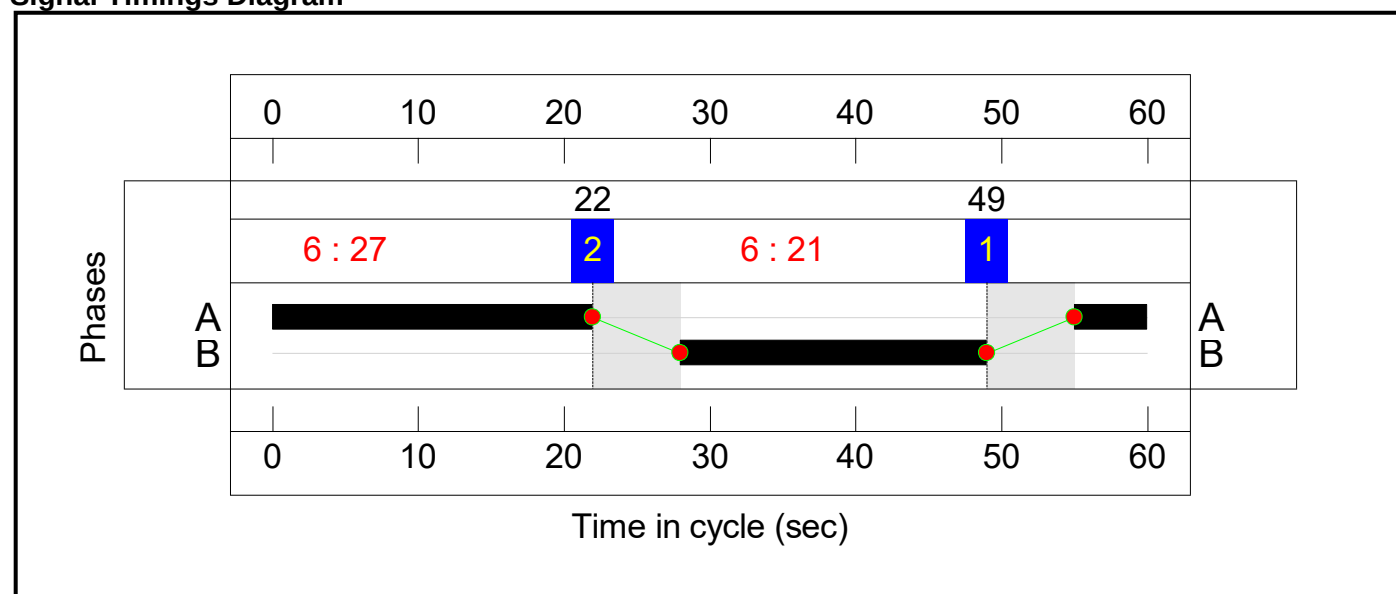


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	49	22

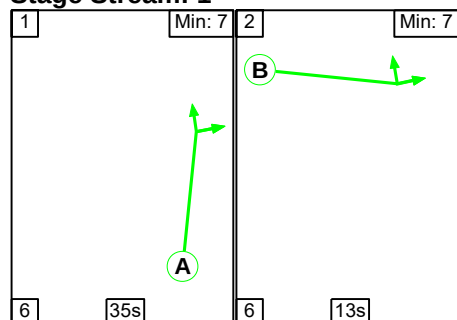
Signal Timings Diagram



C5 - A5080 Cronton Road

Stage Sequence Diagram

Stage Stream: 1

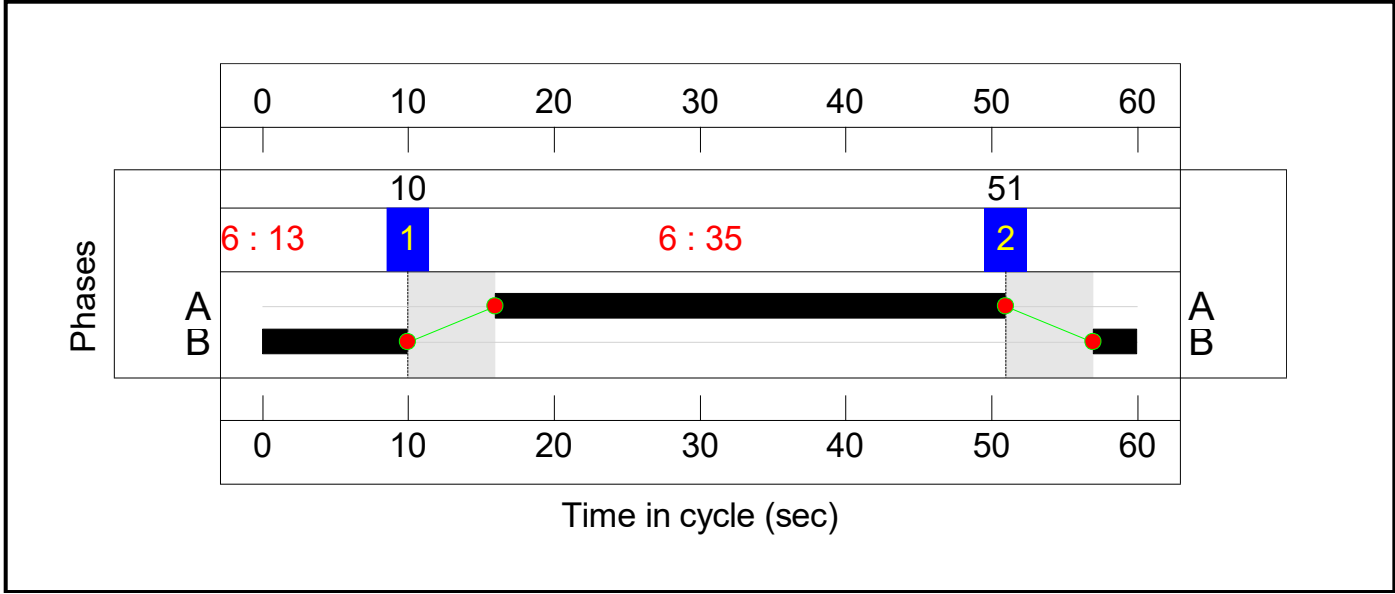


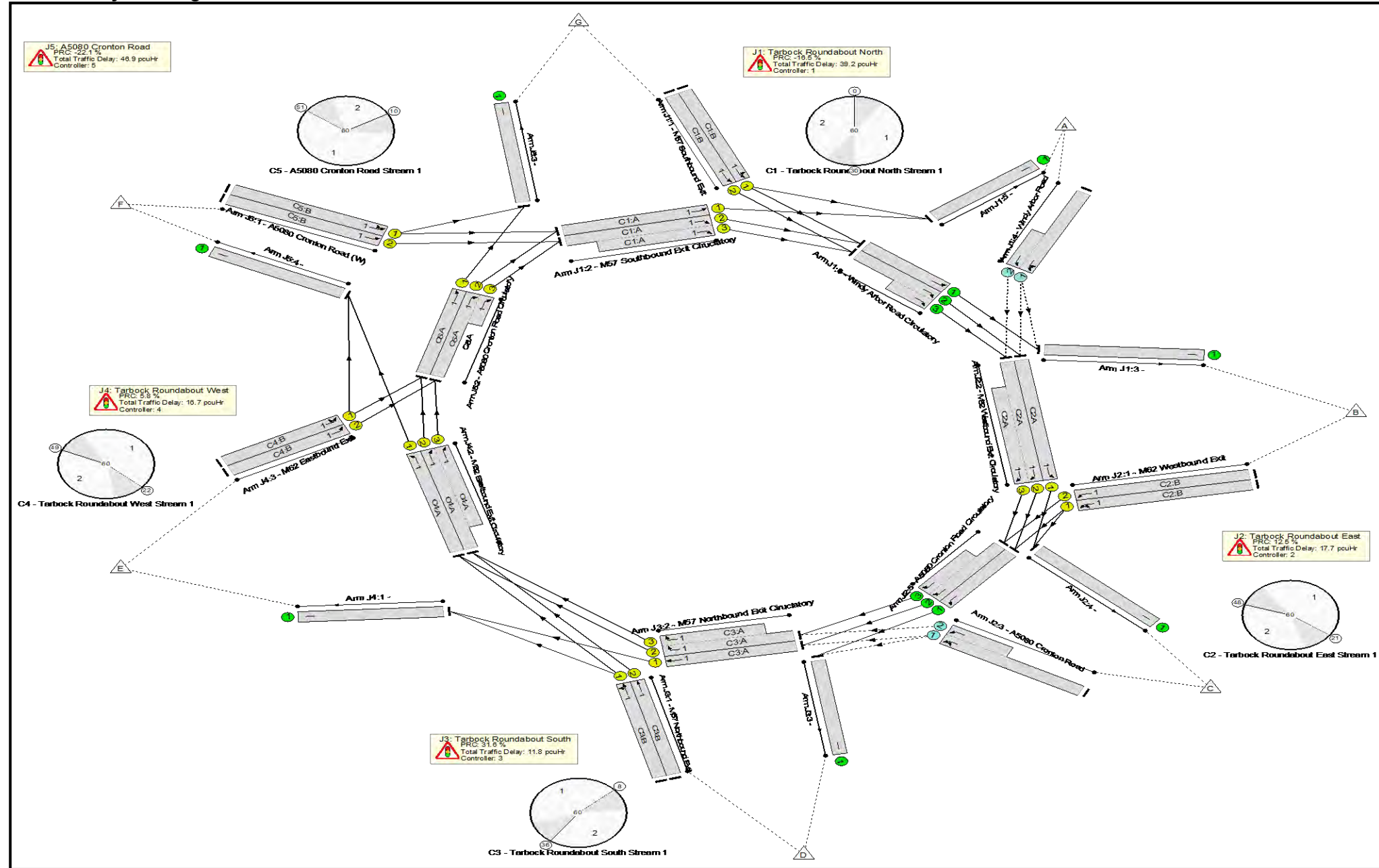
Stage Timings

Stage Stream: 1

Stage	1	2
Duration	35	13
Change Point	10	51

Signal Timings 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	-	-	N/A	-	-		-	-	-	-	-	-	109.9%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	104.8%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	62	1985	827	7.5%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	562	2125	885	63.5%
2/1	M57 Southbound Exit Circulatory Ahead	U	1:1	N/A	C1:A		1	24	-	436	1940	808	51.8%
2/2+2/3	M57 Southbound Exit Circulatory Right	U	1:1	N/A	C1:A		1	24	-	1388	2080:2080	720+803	91.2 : 91.2%
3/1		U	N/A	N/A	-		-	-	-	763	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	524	1965:2105	160+340	104.8 : 104.8%
5/1		U	N/A	N/A	-		-	-	-	494	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	660	1940	1940	34.0%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1294	1940:2080	338+1717	63.0 : 63.0%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	80.0%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	603	2055	753	80.0%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	405	2195	805	50.3%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	278	1940	905	30.7%

Full Input Data And Results

2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1437	2080:2080	747+971	76.8 : 72.2%
3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	367	1965:2105	205+260	78.9 : 78.9%
4/1		U	N/A	N/A	-		-	-	-	315	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	1191	1940	1940	58.8%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1217	2080:2080	638+1442	51.4 : 53.9%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	68.4%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	410	2115	811	50.6%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	553	2255	864	64.0%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	518	1940	873	54.1%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	1049	2080:2080	936+565	68.4 : 60.6%
3/1		U	N/A	N/A	-		-	-	-	1208	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	85.1%
1/1		U	N/A	N/A	-		-	-	-	798	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	784	1940	905	85.1%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	948	2080:2080	403+971	56.0 : 69.0%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	563	1965	721	78.1%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	561	2105	772	72.7%

Full Input Data And Results

J5: A5080 Cronton Road	-	-	N/A	-	-	-	-	-	-	-	-	-	109.9%
1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	13	-	509	1985	463	109.9%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	13	-	403	2125	496	81.3%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	35	-	721	1955	1173	57.0%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	35	-	1231	2095:2095	265+1061	92.8 : 92.8%
3/1		U	N/A	N/A	-		-	-	-	1040	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	904	Inf	Inf	0.0%
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	-	-	1749	0	0	53.0	79.2	0.0	132.2	-	-	-	-
J1: Tarbock Roundabout North	-	-	1015	0	0	12.9	26.3	0.0	39.2	-	-	-	-
1/1	62	62	-	-	-	0.2	0.0	-	0.2	12.9	0.6	0.0	0.7
1/2	562	562	-	-	-	2.2	0.9	-	3.0	19.4	7.3	0.9	8.2
2/1	419	419	-	-	-	1.2	0.5	-	1.8	15.1	4.0	0.5	4.5
2/2+2/3	1388	1388	-	-	-	7.1	4.8	-	11.9	30.9	13.4	4.8	18.2
3/1	763	763	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	524	508	1015	0	0	2.2	18.9	-	21.1	145.0	16.0	18.9	35.0
5/1	477	477	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	660	660	-	-	-	0.0	0.3	-	0.3	1.6	7.1	0.3	7.4
6/2+6/3	1294	1294	-	-	-	0.0	0.8	-	0.9	2.4	11.9	0.8	12.7
J2: Tarbock Roundabout East	-	-	734	0	0	10.5	7.2	0.0	17.7	-	-	-	-
1/1	603	603	-	-	-	2.9	2.0	-	4.8	28.7	8.9	2.0	10.8

Full Input Data And Results

1/2	405	405	-	-	-	1.7	0.5	-	2.2	19.3	5.2	0.5	5.7
2/1	278	278	-	-	-	0.8	0.2	-	1.1	13.7	3.3	0.2	3.5
2/2+2/3	1274	1274	-	-	-	4.3	1.4	-	5.7	16.1	9.5	1.4	10.9
3/1+3/2	367	367	734	0	0	0.9	1.8	-	2.7	26.4	1.7	1.8	3.5
4/1	315	315	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1140	1140	-	-	-	0.0	0.7	-	0.7	2.3	5.6	0.7	6.3
5/2+5/3	1105	1105	-	-	-	0.0	0.6	-	0.6	1.9	10.2	0.6	10.8
J3: Tarbock Roundabout South	-	-	0	0	0	8.8	2.9	0.0	11.8	-	-	-	-
1/1	410	410	-	-	-	1.6	0.5	-	2.1	18.6	5.1	0.5	5.6
1/2	553	553	-	-	-	2.3	0.9	-	3.2	20.9	7.5	0.9	8.4
2/1	473	473	-	-	-	2.2	0.6	-	2.8	21.2	7.7	0.6	8.3
2/2+2/3	983	983	-	-	-	2.7	0.9	-	3.7	13.4	7.7	0.9	8.7
3/1	1157	1157	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	10.0	6.7	0.0	16.7	-	-	-	-
1/1	753	753	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	770	770	-	-	-	1.6	2.7	-	4.3	20.2	5.0	2.7	7.7
2/2+2/3	895	895	-	-	-	3.2	0.9	-	4.2	16.7	16.6	0.9	17.5
3/1	563	563	-	-	-	2.6	1.7	-	4.4	28.0	8.3	1.7	10.0
3/2	561	561	-	-	-	2.6	1.3	-	3.9	24.8	7.9	1.3	9.3
J5: A5080 Cronton Road	-	-	0	0	0	10.8	36.0	0.0	46.9	-	-	-	-
1/1	509	463	-	-	-	4.7	27.5	-	32.2	228.1	9.2	27.5	36.8
1/2	403	403	-	-	-	2.4	2.1	-	4.5	40.3	6.3	2.1	8.3
2/1	668	668	-	-	-	0.9	0.7	-	1.6	8.5	4.7	0.7	5.4
2/2+2/3	1231	1231	-	-	-	2.7	5.8	-	8.5	24.9	12.2	5.8	17.9
3/1	959	959	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	890	890	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1	PRC for Signalled Lanes (%)	-1.3	Total Delay for Signalled Lanes (pcuHr):	16.92	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1	PRC for Signalled Lanes (%)	12.5	Total Delay for Signalled Lanes (pcuHr):	13.71	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1	PRC for Signalled Lanes (%)	31.6	Total Delay for Signalled Lanes (pcuHr):	11.77	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1	PRC for Signalled Lanes (%)	5.8	Total Delay for Signalled Lanes (pcuHr):	16.74	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1	PRC for Signalled Lanes (%)	-22.1	Total Delay for Signalled Lanes (pcuHr):	46.85	Cycle Time (s):	60
		PRC Over All Lanes (%)	-22.1	Total Delay Over All Lanes(pcuHr):	132.25		

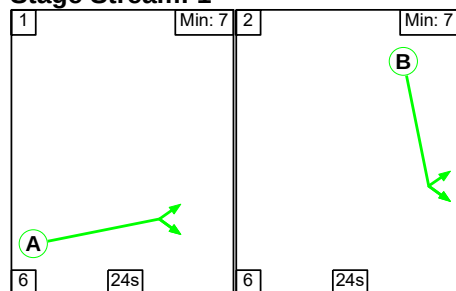
Full Input Data And Results

Scenario 2: '2023 PM' (FG2: '2023 PM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

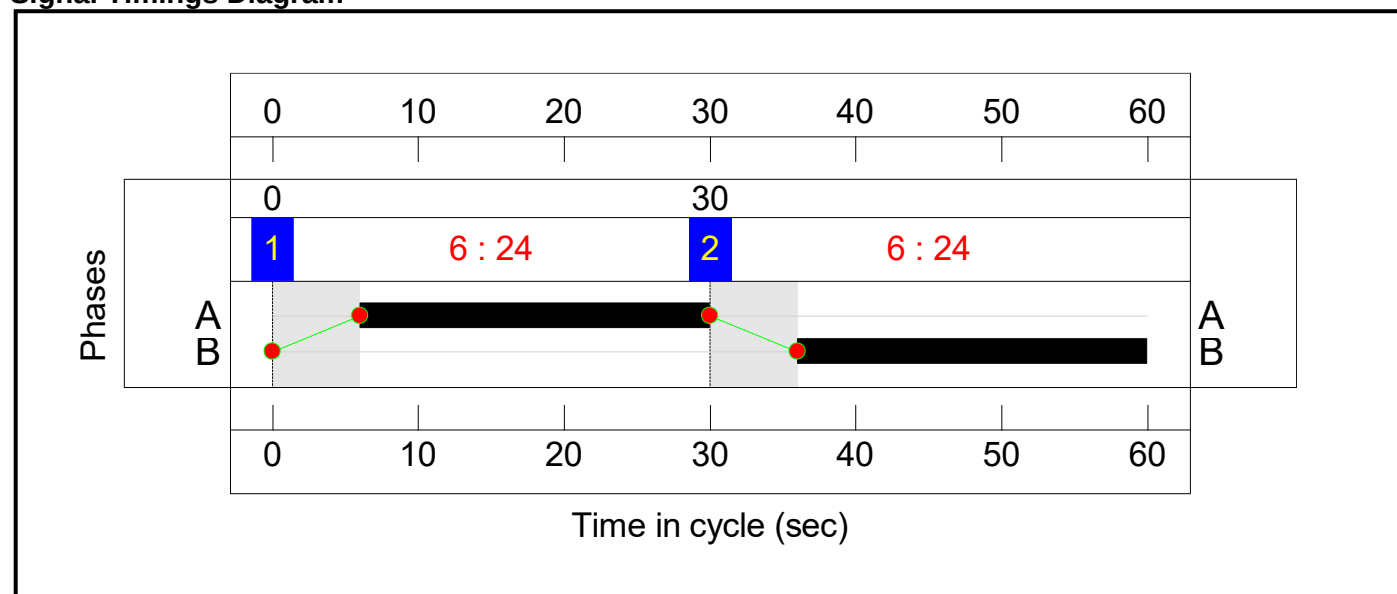


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

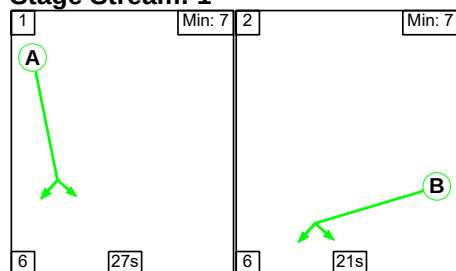
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1



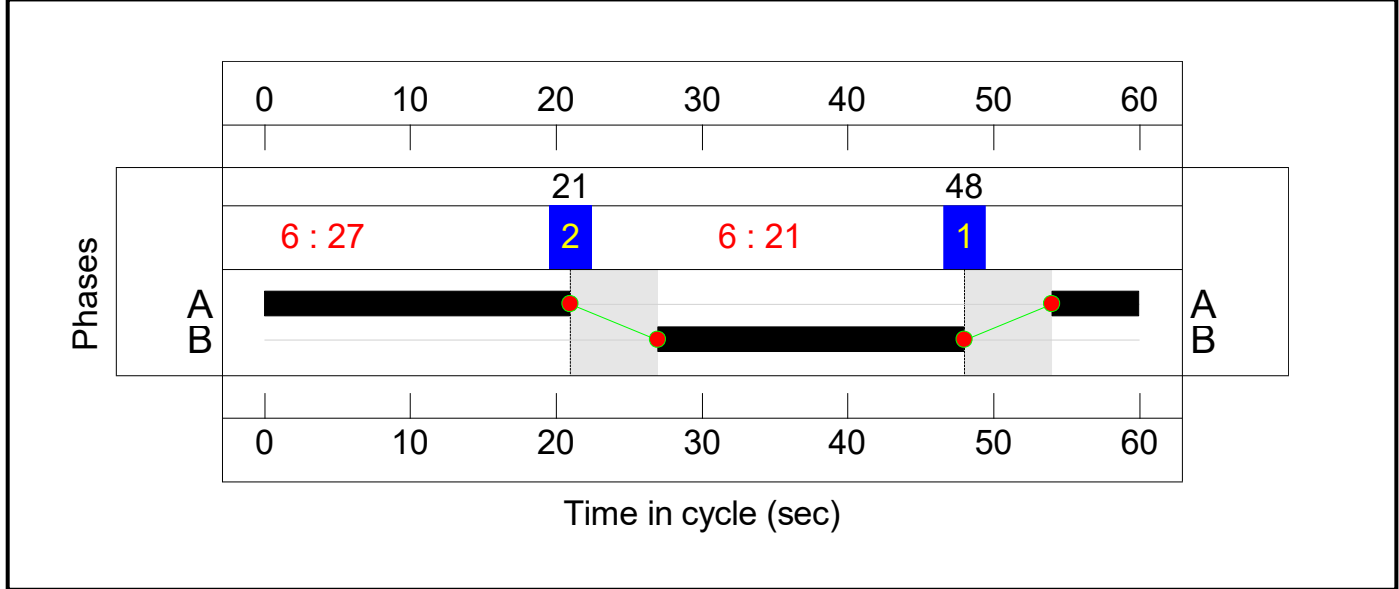
Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results

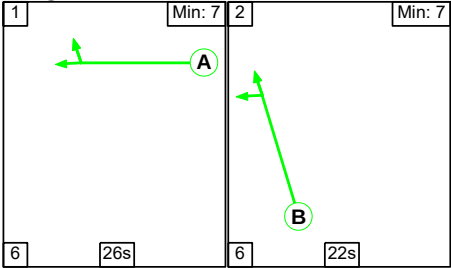
Signal Timings Diagram



C3 - Tarbock Roundabout South

Stage Sequence Diagram

Stage Stream: 1

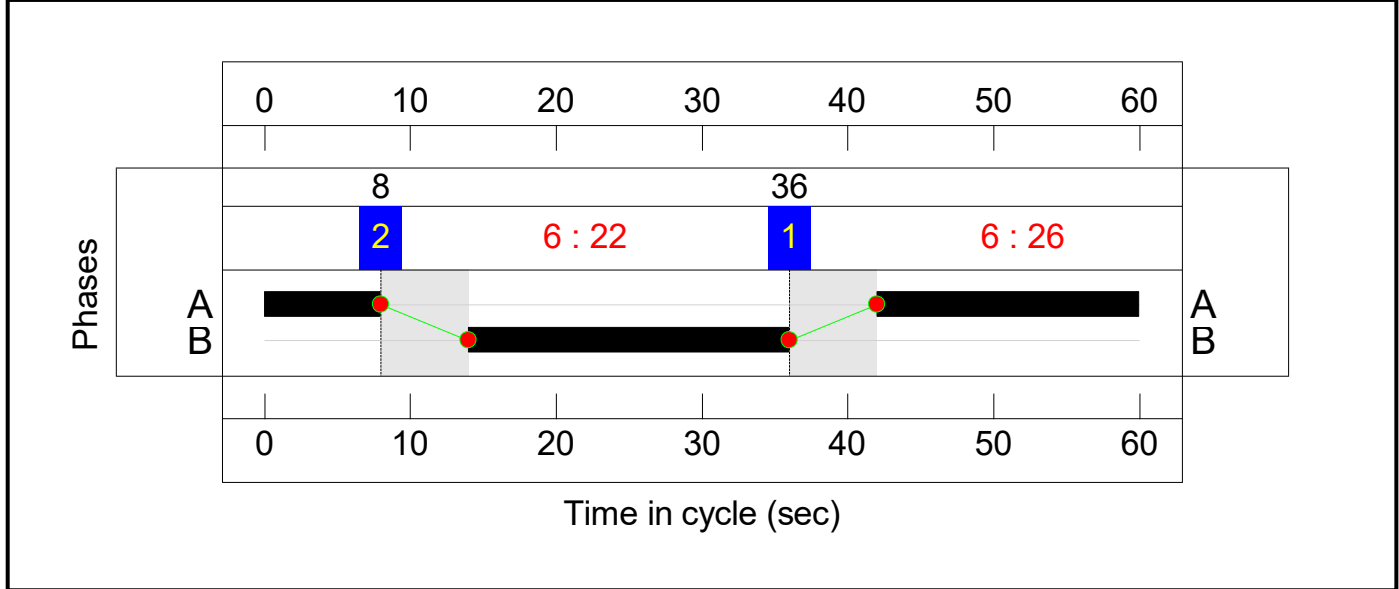


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	36	8

Signal Timings Diagram

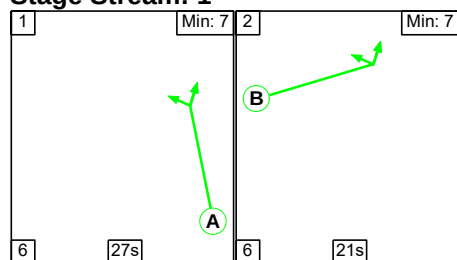


Full Input Data And Results

C4 - Tarbock Roundabout West

Stage Sequence Diagram

Stage Stream: 1

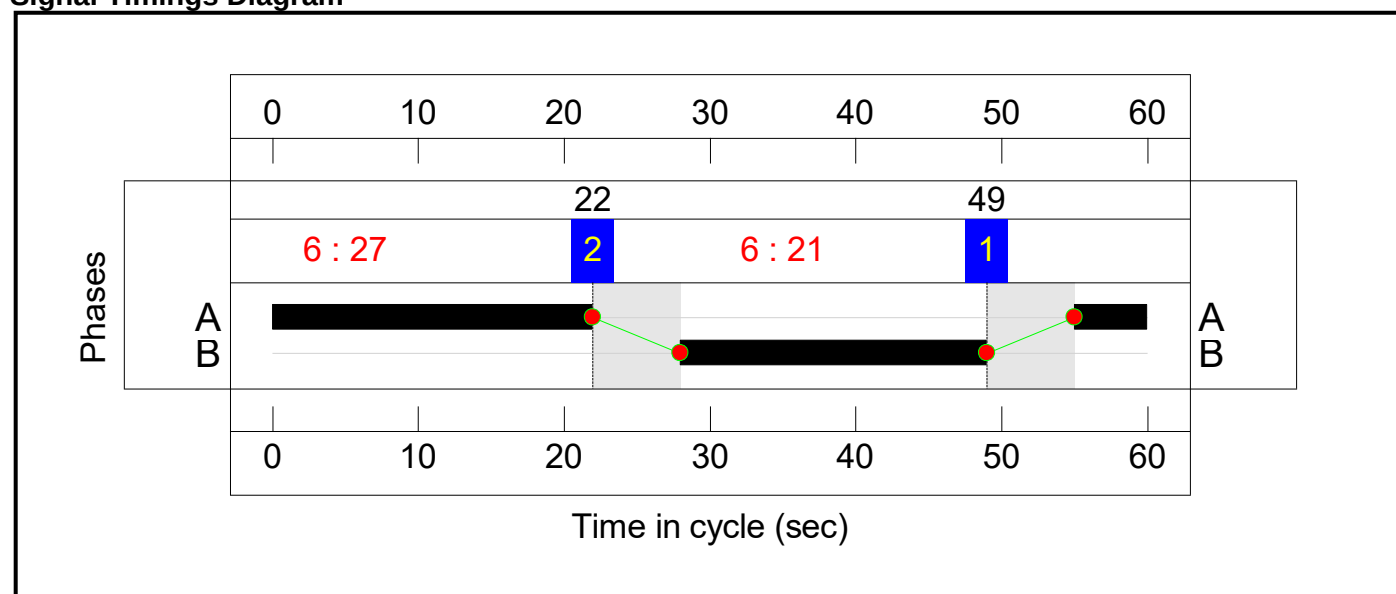


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	49	22

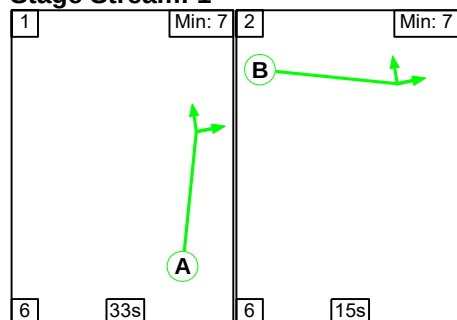
Signal Timings Diagram



C5 - A5080 Cronton Road

Stage Sequence Diagram

Stage Stream: 1

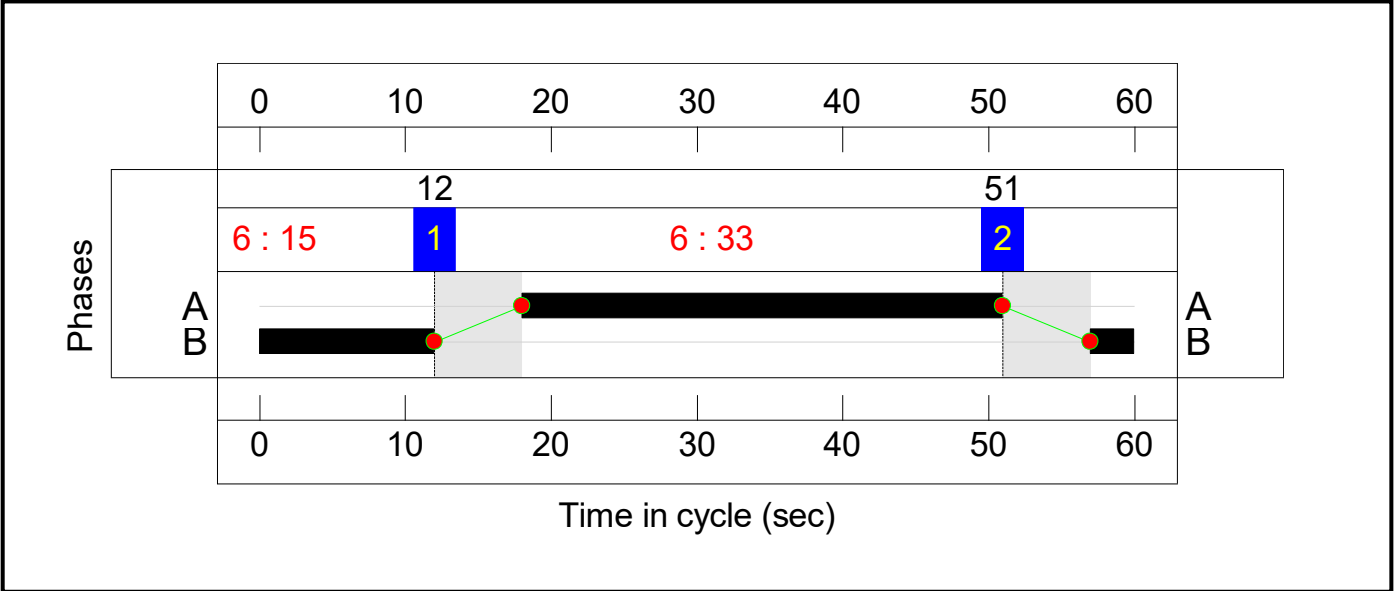


Stage Timings

Stage Stream: 1

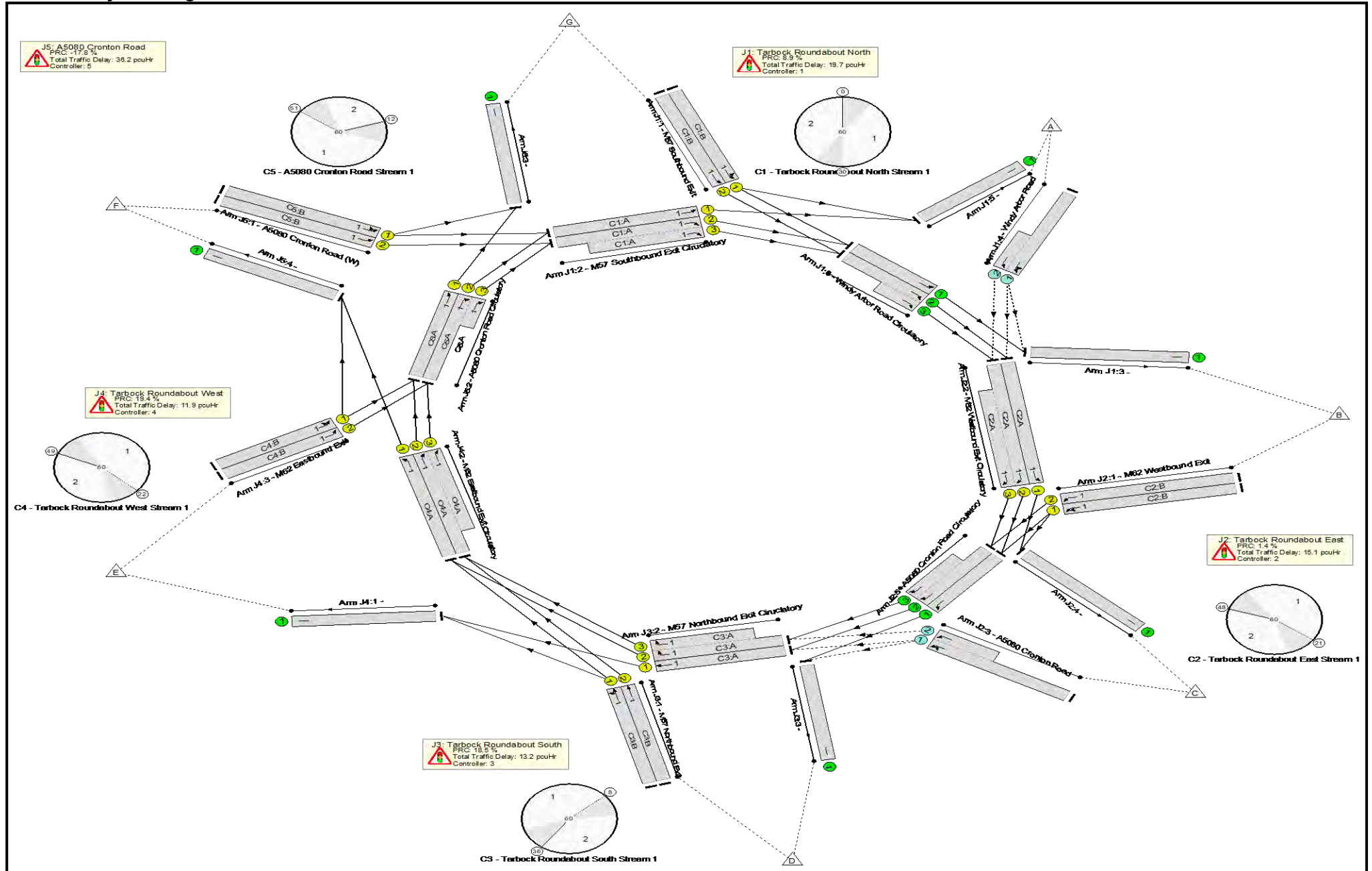
Stage	1	2
Duration	33	15
Change Point	12	51

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	-	-	N/A	-	-		-	-	-	-	-	-	106.0%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	82.7%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	108	1985	827	13.1%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	732	2125	885	82.7%
2/1	M57 Southbound Exit Circulatory Ahead	U	1:1	N/A	C1:A		1	24	-	481	1940	808	57.7%
2/2+2/3	M57 Southbound Exit Circulatory Right	U	1:1	N/A	C1:A		1	24	-	1213	2080:2080	701+804	80.6 : 80.6%
3/1		U	N/A	N/A	-		-	-	-	638	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	383	1965:2105	206+317	73.2 : 73.2%
5/1		U	N/A	N/A	-		-	-	-	586	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	568	1940	1940	29.3%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1380	1940:2080	394+1658	67.3 : 67.3%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	88.8%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	460	2055	753	61.0%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	365	2195	805	45.4%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	346	1940	905	38.2%
2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1347	2080:2080	479+971	88.8 : 87.7%

Full Input Data And Results

3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	354	1965:2105	462+271	45.9 : 52.4%
4/1		U	N/A	N/A	-		-	-	-	410	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	841	1940	1940	42.3%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1267	2080:2080	809+1271	57.4 : 59.1%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	75.9%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	501	2115	811	61.8%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	491	2255	864	56.8%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	691	1940	873	75.9%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	916	2080:2080	936+520	62.6 : 59.2%
3/1		U	N/A	N/A	-		-	-	-	855	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	75.4%
1/1		U	N/A	N/A	-		-	-	-	1095	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	686	1940	905	75.4%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	818	2080:2080	300+971	57.9 : 64.4%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	429	1965	721	59.5%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	478	2105	772	61.9%
J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	106.0%

Full Input Data And Results

1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	15	-	561	1985	529	106.0%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	15	-	331	2125	567	58.4%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	33	-	543	1955	1108	47.3%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	33	-	1103	2095:2095	252+1005	87.8 : 87.8%
3/1		U	N/A	N/A	-		-	-	-	844	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	765	Inf	Inf	0.0%
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	-	-	1474	0	0	47.3	48.7	0.0	96.0	-	-	-	-
J1: Tarbock Roundabout North	-	-	766	0	0	12.1	7.7	0.0	19.7	-	-	-	-
1/1	108	108	-	-	-	0.3	0.1	-	0.4	13.3	1.1	0.1	1.2
1/2	732	732	-	-	-	3.2	2.3	-	5.5	27.0	10.8	2.3	13.1
2/1	466	466	-	-	-	1.3	0.7	-	1.9	14.9	4.1	0.7	4.8
2/2+2/3	1213	1213	-	-	-	6.5	2.0	-	8.6	25.4	12.2	2.0	14.3
3/1	638	638	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	383	383	766	0	0	0.8	1.3	-	2.1	19.7	1.7	1.3	3.1
5/1	571	571	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	568	568	-	-	-	0.0	0.2	-	0.2	1.4	5.5	0.2	5.7
6/2+6/3	1380	1380	-	-	-	0.0	1.0	-	1.0	2.7	12.5	1.0	13.6
J2: Tarbock Roundabout East	-	-	708	0	0	8.5	6.6	0.0	15.1	-	-	-	-
1/1	460	460	-	-	-	2.0	0.8	-	2.8	21.6	6.1	0.8	6.9
1/2	365	365	-	-	-	1.5	0.4	-	1.9	18.5	4.6	0.4	5.0

Full Input Data And Results

2/1	346	346	-	-	-	1.1	0.3	-	1.4	14.5	4.1	0.3	4.4
2/2+2/3	1276	1276	-	-	-	3.3	3.5	-	6.8	19.1	8.1	3.5	11.6
3/1+3/2	354	354	708	0	0	0.7	0.5	-	1.2	11.8	1.6	0.5	2.1
4/1	410	410	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	821	821	-	-	-	0.0	0.4	-	0.4	1.6	3.2	0.4	3.6
5/2+5/3	1216	1216	-	-	-	0.0	0.7	-	0.7	2.1	9.1	0.7	9.8
J3: Tarbock Roundabout South	-	-	0	0	0	9.4	3.8	0.0	13.2	-	-	-	-
1/1	501	501	-	-	-	2.1	0.8	-	2.9	20.7	6.7	0.8	7.5
1/2	491	491	-	-	-	2.0	0.7	-	2.6	19.4	6.4	0.7	7.1
2/1	663	663	-	-	-	3.1	1.6	-	4.6	25.1	10.5	1.6	12.0
2/2+2/3	893	893	-	-	-	2.2	0.8	-	3.0	12.1	7.2	0.8	8.0
3/1	835	835	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	8.0	3.9	0.0	11.9	-	-	-	-
1/1	1067	1067	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	683	683	-	-	-	1.2	1.5	-	2.7	14.2	3.4	1.5	4.9
2/2+2/3	798	798	-	-	-	2.9	0.8	-	3.7	16.9	16.5	0.8	17.4
3/1	429	429	-	-	-	1.8	0.7	-	2.6	21.5	5.7	0.7	6.5
3/2	478	478	-	-	-	2.1	0.8	-	2.9	21.7	6.5	0.8	7.3
J5: A5080 Cronton Road	-	-	0	0	0	9.4	26.7	0.0	36.2	-	-	-	-
1/1	561	529	-	-	-	4.4	22.2	-	26.6	170.6	9.9	22.2	32.0
1/2	331	331	-	-	-	1.8	0.7	-	2.5	26.7	4.8	0.7	5.5
2/1	523	523	-	-	-	0.6	0.4	-	1.1	7.3	3.0	0.4	3.5
2/2+2/3	1103	1103	-	-	-	2.6	3.4	-	6.1	19.8	11.0	3.4	14.5
3/1	807	807	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	762	762	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	8.9	Total Delay for Signalled Lanes (pcuHr):	16.37	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	1.4	Total Delay for Signalled Lanes (pcuHr):	12.82	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	18.5	Total Delay for Signalled Lanes (pcuHr):	13.16	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	19.4	Total Delay for Signalled Lanes (pcuHr):	11.89	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-17.8	Total Delay for Signalled Lanes (pcuHr):	36.17	Cycle Time (s):	60
	PRC Over All Lanes (%):	-17.8	Total Delay Over All Lanes(pcuHr):	96.03		

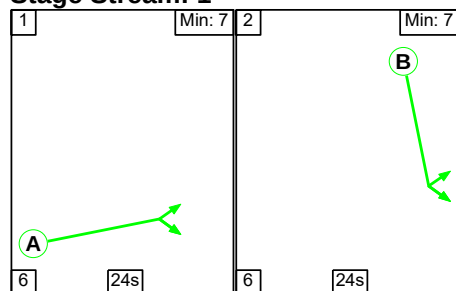
Full Input Data And Results

Scenario 3: '2028 AM' (FG3: '2028 AM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

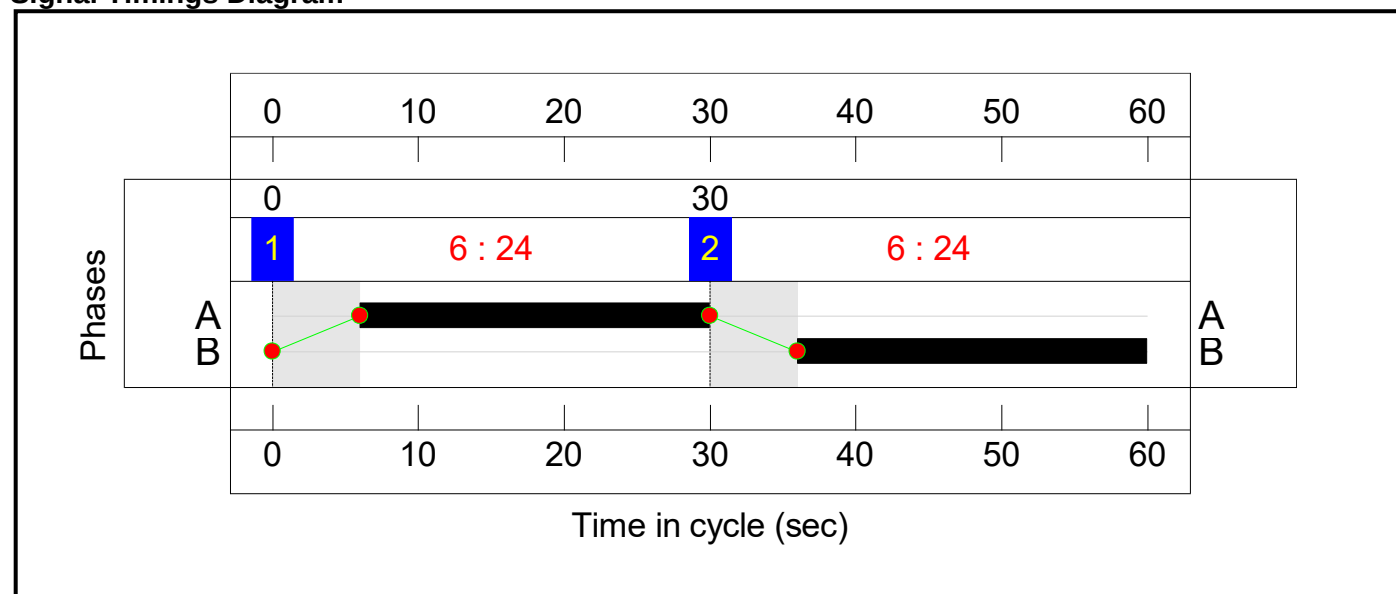


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

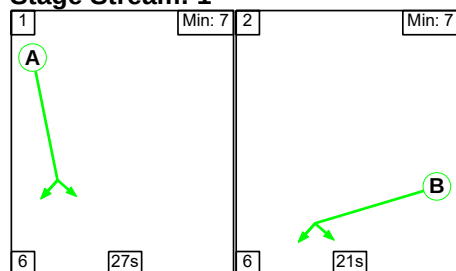
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1



Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Timing diagram for a 60-second cycle. The diagram shows two phases, A and B, represented by black bars. Phase A is high from 0 to 21 seconds and from 48 to 60 seconds. Phase B is high from 21 to 27 seconds and from 48 to 54 seconds. Red dots mark the transitions at 21s, 27s, 48s, and 54s. Red text '6:27' and '6:21' indicates the duration of phase B. Blue boxes with '2' and '1' are at 21s and 48s respectively. Green lines connect the red dots at 21s, 27s, 48s, and 54s.

The diagram shows a 2x2 grid with cells labeled 1, 2, 6, and 26s. A green arrow labeled 'A' starts at cell 1 and points left to cell 2. Another green arrow labeled 'B' starts at cell 26s and points up to cell 2. The grid is divided by a vertical line between columns 1 and 2, and a horizontal line between rows 1 and 2. The top row is labeled 'Min: 7' and the bottom row is labeled '22s'.

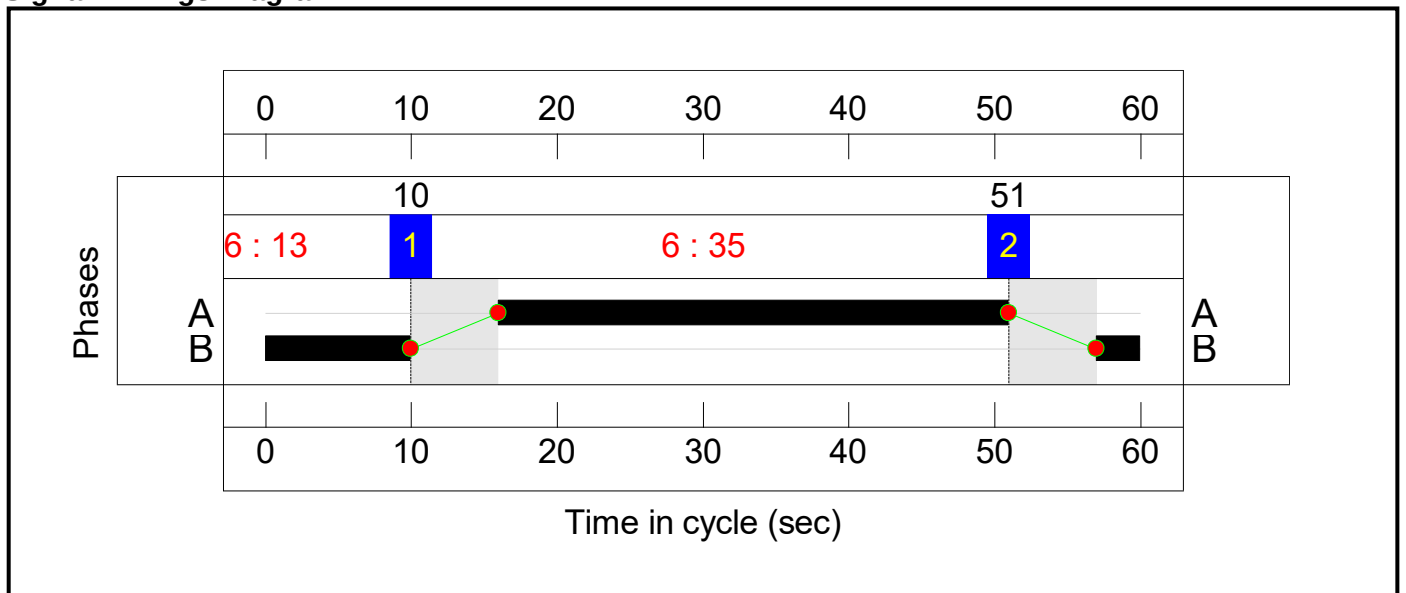
Stage	1	2
Duration	26	22
Change Point	36	8

Timing diagram for a 60-second cycle. The diagram shows the sequence of phases A and B over time. Phase A is active from 0 to 8 seconds and 36 to 60 seconds. Phase B is active from 8 to 36 seconds. The duration of phase A is 8 seconds, and the duration of phase B is 36 seconds. The total cycle time is 60 seconds.

Stage Stream: 1

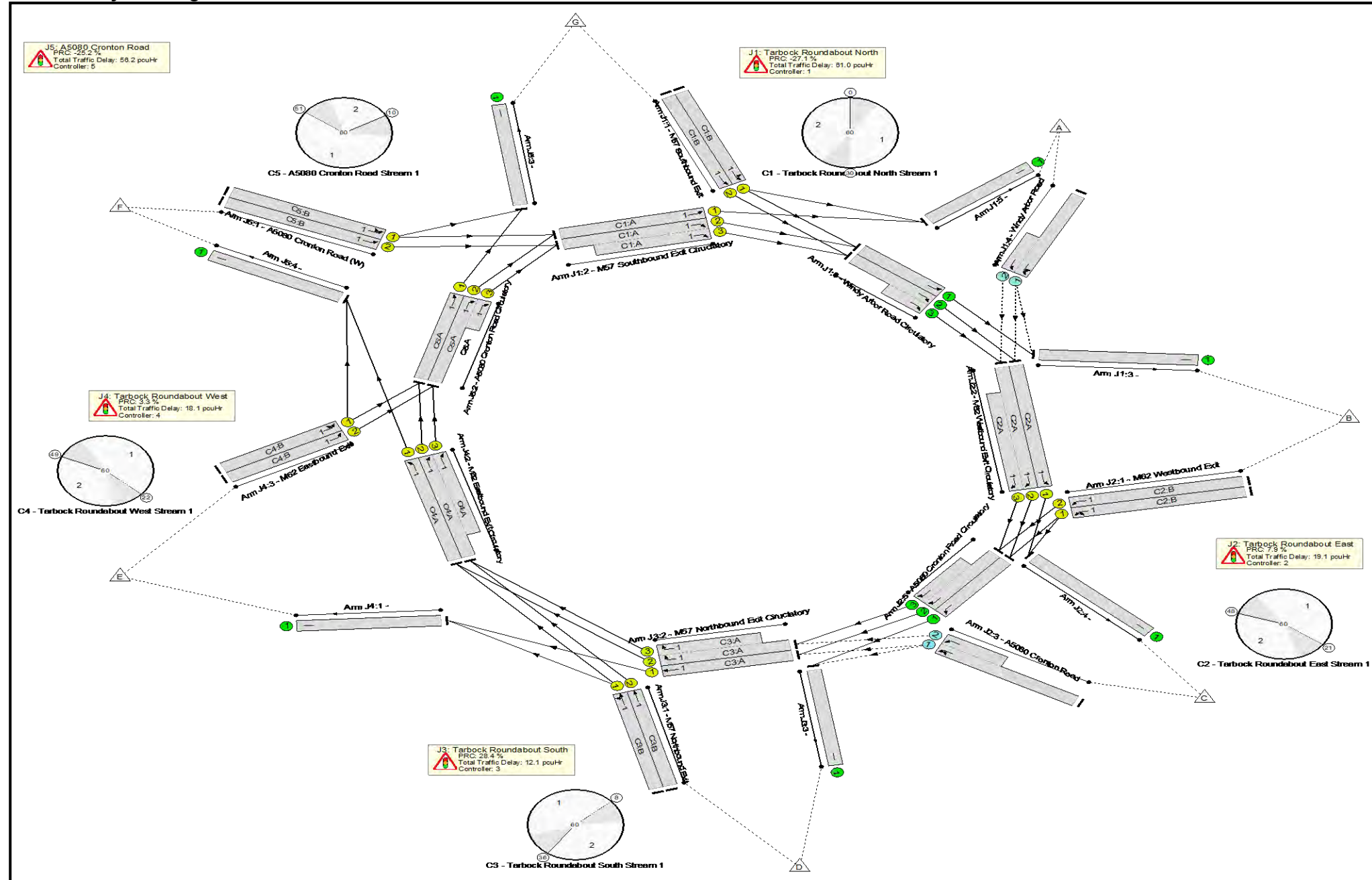
Stage	1	2
Duration	35	13
Change Point	10	51

Full Input Data And Results
Signal Timings Diagram



The diagram illustrates the M57/M62 interchange, a complex highway junction. Key features include:

- Junctions and Roundabouts:**
 - J5: A5080 Cronton Road:** PRC: 25.2%, Total Traffic Delay: 58.2 pcu/h, Controller: 5.
 - J1: Tarbock Roundabout North:** PRC: 27.1%, Total Traffic Delay: 81.0 pcu/h, Controller: 1.
 - J4: Tarbock Roundabout West:** PRC: 3.3%, Total Traffic Delay: 18.1 pcu/h, Controller: 4.
 - J2: Tarbock Roundabout East:** PRC: 7.9%, Total Traffic Delay: 19.1 pcu/h, Controller: 2.
 - J3: Tarbock Roundabout South:** PRC: 28.4%, Total Traffic Delay: 12.1 pcu/h, Controller: 3.
 - C4 - Tarbock Roundabout West Stream 1**
 - C5 - A5080 Cronton Road Stream 1**
 - C2 - Tarbock Roundabout East Stream 1**
 - C3 - Tarbock Roundabout South Stream 1**
- Arms and Lanes:**
 - Arm J1:1 - M62 Northbound Exit:** Lanes C1A, C1A, C1A.
 - Arm J1:2 - M62 Southbound Exit:** Lanes C1B, C1B, C1B.
 - Arm J1:3 - M62 Westbound Exit:** Lanes C2A, C2A, C2A.
 - Arm J2:1 - M62 Westbound Exit:** Lanes C2B, C2B, C2B.
 - Arm J2:2 - M62 Northbound Exit:** Lanes C3A, C3A, C3A.
 - Arm J3:1 - M62 Southbound Exit:** Lanes C3B, C3B, C3B.
 - Arm J4:1 - M62 Eastbound Exit:** Lanes C4A, C4A, C4A.
 - Arm J4:2 - M62 Westbound Exit:** Lanes C4B, C4B, C4B.
 - Arm J5:1 - A5080 Cronton Road:** Lanes C5A, C5A, C5A.
 - Arm J5:2 - A5080 Cronton Road:** Lanes C5B, C5B, C5B.
- Traffic Flow and Lane Numbers:** Arrows indicate the direction of traffic flow. Yellow circles with numbers (1, 2, 3, 4, 5) are placed along the arms to indicate lane numbers and traffic flow patterns.



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	-	-	N/A	-	-		-	-	-	-	-	-	114.4%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	114.4%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	63	1985	827	7.6%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	578	2125	885	65.3%
2/1	M57 Southbound Exit Cirulatory Ahead	U	1:1	N/A	C1:A		1	24	-	448	1940	808	52.7%
2/2+2/3	M57 Southbound Exit Cirulatory Right	U	1:1	N/A	C1:A		1	24	-	1426	2080:2080	720+803	93.6 : 93.6%
3/1		U	N/A	N/A	-		-	-	-	784	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	539	1965:2105	151+320	114.4 : 114.4%
5/1		U	N/A	N/A	-		-	-	-	507	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	678	1940	1940	34.9%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1330	1940:2080	338+1717	64.7 : 64.7%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	83.4%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	620	2055	753	82.3%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	416	2195	805	51.7%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	286	1940	905	31.6%
2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1477	2080:2080	746+971	78.1 : 72.8%

Full Input Data And Results

3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	376	1965:2105	199+252	83.4 : 83.4%
4/1		U	N/A	N/A	-		-	-	-	324	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	1224	1940	1940	60.1%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1251	2080:2080	638+1442	52.0 : 54.9%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	70.1%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	420	2115	811	51.8%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	568	2255	864	65.7%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	533	1940	873	55.1%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	1077	2080:2080	936+564	70.1 : 61.1%
3/1		U	N/A	N/A	-		-	-	-	1241	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	87.2%
1/1		U	N/A	N/A	-		-	-	-	820	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	805	1940	905	87.2%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	973	2080:2080	402+971	55.9 : 70.9%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	579	1965	721	80.4%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	577	2105	772	74.8%
J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	112.7%

Full Input Data And Results

1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	13	-	522	1985	463	112.7%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	13	-	414	2125	496	83.5%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	35	-	741	1955	1173	58.0%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	35	-	1265	2095:2095	265+1061	95.4 : 95.4%
3/1		U	N/A	N/A	-		-	-	-	1068	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	928	Inf	Inf	0.0%
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	-	-	1738	0	0	56.2	110.2	0.0	166.4	-	-	-	-
J1: Tarbock Roundabout North	-	-	986	0	0	14.3	46.6	0.0	61.0	-	-	-	-
1/1	63	63	-	-	-	0.2	0.0	-	0.2	12.9	0.6	0.0	0.7
1/2	578	578	-	-	-	2.3	0.9	-	3.2	19.8	7.7	0.9	8.6
2/1	426	426	-	-	-	1.2	0.6	-	1.8	15.2	4.1	0.6	4.7
2/2+2/3	1426	1426	-	-	-	7.4	6.5	-	13.9	35.0	14.0	6.5	20.4
3/1	784	784	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	539	493	986	0	0	3.2	37.4	-	40.7	271.6	16.5	37.4	53.9
5/1	485	485	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	678	678	-	-	-	0.0	0.3	-	0.3	1.6	7.6	0.3	7.9
6/2+6/3	1330	1330	-	-	-	0.0	0.9	-	0.9	2.5	11.9	0.9	12.8
J2: Tarbock Roundabout East	-	-	752	0	0	10.9	8.2	0.0	19.1	-	-	-	-
1/1	620	620	-	-	-	3.0	2.2	-	5.2	30.3	9.3	2.2	11.5
1/2	416	416	-	-	-	1.7	0.5	-	2.2	19.5	5.3	0.5	5.8

Full Input Data And Results

2/1	286	286	-	-	-	0.9	0.2	-	1.1	13.6	3.4	0.2	3.6
2/2+2/3	1290	1290	-	-	-	4.3	1.5	-	5.8	16.2	9.7	1.5	11.2
3/1+3/2	376	376	752	0	0	1.0	2.4	-	3.4	32.1	3.3	2.4	5.7
4/1	324	324	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1165	1165	-	-	-	0.0	0.8	-	0.8	2.4	6.0	0.8	6.8
5/2+5/3	1123	1123	-	-	-	0.0	0.6	-	0.6	1.9	10.3	0.6	10.9
J3: Tarbock Roundabout South	-	-	0	0	0	9.0	3.1	0.0	12.1	-	-	-	-
1/1	420	420	-	-	-	1.7	0.5	-	2.2	18.8	5.4	0.5	5.9
1/2	568	568	-	-	-	2.4	1.0	-	3.4	21.3	7.7	1.0	8.7
2/1	481	481	-	-	-	2.2	0.6	-	2.8	21.3	7.8	0.6	8.4
2/2+2/3	1001	1001	-	-	-	2.7	1.0	-	3.7	13.4	8.2	1.0	9.2
3/1	1182	1182	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	10.4	7.7	0.0	18.1	-	-	-	-
1/1	768	768	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	789	789	-	-	-	1.7	3.2	-	4.9	22.2	5.4	3.2	8.7
2/2+2/3	913	913	-	-	-	3.3	1.0	-	4.3	17.1	16.6	1.0	17.6
3/1	579	579	-	-	-	2.7	2.0	-	4.7	29.4	8.5	2.0	10.5
3/2	577	577	-	-	-	2.7	1.5	-	4.1	25.7	8.3	1.5	9.8
J5: A5080 Cronton Road	-	-	0	0	0	11.6	44.6	0.0	56.2	-	-	-	-
1/1	522	463	-	-	-	5.2	33.3	-	38.5	265.8	9.7	33.3	43.0
1/2	414	414	-	-	-	2.5	2.4	-	4.9	42.7	6.6	2.4	8.9
2/1	681	681	-	-	-	1.0	0.7	-	1.7	8.9	4.9	0.7	5.6
2/2+2/3	1265	1265	-	-	-	2.9	8.2	-	11.1	31.5	12.6	8.2	20.8
3/1	971	971	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	912	912	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	-4.1	Total Delay for Signalled Lanes (pcuHr):	19.07	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	9.4	Total Delay for Signalled Lanes (pcuHr):	14.35	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	28.4	Total Delay for Signalled Lanes (pcuHr):	12.12	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	3.3	Total Delay for Signalled Lanes (pcuHr):	18.06	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-25.2	Total Delay for Signalled Lanes (pcuHr):	56.21	Cycle Time (s):	60
	PRC Over All Lanes (%):	-27.1	Total Delay Over All Lanes(pcuHr):	166.41		

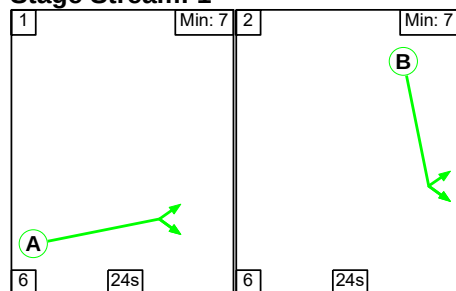
Full Input Data And Results

Scenario 4: '2028 PM' (FG4: '2028 PM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

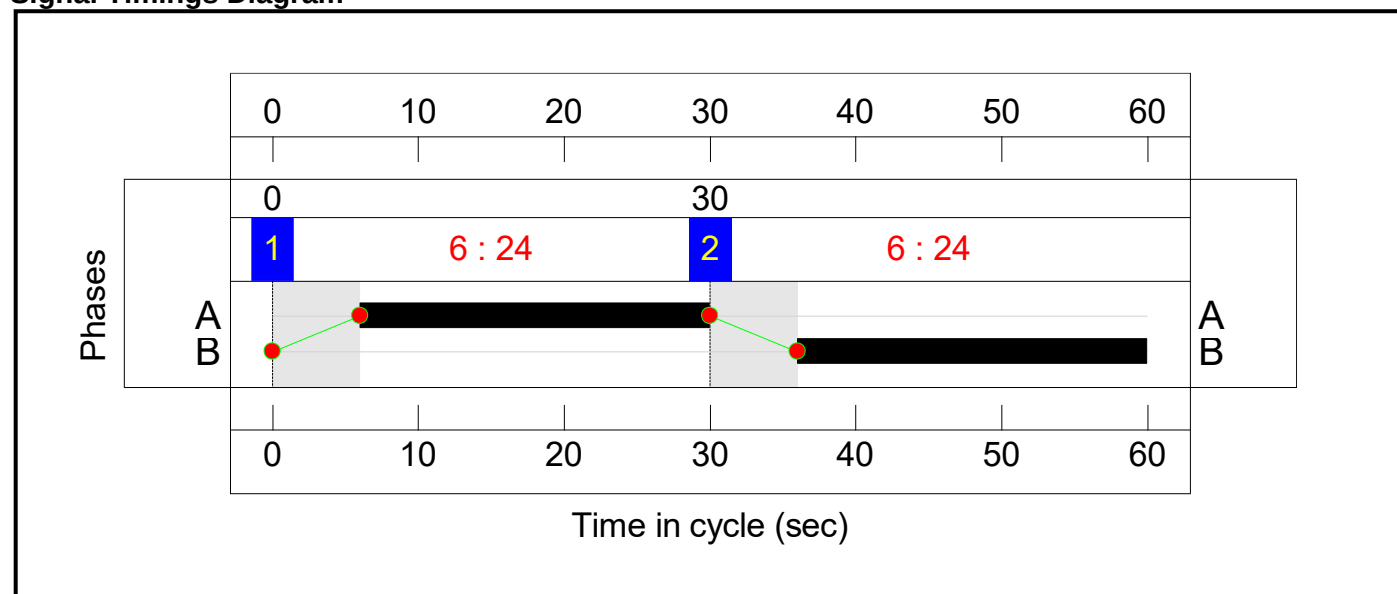


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

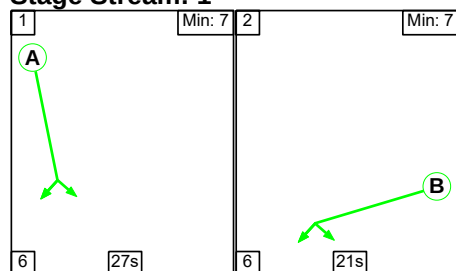
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1



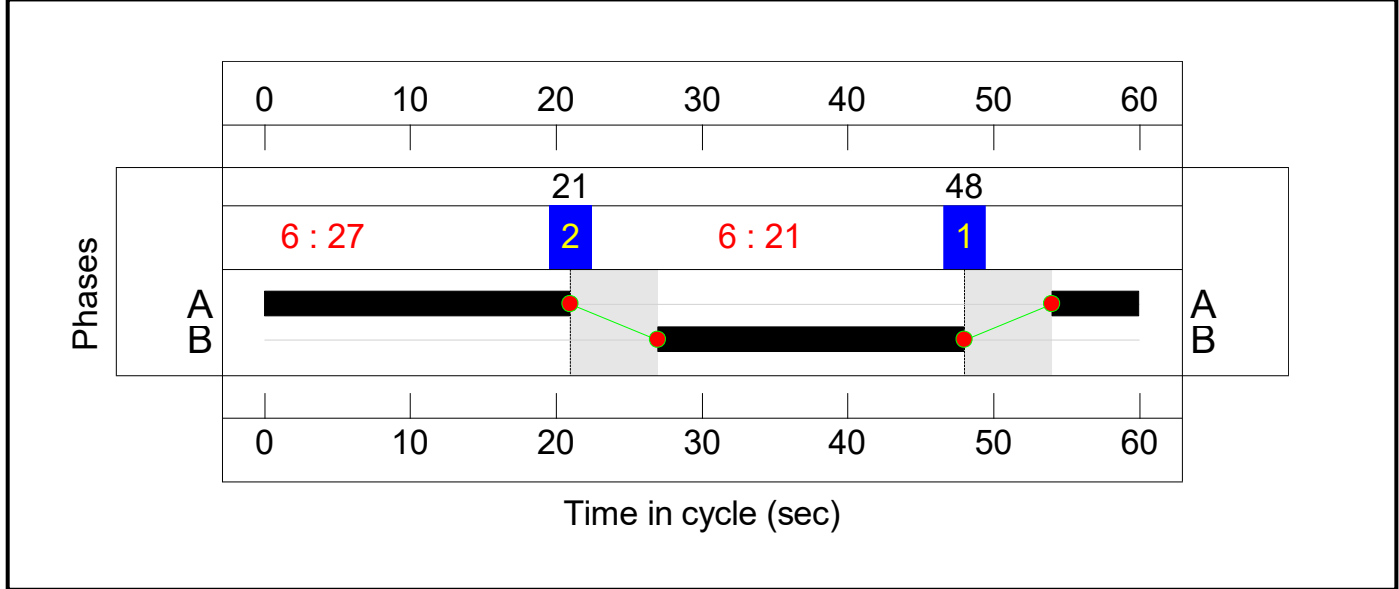
Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results

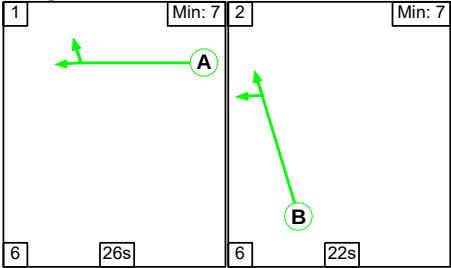
Signal Timings Diagram



C3 - Tarbock Roundabout South

Stage Sequence Diagram

Stage Stream: 1

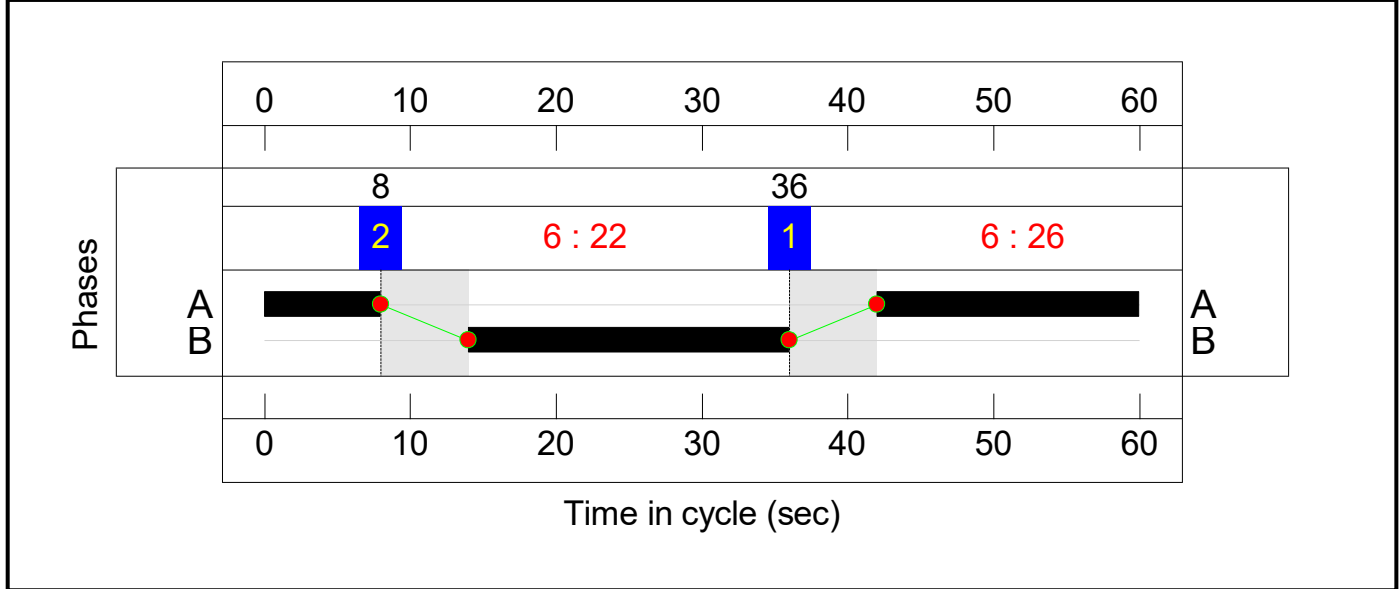


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	36	8

Signal Timings Diagram

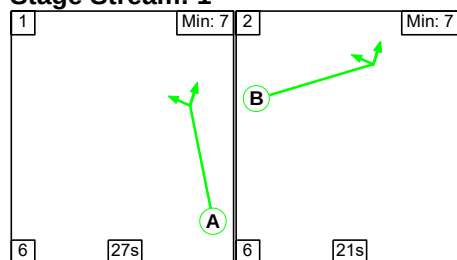


Full Input Data And Results

C4 - Tarbock Roundabout West

Stage Sequence Diagram

Stage Stream: 1

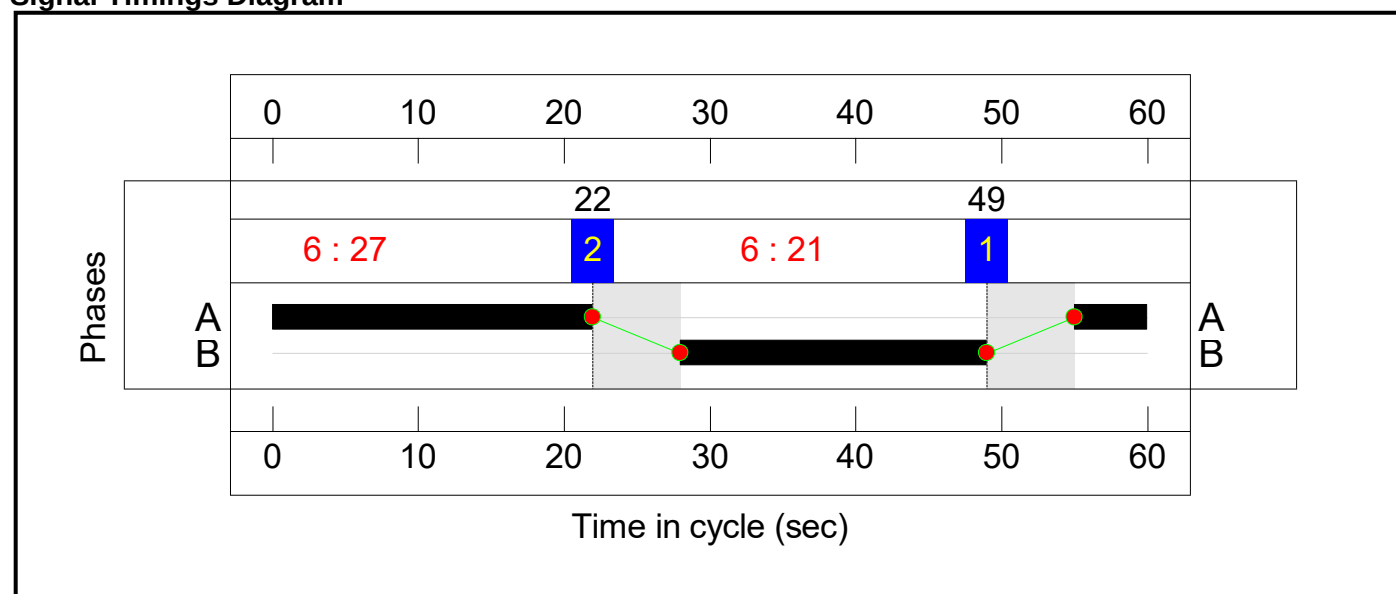


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	49	22

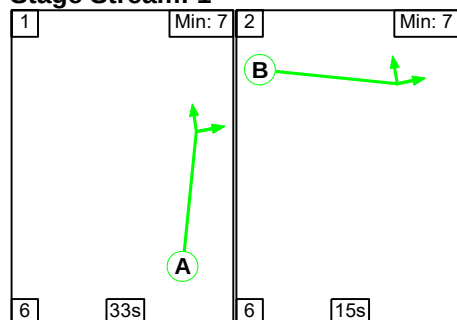
Signal Timings Diagram



C5 - A5080 Cronton Road

Stage Sequence Diagram

Stage Stream: 1

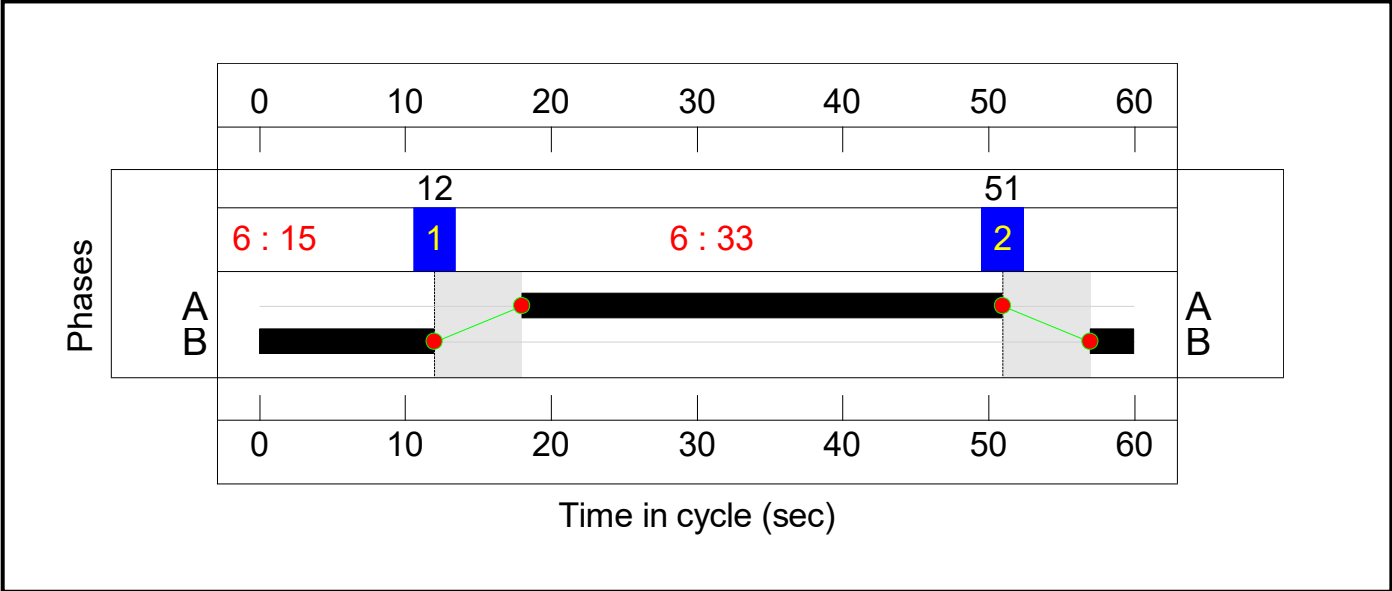


Stage Timings

Stage Stream: 1

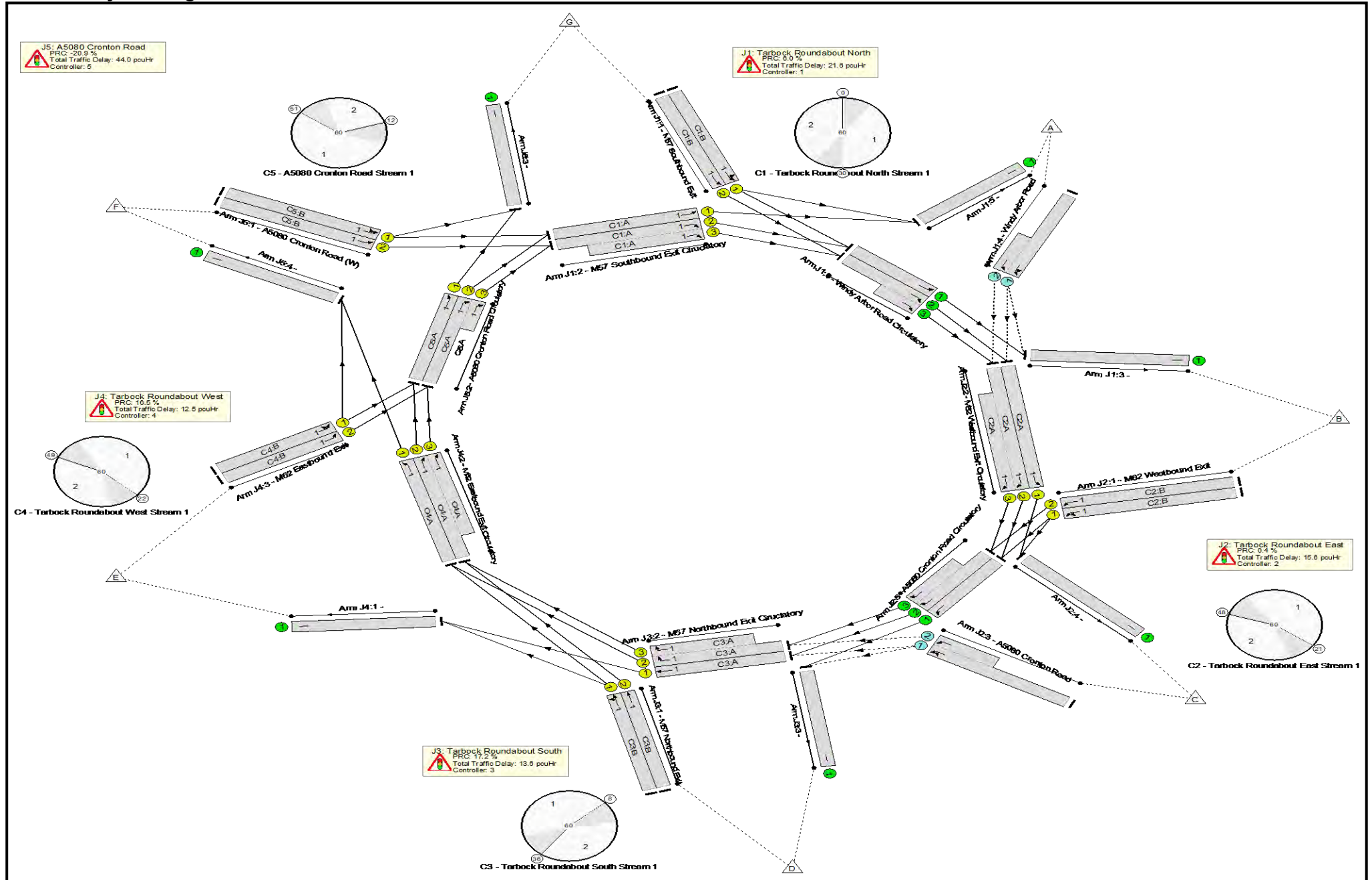
Stage	1	2
Duration	33	15
Change Point	12	51

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	-	-	N/A	-	-		-	-	-	-	-	-	108.8%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	84.9%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	110	1985	827	13.3%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	752	2125	885	84.9%
2/1	M57 Southbound Exit Circulatory Ahead	U	1:1	N/A	C1:A		1	24	-	493	1940	808	58.3%
2/2+2/3	M57 Southbound Exit Circulatory Right	U	1:1	N/A	C1:A		1	24	-	1245	2080:2080	701+804	82.7 : 82.7%
3/1		U	N/A	N/A	-		-	-	-	655	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	394	1965:2105	193+297	80.5 : 80.5%
5/1		U	N/A	N/A	-		-	-	-	600	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	583	1940	1940	30.1%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1417	1940:2080	394+1658	69.1 : 69.1%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	89.6%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	473	2055	753	62.8%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	375	2195	805	46.6%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	355	1940	905	39.2%

Full Input Data And Results

2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1384	2080:2080	480+971	89.6 : 88.2%
3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	362	1965:2105	445+254	48.8 : 57.0%
4/1		U	N/A	N/A	-		-	-	-	421	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	865	1940	1940	43.2%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1301	2080:2080	809+1271	57.8 : 60.1%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	76.8%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	515	2115	811	63.5%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	504	2255	864	58.3%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	709	1940	873	76.8%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	940	2080:2080	936+521	64.0 : 59.3%
3/1		U	N/A	N/A	-		-	-	-	879	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	77.3%
1/1		U	N/A	N/A	-		-	-	-	1124	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	704	1940	905	77.3%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	840	2080:2080	301+971	57.1 : 66.0%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	440	1965	721	61.1%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	490	2105	772	63.5%

Full Input Data And Results

J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	108.8%
1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	15	-	576	1985	529	108.8%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	15	-	340	2125	567	60.0%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	33	-	558	1955	1108	47.9%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	33	-	1131	2095:2095	251+1005	90.0 : 90.0%
3/1		U	N/A	N/A	-		-	-	-	867	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	785	Inf	Inf	0.0%
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	-	-	1512	0	0	49.1	58.2	0.0	107.2	-	-	-	-
J1: Tarbock Roundabout North	-	-	788	0	0	12.5	9.1	0.0	21.6	-	-	-	-
1/1	110	110	-	-	-	0.3	0.1	-	0.4	13.3	1.1	0.1	1.2
1/2	752	752	-	-	-	3.3	2.7	-	6.0	28.8	11.3	2.7	14.0
2/1	471	471	-	-	-	1.3	0.7	-	2.0	15.0	4.4	0.7	5.0
2/2+2/3	1245	1245	-	-	-	6.7	2.4	-	9.1	26.2	12.2	2.4	14.6
3/1	655	655	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	394	394	788	0	0	0.8	2.0	-	2.8	25.6	1.9	2.0	3.8
5/1	578	578	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	583	583	-	-	-	0.0	0.2	-	0.2	1.4	5.5	0.2	5.8
6/2+6/3	1417	1417	-	-	-	0.0	1.1	-	1.1	2.9	13.1	1.1	14.2
J2: Tarbock Roundabout East	-	-	724	0	0	8.6	7.0	0.0	15.6	-	-	-	-
1/1	473	473	-	-	-	2.1	0.8	-	2.9	22.0	6.4	0.8	7.3

Full Input Data And Results

1/2	375	375	-	-	-	1.5	0.4	-	1.9	18.7	4.7	0.4	5.1
2/1	355	355	-	-	-	1.1	0.3	-	1.4	14.6	4.2	0.3	4.5
2/2+2/3	1286	1286	-	-	-	3.2	3.7	-	6.9	19.3	7.2	3.7	10.9
3/1+3/2	362	362	724	0	0	0.7	0.5	-	1.3	12.7	1.7	0.5	2.2
4/1	421	421	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	837	837	-	-	-	0.0	0.4	-	0.4	1.6	3.3	0.4	3.6
5/2+5/3	1231	1231	-	-	-	0.0	0.7	-	0.7	2.1	9.7	0.7	10.4
J3: Tarbock Roundabout South	-	-	0	0	0	9.6	4.0	0.0	13.6	-	-	-	-
1/1	515	515	-	-	-	2.2	0.9	-	3.0	21.1	6.9	0.9	7.7
1/2	504	504	-	-	-	2.1	0.7	-	2.8	19.7	6.6	0.7	7.3
2/1	671	671	-	-	-	3.1	1.6	-	4.7	25.5	10.6	1.6	12.3
2/2+2/3	908	908	-	-	-	2.3	0.8	-	3.1	12.2	7.6	0.8	8.5
3/1	851	851	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	8.3	4.2	0.0	12.5	-	-	-	-
1/1	1086	1086	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	699	699	-	-	-	1.2	1.7	-	2.9	14.9	3.5	1.7	5.2
2/2+2/3	813	813	-	-	-	3.0	0.9	-	3.9	17.2	16.5	0.9	17.4
3/1	440	440	-	-	-	1.9	0.8	-	2.7	21.9	5.9	0.8	6.6
3/2	490	490	-	-	-	2.1	0.9	-	3.0	22.0	6.7	0.9	7.5
J5: A5080 Cronton Road	-	-	0	0	0	10.2	33.8	0.0	44.0	-	-	-	-
1/1	576	529	-	-	-	5.0	28.4	-	33.4	208.7	10.4	28.4	38.8
1/2	340	340	-	-	-	1.8	0.7	-	2.6	27.1	4.9	0.7	5.7
2/1	531	531	-	-	-	0.6	0.5	-	1.1	7.3	3.0	0.5	3.5
2/2+2/3	1131	1131	-	-	-	2.7	4.2	-	7.0	22.2	11.4	4.2	15.6
3/1	815	815	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	780	780	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	6.0	Total Delay for Signalled Lanes (pcuHr):	17.44	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	0.4	Total Delay for Signalled Lanes (pcuHr):	13.18	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	17.2	Total Delay for Signalled Lanes (pcuHr):	13.61	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	16.5	Total Delay for Signalled Lanes (pcuHr):	12.45	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-20.9	Total Delay for Signalled Lanes (pcuHr):	43.99	Cycle Time (s):	60
	PRC Over All Lanes (%):	-20.9	Total Delay Over All Lanes(pcuHr):	107.25		

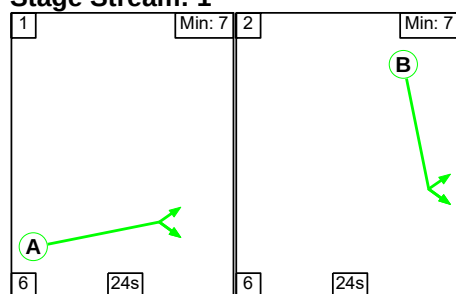
Full Input Data And Results

Scenario 5: '2033 AM' (FG5: '2033 AM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

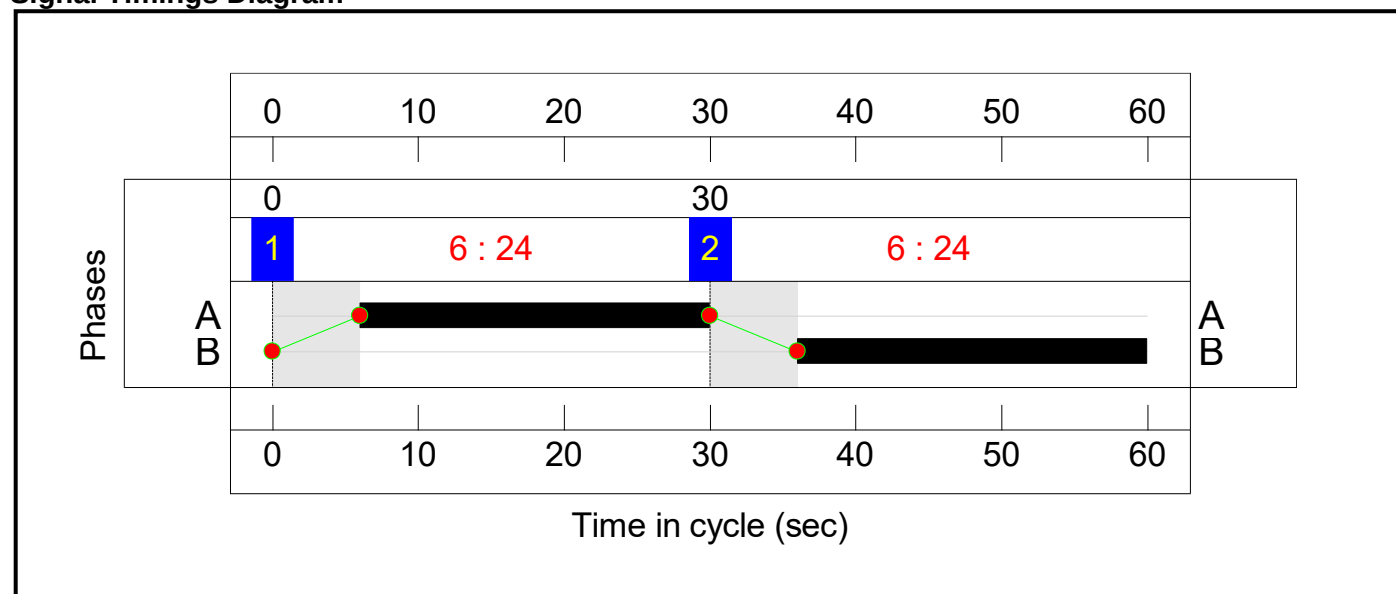


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

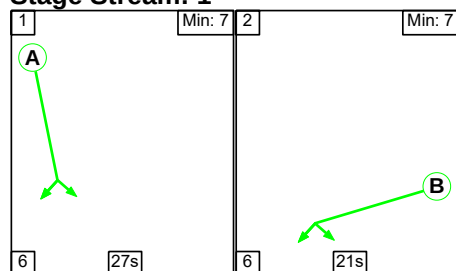
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1



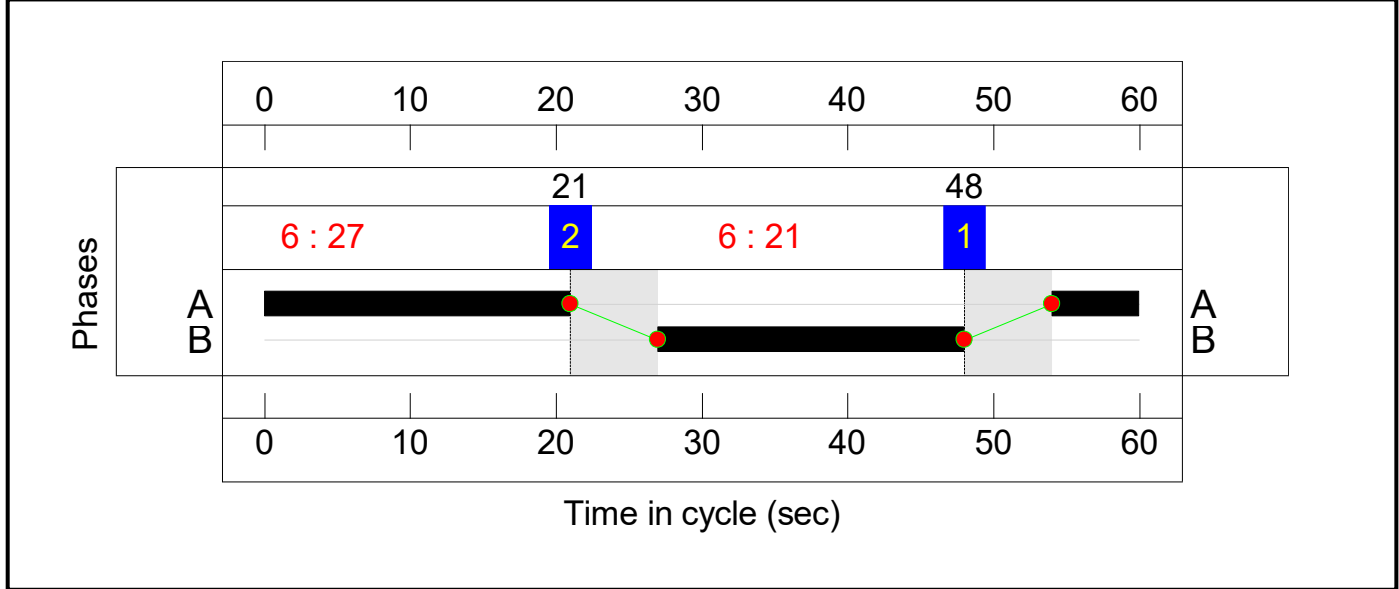
Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results

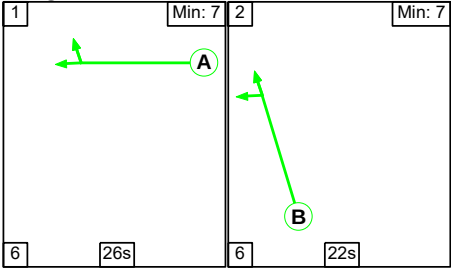
Signal Timings Diagram



C3 - Tarbock Roundabout South

Stage Sequence Diagram

Stage Stream: 1

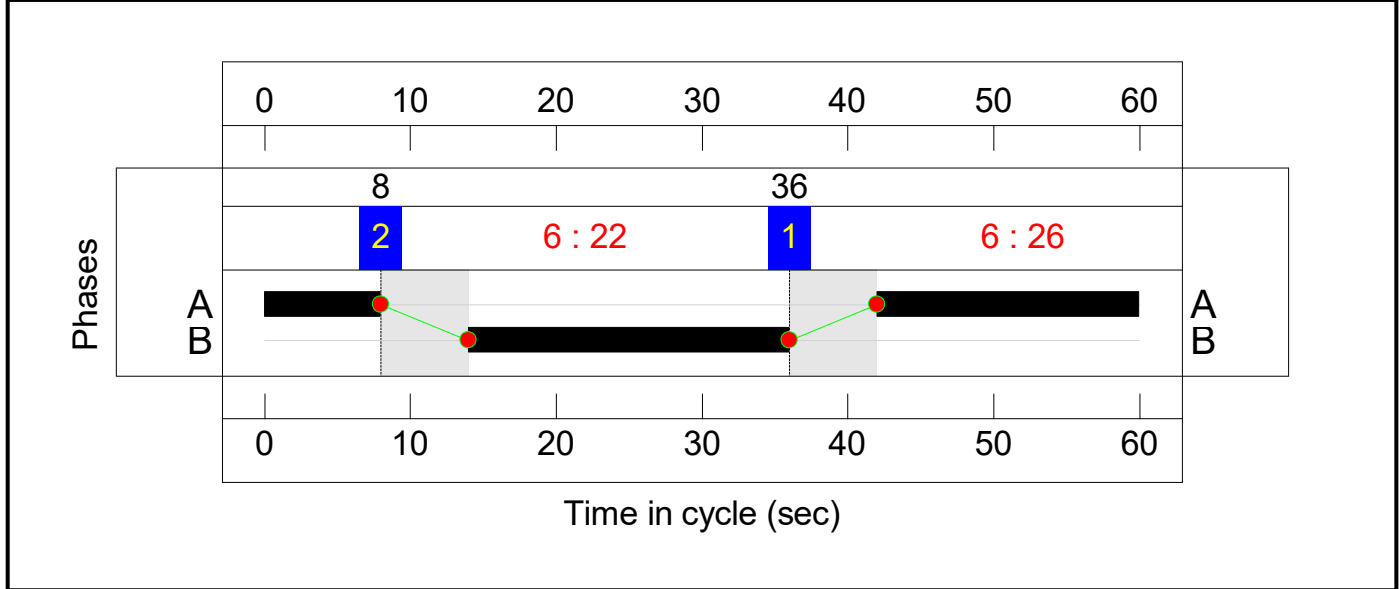


Stage Timings

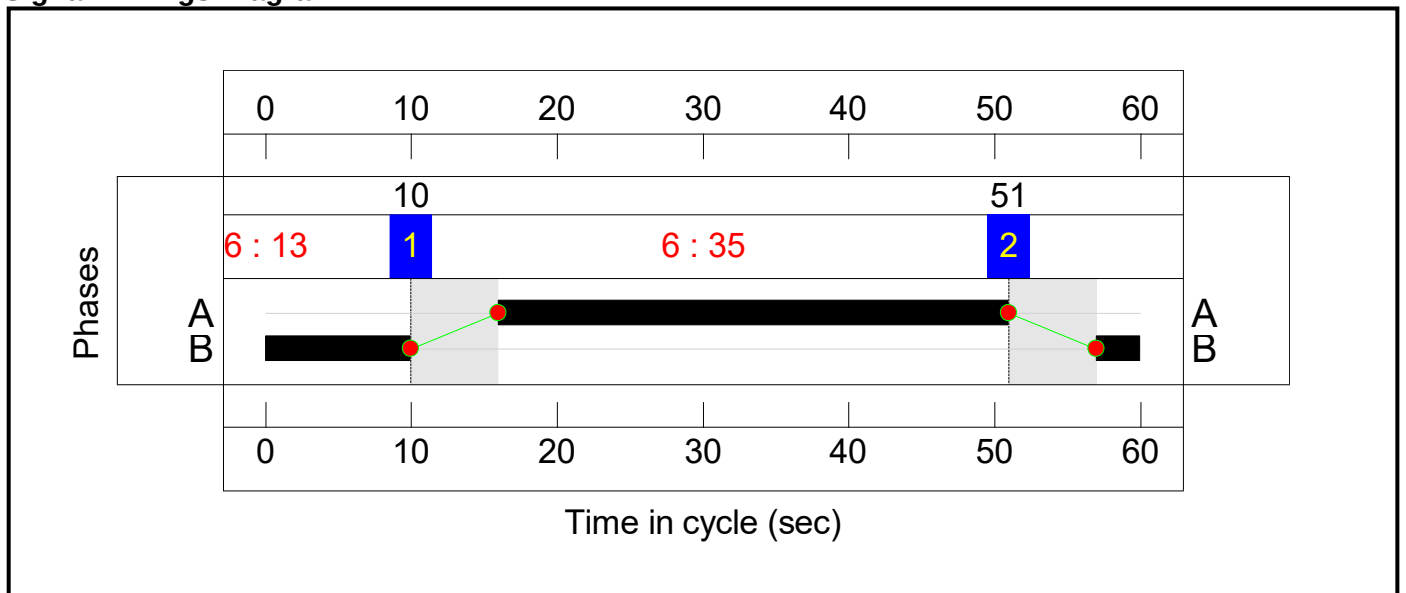
Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	36	8

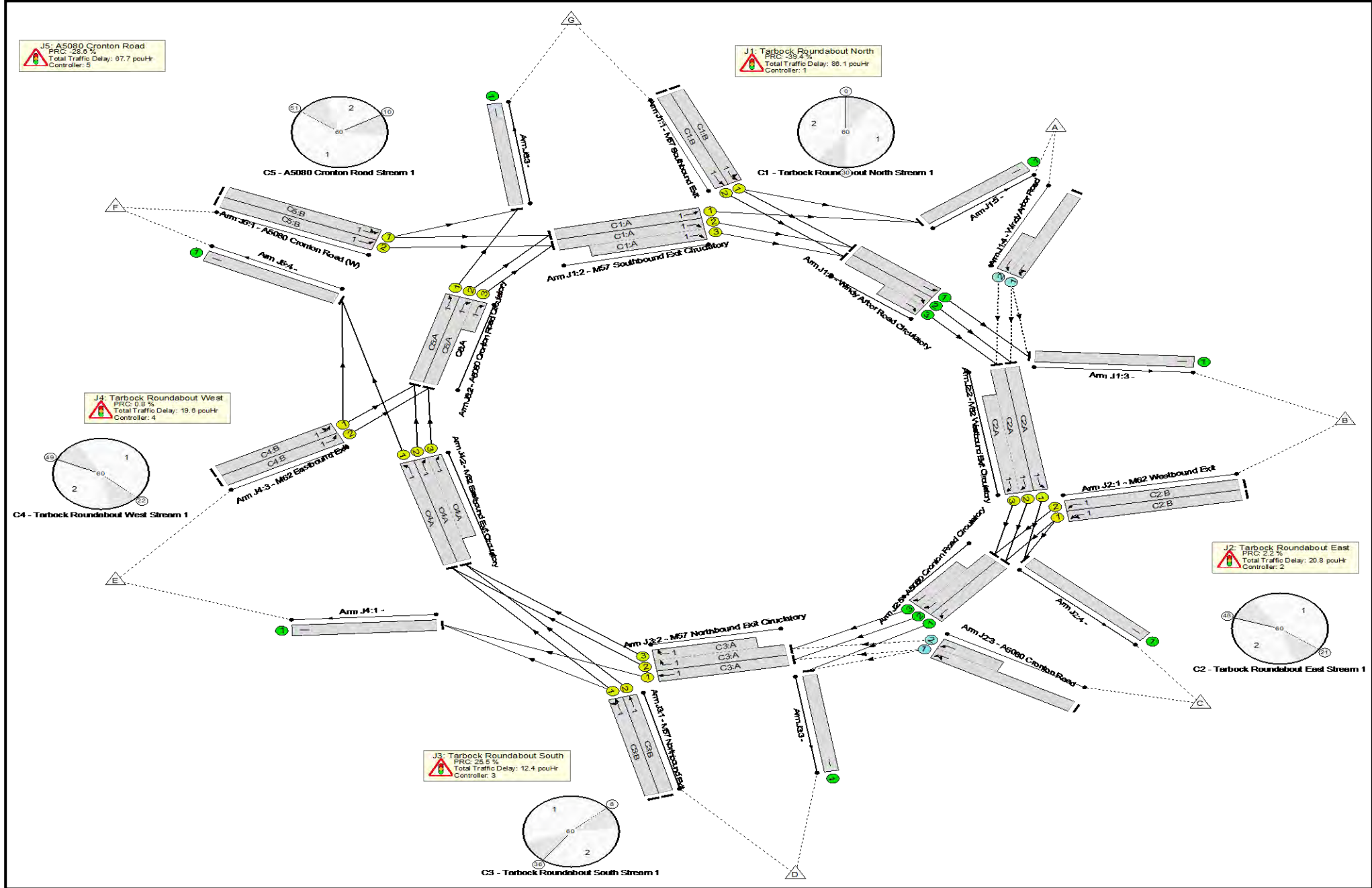
Signal Timings Diagram



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	-	-	N/A	-	-		-	-	-	-	-	-	125.4%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	125.4%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	65	1985	827	7.9%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	592	2125	885	66.9%
2/1	M57 Southbound Exit Cirulatory Ahead	U	1:1	N/A	C1:A		1	24	-	459	1940	808	53.4%
2/2+2/3	M57 Southbound Exit Cirulatory Right	U	1:1	N/A	C1:A		1	24	-	1461	2080:2080	721+803	95.9 : 95.9%
3/1		U	N/A	N/A	-		-	-	-	804	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	553	1965:2105	142+299	125.4 : 125.4%
5/1		U	N/A	N/A	-		-	-	-	520	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	695	1940	1940	35.8%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1362	1940:2080	338+1718	66.3 : 66.3%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	88.1%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	636	2055	753	84.4%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	427	2195	805	53.1%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	293	1940	905	32.4%
2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1513	2080:2080	747+971	79.3 : 73.3%

Full Input Data And Results

3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	385	1965:2105	193+244	88.1 : 88.1%
4/1		U	N/A	N/A	-		-	-	-	332	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	1255	1940	1940	61.3%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1282	2080:2080	638+1442	52.6 : 55.7%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	71.7%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	432	2115	811	53.3%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	582	2255	864	67.3%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	545	1940	873	55.8%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	1104	2080:2080	936+564	71.7 : 61.7%
3/1		U	N/A	N/A	-		-	-	-	1273	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	89.3%
1/1		U	N/A	N/A	-		-	-	-	840	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	826	1940	905	89.3%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	997	2080:2080	402+971	55.9 : 72.6%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	594	1965	721	82.4%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	591	2105	772	76.6%
J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	115.7%

Full Input Data And Results

1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	13	-	536	1985	463	115.7%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	13	-	424	2125	496	85.5%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	35	-	759	1955	1173	59.0%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	35	-	1296	2095:2095	265+1061	97.7 : 97.7%
3/1		U	N/A	N/A	-		-	-	-	1095	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	953	Inf	Inf	0.0%
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	-	-	1724	0	0	59.4	147.2	0.0	206.7	-	-	-	-
J1: Tarbock Roundabout North	-	-	954	0	0	15.8	70.3	0.0	86.1	-	-	-	-
1/1	65	65	-	-	-	0.2	0.0	-	0.2	13.0	0.7	0.0	0.7
1/2	592	592	-	-	-	2.3	1.0	-	3.3	20.2	7.9	1.0	8.9
2/1	432	432	-	-	-	1.3	0.6	-	1.8	15.3	4.3	0.6	4.9
2/2+2/3	1461	1461	-	-	-	7.6	9.1	-	16.7	41.0	14.0	9.1	23.0
3/1	804	804	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	553	477	954	0	0	4.3	58.4	-	62.7	408.5	16.9	58.4	75.3
5/1	493	493	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	695	695	-	-	-	0.0	0.3	-	0.3	1.6	7.7	0.3	8.0
6/2+6/3	1362	1362	-	-	-	0.0	1.0	-	1.0	2.6	12.5	1.0	13.5
J2: Tarbock Roundabout East	-	-	770	0	0	11.2	9.6	0.0	20.8	-	-	-	-
1/1	636	636	-	-	-	3.1	2.6	-	5.7	32.1	9.7	2.6	12.3
1/2	427	427	-	-	-	1.8	0.6	-	2.3	19.7	5.6	0.6	6.1

Full Input Data And Results

2/1	293	293	-	-	-	0.9	0.2	-	1.1	13.5	3.5	0.2	3.7
2/2+2/3	1304	1304	-	-	-	4.3	1.6	-	5.9	16.3	9.9	1.6	11.4
3/1+3/2	385	385	770	0	0	1.1	3.3	-	4.4	41.0	3.4	3.3	6.7
4/1	332	332	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1189	1189	-	-	-	0.0	0.8	-	0.8	2.5	6.1	0.8	6.9
5/2+5/3	1139	1139	-	-	-	0.0	0.6	-	0.6	1.9	10.3	0.6	10.9
J3: Tarbock Roundabout South	-	-	0	0	0	9.2	3.3	0.0	12.4	-	-	-	-
1/1	432	432	-	-	-	1.7	0.6	-	2.3	19.1	5.5	0.6	6.1
1/2	582	582	-	-	-	2.5	1.0	-	3.5	21.7	7.9	1.0	8.9
2/1	487	487	-	-	-	2.3	0.6	-	2.9	21.3	7.9	0.6	8.5
2/2+2/3	1019	1019	-	-	-	2.7	1.1	-	3.8	13.3	8.7	1.1	9.7
3/1	1207	1207	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	10.8	8.8	0.0	19.6	-	-	-	-
1/1	782	782	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	808	808	-	-	-	1.7	3.9	-	5.6	24.9	6.0	3.9	9.8
2/2+2/3	930	930	-	-	-	3.5	1.0	-	4.5	17.5	16.6	1.0	17.7
3/1	594	594	-	-	-	2.8	2.3	-	5.1	31.0	8.9	2.3	11.2
3/2	591	591	-	-	-	2.7	1.6	-	4.4	26.5	8.5	1.6	10.1
J5: A5080 Cronton Road	-	-	0	0	0	12.5	55.2	0.0	67.7	-	-	-	-
1/1	536	463	-	-	-	5.7	39.8	-	45.5	305.8	10.1	39.8	49.9
1/2	424	424	-	-	-	2.6	2.7	-	5.3	45.3	6.7	2.7	9.5
2/1	692	692	-	-	-	1.1	0.7	-	1.8	9.3	5.1	0.7	5.8
2/2+2/3	1296	1296	-	-	-	3.1	12.0	-	15.1	41.9	13.5	12.0	25.5
3/1	982	982	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	-6.6	Total Delay for Signalled Lanes (pcuHr):	22.05	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	6.6	Total Delay for Signalled Lanes (pcuHr):	15.02	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	25.5	Total Delay for Signalled Lanes (pcuHr):	12.44	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	0.8	Total Delay for Signalled Lanes (pcuHr):	19.57	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-28.6	Total Delay for Signalled Lanes (pcuHr):	67.73	Cycle Time (s):	60
	PRC Over All Lanes (%):	-39.4	Total Delay Over All Lanes(pcuHr):	206.67		

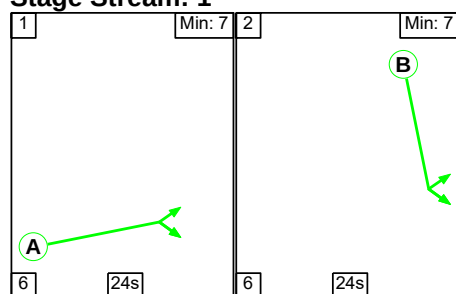
Full Input Data And Results

Scenario 6: '2033 PM' (FG6: '2033 PM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

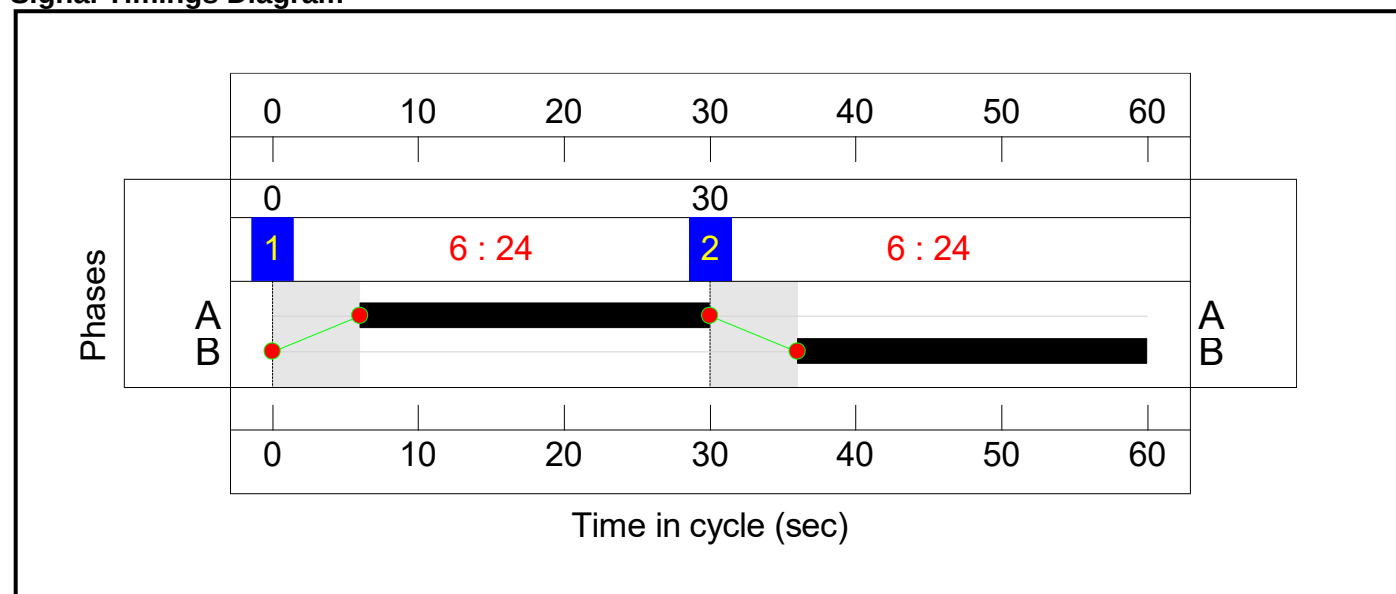


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

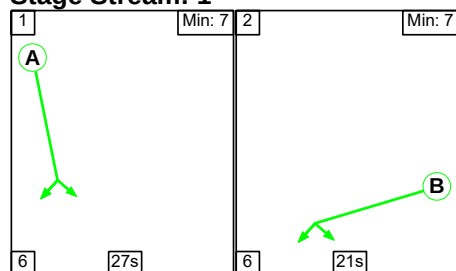
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1



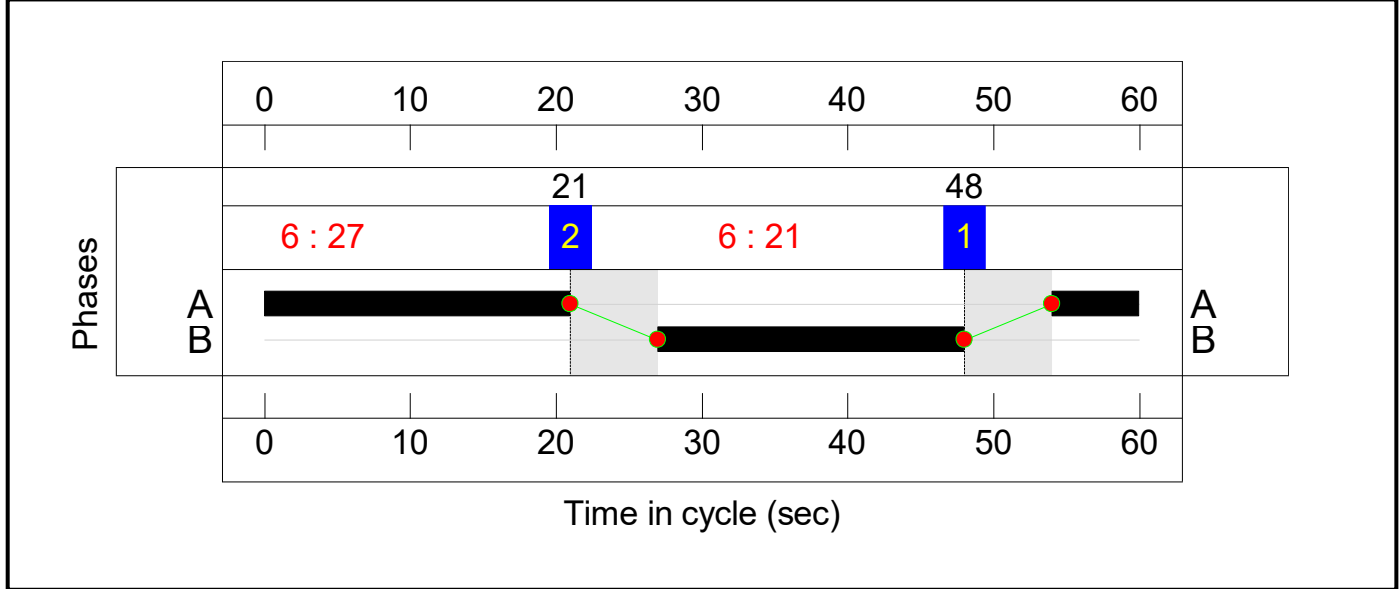
Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results

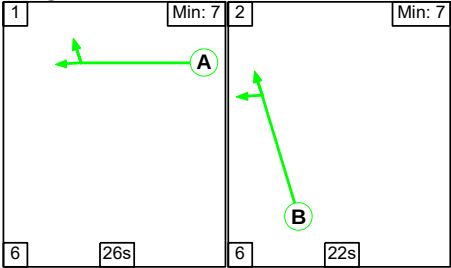
Signal Timings Diagram



C3 - Tarbock Roundabout South

Stage Sequence Diagram

Stage Stream: 1

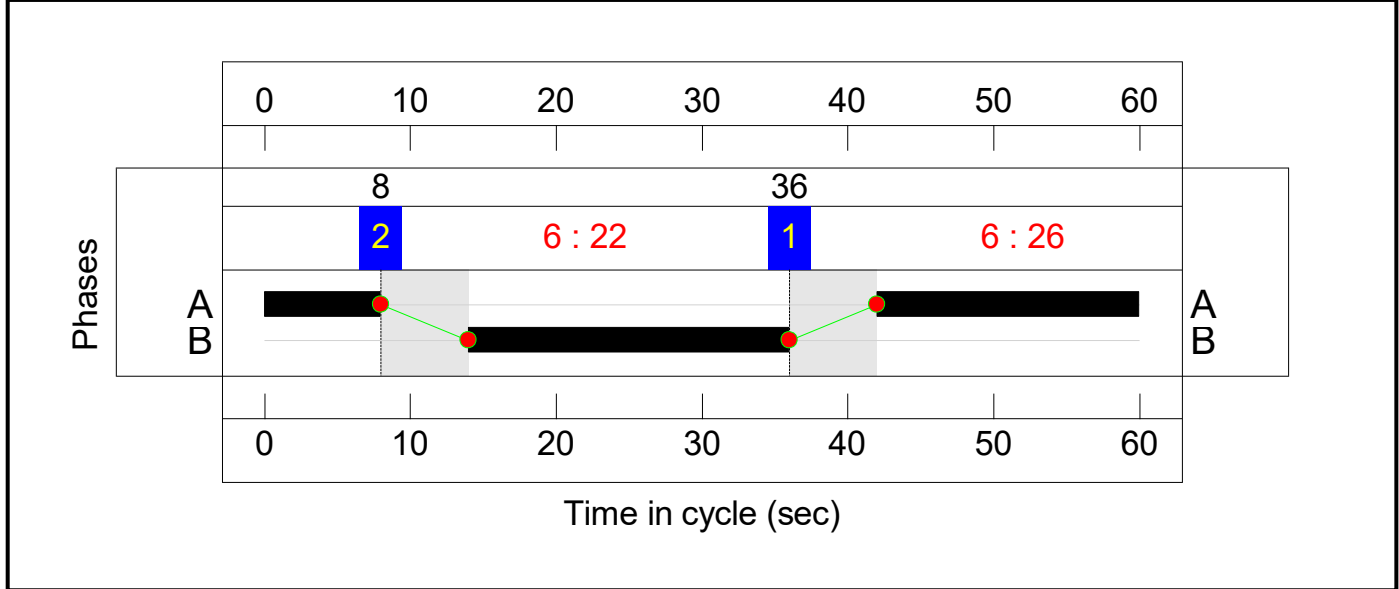


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	36	8

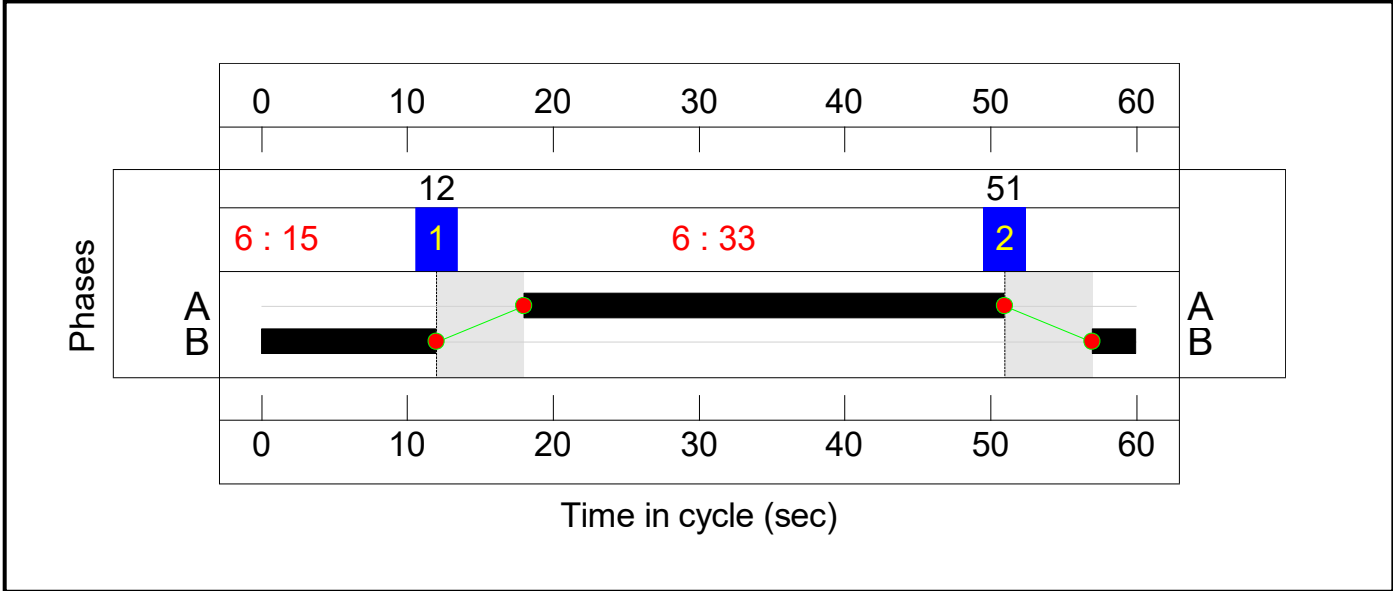
Signal Timings Diagram



Stage Stream: 1

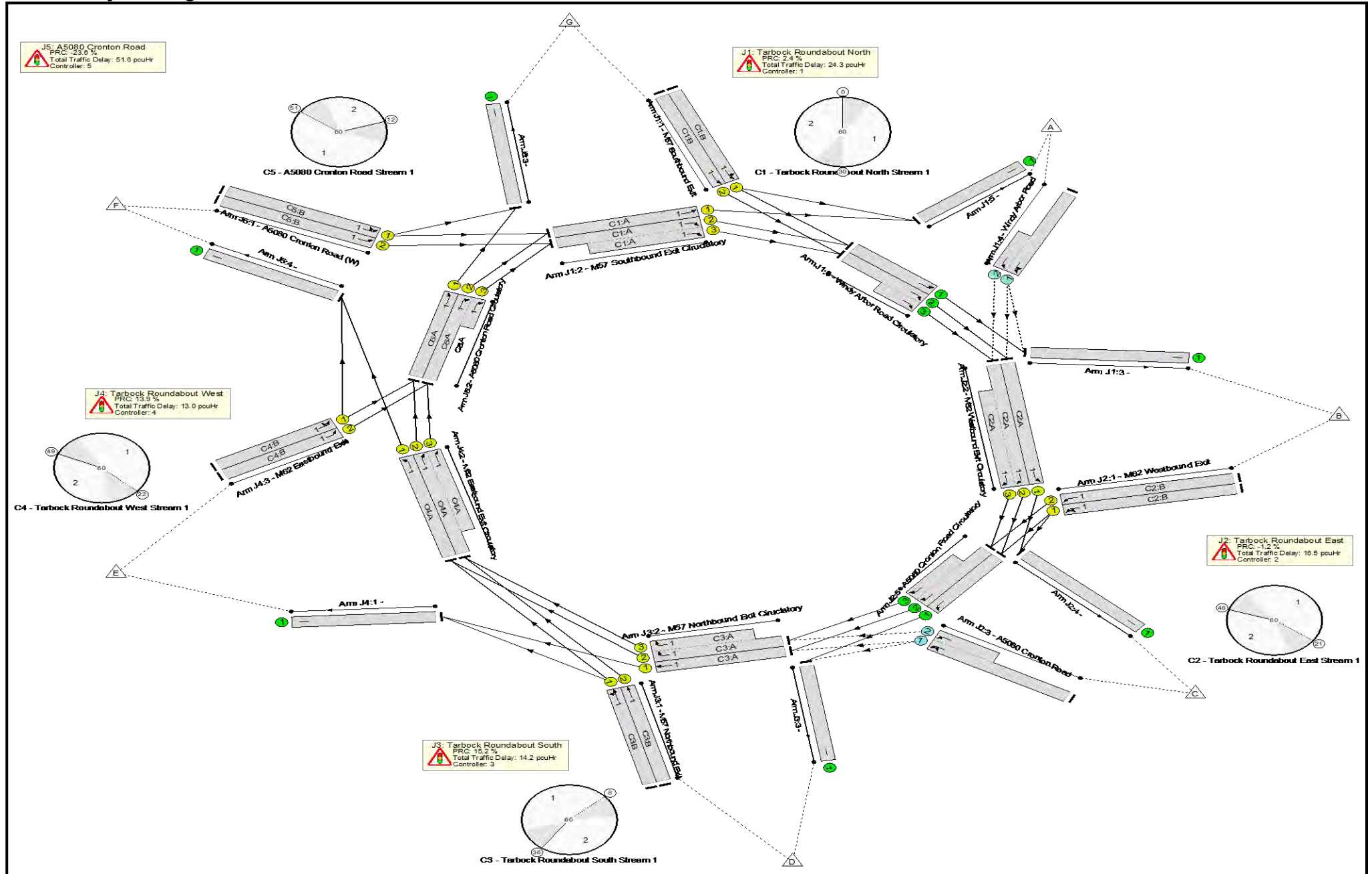
Stage	1	2
Duration	33	15
Change Point	12	51

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	-	-	N/A	-	-		-	-	-	-	-	-	111.3%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	87.9%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	113	1985	827	13.7%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	769	2125	885	86.9%
2/1	M57 Southbound Exit Cirulatory Ahead	U	1:1	N/A	C1:A		1	24	-	504	1940	808	58.9%
2/2+2/3	M57 Southbound Exit Cirulatory Right	U	1:1	N/A	C1:A		1	24	-	1276	2080:2080	700+804	84.8 : 84.8%
3/1		U	N/A	N/A	-		-	-	-	670	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	403	1965:2105	180+279	87.9 : 87.9%
5/1		U	N/A	N/A	-		-	-	-	614	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	597	1940	1940	30.8%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1451	1940:2080	394+1657	70.7 : 70.7%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	91.1%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	484	2055	753	64.2%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	384	2195	805	47.7%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	364	1940	905	40.2%
2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1417	2080:2080	479+971	91.1 : 89.4%

Full Input Data And Results

3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	371	1965:2105	429+241	52.0 : 61.3%
4/1		U	N/A	N/A	-		-	-	-	431	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	885	1940	1940	44.0%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1333	2080:2080	810+1270	58.6 : 61.2%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	78.1%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	527	2115	811	65.0%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	517	2255	864	59.8%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	727	1940	873	78.1%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	962	2080:2080	936+519	65.5 : 60.2%
3/1		U	N/A	N/A	-		-	-	-	900	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	79.0%
1/1		U	N/A	N/A	-		-	-	-	1152	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	721	1940	905	79.0%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	860	2080:2080	300+971	57.4 : 67.7%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	451	1965	721	62.6%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	501	2105	772	64.9%
J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	111.3%

Full Input Data And Results

1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	15	-	589	1985	529	111.3%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	15	-	349	2125	567	61.6%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	33	-	571	1955	1108	48.7%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	33	-	1158	2095:2095	251+1006	92.2 : 92.2%
3/1		U	N/A	N/A	-		-	-	-	887	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	804	Inf	Inf	0.0%
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	-	-	1548	0	0	51.0	68.6	0.0	119.5	-	-	-	-
J1: Tarbock Roundabout North	-	-	806	0	0	13.0	11.3	0.0	24.3	-	-	-	-
1/1	113	113	-	-	-	0.3	0.1	-	0.4	13.4	1.2	0.1	1.2
1/2	769	769	-	-	-	3.4	3.1	-	6.6	30.7	11.5	3.1	14.7
2/1	476	476	-	-	-	1.3	0.7	-	2.0	15.2	4.4	0.7	5.1
2/2+2/3	1276	1276	-	-	-	6.9	2.7	-	9.6	27.2	12.2	2.7	14.9
3/1	670	670	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	403	403	806	0	0	1.0	3.3	-	4.2	37.6	3.9	3.3	7.1
5/1	586	586	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	597	597	-	-	-	0.0	0.2	-	0.2	1.5	6.0	0.2	6.2
6/2+6/3	1451	1451	-	-	-	0.0	1.2	-	1.2	3.1	13.6	1.2	14.8
J2: Tarbock Roundabout East	-	-	742	0	0	8.8	7.7	0.0	16.5	-	-	-	-
1/1	484	484	-	-	-	2.1	0.9	-	3.0	22.4	6.6	0.9	7.5
1/2	384	384	-	-	-	1.6	0.5	-	2.0	18.9	4.9	0.5	5.4

Full Input Data And Results

2/1	364	364	-	-	-	1.1	0.3	-	1.5	14.6	4.4	0.3	4.7
2/2+2/3	1304	1304	-	-	-	3.2	4.2	-	7.4	20.5	7.3	4.2	11.5
3/1+3/2	371	371	742	0	0	0.8	0.6	-	1.4	13.7	1.7	0.6	2.4
4/1	431	431	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	853	853	-	-	-	0.0	0.4	-	0.4	1.7	3.3	0.4	3.7
5/2+5/3	1252	1252	-	-	-	0.0	0.8	-	0.8	2.2	9.7	0.8	10.5
J3: Tarbock Roundabout South	-	-	0	0	0	9.9	4.3	0.0	14.2	-	-	-	-
1/1	527	527	-	-	-	2.2	0.9	-	3.1	21.5	7.2	0.9	8.1
1/2	517	517	-	-	-	2.1	0.7	-	2.9	20.0	6.9	0.7	7.6
2/1	682	682	-	-	-	3.2	1.8	-	5.0	26.2	10.9	1.8	12.6
2/2+2/3	925	925	-	-	-	2.3	0.9	-	3.2	12.4	7.8	0.9	8.7
3/1	868	868	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	8.5	4.5	0.0	13.0	-	-	-	-
1/1	1107	1107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	715	715	-	-	-	1.3	1.8	-	3.1	15.7	3.8	1.8	5.6
2/2+2/3	829	829	-	-	-	3.1	0.9	-	4.0	17.5	16.6	0.9	17.5
3/1	451	451	-	-	-	2.0	0.8	-	2.8	22.3	6.1	0.8	7.0
3/2	501	501	-	-	-	2.2	0.9	-	3.1	22.4	6.8	0.9	7.7
J5: A5080 Cronton Road	-	-	0	0	0	10.8	40.7	0.0	51.6	-	-	-	-
1/1	589	529	-	-	-	5.5	34.1	-	39.6	242.2	10.8	34.1	45.0
1/2	349	349	-	-	-	1.9	0.8	-	2.7	27.5	5.0	0.8	5.8
2/1	540	540	-	-	-	0.6	0.5	-	1.1	7.4	3.0	0.5	3.5
2/2+2/3	1158	1158	-	-	-	2.8	5.3	-	8.2	25.3	11.9	5.3	17.2
3/1	824	824	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	798	798	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	3.6	Total Delay for Signalled Lanes (pcuHr):	18.60	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	-1.2	Total Delay for Signalled Lanes (pcuHr):	13.92	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	15.2	Total Delay for Signalled Lanes (pcuHr):	14.16	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	13.9	Total Delay for Signalled Lanes (pcuHr):	13.05	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-23.6	Total Delay for Signalled Lanes (pcuHr):	51.56	Cycle Time (s):	60
	PRC Over All Lanes (%):	-23.6	Total Delay Over All Lanes(pcuHr):	119.55		

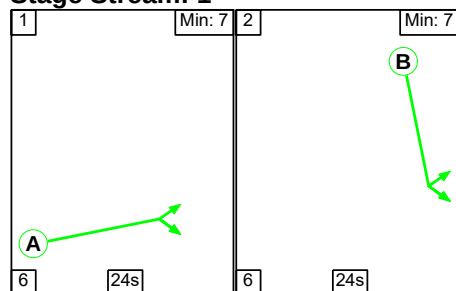
Full Input Data And Results

Scenario 7: '2028 + Development AM' (FG7: '2028 + Development AM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

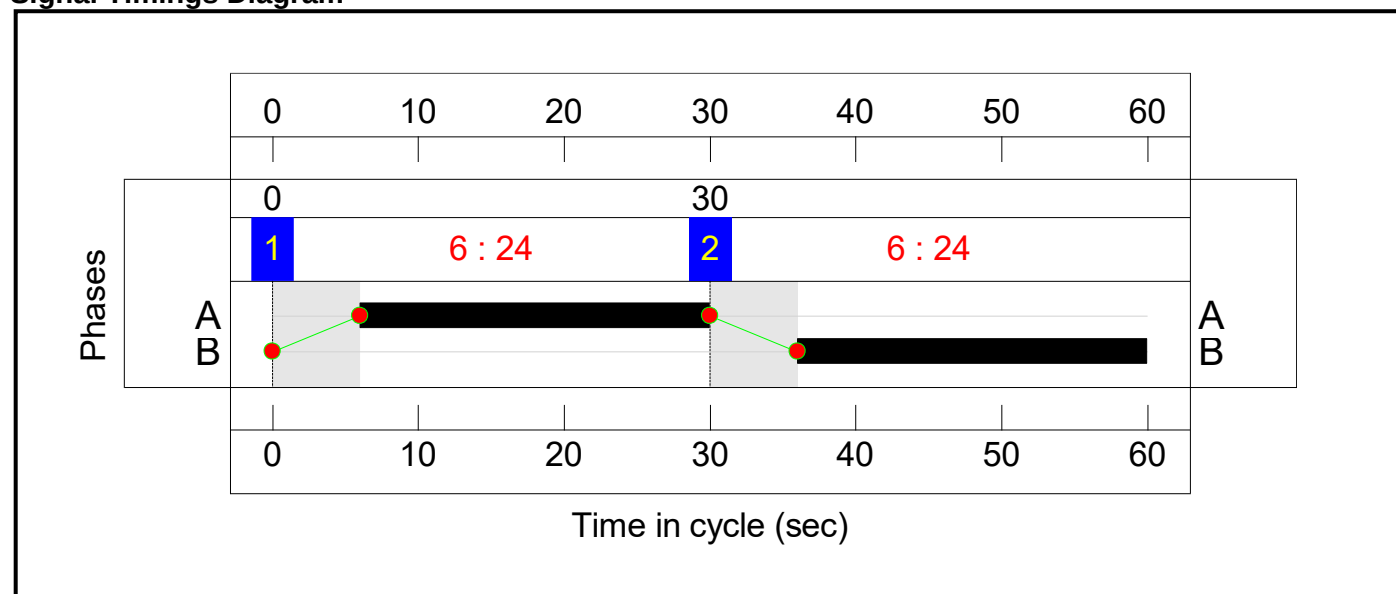


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

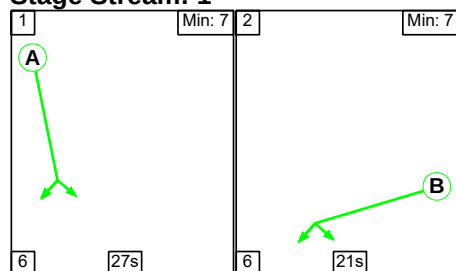
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1

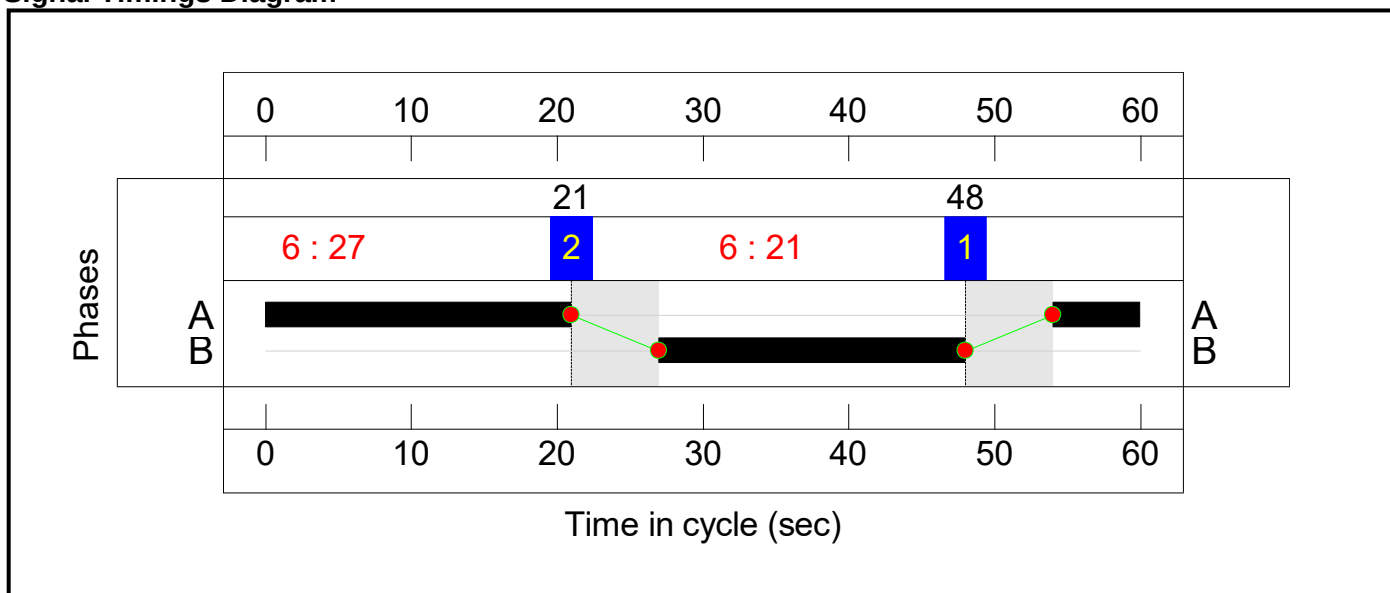


Stage Timings

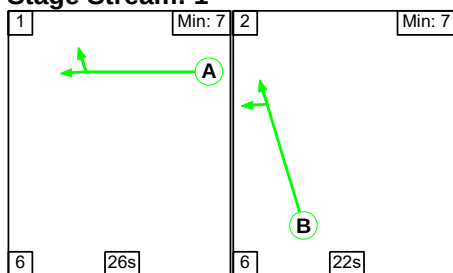
Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results
Signal Timings Diagram



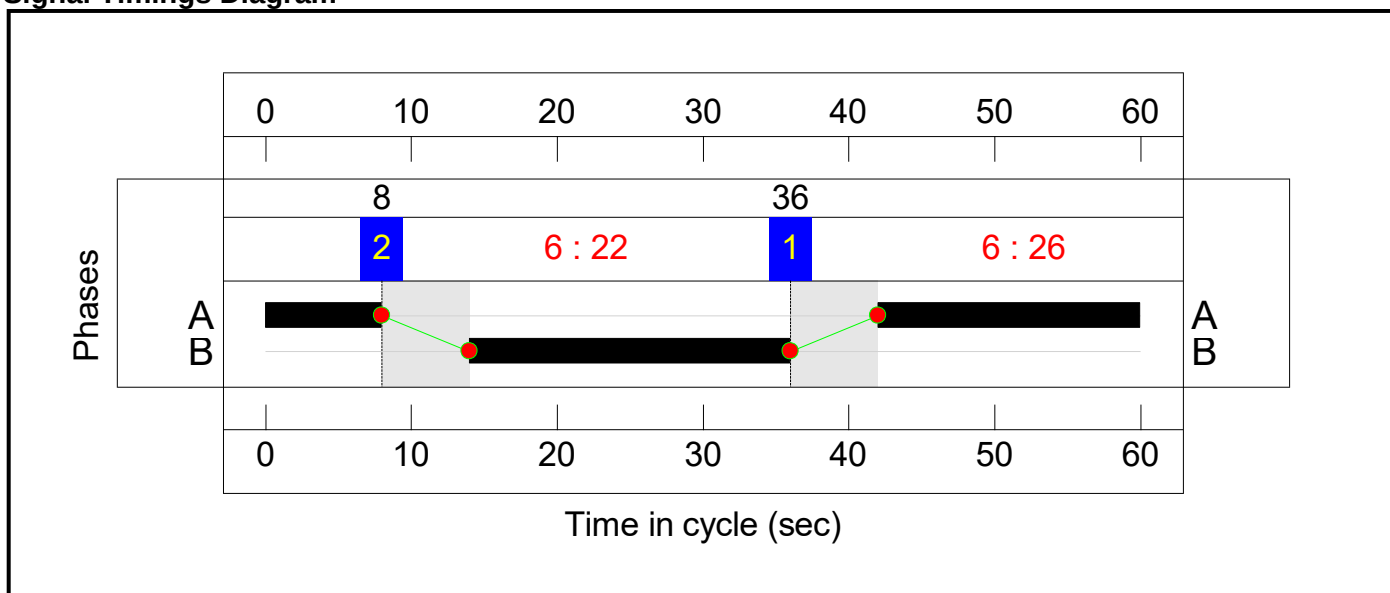
C3 - Tarbock Roundabout South
Stage Sequence Diagram
Stage Stream: 1



Stage Timings
Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	36	8

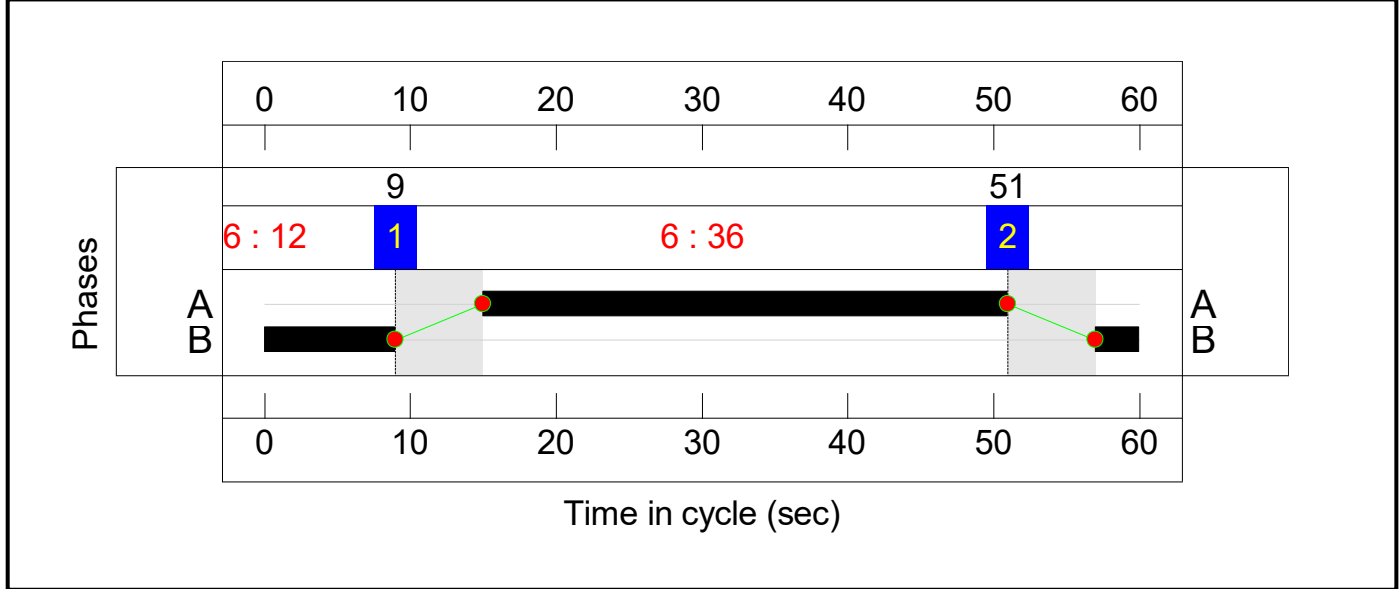
Signal Timings Diagram



Stage Stream: 1

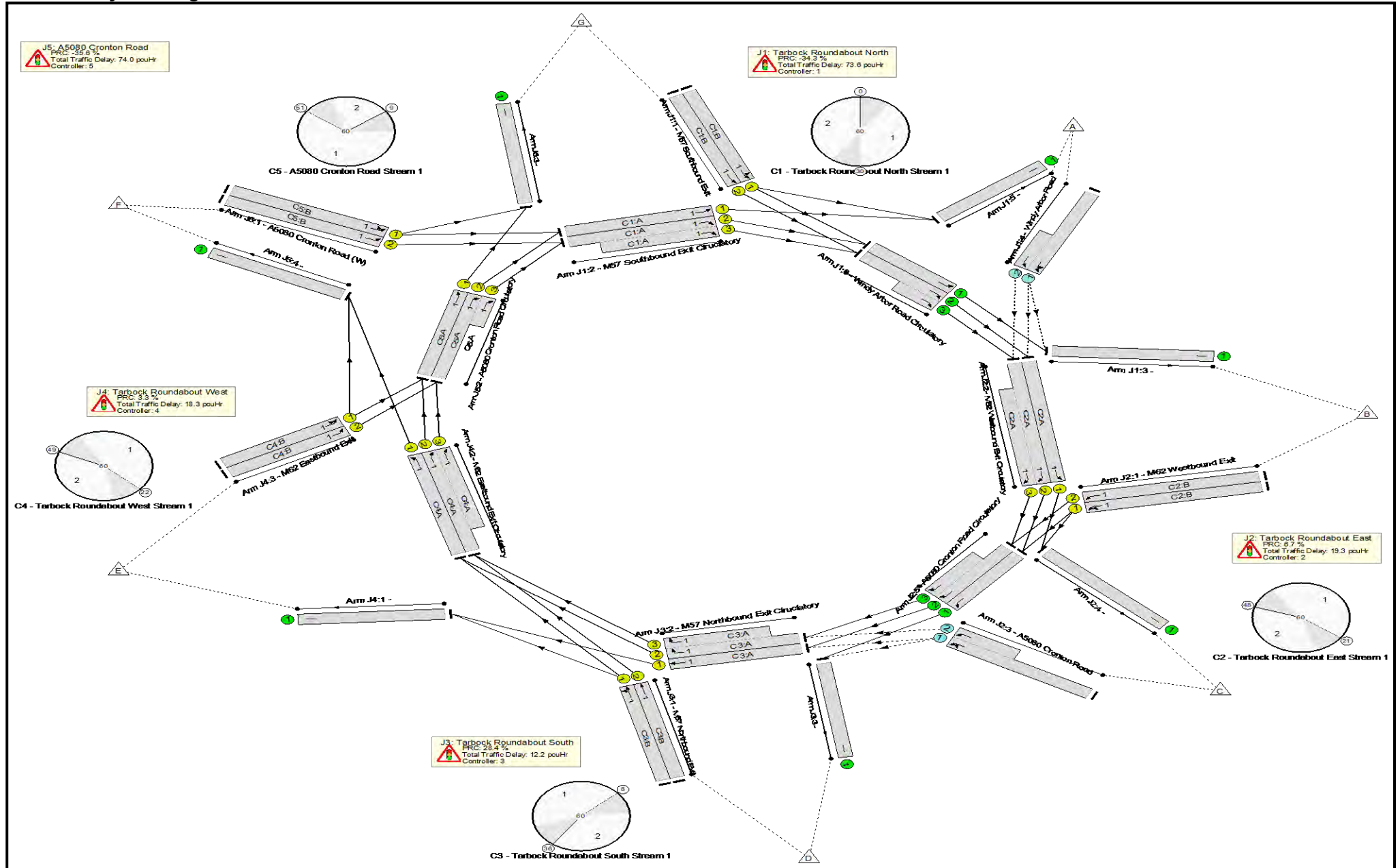
Stage	1	2
Duration	36	12
Change Point	9	51

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	-	-	N/A	-	-		-	-	-	-	-	-	122.1%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	120.9%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	74	1985	827	8.9%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	578	2125	885	65.3%
2/1	M57 Southbound Exit Cirulatory Ahead	U	1:1	N/A	C1:A		1	24	-	469	1940	808	53.6%
2/2+2/3	M57 Southbound Exit Cirulatory Right	U	1:1	N/A	C1:A		1	24	-	1426	2080:2080	720+803	93.6 : 93.6%
3/1		U	N/A	N/A	-		-	-	-	785	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	542	1965:2105	144+304	120.9 : 120.9%
5/1		U	N/A	N/A	-		-	-	-	539	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	678	1940	1940	34.9%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1330	1940:2080	338+1717	64.7 : 64.7%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	84.4%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	620	2055	753	82.3%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	421	2195	805	52.3%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	286	1940	905	31.6%
2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1479	2080:2080	745+971	78.3 : 72.8%

Full Input Data And Results

3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	378	1965:2105	197+251	84.4 : 84.4%
4/1		U	N/A	N/A	-		-	-	-	324	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	1224	1940	1940	60.0%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1258	2080:2080	637+1443	52.2 : 55.1%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	70.1%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	420	2115	811	51.8%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	571	2255	864	66.1%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	534	1940	873	55.1%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	1085	2080:2080	936+575	70.1 : 61.2%
3/1		U	N/A	N/A	-		-	-	-	1241	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	87.2%
1/1		U	N/A	N/A	-		-	-	-	821	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	805	1940	905	87.2%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	984	2080:2080	398+971	56.5 : 71.9%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	579	1965	721	80.4%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	585	2105	772	75.8%
J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	122.1%

Full Input Data And Results

1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	12	-	525	1985	430	122.1%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	12	-	414	2125	460	89.9%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	36	-	742	1955	1206	56.5%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	36	-	1283	2095:2095	288+1077	93.9 : 93.9%
3/1		U	N/A	N/A	-		-	-	-	1069	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	928	Inf	Inf	0.0%
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	-	-	1713	0	0	58.0	139.3	0.0	197.3	-	-	-	-
J1: Tarbock Roundabout North	-	-	957	0	0	14.8	58.8	0.0	73.6	-	-	-	-
1/1	74	74	-	-	-	0.2	0.0	-	0.3	13.0	0.7	0.0	0.8
1/2	578	578	-	-	-	2.3	0.9	-	3.2	19.8	7.7	0.9	8.6
2/1	433	433	-	-	-	1.3	0.6	-	1.9	15.6	4.4	0.6	5.0
2/2+2/3	1426	1426	-	-	-	7.1	6.5	-	13.6	34.3	14.0	6.5	20.4
3/1	785	785	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	542	478	957	0	0	3.9	49.5	-	53.4	354.8	16.6	49.5	66.1
5/1	503	503	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	678	678	-	-	-	0.0	0.3	-	0.3	1.6	7.6	0.3	7.9
6/2+6/3	1330	1330	-	-	-	0.0	0.9	-	0.9	2.5	11.3	0.9	12.3
J2: Tarbock Roundabout East	-	-	756	0	0	10.9	8.4	0.0	19.3	-	-	-	-
1/1	620	620	-	-	-	3.0	2.2	-	5.2	30.3	9.3	2.2	11.5
1/2	421	421	-	-	-	1.7	0.5	-	2.3	19.6	5.5	0.5	6.0

Full Input Data And Results

2/1	286	286	-	-	-	0.9	0.2	-	1.1	13.7	3.4	0.2	3.6
2/2+2/3	1290	1290	-	-	-	4.3	1.5	-	5.8	16.1	9.7	1.5	11.2
3/1+3/2	378	378	756	0	0	1.0	2.5	-	3.5	33.5	3.4	2.5	5.9
4/1	324	324	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1165	1165	-	-	-	0.0	0.8	-	0.8	2.4	6.0	0.8	6.8
5/2+5/3	1128	1128	-	-	-	0.0	0.6	-	0.6	1.9	10.3	0.6	10.9
J3: Tarbock Roundabout South	-	-	0	0	0	9.0	3.1	0.0	12.2	-	-	-	-
1/1	420	420	-	-	-	1.7	0.5	-	2.2	18.8	5.4	0.5	5.9
1/2	571	571	-	-	-	2.4	1.0	-	3.4	21.4	7.8	1.0	8.7
2/1	481	481	-	-	-	2.2	0.6	-	2.8	21.3	7.8	0.6	8.4
2/2+2/3	1008	1008	-	-	-	2.7	1.0	-	3.7	13.3	8.2	1.0	9.2
3/1	1182	1182	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	10.5	7.8	0.0	18.3	-	-	-	-
1/1	768	768	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	789	789	-	-	-	1.7	3.2	-	4.9	22.3	5.4	3.2	8.7
2/2+2/3	923	923	-	-	-	3.4	1.0	-	4.4	17.3	16.6	1.0	17.6
3/1	579	579	-	-	-	2.7	2.0	-	4.7	29.4	8.5	2.0	10.5
3/2	585	585	-	-	-	2.7	1.5	-	4.2	26.1	8.5	1.5	10.0
J5: A5080 Cronton Road	-	-	0	0	0	12.8	61.2	0.0	74.0	-	-	-	-
1/1	525	430	-	-	-	6.5	50.1	-	56.5	387.7	10.3	50.1	60.4
1/2	414	414	-	-	-	2.6	3.8	-	6.5	56.2	6.7	3.8	10.5
2/1	681	681	-	-	-	0.9	0.6	-	1.6	8.2	4.7	0.6	5.3
2/2+2/3	1283	1283	-	-	-	2.8	6.7	-	9.4	26.5	12.8	6.7	19.4
3/1	949	949	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	912	912	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	-4.1	Total Delay for Signalled Lanes (pcuHr):	18.92	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	9.4	Total Delay for Signalled Lanes (pcuHr):	14.37	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	28.4	Total Delay for Signalled Lanes (pcuHr):	12.15	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	3.3	Total Delay for Signalled Lanes (pcuHr):	18.29	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-35.6	Total Delay for Signalled Lanes (pcuHr):	73.99	Cycle Time (s):	60
	PRC Over All Lanes (%):	-35.6	Total Delay Over All Lanes(pcuHr):	197.26		

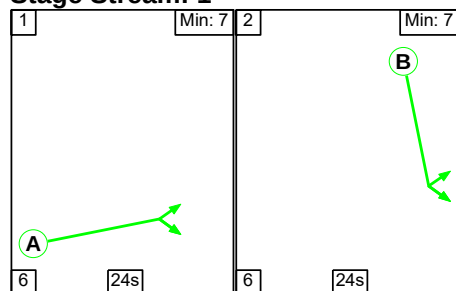
Full Input Data And Results

Scenario 8: '2028 + Development PM' (FG8: '2028 + Development PM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

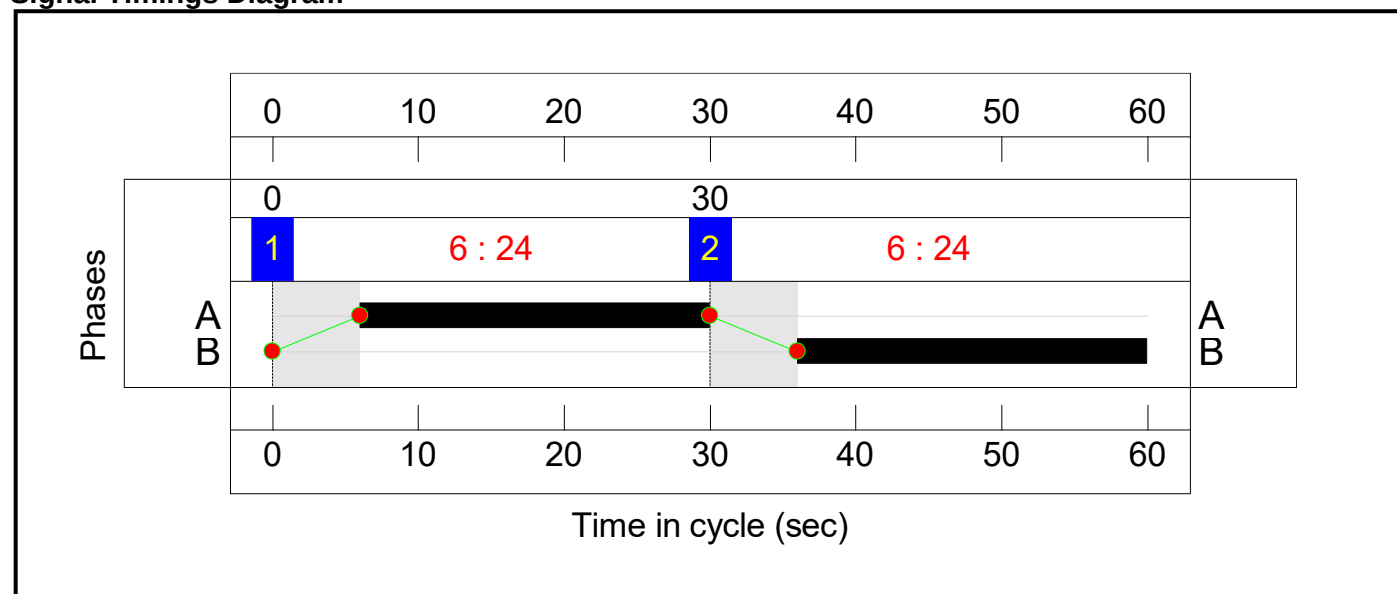


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

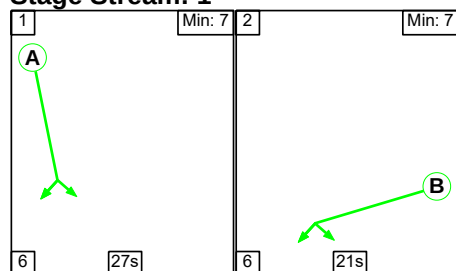
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1

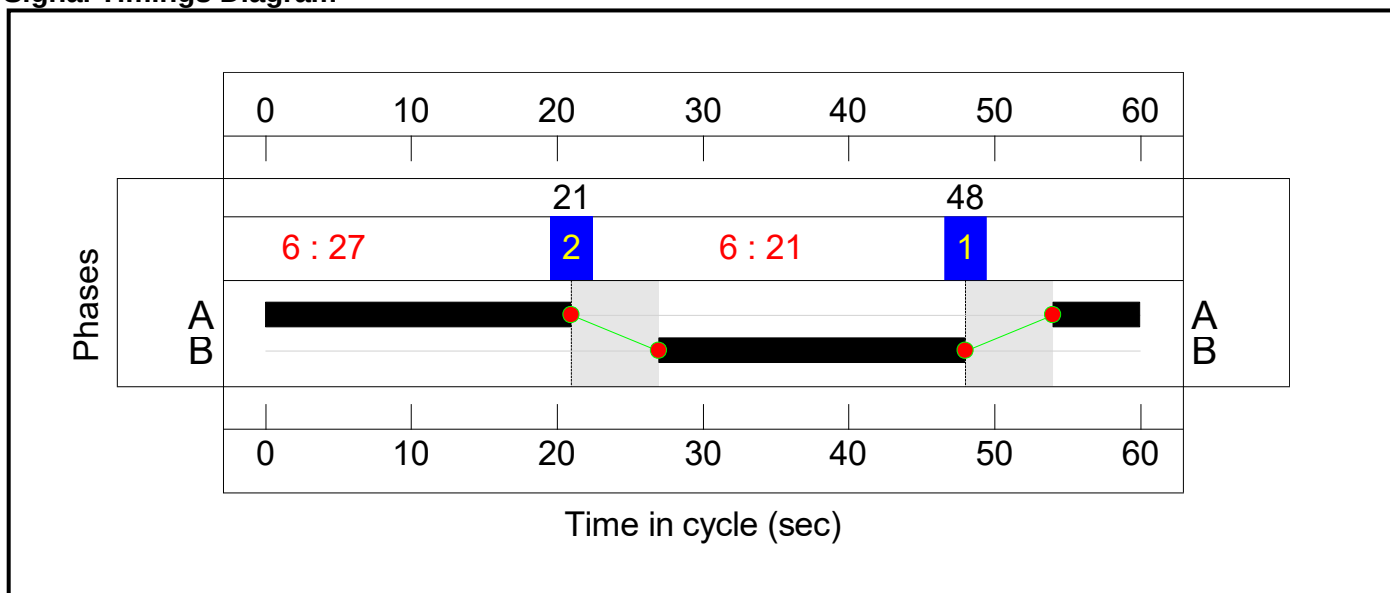


Stage Timings

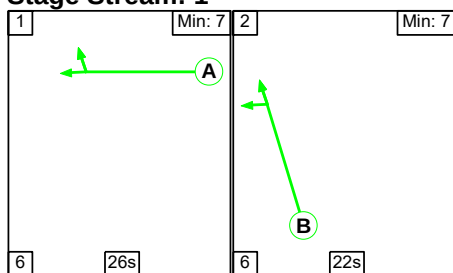
Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results
Signal Timings Diagram



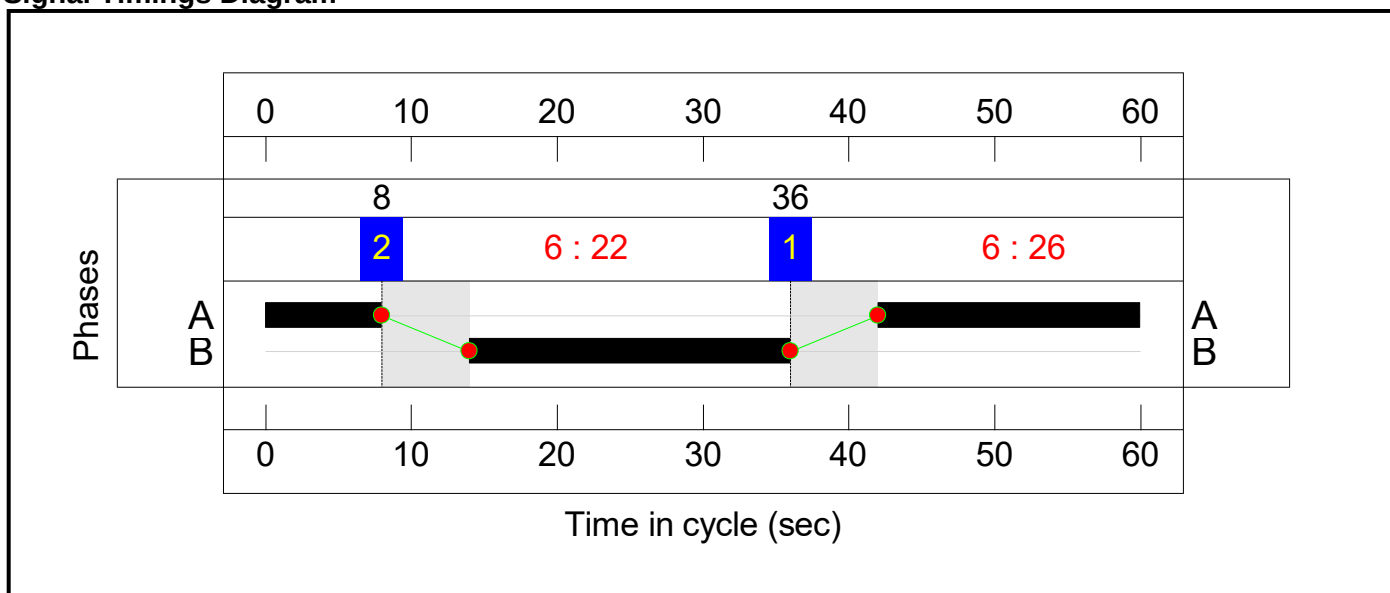
C3 - Tarbock Roundabout South
Stage Sequence Diagram
Stage Stream: 1



Stage Timings
Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	36	8

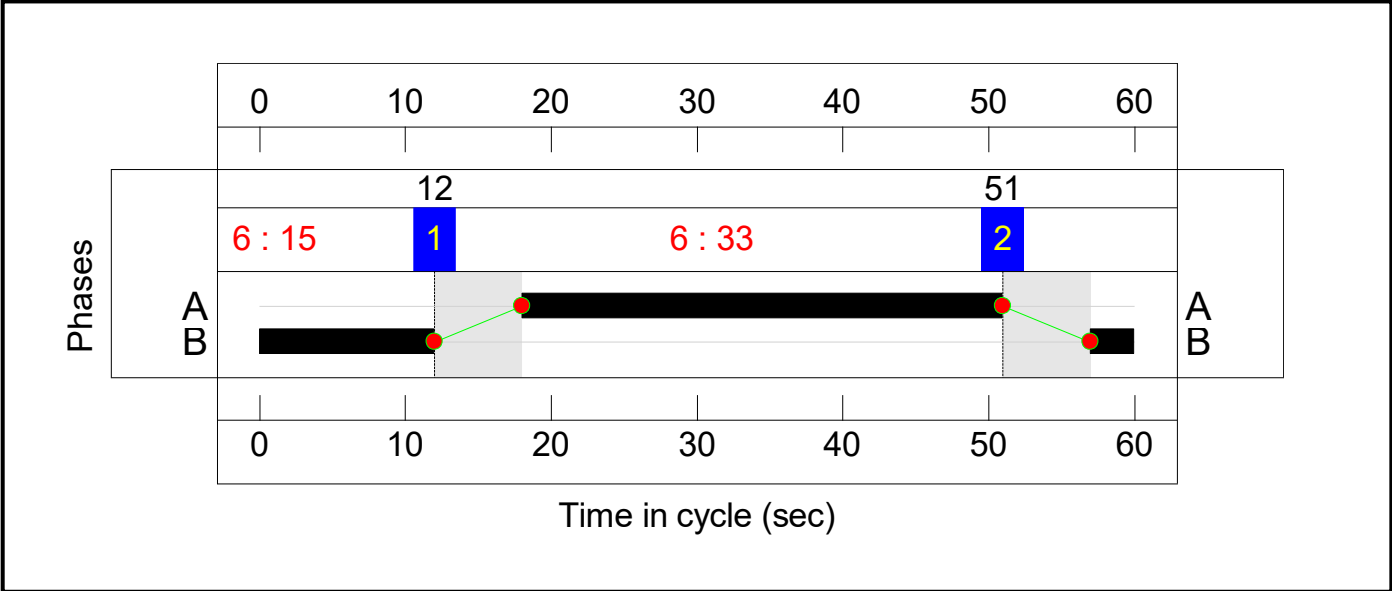
Signal Timings Diagram



Stage Stream: 1

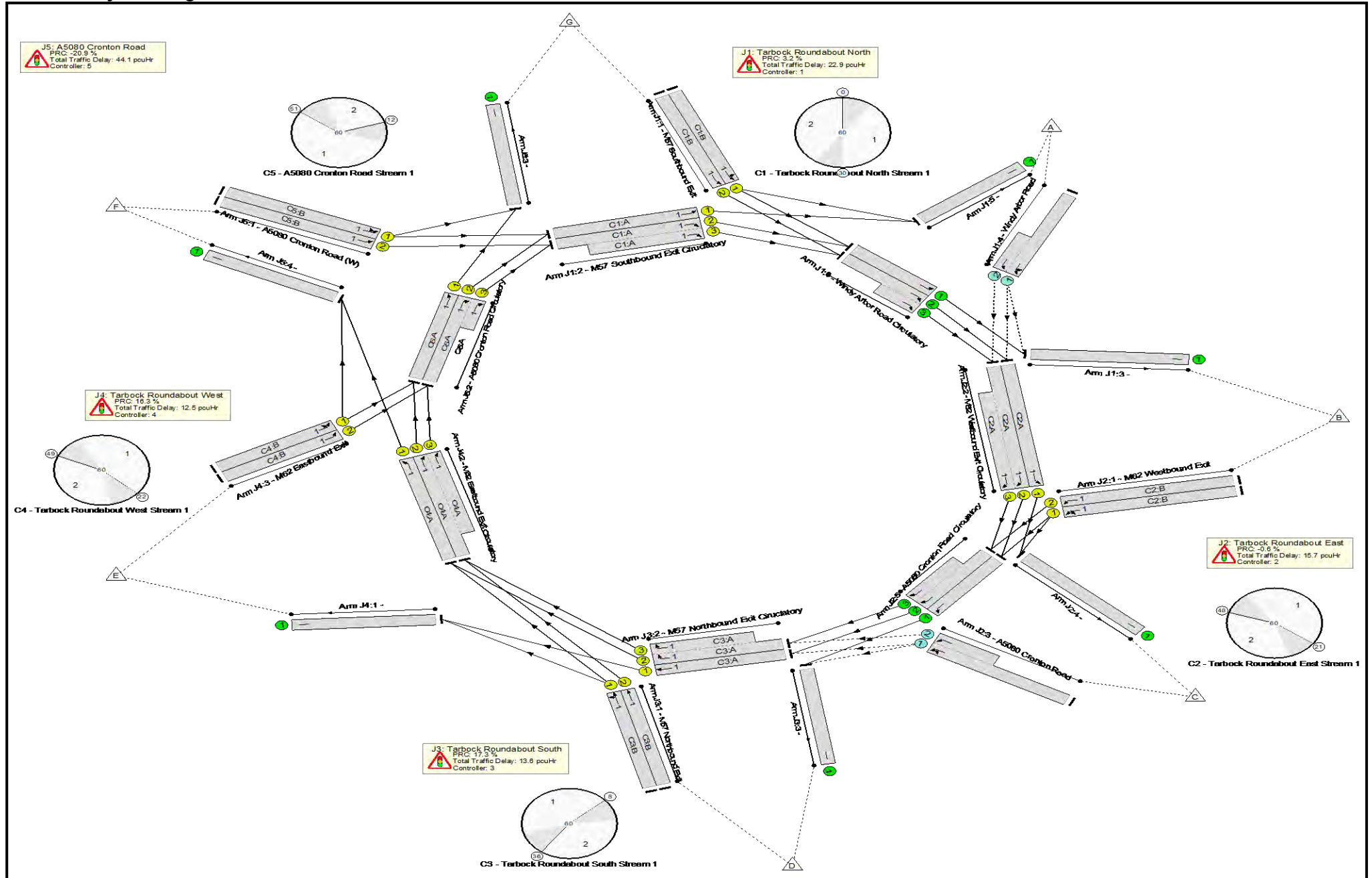
Stage	1	2
Duration	33	15
Change Point	12	51

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	-	-	N/A	-	-		-	-	-	-	-	-	108.8%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	87.2%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	112	1985	827	13.5%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	752	2125	885	84.9%
2/1	M57 Southbound Exit Cirulatory Ahead	U	1:1	N/A	C1:A		1	24	-	496	1940	808	58.7%
2/2+2/3	M57 Southbound Exit Cirulatory Right	U	1:1	N/A	C1:A		1	24	-	1245	2080:2080	701+804	82.7 : 82.7%
3/1		U	N/A	N/A	-		-	-	-	659	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	420	1965:2105	185+297	87.2 : 87.2%
5/1		U	N/A	N/A	-		-	-	-	605	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	583	1940	1940	30.1%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1417	1940:2080	394+1658	69.1 : 69.1%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	90.5%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	473	2055	753	62.8%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	376	2195	805	46.7%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	357	1940	905	39.4%
2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1404	2080:2080	473+971	90.5 : 88.4%

Full Input Data And Results

3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	362	1965:2105	445+254	48.8 : 57.0%
4/1		U	N/A	N/A	-		-	-	-	423	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	867	1940	1940	43.0%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1320	2080:2080	808+1272	57.8 : 60.3%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	76.8%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	515	2115	811	63.5%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	505	2255	864	58.4%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	716	1940	873	76.8%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	952	2080:2080	936+532	64.2 : 58.5%
3/1		U	N/A	N/A	-		-	-	-	881	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	77.4%
1/1		U	N/A	N/A	-		-	-	-	1131	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	707	1940	905	77.4%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	850	2080:2080	312+971	55.5 : 66.2%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	440	1965	721	61.1%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	491	2105	772	63.6%
J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	108.8%

Full Input Data And Results

1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	15	-	576	1985	529	108.8%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	15	-	340	2125	567	60.0%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	33	-	566	1955	1108	48.1%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	33	-	1134	2095:2095	254+1003	90.2 : 90.2%
3/1		U	N/A	N/A	-		-	-	-	875	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	788	Inf	Inf	0.0%
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	-	-	1564	0	0	49.3	59.5	0.0	108.8	-	-	-	-
J1: Tarbock Roundabout North	-	-	840	0	0	12.6	10.3	0.0	22.9	-	-	-	-
1/1	112	112	-	-	-	0.3	0.1	-	0.4	13.3	1.2	0.1	1.2
1/2	752	752	-	-	-	3.3	2.7	-	6.0	28.8	11.3	2.7	14.0
2/1	474	474	-	-	-	1.3	0.7	-	2.0	15.1	4.4	0.7	5.1
2/2+2/3	1245	1245	-	-	-	6.7	2.4	-	9.1	26.2	12.2	2.4	14.6
3/1	659	659	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	420	420	840	0	0	1.0	3.1	-	4.0	34.7	4.1	3.1	7.2
5/1	583	583	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	583	583	-	-	-	0.0	0.2	-	0.2	1.4	5.5	0.2	5.8
6/2+6/3	1417	1417	-	-	-	0.0	1.1	-	1.1	2.9	13.1	1.1	14.2
J2: Tarbock Roundabout East	-	-	724	0	0	8.6	7.1	0.0	15.7	-	-	-	-
1/1	473	473	-	-	-	2.1	0.8	-	2.9	22.0	6.4	0.8	7.3
1/2	376	376	-	-	-	1.5	0.4	-	2.0	18.7	4.7	0.4	5.1

Full Input Data And Results

2/1	357	357	-	-	-	1.1	0.3	-	1.4	14.6	4.2	0.3	4.5
2/2+2/3	1286	1286	-	-	-	3.2	3.9	-	7.1	19.7	7.1	3.9	11.0
3/1+3/2	362	362	724	0	0	0.7	0.5	-	1.3	12.7	1.7	0.5	2.2
4/1	423	423	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	835	835	-	-	-	0.0	0.4	-	0.4	1.6	3.2	0.4	3.6
5/2+5/3	1234	1234	-	-	-	0.0	0.7	-	0.7	2.1	9.7	0.7	10.4
J3: Tarbock Roundabout South	-	-	0	0	0	9.6	4.0	0.0	13.6	-	-	-	-
1/1	515	515	-	-	-	2.2	0.9	-	3.0	21.1	6.9	0.9	7.7
1/2	505	505	-	-	-	2.1	0.7	-	2.8	19.7	6.6	0.7	7.3
2/1	670	670	-	-	-	3.1	1.6	-	4.7	25.4	10.6	1.6	12.2
2/2+2/3	912	912	-	-	-	2.3	0.8	-	3.1	12.2	7.6	0.8	8.5
3/1	849	849	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	8.3	4.2	0.0	12.5	-	-	-	-
1/1	1085	1085	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	701	701	-	-	-	1.2	1.7	-	2.9	15.0	3.5	1.7	5.2
2/2+2/3	816	816	-	-	-	3.0	0.9	-	3.9	17.1	16.5	0.9	17.4
3/1	440	440	-	-	-	1.9	0.8	-	2.7	21.9	5.9	0.8	6.6
3/2	491	491	-	-	-	2.1	0.9	-	3.0	22.1	6.7	0.9	7.6
J5: A5080 Cronton Road	-	-	0	0	0	10.2	33.9	0.0	44.1	-	-	-	-
1/1	576	529	-	-	-	5.0	28.4	-	33.4	208.7	10.4	28.4	38.8
1/2	340	340	-	-	-	1.8	0.7	-	2.6	27.1	4.9	0.7	5.7
2/1	532	532	-	-	-	0.6	0.5	-	1.1	7.3	3.0	0.5	3.5
2/2+2/3	1134	1134	-	-	-	2.7	4.3	-	7.0	22.4	11.4	4.3	15.7
3/1	816	816	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	782	782	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	6.0	Total Delay for Signalled Lanes (pcuHr):	17.48	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	-0.6	Total Delay for Signalled Lanes (pcuHr):	13.34	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	17.3	Total Delay for Signalled Lanes (pcuHr):	13.62	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	16.3	Total Delay for Signalled Lanes (pcuHr):	12.48	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-20.9	Total Delay for Signalled Lanes (pcuHr):	44.08	Cycle Time (s):	60
	PRC Over All Lanes (%):	-20.9	Total Delay Over All Lanes(pcuHr):	108.82		

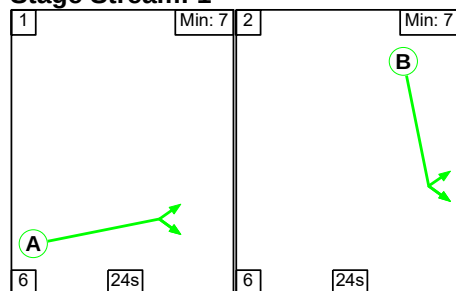
Full Input Data And Results

Scenario 9: '2033 + Development AM' (FG9: '2033 + Development AM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

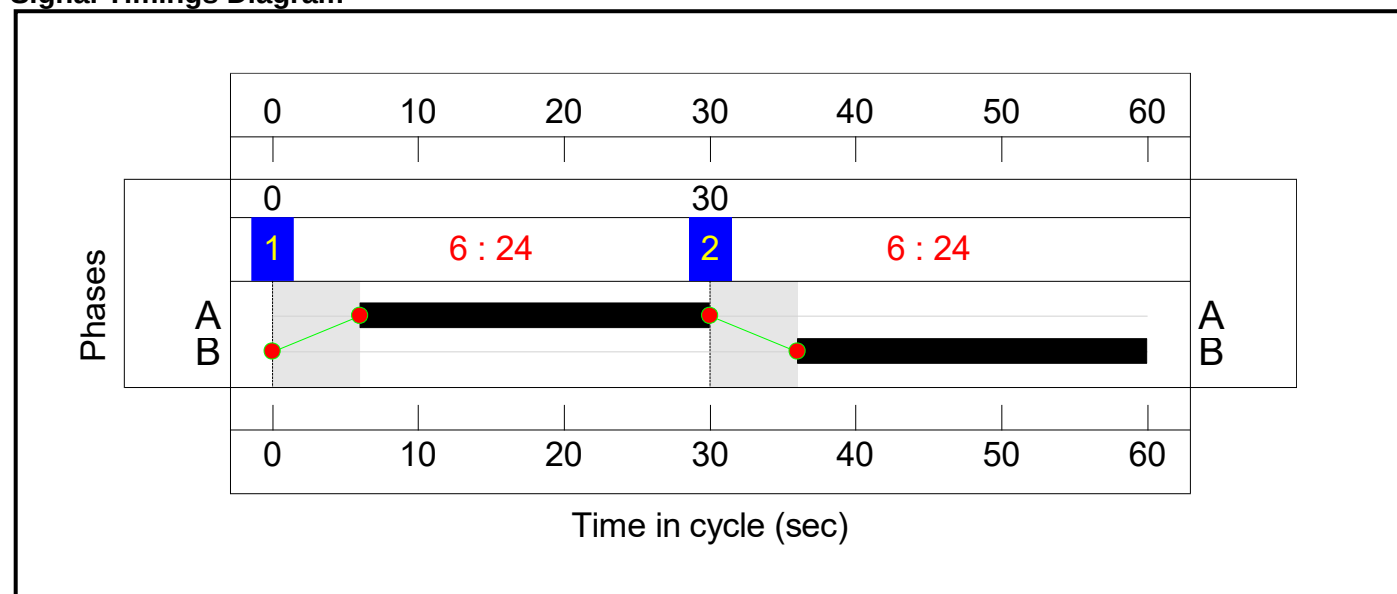


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

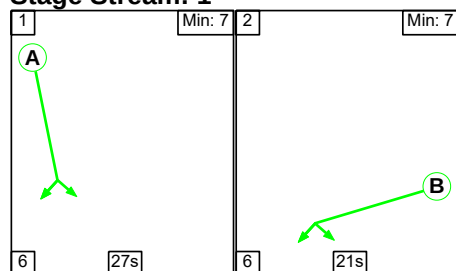
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1

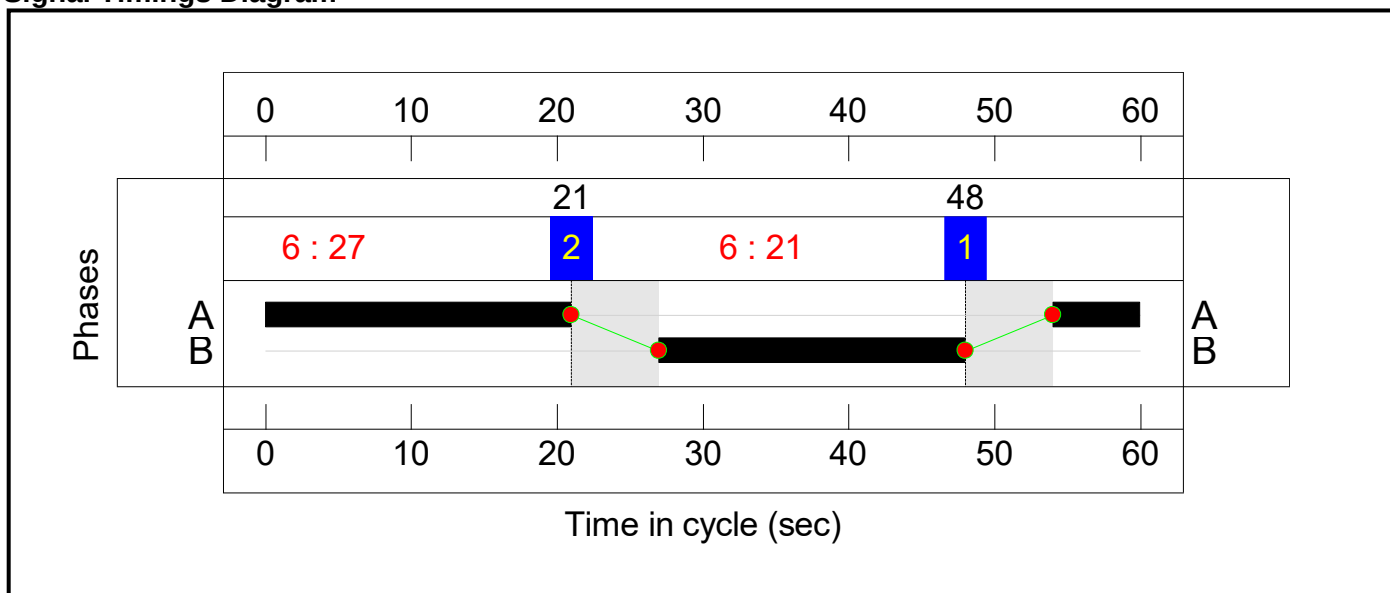


Stage Timings

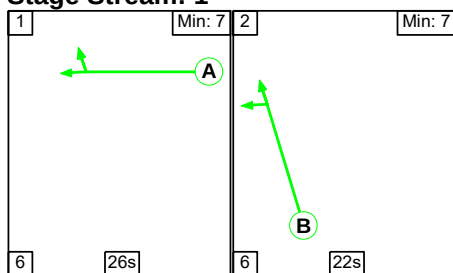
Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results
Signal Timings Diagram



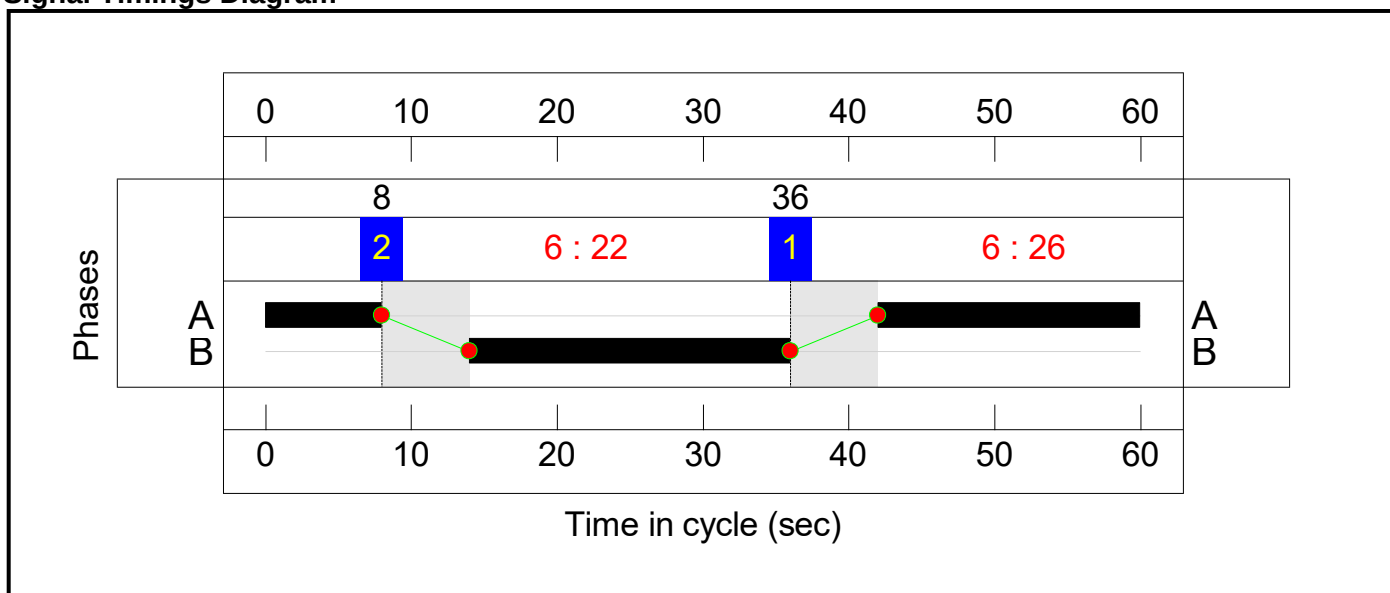
C3 - Tarbock Roundabout South
Stage Sequence Diagram
Stage Stream: 1



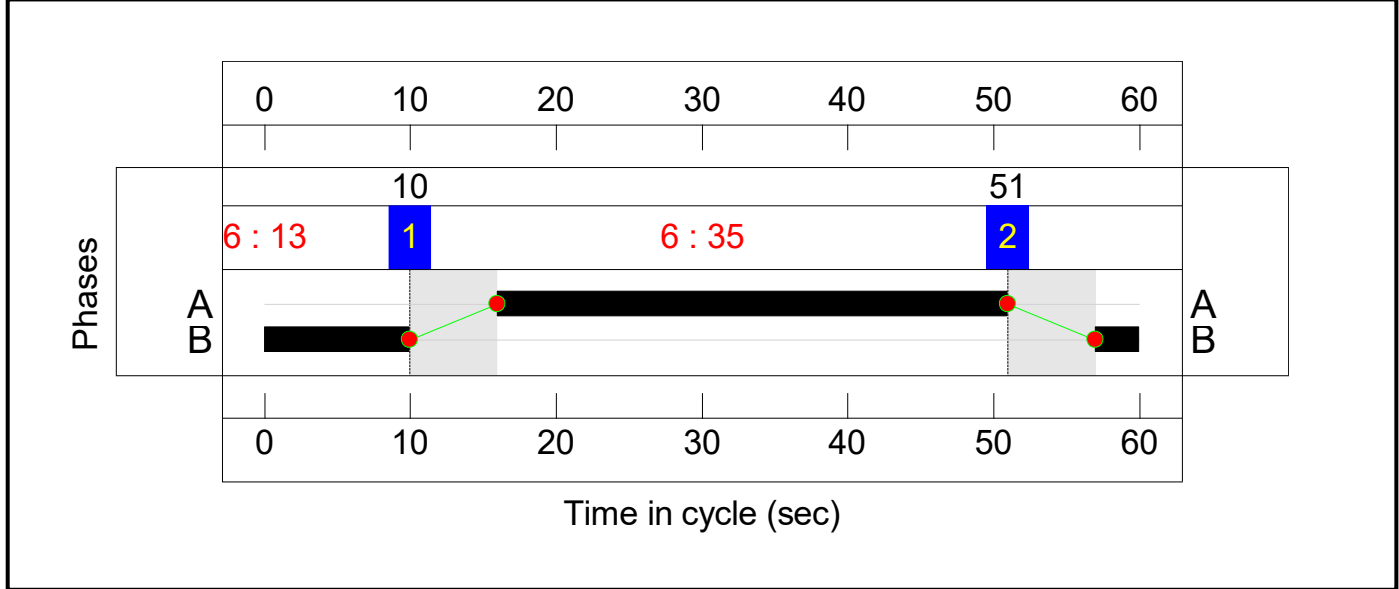
Stage Timings
Stage Stream: 1

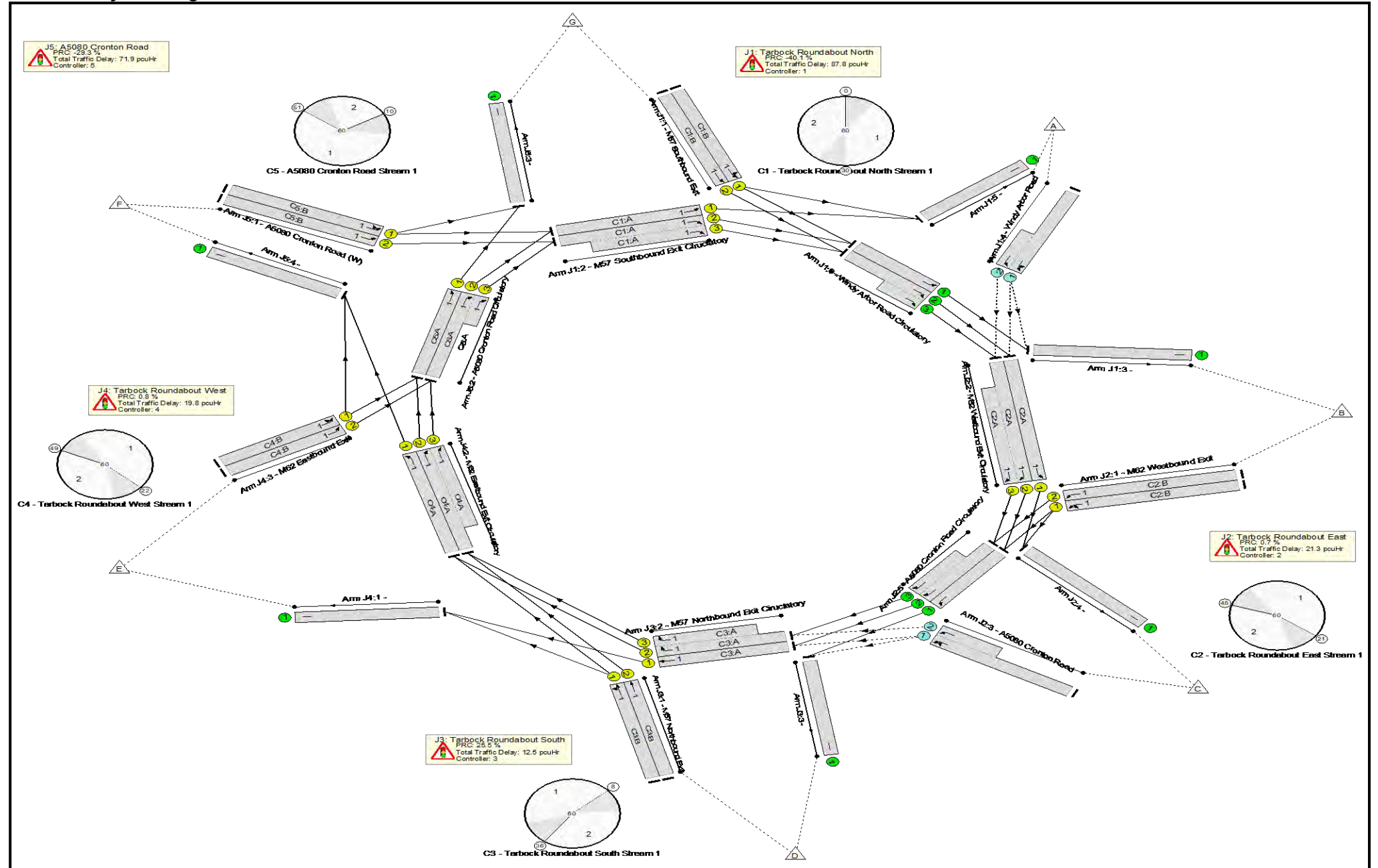
Stage	1	2
Duration	26	22
Change Point	36	8

Signal Timings Diagram



Full Input Data And Results
Signal Timings 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	-	-	N/A	-	-		-	-	-	-	-	-	126.1%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	126.1%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	75	1985	827	9.1%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	592	2125	885	66.9%
2/1	M57 Southbound Exit Cirulatory Ahead	U	1:1	N/A	C1:A		1	24	-	481	1940	808	56.0%
2/2+2/3	M57 Southbound Exit Cirulatory Right	U	1:1	N/A	C1:A		1	24	-	1461	2080:2080	721+803	95.9 : 95.9%
3/1		U	N/A	N/A	-		-	-	-	805	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	556	1965:2105	142+299	126.1 : 126.1%
5/1		U	N/A	N/A	-		-	-	-	552	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	695	1940	1940	35.8%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1362	1940:2080	338+1718	66.3 : 66.3%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	89.4%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	636	2055	753	84.4%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	432	2195	805	53.7%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	293	1940	905	32.4%
2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1515	2080:2080	745+971	79.4 : 73.4%

Full Input Data And Results

3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	388	1965:2105	190+244	89.4 : 89.4%
4/1		U	N/A	N/A	-		-	-	-	332	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	1255	1940	1940	61.3%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1289	2080:2080	636+1444	52.7 : 56.0%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	71.7%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	432	2115	811	53.3%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	585	2255	864	67.7%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	546	1940	873	55.8%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	1113	2080:2080	936+576	71.7 : 61.8%
3/1		U	N/A	N/A	-		-	-	-	1273	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	89.3%
1/1		U	N/A	N/A	-		-	-	-	841	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	826	1940	905	89.3%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	1009	2080:2080	397+971	56.6 : 73.8%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	594	1965	721	82.4%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	599	2105	772	77.6%
J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	116.4%

Full Input Data And Results

1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	13	-	539	1985	463	116.4%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	13	-	424	2125	496	85.5%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	35	-	760	1955	1173	59.0%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	35	-	1315	2095:2095	281+1050	98.8 : 98.8%
3/1		U	N/A	N/A	-		-	-	-	1096	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	953	Inf	Inf	0.0%
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	-	-	1732	0	0	60.0	153.2	0.0	213.3	-	-	-	-
J1: Tarbock Roundabout North	-	-	956	0	0	16.0	71.8	0.0	87.8	-	-	-	-
1/1	75	75	-	-	-	0.2	0.0	-	0.3	13.1	0.7	0.0	0.8
1/2	592	592	-	-	-	2.3	1.0	-	3.3	20.2	7.9	1.0	8.9
2/1	452	452	-	-	-	1.4	0.6	-	2.0	15.9	4.6	0.6	5.2
2/2+2/3	1461	1461	-	-	-	7.6	9.1	-	16.7	41.0	14.0	9.1	23.0
3/1	805	805	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	556	478	956	0	0	4.4	59.8	-	64.2	415.8	17.0	59.8	76.8
5/1	523	523	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	695	695	-	-	-	0.0	0.3	-	0.3	1.6	7.7	0.3	8.0
6/2+6/3	1362	1362	-	-	-	0.0	1.0	-	1.0	2.6	12.5	1.0	13.5
J2: Tarbock Roundabout East	-	-	776	0	0	11.2	10.0	0.0	21.3	-	-	-	-
1/1	636	636	-	-	-	3.1	2.6	-	5.7	32.1	9.7	2.6	12.3
1/2	432	432	-	-	-	1.8	0.6	-	2.4	19.8	5.6	0.6	6.2

Full Input Data And Results

2/1	293	293	-	-	-	0.9	0.2	-	1.1	13.5	3.5	0.2	3.7
2/2+2/3	1304	1304	-	-	-	4.3	1.6	-	5.9	16.3	9.9	1.6	11.4
3/1+3/2	388	388	776	0	0	1.1	3.6	-	4.8	44.2	3.5	3.6	7.1
4/1	332	332	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	1189	1189	-	-	-	0.0	0.8	-	0.8	2.5	6.1	0.8	6.9
5/2+5/3	1144	1144	-	-	-	0.0	0.6	-	0.6	1.9	10.3	0.6	10.9
J3: Tarbock Roundabout South	-	-	0	0	0	9.2	3.3	0.0	12.5	-	-	-	-
1/1	432	432	-	-	-	1.7	0.6	-	2.3	19.1	5.5	0.6	6.1
1/2	585	585	-	-	-	2.5	1.0	-	3.5	21.8	8.0	1.0	9.0
2/1	487	487	-	-	-	2.3	0.6	-	2.9	21.3	7.9	0.6	8.6
2/2+2/3	1027	1027	-	-	-	2.7	1.1	-	3.8	13.2	8.7	1.1	9.7
3/1	1207	1207	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	10.9	8.9	0.0	19.8	-	-	-	-
1/1	782	782	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	808	808	-	-	-	1.7	3.9	-	5.6	24.9	6.0	3.9	9.8
2/2+2/3	941	941	-	-	-	3.5	1.1	-	4.6	17.6	16.6	1.1	17.7
3/1	594	594	-	-	-	2.8	2.3	-	5.1	31.0	8.9	2.3	11.2
3/2	599	599	-	-	-	2.8	1.7	-	4.5	27.0	8.8	1.7	10.5
J5: A5080 Cronton Road	-	-	0	0	0	12.7	59.2	0.0	71.9	-	-	-	-
1/1	539	463	-	-	-	5.9	41.2	-	47.0	314.2	10.2	41.2	51.4
1/2	424	424	-	-	-	2.6	2.7	-	5.3	45.3	6.7	2.7	9.5
2/1	692	692	-	-	-	1.1	0.7	-	1.8	9.3	5.1	0.7	5.8
2/2+2/3	1315	1315	-	-	-	3.2	14.6	-	17.8	48.7	14.6	14.6	29.2
3/1	981	981	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	935	935	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	-6.6	Total Delay for Signalled Lanes (pcuHr):	22.25	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	6.6	Total Delay for Signalled Lanes (pcuHr):	15.06	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	25.5	Total Delay for Signalled Lanes (pcuHr):	12.48	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	0.8	Total Delay for Signalled Lanes (pcuHr):	19.82	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-29.3	Total Delay for Signalled Lanes (pcuHr):	71.94	Cycle Time (s):	60
	PRC Over All Lanes (%):	-40.1	Total Delay Over All Lanes(pcuHr):	213.27		

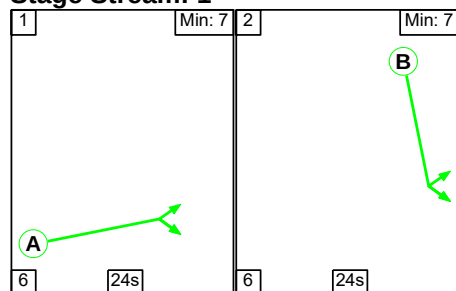
Full Input Data And Results

Scenario 10: '2033 + Development PM' (FG10: '2033 + Development PM', Plan 1: 'Network Control Plan 1')

C1 - Tarbock Roundabout North

Stage Sequence Diagram

Stage Stream: 1

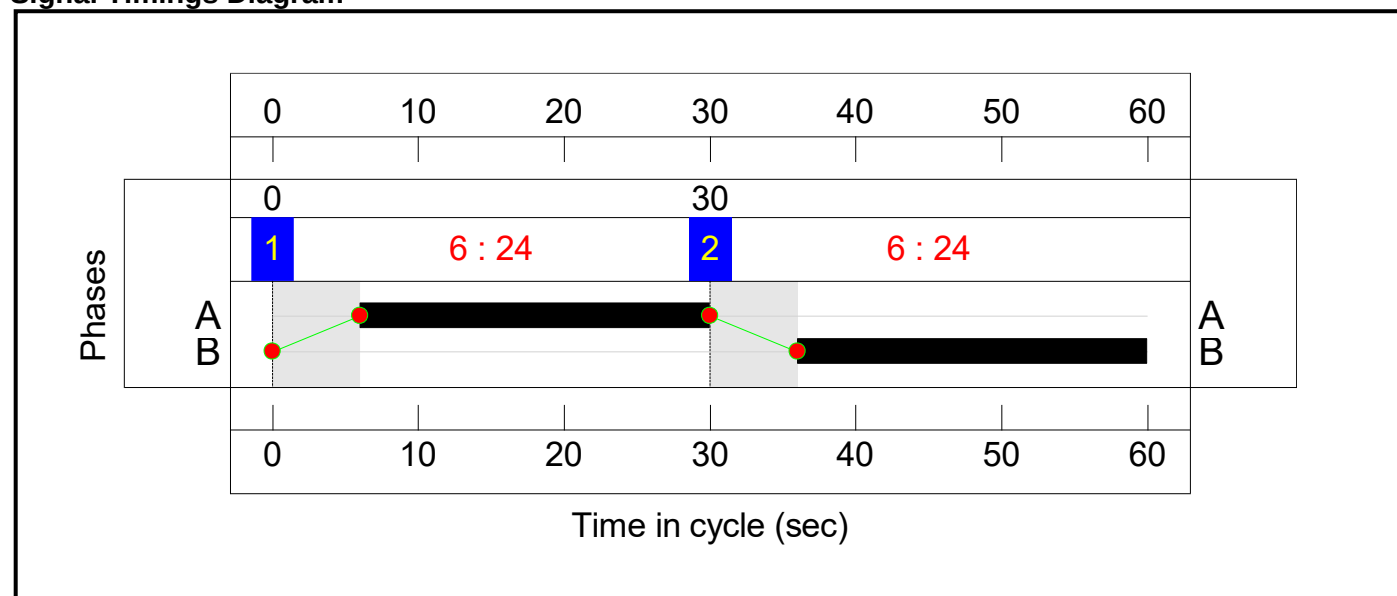


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	24	24
Change Point	0	30

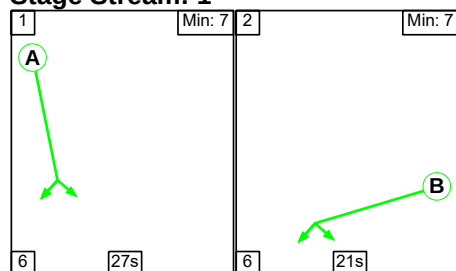
Signal Timings Diagram



C2 - Tarbock Roundabout East

Stage Sequence Diagram

Stage Stream: 1

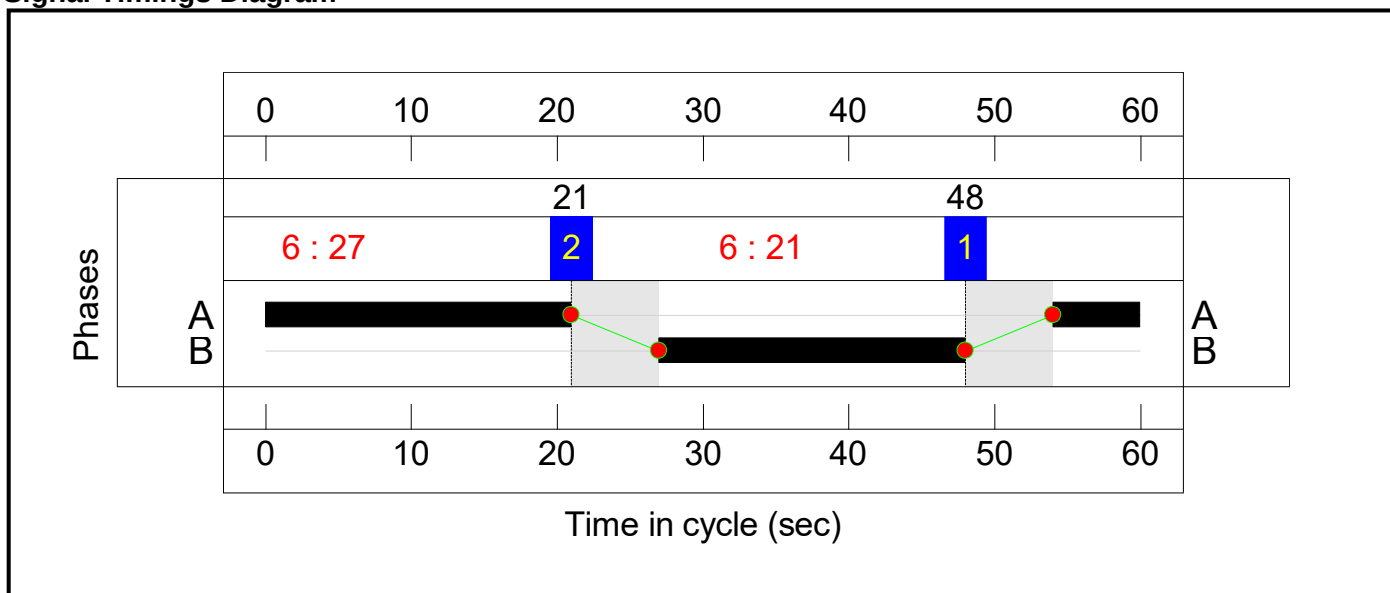


Stage Timings

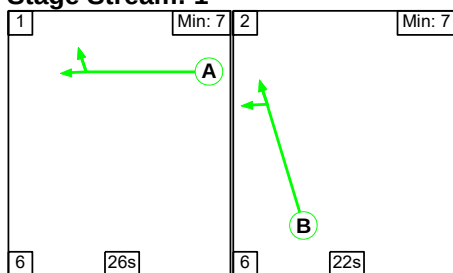
Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	48	21

Full Input Data And Results
Signal Timings Diagram



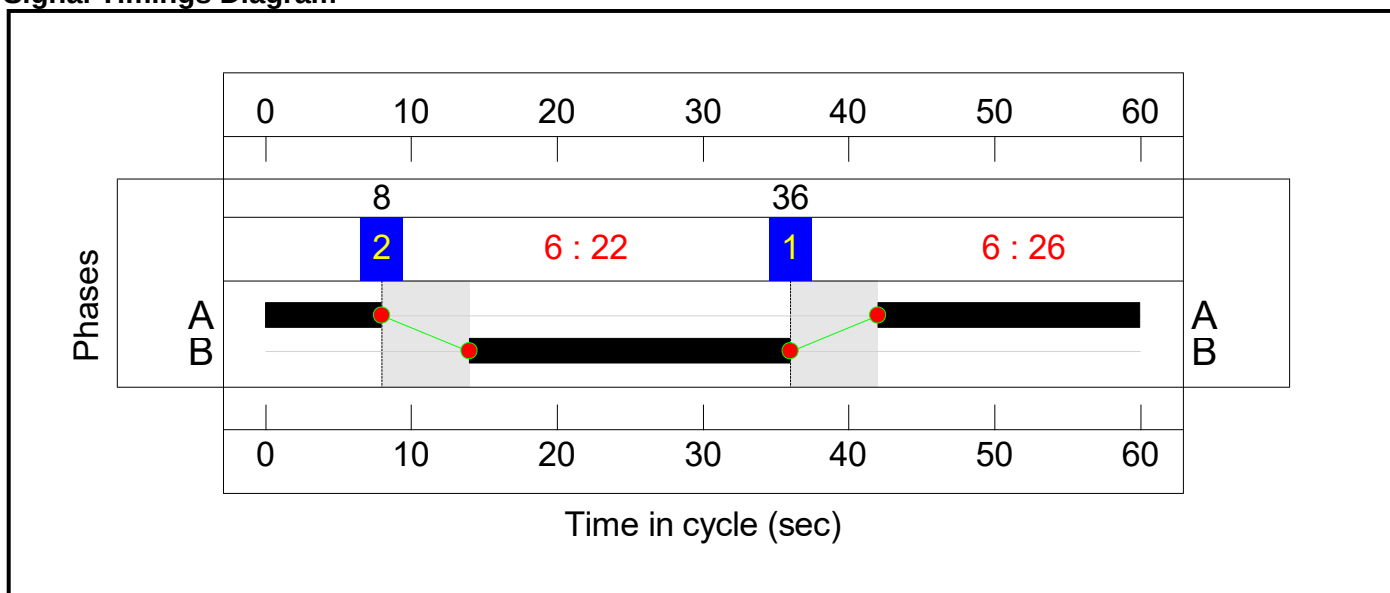
C3 - Tarbock Roundabout South
Stage Sequence Diagram
Stage Stream: 1



Stage Timings
Stage Stream: 1

Stage	1	2
Duration	26	22
Change Point	36	8

Signal Timings Diagram

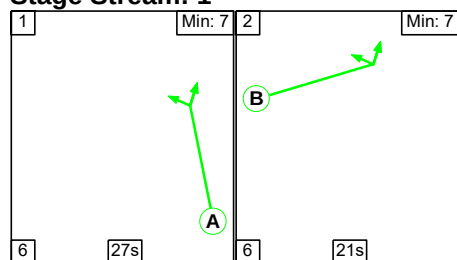


Full Input Data And Results

C4 - Tarbock Roundabout West

Stage Sequence Diagram

Stage Stream: 1

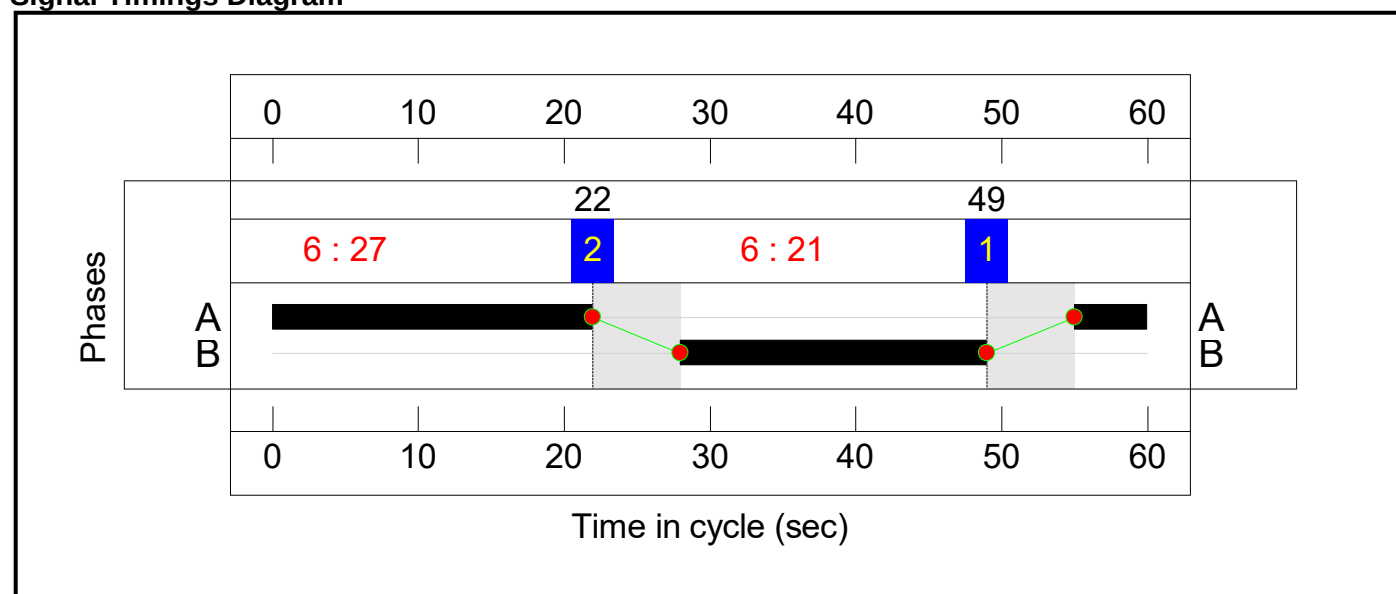


Stage Timings

Stage Stream: 1

Stage	1	2
Duration	27	21
Change Point	49	22

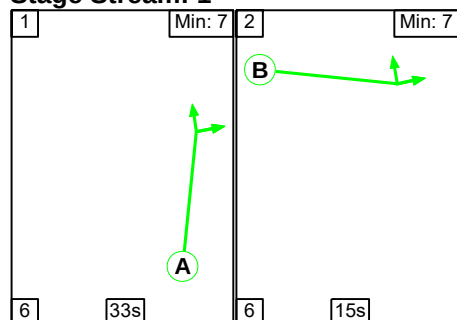
Signal Timings Diagram



C5 - A5080 Cronton Road

Stage Sequence Diagram

Stage Stream: 1

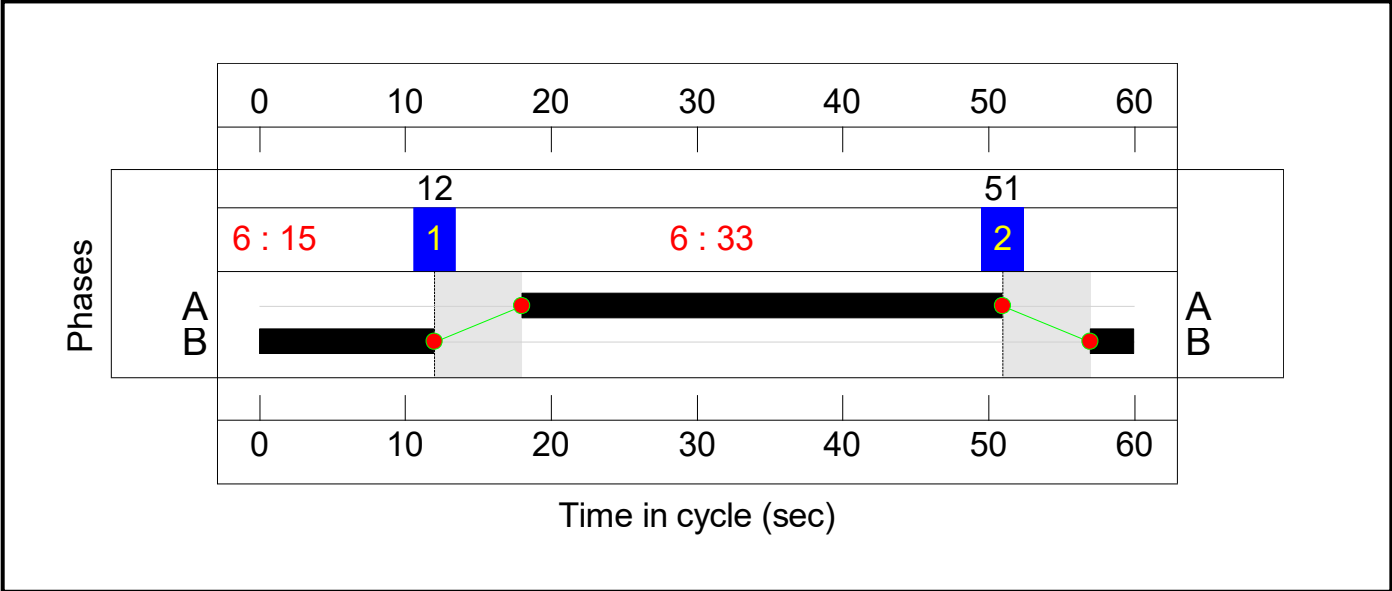


Stage Timings

Stage Stream: 1

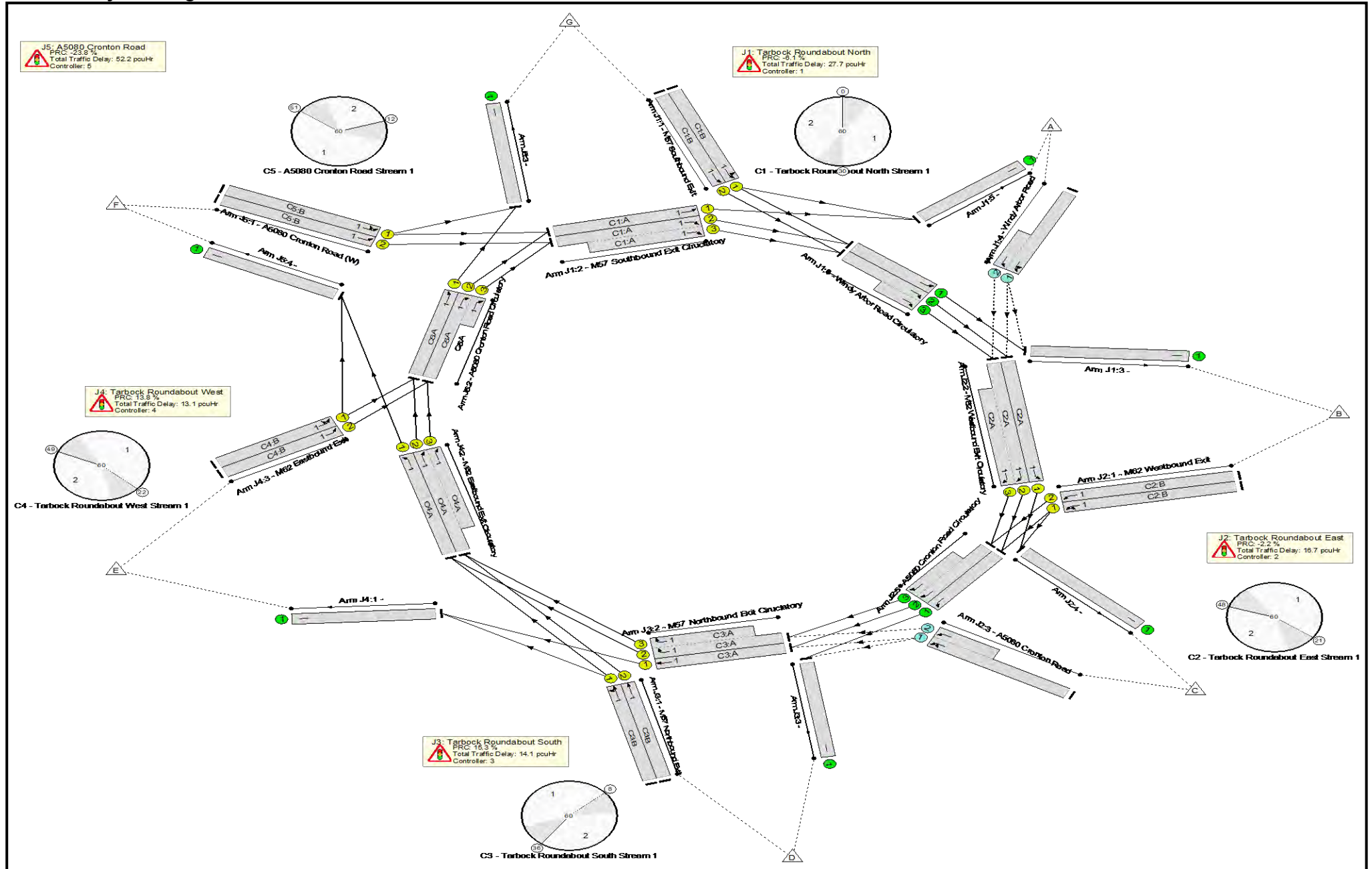
Stage	1	2
Duration	33	15
Change Point	12	51

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	-	-	N/A	-	-		-	-	-	-	-	-	111.5%
J1: Tarbock Roundabout North	-	-	N/A	-	-		-	-	-	-	-	-	95.4%
1/1	M57 Southbound Exit Left Ahead	U	1:1	N/A	C1:B		1	24	-	114	1985	827	13.8%
1/2	M57 Southbound Exit Ahead	U	1:1	N/A	C1:B		1	24	-	769	2125	885	86.9%
2/1	M57 Southbound Exit Cirulatory Ahead	U	1:1	N/A	C1:A		1	24	-	509	1940	808	59.5%
2/2+2/3	M57 Southbound Exit Cirulatory Right	U	1:1	N/A	C1:A		1	24	-	1276	2080:2080	700+804	84.8 : 84.8%
3/1		U	N/A	N/A	-		-	-	-	674	Inf	Inf	0.0%
4/1+4/2	Windy Arbor Road Ahead Left	O	N/A	N/A	-		-	-	-	430	1965:2105	172+279	95.4 : 95.4%
5/1		U	N/A	N/A	-		-	-	-	620	Inf	Inf	0.0%
6/1	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	597	1940	1940	30.8%
6/2+6/3	Windy Arbor Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1451	1940:2080	394+1657	70.7 : 70.7%
J2: Tarbock Roundabout East	-	-	N/A	-	-		-	-	-	-	-	-	91.9%
1/1	M62 Westbound Exit Left Ahead	U	2:1	N/A	C2:B		1	21	-	484	2055	753	64.2%
1/2	M62 Westbound Exit Ahead	U	2:1	N/A	C2:B		1	21	-	385	2195	805	47.8%
2/1	M62 Westbound Exit Circulatory Ahead	U	2:1	N/A	C2:A		1	27	-	366	1940	905	40.4%
2/2+2/3	M62 Westbound Exit Circulatory Right	U	2:1	N/A	C2:A		1	27	-	1438	2080:2080	473+971	91.9 : 89.5%

Full Input Data And Results

3/1+3/2	A5080 Cronton Road Ahead Left	O	N/A	N/A	-		-	-	-	372	1965:2105	429+241	51.9 : 61.8%
4/1		U	N/A	N/A	-		-	-	-	433	Inf	Inf	0.0%
5/1	A5080 Cronton Road Circulatory Left	U	N/A	N/A	-		-	-	-	888	1940	1940	43.9%
5/2+5/3	A5080 Cronton Road Circulatory Ahead	U	N/A	N/A	-		-	-	-	1352	2080:2080	809+1271	58.5 : 61.4%
J3: Tarbock Roundabout South	-	-	N/A	-	-		-	-	-	-	-	-	78.1%
1/1	M57 Northbound Exit Left Ahead	U	3:1	N/A	C3:B		1	22	-	527	2115	811	65.0%
1/2	M57 Northbound Exit Ahead	U	3:1	N/A	C3:B		1	22	-	517	2255	864	59.8%
2/1	M57 Northbound Exit Cirulatory Ahead	U	3:1	N/A	C3:A		1	26	-	734	1940	873	78.1%
2/2+2/3	M57 Northbound Exit Cirulatory Right	U	3:1	N/A	C3:A		1	26	-	975	2080:2080	936+534	65.6 : 59.2%
3/1		U	N/A	N/A	-		-	-	-	903	Inf	Inf	0.0%
J4: Tarbock Roundabout West	-	-	N/A	-	-		-	-	-	-	-	-	79.1%
1/1		U	N/A	N/A	-		-	-	-	1159	Inf	Inf	0.0%
2/1	M62 Eastbound Exit Circulatory Left	U	4:1	N/A	C4:A		1	27	-	723	1940	905	79.1%
2/2+2/3	M62 Eastbound Exit Circulatory Ahead	U	4:1	N/A	C4:A		1	27	-	871	2080:2080	312+971	55.6 : 67.9%
3/1	M62 Eastbound Exit Left Left2	U	4:1	N/A	C4:B		1	21	-	451	1965	721	62.6%
3/2	M62 Eastbound Exit Left	U	4:1	N/A	C4:B		1	21	-	503	2105	772	65.2%
J5: A5080 Cronton Road	-	-	N/A	-	-		-	-	-	-	-	-	111.5%

Full Input Data And Results

1/1	A5080 Cronton Road (W) Ahead Left	U	5:1	N/A	C5:B		1	15	-	590	1985	529	111.5%
1/2	A5080 Cronton Road (W) Ahead	U	5:1	N/A	C5:B		1	15	-	349	2125	567	61.6%
2/1	A5080 Cronton Road Circulatory Ahead	U	5:1	N/A	C5:A		1	33	-	580	1955	1108	48.9%
2/2+2/3	A5080 Cronton Road Circulatory Right	U	5:1	N/A	C5:A		1	33	-	1162	2095:2095	254+1003	92.4 : 92.4%
3/1		U	N/A	N/A	-		-	-	-	896	Inf	Inf	0.0%
4/1		U	N/A	N/A	-		-	-	-	806	Inf	Inf	0.0%
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	-	-	1604	0	0	51.3	72.5	0.0	123.8	-	-	-	-
J1: Tarbock Roundabout North	-	-	860	0	0	13.2	14.5	0.0	27.7	-	-	-	-
1/1	114	114	-	-	-	0.3	0.1	-	0.4	13.4	1.2	0.1	1.3
1/2	769	769	-	-	-	3.4	3.1	-	6.6	30.7	11.5	3.1	14.7
2/1	481	481	-	-	-	1.3	0.7	-	2.0	15.3	4.5	0.7	5.2
2/2+2/3	1276	1276	-	-	-	6.9	2.7	-	9.6	27.2	12.2	2.7	14.9
3/1	674	674	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1+4/2	430	430	860	0	0	1.1	6.4	-	7.6	63.4	4.3	6.4	10.7
5/1	592	592	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
6/1	597	597	-	-	-	0.0	0.2	-	0.2	1.5	6.0	0.2	6.2
6/2+6/3	1451	1451	-	-	-	0.0	1.2	-	1.2	3.1	13.6	1.2	14.8
J2: Tarbock Roundabout East	-	-	744	0	0	8.8	7.8	0.0	16.7	-	-	-	-
1/1	484	484	-	-	-	2.1	0.9	-	3.0	22.4	6.6	0.9	7.5
1/2	385	385	-	-	-	1.6	0.5	-	2.0	18.9	4.9	0.5	5.4

Full Input Data And Results

2/1	366	366	-	-	-	1.1	0.3	-	1.5	14.6	4.4	0.3	4.7
2/2+2/3	1304	1304	-	-	-	3.2	4.4	-	7.6	20.9	7.2	4.4	11.6
3/1+3/2	372	372	744	0	0	0.8	0.6	-	1.4	13.8	1.7	0.6	2.4
4/1	433	433	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
5/1	852	852	-	-	-	0.0	0.4	-	0.4	1.7	3.3	0.4	3.7
5/2+5/3	1254	1254	-	-	-	0.0	0.8	-	0.8	2.2	9.7	0.8	10.5
J3: Tarbock Roundabout South	-	-	0	0	0	9.9	4.3	0.0	14.1	-	-	-	-
1/1	527	527	-	-	-	2.2	0.9	-	3.1	21.5	7.2	0.9	8.1
1/2	517	517	-	-	-	2.1	0.7	-	2.9	20.0	6.9	0.7	7.6
2/1	682	682	-	-	-	3.2	1.7	-	4.9	26.1	10.9	1.7	12.6
2/2+2/3	930	930	-	-	-	2.3	0.9	-	3.2	12.3	7.8	0.9	8.7
3/1	867	867	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
J4: Tarbock Roundabout West	-	-	0	0	0	8.5	4.5	0.0	13.1	-	-	-	-
1/1	1107	1107	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
2/1	716	716	-	-	-	1.3	1.9	-	3.1	15.7	3.8	1.9	5.6
2/2+2/3	833	833	-	-	-	3.1	0.9	-	4.0	17.3	16.6	0.9	17.5
3/1	451	451	-	-	-	2.0	0.8	-	2.8	22.3	6.1	0.8	7.0
3/2	503	503	-	-	-	2.2	0.9	-	3.1	22.5	6.8	0.9	7.8
J5: A5080 Cronton Road	-	-	0	0	0	10.9	41.3	0.0	52.2	-	-	-	-
1/1	590	529	-	-	-	5.5	34.6	-	40.1	244.8	10.8	34.6	45.4
1/2	349	349	-	-	-	1.9	0.8	-	2.7	27.5	5.0	0.8	5.8
2/1	542	542	-	-	-	0.6	0.5	-	1.1	7.4	3.0	0.5	3.5
2/2+2/3	1162	1162	-	-	-	2.8	5.5	-	8.3	25.7	11.9	5.5	17.4
3/1	825	825	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0
4/1	799	799	-	-	-	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0

Full Input Data And Results

C1 - Tarbock Roundabout North	Stream: 1 PRC for Signalled Lanes (%):	3.6	Total Delay for Signalled Lanes (pcuHr):	18.65	Cycle Time (s):	60
C2 - Tarbock Roundabout East	Stream: 1 PRC for Signalled Lanes (%):	-2.2	Total Delay for Signalled Lanes (pcuHr):	14.09	Cycle Time (s):	60
C3 - Tarbock Roundabout South	Stream: 1 PRC for Signalled Lanes (%):	15.3	Total Delay for Signalled Lanes (pcuHr):	14.15	Cycle Time (s):	60
C4 - Tarbock Roundabout West	Stream: 1 PRC for Signalled Lanes (%):	13.8	Total Delay for Signalled Lanes (pcuHr):	13.07	Cycle Time (s):	60
C5 - A5080 Cronton Road	Stream: 1 PRC for Signalled Lanes (%):	-23.8	Total Delay for Signalled Lanes (pcuHr):	52.21	Cycle Time (s):	60
	PRC Over All Lanes (%):	-23.8	Total Delay Over All Lanes(pcuHr):	123.79		

Appendix D

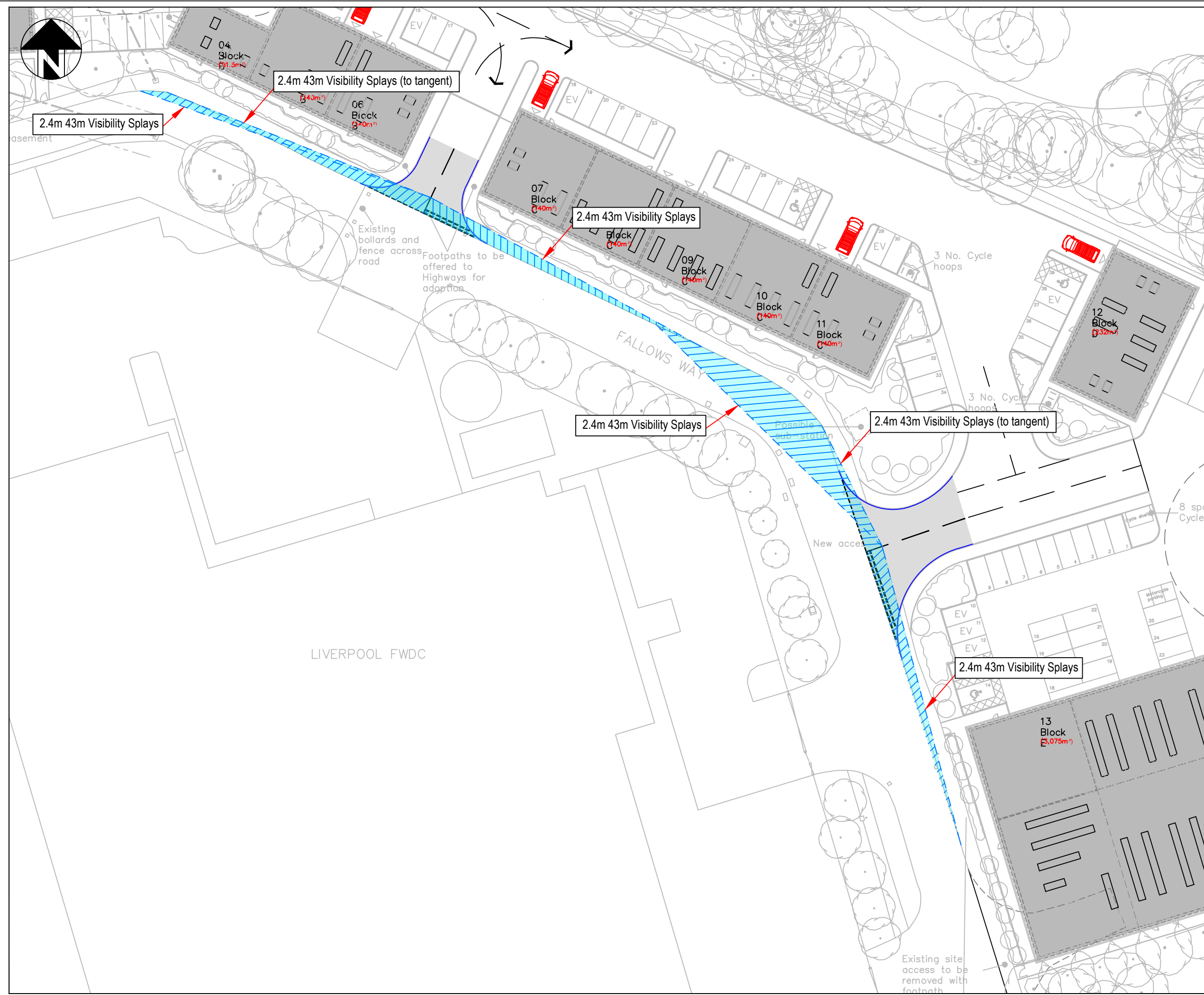
PROPOSED SITE ACCESS DESIGN



NOTES			
P1	Preliminary - Initial Issue	-	-
 ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS			
Project: FALLOWS WAY, PRESCOT			
Client: ALLIED PROPERTIES			
Drawing: PROPOSED SITE ACCESS DESIGN			
Drawn By: MHT	Date: 13/02/2023		
Checked: SK	Scale: 1:200	A3	
Drawing No. AMA/21686/SK/001			Rev. -

Appendix E

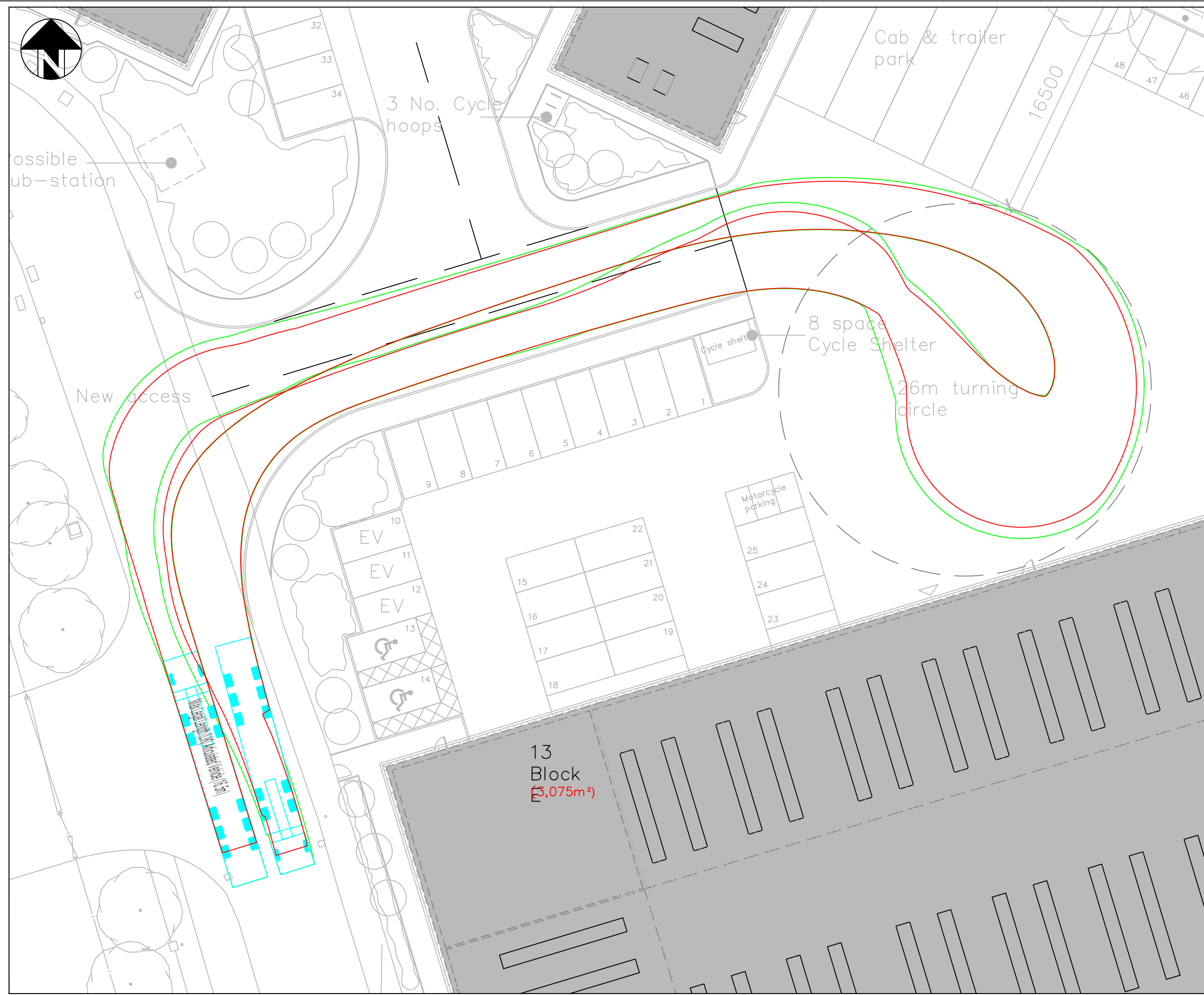
PROPOSED SITE ACCESS VISIBILITY SPLAYS



NOTES			
P1	Preliminary - Initial Issue	-	-
AMA ANDREW MOSELEY ASSOCIATES TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS			
Project: FALLOWS WAY, PRESCOT			
Client: ALLIED PROPERTIES			
Drawing: PROPOSED SITE ACCESS VISIBILITY SPLAYS			
Drawn By: MHT		Date: 13/02/2023	
Checked: SK		Scale: 1:500	A3
Drawing No. AMA/21686/SK/002			Rev. -

Appendix F

MAX LEGAL ARTICULATED VEHICLE SWEEP PATH ANALYSIS



NOTES

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

P1	Preliminary - Initial Issue	-	-

ANDREW MOSELEY ASSOCIATES
 TRANSPORT AND DEVELOPMENT PLANNING CONSULTANTS

Project:
FALLOWS WAY, PRESCOT

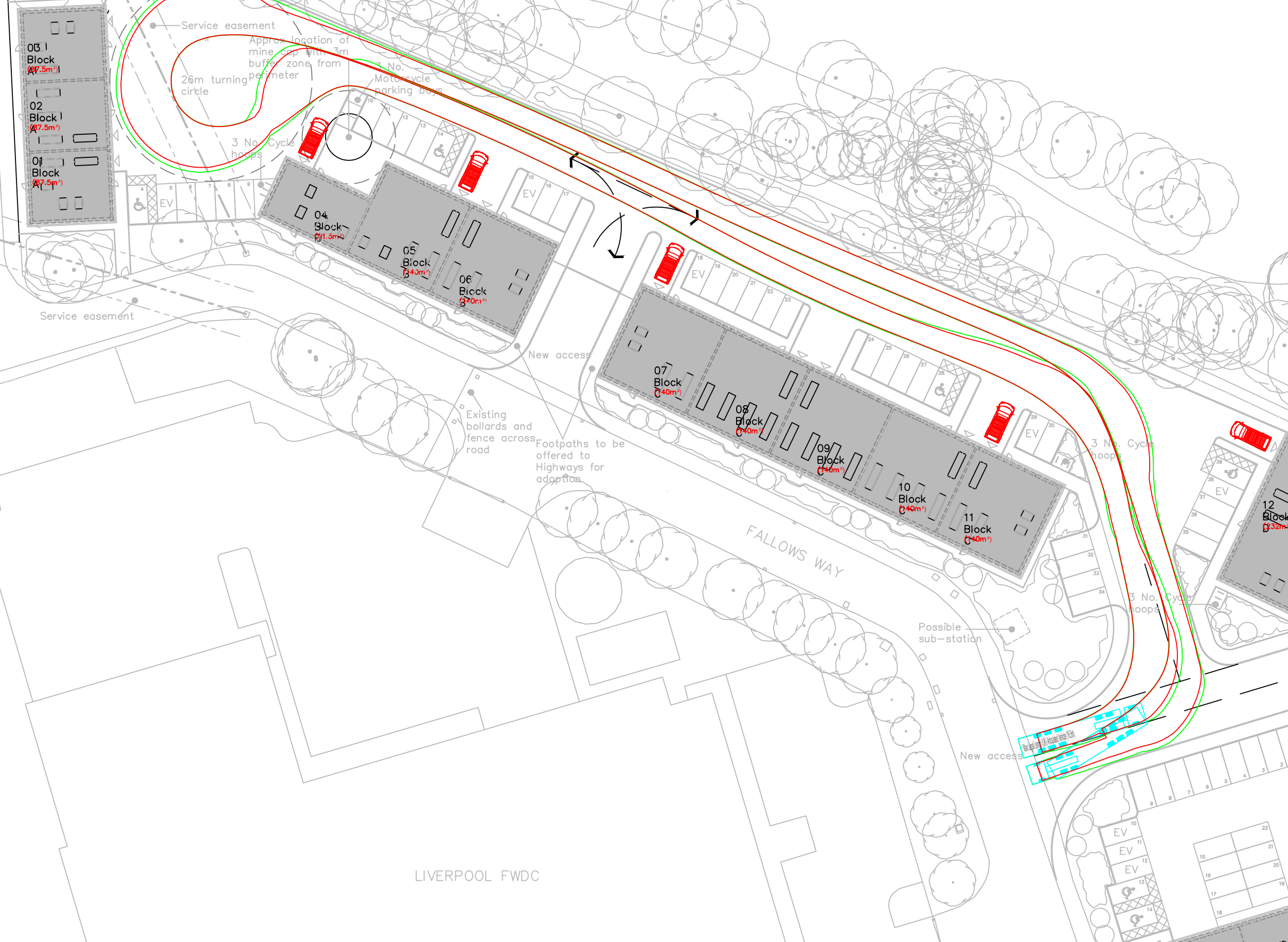
Client:
ALLIED PROPERTIES

Drawing:
PROPOSED SITE ACCESS DESIGN

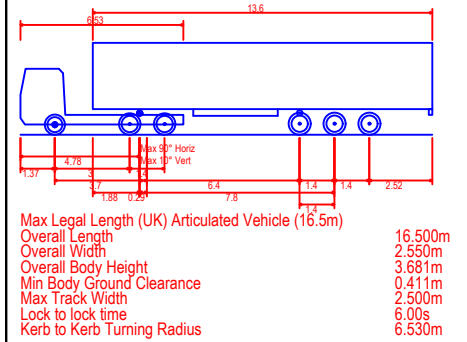
Drawn By: MHT	Date: 13/02/2023
Checked: SK	Scale: 1:250
Drawing No. AMA/21686/ATR/001	Rev. -



TUSHINGHAM'S LAKE



NOTES



P1	Preliminary - Initial Issue	-	-
----	-----------------------------	---	---



Project: FALLOWS WAY, PRESCOT		
Client: ALLIED PROPERTIES		
Drawing: PROPOSED SITE ACCESS VISIBILITY SPLAYS		
Drawn By: MHT	Date: 13/02/2023	
Checked: SK	Scale: 1:500	A3
Drawing No. AMA/21686/ATR/002		Rev. -

Appendix G

B2 TRICS DATA

Calculation Reference: AUDIT-710001-230111-0134

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : C - INDUSTRIAL UNIT
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BO BEDFORD	1 days
	HC HAMPSHIRE	1 days
03	SOUTH WEST	
	BR BRISTOL CITY	1 days
	DV DEVON	1 days
	GS GLOUCESTERSHIRE	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
06	WEST MIDLANDS	
	WK WARWICKSHIRE	1 days
	WM WEST MIDLANDS	1 days
08	NORTH WEST	
	AC CHESHIRE WEST & CHESTER	1 days
	BP BLACKPOOL	1 days
	EC CHESHIRE EAST	2 days
09	NORTH	
	TV TEES VALLEY	1 days
10	WALES	
	CF CARDIFF	1 days
	VG VALE OF GLAMORGAN	1 days
11	SCOTLAND	
	SR STIRLING	1 days
12	CONNAUGHT	
	RO ROSCOMMON	1 days
14	LEINSTER	
	KK KILKENNY	2 days
17	ULSTER (NORTHERN IRELAND)	
	AN ANTRIM	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

AMA - Leeds

Licence No: 710001

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 1010 to 14125 (units: sqm)
 Range Selected by User: 1000 to 15000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 10/11/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Tuesday	2 days
Wednesday	3 days
Thursday	8 days
Friday	5 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	20 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	14

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	17
Development Zone	1
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	2 days - Selected
Servicing vehicles Excluded	25 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	20 days
-----------	---------

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	6 days
10,001 to 15,000	7 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	4 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

25,001 to 50,000	3 days
50,001 to 75,000	1 days
75,001 to 100,000	4 days
100,001 to 125,000	2 days
125,001 to 250,000	6 days
250,001 to 500,000	4 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	6 days
1.1 to 1.5	14 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	20 days
----	---------

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	20 days
-----------------	---------

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

AMA - Leeds

Licence No: 710001

LIST OF SITES relevant to selection parameters

- | | | | |
|---|------------------------------------|--------------------------|-------------------------|
| 1 | AC-02-C-02 | INDUSTRIAL MATERIALS | CHESHIRE WEST & CHESTER |
| | JUPITER DRIVE | | |
| | CHESTER | | |
| | CHESTER W. EMP. PARK | | |
| | Edge of Town | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 8100 sqm | |
| | Survey date: WEDNESDAY | 19/11/14 | Survey Type: MANUAL |
| 2 | AN-02-C-01 | COMPOSITES | ANTRIM |
| | FERGUSON ROAD | | |
| | LISBURN | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | No Sub Category | | |
| | Total Gross floor area: | 6500 sqm | |
| | Survey date: FRIDAY | 19/06/15 | Survey Type: MANUAL |
| 3 | BO-02-C-01 | PUMPS, MOTORS & FANS | BEDFORD |
| | POSTLEY ROAD | | |
| | BEDFORD | | |
| | KEMPSTON | | |
| | Edge of Town | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 1045 sqm | |
| | Survey date: THURSDAY | 15/10/20 | Survey Type: MANUAL |
| 4 | BP-02-C-01 | POWDER COATINGS | BLACKPOOL |
| | CHORLEY ROAD | | |
| | BLACKPOOL | | |
| | LITTLE CARLETON | | |
| | Edge of Town | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 1010 sqm | |
| | Survey date: THURSDAY | 20/06/19 | Survey Type: MANUAL |
| 5 | BR-02-C-02 | STAINLESS FITTINGS | BRISTOL CITY |
| | SOUTH LIBERTY LANE | | |
| | BRISTOL | | |
| | Edge of Town | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 1475 sqm | |
| | Survey date: TUESDAY | 22/09/15 | Survey Type: MANUAL |
| 6 | CF-02-C-02 | BAKERY | CARDIFF |
| | MAES-Y-COED ROAD | | |
| | CARDIFF | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 14125 sqm | |
| | Survey date: THURSDAY | 06/10/16 | Survey Type: MANUAL |
| 7 | DV-02-C-02 | ENERGY RECOVERY FACILITY | DEVON |
| | GRACE ROAD SOUTH | | |
| | EXETER | | |
| | MARSH BARTON TRAD. EST. | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 3513 sqm | |
| | Survey date: THURSDAY | 06/07/17 | Survey Type: MANUAL |
| 8 | DY-02-C-01 | ENGINEERED PRODUCTS | DERBY |
| | PONTEFRAC STREET | | |
| | DERBY | | |
| | Suburban Area (PPS6 Out of Centre) | | |
| | Industrial Zone | | |
| | Total Gross floor area: | 2600 sqm | |
| | Survey date: THURSDAY | 25/06/15 | Survey Type: MANUAL |

AMA - Leeds

Licence No: 710001

LIST OF SITES relevant to selection parameters (Cont.)

9	EC-02-C-01	OFFICE FURNITURE	CHESHIRE EAST
	BRUNEL ROAD		
	MACCLESFIELD		
	LYME GREEN BUS. PARK		
	Edge of Town		
	Development Zone		
	Total Gross floor area:	6658 sqm	
	Survey date: MONDAY	19/09/16	Survey Type: MANUAL
10	EC-02-C-02	FABRICS MANUFACTURE	CHESHIRE EAST
	CHARTER WAY		
	MACCLESFIELD		
	HURDSFIELD		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3200 sqm	
	Survey date: FRIDAY	07/05/21	Survey Type: MANUAL
11	GS-02-C-02	MARINE ENGINE PRODUCTION	GLOUCESTERSHIRE
	DAVY WAY		
	GLOUCESTER		
	HARDWICKE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	1630 sqm	
	Survey date: FRIDAY	23/04/21	Survey Type: MANUAL
12	HC-02-C-01	ENGINEERING COMPANY	HAMPSHIRE
	JAYS CLOSE		
	BASINGSTOKE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3000 sqm	
	Survey date: THURSDAY	16/06/16	Survey Type: MANUAL
13	KK-02-C-01	VEHICLE UPHOLSTERY CENTRE	KILKENNY
	HEBRON IND. ESTATE		
	KILKENNY		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	1772 sqm	
	Survey date: THURSDAY	26/10/17	Survey Type: MANUAL
14	KK-02-C-02	COOLING SYSTEMS COMPANY	KILKENNY
	HEBRON ROAD		
	KILKENNY		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3572 sqm	
	Survey date: FRIDAY	04/10/19	Survey Type: MANUAL
15	RO-02-C-01	PHARMACEUTICAL SUPPLIES	ROSCOMMON
	N66		
	ATHLONE		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	11250 sqm	
	Survey date: WEDNESDAY	24/09/14	Survey Type: MANUAL
16	SR-02-C-01	SPECIALIST MODEL MAKING	STIRLING
	BORROWMEADOW ROAD		
	STIRLING		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	2350 sqm	
	Survey date: MONDAY	16/06/14	Survey Type: MANUAL

AMA - Leeds

Licence No: 710001

LIST OF SITES relevant to selection parameters (Cont.)

17	TV-02-C-02	FLUID ENGINEERING	TEES VALLEY
	PARKVIEW ROAD WEST		
	HARTLEPOOL		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	1050 sqm	
	Survey date: FRIDAY	04/09/20	Survey Type: MANUAL
18	VG-02-C-01	ALCOHOL ANALYSIS PRODUCTS	VALE OF GLAMORGAN
	VERLON CLOSE		
	BARRY		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	1500 sqm	
	Survey date: THURSDAY	06/05/21	Survey Type: MANUAL
19	WK-02-C-01	MACHINE ENGINEERING	WARWICKSHIRE
	CASTLE MOUND WAY		
	RUGBY		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	9216 sqm	
	Survey date: WEDNESDAY	10/11/21	Survey Type: MANUAL
20	WM-02-C-04	FOUNDRY	WEST MIDLANDS
	STOURVALE ROAD		
	STOURBRIDGE		
	LYE		
	Suburban Area (PPS6 Out of Centre)		
	Industrial Zone		
	Total Gross floor area:	4324 sqm	
	Survey date: TUESDAY	21/11/17	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
TOTAL VEHICLES
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	4	3740	0.074	4	3740	0.000	4	3740	0.074
06:00 - 07:00	6	3157	0.095	6	3157	0.016	6	3157	0.111
07:00 - 08:00	20	4395	0.512	20	4395	0.075	20	4395	0.587
08:00 - 09:00	20	4395	0.305	20	4395	0.086	20	4395	0.391
09:00 - 10:00	20	4395	0.190	20	4395	0.123	20	4395	0.313
10:00 - 11:00	20	4395	0.154	20	4395	0.115	20	4395	0.269
11:00 - 12:00	20	4395	0.105	20	4395	0.121	20	4395	0.226
12:00 - 13:00	20	4395	0.166	20	4395	0.207	20	4395	0.373
13:00 - 14:00	20	4395	0.151	20	4395	0.182	20	4395	0.333
14:00 - 15:00	20	4395	0.124	20	4395	0.137	20	4395	0.261
15:00 - 16:00	20	4395	0.154	20	4395	0.176	20	4395	0.330
16:00 - 17:00	20	4395	0.069	20	4395	0.408	20	4395	0.477
17:00 - 18:00	20	4395	0.071	20	4395	0.279	20	4395	0.350
18:00 - 19:00	20	4395	0.041	20	4395	0.129	20	4395	0.170
19:00 - 20:00	4	3740	0.013	4	3740	0.027	4	3740	0.040
20:00 - 21:00	4	3740	0.000	4	3740	0.013	4	3740	0.013
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.224			2.094			4.318

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	1010 - 14125 (units: sqm)
Survey date date range:	01/01/14 - 10/11/21
Number of weekdays (Monday-Friday):	20
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
 OGVS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	4	3740	0.000	4	3740	0.000	4	3740	0.000
06:00 - 07:00	6	3157	0.000	6	3157	0.000	6	3157	0.000
07:00 - 08:00	20	4395	0.019	20	4395	0.016	20	4395	0.035
08:00 - 09:00	20	4395	0.030	20	4395	0.025	20	4395	0.055
09:00 - 10:00	20	4395	0.053	20	4395	0.032	20	4395	0.085
10:00 - 11:00	20	4395	0.048	20	4395	0.026	20	4395	0.074
11:00 - 12:00	20	4395	0.031	20	4395	0.033	20	4395	0.064
12:00 - 13:00	20	4395	0.041	20	4395	0.036	20	4395	0.077
13:00 - 14:00	20	4395	0.036	20	4395	0.027	20	4395	0.063
14:00 - 15:00	20	4395	0.022	20	4395	0.025	20	4395	0.047
15:00 - 16:00	20	4395	0.011	20	4395	0.017	20	4395	0.028
16:00 - 17:00	20	4395	0.009	20	4395	0.014	20	4395	0.023
17:00 - 18:00	20	4395	0.002	20	4395	0.002	20	4395	0.004
18:00 - 19:00	20	4395	0.000	20	4395	0.000	20	4395	0.000
19:00 - 20:00	4	3740	0.000	4	3740	0.000	4	3740	0.000
20:00 - 21:00	4	3740	0.000	4	3740	0.007	4	3740	0.007
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.302			0.260			0.562

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

AMA - Leeds

Licence No: 710001

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT

CARS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	4	3740	0.067	4	3740	0.000	4	3740	0.067
06:00 - 07:00	6	3157	0.058	6	3157	0.000	6	3157	0.058
07:00 - 08:00	20	4395	0.462	20	4395	0.048	20	4395	0.510
08:00 - 09:00	20	4395	0.251	20	4395	0.048	20	4395	0.299
09:00 - 10:00	20	4395	0.096	20	4395	0.053	20	4395	0.149
10:00 - 11:00	20	4395	0.051	20	4395	0.044	20	4395	0.095
11:00 - 12:00	20	4395	0.044	20	4395	0.055	20	4395	0.099
12:00 - 13:00	20	4395	0.080	20	4395	0.137	20	4395	0.217
13:00 - 14:00	20	4395	0.093	20	4395	0.119	20	4395	0.212
14:00 - 15:00	20	4395	0.074	20	4395	0.080	20	4395	0.154
15:00 - 16:00	20	4395	0.109	20	4395	0.105	20	4395	0.214
16:00 - 17:00	20	4395	0.044	20	4395	0.366	20	4395	0.410
17:00 - 18:00	20	4395	0.063	20	4395	0.261	20	4395	0.324
18:00 - 19:00	20	4395	0.039	20	4395	0.126	20	4395	0.165
19:00 - 20:00	4	3740	0.013	4	3740	0.027	4	3740	0.040
20:00 - 21:00	4	3740	0.000	4	3740	0.007	4	3740	0.007
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.544			1.476			3.020

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Appendix H

OFFICE TRICS DATA

Calculation Reference: AUDIT-710001-230110-0120

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : A - OFFICE
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	BH BRIGHTON & HOVE	1 days
	ES EAST SUSSEX	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
05	EAST MIDLANDS	
	DY DERBY	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
10	WALES	
	BG BRIDGEND	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
 Actual Range: 178 to 594 (units: sqm)
 Range Selected by User: 118 to 600 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/14 to 15/11/21

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Tuesday	1 days
Wednesday	2 days
Thursday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	7 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	3
Suburban Area (PPS6 Out of Centre)	3
Edge of Town	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	1
Commercial Zone	1
Residential Zone	3
Built-Up Zone	1
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	6 days - Selected
Servicing vehicles Excluded	2 days - Selected

Secondary Filtering selection:

Use Class:

Not Known	6 days
E(c)	1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Population within 1 mile:

15,001 to 20,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	4 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

75,001 to 100,000	2 days
100,001 to 125,000	1 days
125,001 to 250,000	1 days
250,001 to 500,000	3 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	1 days
No	6 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	7 days
-----------------	--------

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

LIST OF SITES relevant to selection parameters

1	BG-02-A-01 KENT ROAD BRIDGEND	HAULAGE COMPANY	BRIDGEND
	Suburban Area (PPS6 Out of Centre) Industrial Zone Total Gross floor area: 300 sqm Survey date: THURSDAY 06/05/21		Survey Type: MANUAL
2	BH-02-A-05 ROMAN ROAD HOVE	OFFICES	BRIGHTON & HOVE
	Edge of Town Centre Residential Zone Total Gross floor area: 280 sqm Survey date: WEDNESDAY 04/07/18		Survey Type: MANUAL
3	DY-02-A-02 PRIME PARKWAY DERBY	REAL ESTATE DEVELOPERS	DERBY
	Edge of Town Centre No Sub Category Total Gross floor area: 594 sqm Survey date: THURSDAY 21/10/21		Survey Type: MANUAL
4	ES-02-A-11 THE SIDINGS HASTINGS ORE VALLEY	HOUSING COMPANY	EAST SUSSEX
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 186 sqm Survey date: TUESDAY 17/11/15		Survey Type: MANUAL
5	GM-02-A-10 CHORLEY NEW ROAD BOLTON HEATON	ACCOUNTANTS	GREATER MANCHESTER
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area: 500 sqm Survey date: MONDAY 19/04/21		Survey Type: MANUAL
6	NF-02-A-04 WHITING ROAD NORWICH	BUILDING CONSULTANT	NORFOLK
	Edge of Town Commercial Zone Total Gross floor area: 500 sqm Survey date: WEDNESDAY 13/11/19		Survey Type: MANUAL
7	NY-02-A-01 NORTH PARK ROAD HARROGATE	SOLICITORS	NORTH YORKSHIRE
	Edge of Town Centre Built-Up Zone Total Gross floor area: 178 sqm Survey date: THURSDAY 04/10/18		Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	393	1.059	6	393	0.127	6	393	1.186
08:00 - 09:00	7	363	2.994	7	363	0.276	7	363	3.270
09:00 - 10:00	7	363	1.891	7	363	1.143	7	363	3.034
10:00 - 11:00	7	363	0.906	7	363	0.709	7	363	1.615
11:00 - 12:00	7	363	0.749	7	363	0.827	7	363	1.576
12:00 - 13:00	7	363	0.906	7	363	1.182	7	363	2.088
13:00 - 14:00	7	363	0.788	7	363	0.827	7	363	1.615
14:00 - 15:00	7	363	0.630	7	363	0.985	7	363	1.615
15:00 - 16:00	7	363	0.394	7	363	0.630	7	363	1.024
16:00 - 17:00	7	363	0.630	7	363	1.891	7	363	2.521
17:00 - 18:00	7	363	0.394	7	363	2.600	7	363	2.994
18:00 - 19:00	6	393	0.424	6	393	0.847	6	393	1.271
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			11.765			12.044			23.809

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

Trip rate parameter range selected:	178 - 594 (units: sqm)
Survey date range:	01/01/14 - 15/11/21
Number of weekdays (Monday-Friday):	7
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	393	0.000	6	393	0.000	6	393	0.000
08:00 - 09:00	7	363	0.000	7	363	0.000	7	363	0.000
09:00 - 10:00	7	363	0.000	7	363	0.000	7	363	0.000
10:00 - 11:00	7	363	0.000	7	363	0.000	7	363	0.000
11:00 - 12:00	7	363	0.039	7	363	0.039	7	363	0.078
12:00 - 13:00	7	363	0.079	7	363	0.079	7	363	0.158
13:00 - 14:00	7	363	0.000	7	363	0.000	7	363	0.000
14:00 - 15:00	7	363	0.039	7	363	0.039	7	363	0.078
15:00 - 16:00	7	363	0.000	7	363	0.000	7	363	0.000
16:00 - 17:00	7	363	0.000	7	363	0.000	7	363	0.000
17:00 - 18:00	7	363	0.000	7	363	0.000	7	363	0.000
18:00 - 19:00	6	393	0.000	6	393	0.000	6	393	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.157			0.157			0.314

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE

CARS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	393	1.059	6	393	0.127	6	393	1.186
08:00 - 09:00	7	363	2.916	7	363	0.276	7	363	3.192
09:00 - 10:00	7	363	1.694	7	363	0.946	7	363	2.640
10:00 - 11:00	7	363	0.749	7	363	0.512	7	363	1.261
11:00 - 12:00	7	363	0.394	7	363	0.552	7	363	0.946
12:00 - 13:00	7	363	0.670	7	363	0.906	7	363	1.576
13:00 - 14:00	7	363	0.630	7	363	0.670	7	363	1.300
14:00 - 15:00	7	363	0.473	7	363	0.827	7	363	1.300
15:00 - 16:00	7	363	0.315	7	363	0.512	7	363	0.827
16:00 - 17:00	7	363	0.512	7	363	1.773	7	363	2.285
17:00 - 18:00	7	363	0.355	7	363	2.522	7	363	2.877
18:00 - 19:00	6	393	0.381	6	393	0.805	6	393	1.186
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			10.148			10.428			20.576

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
 LGVS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	6	393	0.000	6	393	0.000	6	393	0.000
08:00 - 09:00	7	363	0.039	7	363	0.000	7	363	0.039
09:00 - 10:00	7	363	0.197	7	363	0.197	7	363	0.394
10:00 - 11:00	7	363	0.118	7	363	0.197	7	363	0.315
11:00 - 12:00	7	363	0.276	7	363	0.197	7	363	0.473
12:00 - 13:00	7	363	0.118	7	363	0.158	7	363	0.276
13:00 - 14:00	7	363	0.079	7	363	0.079	7	363	0.158
14:00 - 15:00	7	363	0.118	7	363	0.118	7	363	0.236
15:00 - 16:00	7	363	0.079	7	363	0.079	7	363	0.158
16:00 - 17:00	7	363	0.079	7	363	0.079	7	363	0.158
17:00 - 18:00	7	363	0.039	7	363	0.039	7	363	0.078
18:00 - 19:00	6	393	0.000	6	393	0.000	6	393	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.142			1.143			2.285

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.



All rights are reserved. Copyright © 2023

Andrew Moseley Associates, 15 St Paul's Street, Leeds, LS1 2JG

www.amatp.co.uk

info@amatp.co.uk